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Environmental Design vs. Environmental Art Design: A Chinese Perspective

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Abstract

Environmental (Art) Design is one of the most dynamic and studied design disciplines in China, derived and developed from Interior Decoration and Design. "Environmental Design" and "Environmental Art Design", two naming variations for the same discipline, coexist within the Chinese cultural context, in which many Chinese scholars developed their own comprehension of the nature of "Design". Therefore, these two names are often misused in Chinese academia and industry. The broad concept of "Environment" led to an ambiguity in the core, boundary, and scope of the discipline. Within this background, the discipline of Environmental (Art) Design is facing confusion and challenges. Similarly, today's design as a practice and research faces a dramatic change, focusing on "Ways of Thinking and Doing" instead of "Object". In this context, the mission and vision of the discipline of Environmental (Art) Design will opt for change accordingly. This article reviews a recent history of the discipline of Environmental (Art) Design, relevant key educational institutions, and opinions from prominent scholars. Furthermore, in the background of emerging design trends, new collective and constructive ideas and methods for Environment (Art) Design are also proposed. Finally, this paper alludes to the uniqueness and regionality of "Design Culture" in the Chinese context by studying the dispute over the name of China's Environmental (Art) Design.

Keywords: Art and Design, Environmental Design, Environmental Art Design, Chinese Design Discipline, Chinese Design Culture, Chinese Perspective.

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Introduction

Characterized by Chinese culture, Environmental (Art) Design (Figure 1) is one of the most dynamic and studied design disciplines. In this discipline, the "Environment" does not refer to the Western "Environmental Art" genre or "Environmental Design", rather it comes from the Interior Design discipline dated from 1988. In recent years, it gradually expands its role and research fields to Urban Planning and Design, Architectural Design, Public Space Design, Landscape Design, Interior Design, Decoration Design, and Public Art (Zhang Yiman, 1996). Currently, in China, this subject is being taught in more than 1,000 higher education institutions, among which are categorized into comprehensive universities and art academies. In the latest discipline directory of the Ministry of Education of China, the following descriptions can be found:

"The focus of this discipline is to study the environmental relationship between nature, artifacts, and society, with the main purpose of optimizing the quality of human life and living environment" (The Academic Degrees Committee of the State Council, 2013, p.416).

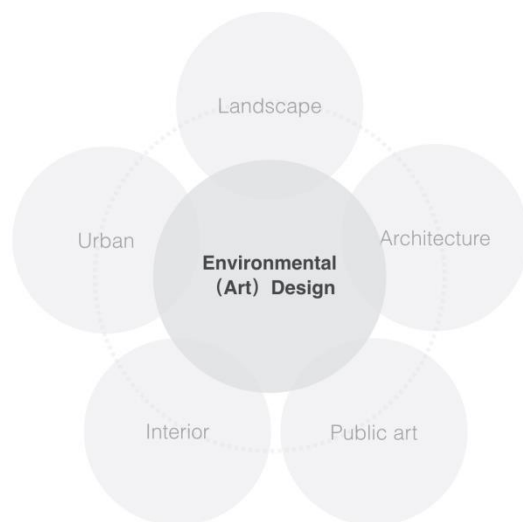


Figure 1. Environmental (Art) Design field and related discipline

However, the discipline development generated a lively debate among scholars (Yu Zhanli, 2020; Lou Yongqi, 2019), which can help us understand the broader academic discussion on design in China. First of all, there is considerable debate among Chinese scholars regarding the naming of the Environmental (Art) Design (Zheng Shuyang, 2019). Many scholars pointed out that the "Discipline Name" setting by the Ministry of Education was inaccurate (Zhang Yiman, 2019; Su Dan, 2015). They are divided into two rivalries: *Environmental Art Design* VS. *Environmental Design*. Both terms are somehow disputable and often misused in academia and industry, although they actually refer to the same discipline. The ambiguity comes from the misunderstanding between "Art" and "Design". Accordingly, this issue reflects the uniqueness of the "Chinese Design Culture" compared to the Western one. Secondly, the discipline's connotation and positioning are always unclear: because "Environment" has a broad meaning, from indoor to outdoor, from physical to abstract, from tangible to intangible; it is independent but related to urban planning, architecture, landscape, interior design, and other disciplines. Its positioning, boundaries, objective, and core of the discipline are a bit vague and loose, and a "Generalist" cannot study all the disciplines mentioned above under a limited educational background (Lou Yongqi, 2019).

