

# The Road of Design Innovation from the Perspective of Human World

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## ABSTRACT

The research objective is to explore the human reflection and discuss natural destruction in the Anthropocene era, and to adjust the transformation of "design" innovation. The new direction of "design" innovation is analyzed by examples, and the future path of design innovation is explored by induction and contrast. Design innovation is the only way of sustainable development in anthropocene. Taking "design innovation" as the research direction of discussion, this paper discusses the development direction of design innovation in anthropocene. Two directions of design innovation under the background of anthropocene are proposed: the change of design methods and the change of design thinking. Through scientific and technological innovation, design innovation can promote design innovation, and use design innovation to influence scientific and technological innovation, so as to change the original human dependence on ecological environment. By changing the design thinking, people can understand that people are born for nature and that man and nature are a symbiotic relationship. When design faces more fields and problems, and the original design "paradigm" is no longer in line with the current national conditions, design innovation will become an important way to cope with the changing world.

**Keywords:** Anthropocene, Design, Innovation, Sustainable development, Industrialization of design.

## 1. INTRODUCTION

Since the industrial revolution, the development of social productive forces has accelerated, creating the steam engine era, the electrical era and the information age. Human activities and the scope of activities have been expanded unprecedentedly, and human beings have gradually become the "master" of the world. When mankind has made great economic achievements, it has also caused irreparable damage to the earth's ecological environment. Various natural disasters occur frequently. The reduction of resources and the increase of population have led to the continuous deterioration of the ecological environment - global warming, dust storms, floods... Each problem cannot help serving as the way out for mankind in the future. "Design", as a promoter, also contributes to its "prestige" - the "planned abolition system". This design system was first used in cars. Capital, for the sake of interests, used all means to constantly transform the style of cars, resulting in stimulating consumers' purchase psychology. This method has also been used in all walks of life and

continues to this day. Since the 18th century, nature has suffered more man-made damage than the whole prehistoric era, and the natural resources on which human civilization depends are decreasing sharply. Mankind has inherited such a rich "heritage". If it is consumed at the current rate, it will be hollowed out by the end of the next world. Therefore, we need a new thinking mode, how to "survive together" with the earth through design innovation.

## 2. BACKGROUND OF "ANTHROPOCENE"

### 2.1 Concept of the Anthropocene

The formation of the human world mainly stems from the "humanist center" formed by taking human beings as the dominant consciousness. It was first proposed by Paul Jozef Crutzen. The magazine Nature reported on May 21, 2019 that "the Anthropocene mainly refers to the new geological age in terms of geological concept, so as to show the great impact of human activities on the

earth [1]. The Anthropocene working group of the international stratigraphic Commission clearly set the beginning of the Anthropocene at the middle of the 20th century". At this stage, human frequent "activities" have had an irreversible negative impact on the earth's ecological environment. The earth's own system and function have undergone fundamental changes, and its own defense system has been unable to repair it, which is beyond the variation range of the "Holocene". Liu Dongsheng, a famous Chinese geoscientist, pointed out: "the concept of Anthropocene puts forward a new direction for the relationship between man and nature, which is another leap in Geology". American biologist Edward Wilson wrote in his book the meaning of human existence: "the Anthropocene is also known as the "lonely era" or "lonely era", in which all species are human appendages".

## 2.2 Design Innovation Thinking

Design is not only an important way of human existence, but also an important means of human construction of the ideal world. Design is an expression of ideal ideas. Through design, users can enter the ideal world constructed by designers. Design is an integrated innovation of function and form [2]. As a historical category, "design" has different meanings in different times. In the period of Arts and crafts movement, the main purpose of design is to explore the aesthetic paradigm matching with mechanized mass production through design; In the Bauhaus era, the value of democracy was implemented through design; In postmodernism, through design to show the diversity of human existence forms and cultural diversity; In the past, all kinds of design theories are people-centered. No matter dignitaries or civilians, only human beings are the "ruler" of all things in the world. Under the background of the human world, design innovation should break through the traditional design thinking mode, face up to the vassal relationship between "human" and "non-human", change the attitude of taking "human" as the center, and make it clear that human and things are two equal individuals.

Since the eighteen Party Congress, the Central Committee of the CPC Central Committee with Comrade Xi Jinping as the core has emphasized the integration of ecological civilization into the "five in one" overall layout. It is the precise grasp of the CPC Central Committee in the future under the background of the human world. Building the

earth's ecological environment with the strictest system and realizing the harmonious coexistence between man and nature also provides a new way for global sustainable development.