After several generations of scholars' discussion and reflection, the new missions and visions of Environmental (Art) Design were proposed. Based on the "Sciences of Human Settlements" initiated by academician Wu Liangyong, Zheng Shuyang (2019) believed that environmental (art) design could be a constructive component, and the related research and practice should be oriented towards the micro-system. In addition, Song Liming (2020) considered "Spatial Design" an accurate name for this discipline, and he proposed a new positioning and order of "Integrating the Wide range (融广域), Acquiring Detailed Micro-system (致精微), and Compromising Physical and Abstract (兼虚实)". Furthermore, Lou Yongqi (2019) disassembled the Chinese characters "Environment (环境)" and interpreted them as "Surrounding (环)" + "Condition (境)". Consequently, he proposed an idea on the "Life/Space Ecosystem" contributing to the environment design education at Tongji University. At the same time, Richard Buchanan (2019) demonstrated and endorsed the interrelationship between "Surroundings" and "Environments" in "The Four Orders of Design", which also agreed with Lou Yongqi's interpretation.

This article reviews the history of the discipline, related educational institutions, and opinions of prominent scholars. In the emerging design context, the hypothesis of new construction ideas and methods for the discipline is also proposed. Finally, through the study of the dispute over the name of China's Environmental (Art) Design discipline, this research alludes to the uniqueness and regionality of "Design Culture" in the Chinese context.

History of the Discipline

Post the founding of the People's Republic of China in 1949, the newly unified nation was in a state of economic recovery, with low productivity and inadequate innovation. Architects often carried out interior design-related work since a discrete discipline in interior design was not established yet, and there were no disciplinary guidelines or professional design teams on such topics (Zhang Yiman, 1994). In 1958, on celebrating the 10th-anniversary national day, the Chinese central government undertook "Ten Great Buildings" in Beijing, highlighting the country's architectural achievements ("Ten Great Buildings," 2020). With this project, for the first time, the government promoted civilian artists, decorators, painters, sculptors, and art theorists to collaborate, emphasizing the need to integrate artistic aspects with people's lives (Peng Xiaoxi, 1959). As a result, these talents created a rich collective production of interior design, furniture, and decorative artworks. The participants' contribution induced the establishment of a stage for modern Chinese "Interior Design" (Zhang Yiman, 1994).

A higher education institution is an essential part of the systemic development of a discipline. Central Academy of Art and Craft (now Academy of Arts & Design, Tsinghua University) was the first institution of design and craft founded in mainland China in 1956. It has held a prestigious position in the nation for its recognition as the birthplace of modern Chinese design and its academic contribution by renowned design scholars. In the past 60 years, the name of the environmental art design discipline in Chinese institution of design and arts has been changed eight times, in chronological order, they were Interior Decoration (1957), Architectural Decoration (1961), Architectural Art (1962), Architectural Decorative Art (1964), Industrial Art (1975), Interior Design (1984), Environmental Art (1988), and Environmental Art Design (1999) (Figure 2). Among these names, two applications were submitted officially to the Ministry of Education to revise the name of this discipline in the "Directory of Undergraduate discipline of General Colleges and Universities" (Table 1), namely "Environmental Art Design (1987)" and "Environmental Design (2012)".

Table 1. Directory of Discipline of General Colleges and Universities

Year	1963	1987	1993	1998	2012
Category	Art	Social science	Literature	Literature	Art
First-level discipline		Art	Art	Art	Design
Sub-discipline	Dyeing and Weaving Art	Dyeing and Weaving Design	Art Design of Dyeing and Weaving	Art Design	
	Ceramic Art	Ceramic Design	Ceramic Art Design		
	Decoration Art	Decoration Design	Decoration Art Design		Visual Communication Design
	Architectural Decoration Art	Environmental Art Design	Environmental Art Design		Environmental Design
	Lacquer Art	Lacquer Art			
	Industrial Arts	Industrial Modeling Design	Industrial Design (Engineering-Mechanical)		Product Design
	Printing Art				
		Clothing Design	Clothing Art Design		Clothing and apparel design
		Art Deco Design	Art Deco Design		Art and craft
		History and Theory of Arts and Crafts	Arts and Crafts		Art Design Study
					Public Art
					Digital Media Art

During this period, this discipline at Tsinghua University underwent three significant changes, as listed below:

1. From "Decoration" to "Design" (1957-1984). Scholars gradually realized the limitation of using the term "Decoration", supported by the idea that the discipline should not be limited to "Surface Painting", but more measures such as materials, techniques and scientific knowledge in the curriculum, moving towards an integrated and systematic term "Design".

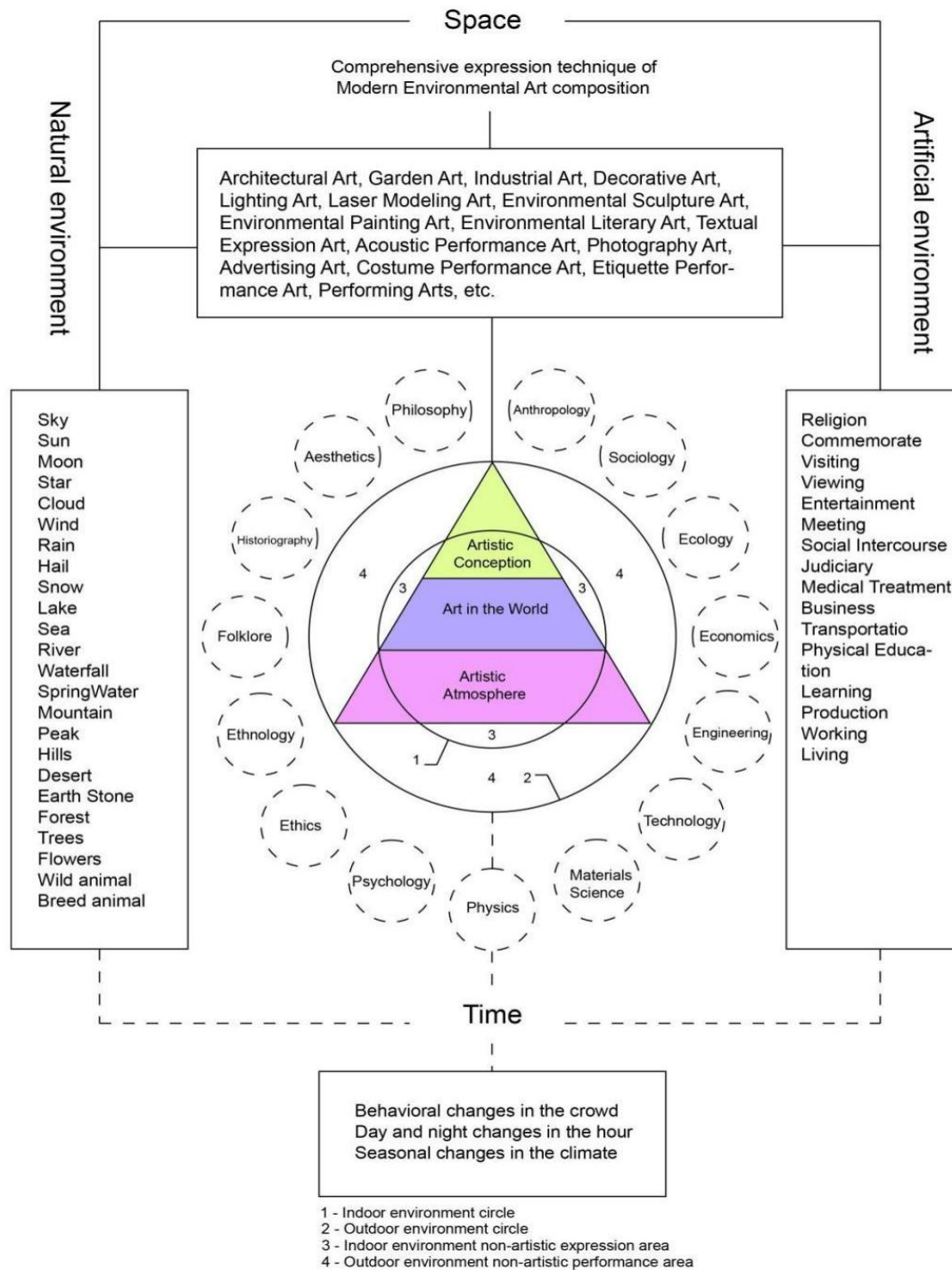


Figure 2. Environmental Art Design concept map (Zhang Yiman & Zheng Shuyan)