Design innovation is facing a "paradigm shift". Every violent "activity" of mankind will lead to the transformation of design "paradigm", and the transformation of paradigm will lead to the transformation of design mode. Under the environment of human world, design innovation must be different from the previous design paradigm. Giovanni Dorsey, an Italian scholar, put forward "technology driven innovation and market driven innovation" in 1982; In 2003, the first mock exam of Roberto's Roberto Viganti put forward the idea of "design driven innovation" in his book third innovations. At this time, the design innovation is from the perspective of business and capital, how to maximize interests and meet the needs of consumers as much as possible. Under the background of the human world, designers need to re-examine "design innovation". How to survive with the earth is the "way" for the development of design innovation.

## 3. METHODS OF DESIGN INNOVATION

Liu Guanzhong emphasized in his book "science of affairs" that "design is a process of coordinating the relationship between internal and external factors, optimizing external resources and giving full play to creativity". Object Oriented Ontology and human centered ontology are the natural opposites of design. "People-oriented" can be traced back to "Ba Yan" in Guanzi: "the beginning of husband overlord is also people-oriented"; "Thing oriented" is generally believed to be determined by Graham Harman. The "thing" oriented design is the design innovation of the "person" oriented design, which regards "thing" as the center of everything, and "person" is attached to or has an equal status with "thing". It breaks the previous "human" demand as the only standard of value judgment. The "thing" Oriented Ontology replaces the "person" Oriented Ontology and establishes the "social" relationship of equality between man and things [3].

For the better continuation of human "tomorrow", the top priority is "change". But how to "change" is more meaningful and challenging. Generally speaking, there are two aspects on how to "land" safely in the human world: the one change

the design thinking mode; the other improves and improve the technology.

### 3.1 Change Of Design Thinking

#### 3.1.1 Change of Design Direction: Design Returning to Nature

Zhuang Ziyun: "when there are people, there is also heaven; when there are days, there is also heaven", emphasizing the harmonious coexistence between man and nature and the Taoist thought of the unity of heaven and man.; "Tao follows nature" in Tao Te Ching is also a natural law to express the operation of all things. We should abide by the natural law of the ingenious integration of "thing man nature"[4]; Confucius wrote in the "five Zhi" that "where things come, the will is also Yan, and where the will comes, the ceremony is also Yan", emphasizing that the focus of design is things, not people, and bringing the idea of designing "things" into design practice; Lao Tzu, the founder of Taoist school, believes that "the sage is the belly, not the goal, so the other takes this", and advocates "Inaction" instead of "promising". People should comply with the development of nature and live in harmony with themselves. In the process of designing "material", we must correctly coordinate the contradictory relationship between "people-oriented" and "material-oriented".

Man and nature are the "community" of life, which expounds the organic relationship between man and nature and points out the way forward for the road of design innovation. It emphasizes the harmonious coexistence between man and nature and fundamentally refutes the dualistic opposition theory, that is, the subject object relationship between man and nature. General Secretary Xi Jinping pointed out: "man is born by nature, and man is a symbiotic relationship with nature", emphasizing that nature is the mother of life. The "thing" oriented design emphasizes that human beings are no longer the center of the world, but a symbiotic body entangled with all sentient beings.



Figure 1 Solar outdoor restaurant.

Solar open-air restaurant is a core case of symbiosis between man and nature based on "things", as shown in "Figure 1". The restaurant is opened by Finnish culinary master MELAS in the capital Helsinki. It uses natural energy - solar energy and uses the energy generated by the sun to make delicious dishes, which is both environmentally friendly and energy-saving. The restaurant abandons the traditional "people-oriented" original restaurant model - "come and eat under appropriate temperature and mild light". It is affected by multiple "natural things", such as the weather, whether the sun is sufficient, whether the temperature is appropriate, etc. Consumers can no longer rely on their own preferences, but need the help of natural weather, which is no longer controllable. If the weather is sunny, you can eat delicious food. If it rains or blows hard, you can't enjoy delicious food any more. This change from "thing" oriented to "person" oriented, and becomes a world where "people" and "things" coexist. People are no longer the "center" of the activity of "eating", but the "weather" as the center[5]. Only when both are just right can they succeed. Through the coexistence of "people" and "things", the solar open-air restaurant guides people to abandon the traditional and comfortable dining environment and gradually get used to the thinking mode of the world centered on "things", which makes people pay more attention to the "things" outside people's ideology, such as weather, and leads to human's "sense of suffering" for nature.