2. From "Interior" to "Environment" (1984-1988). Pang Xunqin, Xi Xiaopeng, Pan Changhou, Zhang Yiman, and other renowned scholars proposed using the term "Environment" from the basis of Interior Design (Ren Yilin, 2018). Summary of their reasoning as shown in the Physical Spatial Level (Xi Xiaopeng, 1982), Cognitive Level (Luo Wuyi, 1985; Pan Changhou, 1988; Pang Xunqin, 2002) Philosophical Level (Pan Changhou, 1988) and Social-ecological Level (Zhang Yiman,1998).

3. From "Environmental Art Design" to "Environmental Design" (1988-2012). There were three main reasons for the change:

- Integrated thinking system. Design should be a discipline engaging collaborations and resources from art and engineering (Pan Yunhe, 2013). Art provided abstract innovative potentialities, while engineering offered technical solutions to realize ideas. The combination of the two was conducive to developing design as a discipline (Zheng Shuyang, 2019);
- Better understanding of the design. "Art Design" was originally a vague Chinese translation of the western "Design" (Cai Jun, 1999). However, the original term had proven limited and unfavorable to the development of the discipline;
- Distinction between "Environmental Art" and "Environmental Design". The former was an art genre, while the latter a design category.

As a result of these adjustments, in 2012, the Ministry of Education upgraded "Design" to a discrete first-class discipline, and "Environmental Design" became its second-class sub-discipline. Nevertheless, Tsinghua University still keeps the original department name "Environmental Art Design" and retains the term "Art". After 60 years of evolution, the name of this discipline was finally determined. However, in recent years, a larger debate is being staged.

Environmental Art Design or Environmental Design?

The controversy arose by two directors of the Department of Environmental Art Design of Tsinghua: Zhang Yiman and Zheng Shuyang. They were also the leading promoters for revising the discipline for the Directory of the Ministry of Education in 1987 and 2012.

Zhang Yiman was the defender of "Environmental Art Design". She believed the English name "Environmental Design" for the discipline to be correct, because "Design" in English contained the meaning of artistry. However, in the Chinese context, design is perceived as an engineering-related topic, and by adding a prefix word "Decoration", it is clear that the discipline includes artistic components. Therefore, it has been called "Interior Decoration Design" or "Interior Art Design" for a long time. The name "Environmental Art Design" would have been a more suitable one considering the peculiarity of the Chinese culture and helped the general public understand the discipline better (Zhang Yiman, 2019).

Instead, Zheng Shuyang insisted that "Art" should be removed. He believed that Environmental Art was not the same as Environmental Design. The former was a pure art field in the West, and the latter was originally a design concept in China.

The focal point of the debate between the two can be summarized into two issues:

1. Is "Art Design" a more appropriate name in the Chinese cultural context?
2. Is "Environmental Art" or "Environment" the research/practice objective of this discipline?

The first issue is discussed by reviewing the development of Chinese design. "Design" is a foreign concept for Chinese culture, with regard to its meaning and the discipline originated in the West. It has gradually evolved from "Image" (during the Westernization Movement in the 1860s) to "Decoration" (middle of the 20th century), to "Arts & Crafts" (after the 1950s), to "Art Design" (contemporary) (Hang Jian, 2009; Zhang Fuye, 2015). Concerning the name "Art Design", two explanations are associated with its origin (Cai Jun, 1992):

- As an abbreviation for "Art and Design", by omitting "And" in the middle (a kind of hasty way to give a name), and leaving an obscure relationship between "Art" and "Design";

- The "Chinese Context". Many Chinese scholars are still clinging to the "Crafts & Arts" concept, while understanding the "Design" is lacking. By adding the word "Art" before "Design" may help a large majority accept and understand this discipline better. Therefore, "Design" can be interpreted as "Modern Arts & Crafts", compared to a "Pure Art" form inherited from the content of traditional "Decorative Art".

A common phenomenon within Chinese design education is that the perception of "Design" based on the institutions' background has different interpretations. In the historical Academy/College of Fine Arts or/and places where Arts & Crafts scholars gather, "Art" gets more emphasized while "Design" lacks clarification, and the "Art" is more valued than "Design". On the contrary, in comprehensive universities, people actively adopt "Design" and "Innovation" in the name to distinguish from the traditional concepts (Cai Jun, 1992).

At "40 Years of Chinese Design Symposium", Professor Hang Jian, the former vice dean of the Academy of Arts & Design of Tsinghua University, proposed 1978 to be the starting time of "Modern Design" in China. He pointed out that all previous names given to "Design" resulted from an incomplete understanding of the discipline. Those names lack order and complexity, to the point of undermining the future development of the discipline itself.

Regarding the second issue, the authors mentioned how the discipline evolved from "Decoration" to "Design" and from "Interior" to "Environment", and how it dissociated itself from the "Environmental Art" of the contemporary art discipline. For example, in the course curriculums at Tsinghua University, its discipline provides two different educational directions: Interior Design and Landscape Design (Table 2). By juxtaposing their course structure of the curriculums, instead of emphasizing the potentiality of the artistic expression, they both value "Design" as the core element and consider interior and exterior spatial design as the most essential subject.

Table 2. Course Curriculum of Environmental Design Undergraduate Degree Program at Tsinghua University (major courses only, excluding electives and general education courses)

Direction	Course Curriculum
Interior Design	Spatial Design Concepts, Design Expression, Ergonomics, Material Construction and Technology, Architectural Design Foundation, Furnishings Art Design, Furniture Design, Environmental Lighting Design, Environmental Colour Design, Environmental Greening Design, Introduction of Environmental Art Design, Architecture and Garden History in Chinese and Foreign.
Landscape Design	Spatial Design Concepts, Design Expressions, Landscape Surveys, Architectural Morphology, Horticultural Foundations, Public Facility Design, Public Art Design, Garden Design, Urban Design, Urban Planning Principles, Architecture and Garden History in Chinese and Foreign, Environmental Behavior Psychology Courses.

In summary, to respond to both issues mentioned above, the authors believe that "Environmental Design" is a more accurate definition of the discipline, and more conducive to discussions in an international context. However, because most Chinese universities and scholars nowadays still linger in the nostalgia and the legacy of "Decoration" and "Arts & Crafts", the ambiguity between "Art" and "Design" is still unsolved within Chinese academia and industry. "One discipline, two names" is the unresolvable riddle in contemporary China. Hopefully, the scholars of the future generation will solve and surpass it.

Rethinking discipline in the context of Emerging Design

Although Environmental (Art) Design has been established in many universities and colleges in China, it is still hard to define its core and boundary, since the concept of "Environment" is broad and connected to other disciplines, like Urban Design, Architecture, Interior Design, and Landscape Design. In the meanwhile, it is a unique discipline and resembles a synthesis of the disciplines mentioned above. Such complexity makes it impossible to train a proper "Generalist" in a short amount of time (Lou Yongqi, 2019). Therefore, the pedagogy and education of environmental design will transform new perspectives on the way of thinking.

The international design research scenery could give an answer: in the "Design X Declaration" on Emerging Design, Don Norman and others proposed:

"The major problems facing humanity today involve complex systems of stakeholders and issues, and modern design has grown from a focus on products and services to a robust set of methods that is applicable to a wide range of societal issues" (Norman & Stappers, 2015).

The focus of Emerging Design research/practice has shifted away from "Objects" (products, services, and systems) and toward "Ways of Thinking and Doing" (methods, tools, approaches, design cultures) (Krippendorff, 2005; Brown, 2008; Manzini, 2016). Under this transitional circumstance, will Environmental (Art) Design thrive?