The development model based on "things" takes "things" as the "center", emphasizes the equal relationship between "things" and "people", and no longer regards "people" as the center of the universe. It is to change the design thinking, create things around the attitude of "things = people, people = things", emphasize the objective attributes of things themselves, and do not take people's will as the transfer. Man must put his position right.

Man is not the Lord of all things, neither now nor in the future. The change of design thinking is to eliminate people-centered prejudice and form inner identity to the existence of things. Realize that man is also one of all things, and man and "non-human things" are intertwined in a harmonious symbiosis: "you have me, I have you"[6].

### 3.1.2 *Change of Design Method: Returning to Local Design — Less "Quantity" and More Quality*

Under the background of the human world, the "people-oriented" to "environment-oriented" discussed in the academic circles is another continuation of the concept of sustainable development. In the field of design, the fundamental purpose of design is to create man-made things to help people solve all kinds of things. Using design to "create things", "things" are "used" by people in turn, and "creation" has become a necessary means for people's survival and development. Atlas of agricultural implements first mentioned "suitable for everywhere and taking things", indicating that creation should follow the rules of things and adjust measures to local conditions; Chen tingzhang wrote in Shui Shui Fu that "we must follow the standard, what comes first and what comes later" is also the process of expressing creation, which should be adjusted to local conditions; Follow the objective law of natural development and the conditions provided by "anytime" and "anywhere", and act according to your ability, which is in line with the objective law. In today's consumer society, consumption is the source of production. In the concept of etymology, "consumption" is equal to "Exhaustion" and "consumption".

In order to meet the needs of consumers, people-oriented design values wantonly manufacture products that are not needed.

At the same time, the value of "conventional" in business: "planned abolition of the system"; According to Mr. Liu Guanzhong's philosophy, "buying a car in order to have a means of transportation is not necessarily called consumption, but buying a famous brand car is consumption in order to prove your identity". If the purpose of buying a car only needs to be driven for more than ten years, it is too limited for capitalists. The purpose of capital itself is to launch new products and new patterns without end and conditions, which has led to the aggravation of the plundering of

natural resources[7]. How to reduce unnecessary waste through design without reducing product quality under the condition of reducing resource plunder.



Figure 2 MUJI products.

The design community began to explore the "Tao" led by Muji. MUJI, established in the 1980s, reduced people's original intention of blindly pursuing the brand and respected the life attitude of environmental protection, minimalism and quality first. "The father of MUJI products", ichiko Tanaka, advocates "deleting complexity and simplicity", discarding the original excessive decoration and injecting the design concept of environmental protection into it, as shown in "Figure 2". In the process of design, cumbersome and gorgeous design techniques are not considered to reduce unnecessary decoration and return to the original intention of the design. This is also in line with the philosophy of life under the background of the human world, in line with the social concept advocated by today's society, and has a deep impression on people's consumption concept and behavior. When yuan Yanya was the design director of MUJI products, he focused on advocating a natural and simple lifestyle and respected a new "environmental protection" lifestyle. While meeting people's needs, he spread the concept of Ecology - "nature, humanity, health and environmental protection". He always adhered to a principle in the design process - small amount design, which is not only a way to minimize resource waste and save resources, but also a responsibility and obligation to protect the environment. Although the "quantity" of design is reduced, the "quality" of design is improved It did not decrease, but increased in a sense. Cultivate the "moderation" consumption soil, dispel people's desire through practical action, change people's concept, pursue nature and return to the original.

## 3.2 Technical Improvement

### 3.2.1 Transformation of Design Research Mode: Science and Technology Changes the "World"

The concept of design is a creative activity for people to realize their intention, that is, while realizing their own intention, they can change a design method to reduce unnecessary waste of resources. The 14th five year plan proposes to accelerate the development of digitization and build a digital China.



Figure 3 VR tourism.