In recent years, the College of Design and Innovation of Tongji University has proved to be a pioneer in the contemporary Chinese education community (Ranked first in Asia, according to 2020 QS "Art and Design" ranking). It has no traditional constraints and adapts emerging design ideas from all over the world. As indicated in the college's name, it prefers "Design and Innovation" to the vague concept of "Art Design". A new definition was given to the discipline by Tongji:

"Our Environmental Design focuses on using holistic, human-centered and interdisciplinary approaches to create and enable a sustainable life-space ecosystem, including experience, communication and place that facilitate interaction of humans with their surroundings (Table 3)." (Introduction of the Environmental Design Discipline by Tongji University)

Table 3. Course Curriculum of Environmental Design Undergraduate Degree Program at Tongji University (major courses only, excluding electives and general education courses)

Type	Course Curriculum
Computer	Open Source Hardware and Programming, University Computers
Thinking of design	Design Introduction, Design Thinking, Design Thinking & Expression
Major foundation	Design Fundamentals, Design History, Design Technology
Compulsory course	Sustainable design, Design competitions, Thematic design
Practicum course	Design practice, Professional practice, Graduation design

The authors participated in the project of "Surrounding Tongji - NICE 2035 Chifeng Road Prototype" (Figure 3), which was previously a chaotic amalgam of small shops and stores, such as printing shops, small restaurants, facade rooms, abandoned stores, and others. Local government later implemented a unified management system, resulting in multiple idle spaces. Tongji University was assigned to

revive this project and establish various types of laboratories in the neighborhood. As a result, the following goals were achieved:

- Reuse of the idle spaces;
- Technology integration of the academic and the neighborhood;
- Economic development and social expansion based on the university;
- Maximum use of the street as a "living laboratory" for future industries (Figure 4).

Through this project new techniques have experimented:

- Integration of the experiences and sustainability based on the relationship between people and environment;
- Combining multi-disciplinary design tools, such as scenery map, storyboard, and system diagram from product service system design; mood board, spatial diagram and rendering from interior design;
- Experimenting with big data analysis and digital technology such as VR and AI.

Tongji team carried this project beyond traditional environmental (art) design methods. They not only designed the "physical" spaces, but also integrated and advanced local "non-physical" resources, and "surrounding" conditions were redesigned and transformed. In the prototype street of NICE 2035, through the investment of finance and talents, the knowledge and resources of the university have been transferred into new models for industry, commerce, technology, and culture.

Compared with Tsinghua University known for its long history in design disciplines, Tongji University's emerging environmental design discipline pays more attention to the design of the whole environmental system, and it extends the scope of design from physical space to community activities and social innovation. When it comes to design methods, Tongji University keeps the traditional spatial design subject, meanwhile borrows more tools from service design, such as Persona, Customer journey mapping, and Storyboards. As a result, the design goals and visions have undergone major transformation. It will be important that future research investigate the significance of such a transformation in design education and design practice in China.