At the end of 2018, the Ministry of industry and information technology issued the guiding opinions on accelerating the development of virtual reality industry, which proposed that by 2025, the overall strength of China's virtual reality technology industry should be in the forefront of the world. The arrival of 5g technology has brought new hope to our design innovation. 5g is the fifth generation mobile communication technology and the latest generation mobile communication technology. 5g has the characteristics of "high broadband, low delay and wide connection", which is the key construction goal of countries all over the world. The rapid development of 5g technology will rapidly popularize and further improve the human ecological environment. Virtual reality, abbreviated as VR, means virtual reality in Chinese. It is a three-dimensional virtual reality environment. Through 5g technology, people can enjoy the same visual, auditory and weightless scenes as the "real object" in virtual reality, making people seem to experience the environment, as shown in "Figure 3". VR technology has a variety of application scenarios: remote viewing, online shopping, film and television, medical and health care, amusement parks, military, games, education, tourism and other fields[8].

Reduce the footprint of human activities and damage to the natural ecological environment

through virtual technology. At present, many museums and art galleries in China use VR technology to replace the traditional display form and display the original appearance of cultural relics in a digital form, which not only breaks the boundary of time, but also "pulls in" the distance between us and the ancients. Apply tourism to VR and store the images of scenic spots in "3D glasses" through technical means, so that consumers can visit online through VR equipment. By designing the mode of the scene, we can realize the "no difference" play with the field. At the same time, it can also change the uncontrollable influence of the real world such as season and environment, break the constraints of traditional playing time and space, promote the development of tourism to digitization, reduce human damage to the environment, and achieve the purpose of harmonious coexistence between man and nature.

### 3.2.2 Transformation of Design Research Mode: Integrating Design into Industry and Building a Closed Ecological Chain

The 18th National Congress put forward the implementation of the innovation driven development strategy. The national strategy has changed from the "material drive" of consuming natural resources, investing cheap labor costs, high investment and high energy consumption to relying on the accumulation of knowledge, technological progress and the improvement of labor quality of the whole society, from the unsustainable development of resources and energy to the sustainable development of "Knowledge Value Revolution".

From design industry to design industrialization is to change from the original "industry + design" to "design + industry + design", so that design can drive the development of the whole industrial chain from the source, enable enterprises to integrate the ecological innovation chain with design as the core, and promote the virtuous cycle development of design. Design industrialization reduces unnecessary waste of resources, integrates innovation, and makes enterprise resource allocation and management more reasonable. The rational integration of resources reduces unnecessary resource loss and reduces the damage to nature.

Under the background of the human world, the traditional industrial development model can no longer adapt to the current environment. The creative industry with design innovation as the core

should be gradually put on the agenda. However, the integration of design and other industries is still insufficient, and the long-term high resources and high consumption investment do not match the current harmonious coexistence between man and nature.

The strategy of Xiaomi ecological chain carries out the layout of the ecological chain by investing certain funds and owning certain shares in the ecological chain enterprises, but not fully holding shares. It can not only reduce the occupation of the capital chain, but also reduce the investment in equipment. The advantages of various enterprises complement each other and indirectly reduce the trajectory of human activities. Although a single "Xiaomi" has less influence, it is also an important breakthrough in the context of the human world when all enterprises cooperate with win-win and mutually beneficial resources.

#### 4. CONCLUSION

"Human world" has attracted extensive attention since it was put forward. Whether the human world has normative significance and how to take a new road of design innovation under the background of the human world are still being explored. Building a harmonious "symbiosis" between man and nature is one of the feasible ways to spend the human world safely. Our relationship with nature has been seriously distorted. How to become the "Guardian" and "repairer" of the earth has a long way to go. The Anthropocene forces us to reflect on our destruction of the earth, which also contains a warning to mankind. Abide by the "Tao" of nature, respect the form of existence of all things, and act against its "Tao", mankind will eventually be swallowed. The author thinks that the idea of building Xi Jinping's ecological civilization with the goal of "natural harmony" is the best theoretical direction for the design of innovation. Promote design innovation through scientific and technological innovation, use design innovation to affect scientific and technological innovation, and change the original human dependence on the ecological environment. "The rise of ecology leads to the rise of civilization, and the decline of ecology leads to the decline of civilization". Change the concept of taking human beings as the center, and realize that the relationship between people and things is a "symbiotic body", not either or. The two are not relative, but symbiosis. When the future is full of uncertainty, when design faces more fields and problems, and when the original design

"paradigm" is no longer in line with the current national conditions, design innovation will become an important way to deal with the changing world.

#### AUTHORS' CONTRIBUTIONS

This paper is independently completed by Zheng Wang.

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