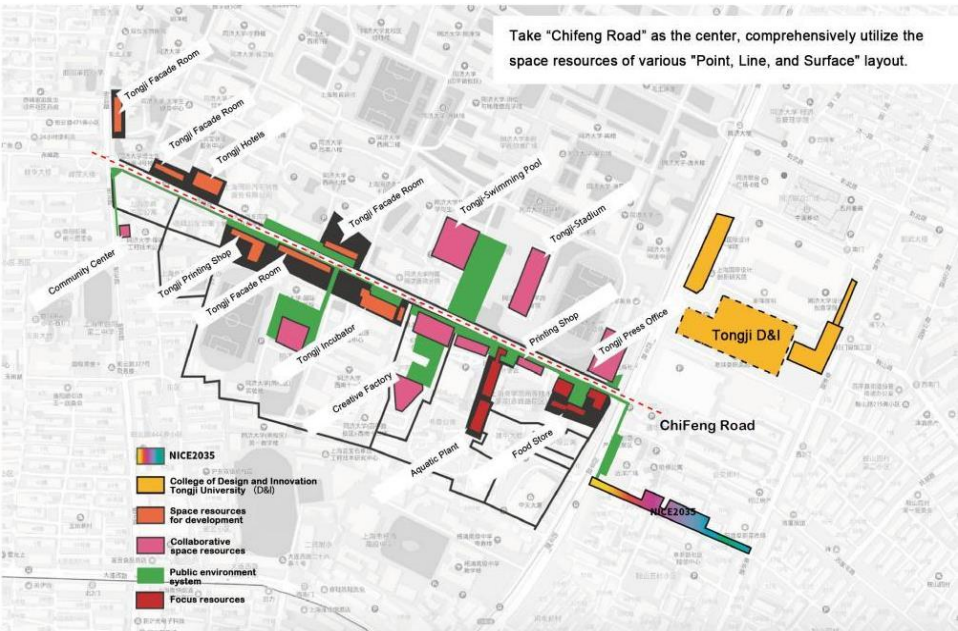


Figure 3. Chifeng Road resources map, made by this project team

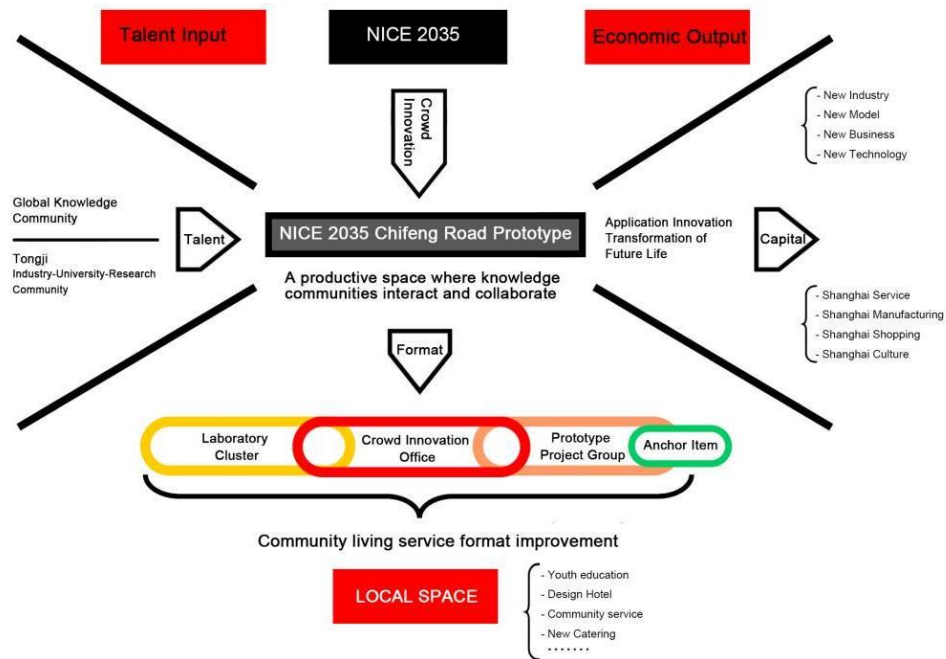


Figure 4. 'Future living laboratory' strategy diagram, made by this project team

Conclusion

The debate of Environmental (Art) Design is a microcosm of the confusion of the "Design" discipline in China. One of the main reasons is that the differences in understanding and cognition of design reflect in culture and language worldwide. Nowadays, this foreign term has taken root in China with its cultural characteristic. In the Chinese language, "Design (设计)" is a term composed of the two ideograms "设 (plan, imagine, set, establish, assume)" and "计 (idea, viewpoint, concept, strategy)". It is an elaborate term of infinite possibilities.

Based on the investigation of the history and development of Environmental (Art) Design, "Space" is the core study/practice objective. The authors will further focus on issues related to space in a contemporary academic scenario. The study of the physical characteristics of space and its intangible properties (services, activities, experiences, and interactions) will be conducted.

In the background of rapid information and technology development, the connotation of "Space" extends to more complex cyber systems. According to Lou Yongqi, the natural system, the human system, the artificial system, and the cyber system were integrated into a new ecosystem, opening new design directions. Within the spatial ecosystem, the authors will re-examine the following three relationships in "Human-Centered" design: People versus People, People versus Things, and Things (other creatures) versus Things.

Finally, the authors believe that the value of culture lies in its history and diversity. Each country has its unique vocabulary and interpretation of design, shaping our own design culture. Despite diverse histories, concepts, common thinking, and values, people are all bonded by our shared understanding and respect in the design world.

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