Research Article

Boundaries of generalized design

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ABSTRACT

Generalized design is interdisciplinary, comprehensive, and diverse. But interdisciplinary does not mean boundless. So where are the boundaries? This paper explores the boundaries and significance of "interdisciplinary" generalized design, and points out that the only and the ultimate boundary of generalized design is -humanity.

Key words: generalized design, boundaries, interdisciplinary, humanity
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INTRODUCTION

Generalized design [1] is interdisciplinary, comprehensive, and diverse, which is established in the 80th of this century. Unlike the traditional way of thinking which is emotional and static, generalized design is not only scientific and rational but also interdisciplinary, comprehensive, and diverse. Generalized design reveals the principles and ways which can be applied to all professional modern designs. It also shows the scientific integration of interdisciplinary science and individual professional sciences.

Generalized design is "generalized" by comparing with the narrowly defined isolated professions. Because of our limited knowledge and ability, we divide the world into various professions and majors, thus causing the isolation of professions. However, as profession is gradually developing and has to be applied to the real, integrated society, so interdisciplinary and frontier subjects show up, which will help the integration of the divided world and would be the ultimate developing direction of science. Art design is also highly divided. Various art design majors have clear boundaries, so when people design, their design works are highly separated from each other. The ultimate goal of design is the integration of function and aesthetics, i.e., the design should be both useful and artistic. In fact, different areas have different inner functions and operating mechanisms, but their base of getting combined with aesthetics is the same: the interpretation of conflicts and tension in different forms, or in different areas, or at different levels. I have to point it out that the interpretation based on the special content of different areas, even using same artistic approach, would have different degrees of development in different areas. Despite these differences, the physiological base of experiencing aesthetics through sense organs is the same, and do not change because of areas or forms. "Different sense organs are stimulated in different ways, but the physiological mechanism to gain aesthetics is the same for aesthetic is aroused by the comparison and change of different elements."[2] This kind of resonance is called synaesthesia in traditional Chinese artistic experience. Synaethesia is the subject's base to link different sensory experience so as to push forward the cross-boundary aesthetic appreciation of different objects and find the integrating point of interdisciplinary design based on aesthetics. So Chinese cross-boundary art activities emerged, one typical example of which is the integration of poem, calligraphy, painting, music on the one hand and traditional Chinese garden on the other. [3] So based on common physiological characters, different areas get the chance to integrate with each other, and this chance of integration is born and intrinsic instead of being created afterwards.

Based on the facts above, conscious interdisciplinary experience, thinking and exchange are vital to art and design. The aesthetics of different areas comes from the different interpretation of conflicts, and different areas, decided by their unique professional elements, would have different degrees of development in terms of using aesthetic

principles because of their different definition and operation of aesthetics.[4] Take architectural design as an example, traditional building materials have limited colors and only low-level skills, but with the development of building materials, many colors emerge. So the traditional architectural color theory is outdated in color combination. If we look at fashion design, we would see that color design theory is its core and highlight. So it's important for architectural design to learn from fashion design, which would directly bring about the excellent work of many architects such as Rem Koolhaas and ZahaHadid. On the other hand, fashion design is also learning from architectural design, for the latter has cutting edge in reflecting the sense of space. During the Architectural Art Exposition of Frank Owen Gehry, one fashion design learning from the spatial flow character of Gehry was exhibited.

Yet, is interdisciplinary design boundless? Does it have boundaries? And where are the boundaries? It's vital to answer these questions; otherwise, interdisciplinary design would bring about contrary results or even disastrous results. It's hard to tell whether interdisciplinary designs are blessings or not as these examples listed below.

Example 1.Multi-media interaction experience room of the Germany Pavilion during the Shanghai World Expo

During the 2010 Shanghai World Expo, the Germany Pavilion was very eye-catching.A huge spherical LED screen was hung in the middle of the room to play videos, and the screen could swing with the change of people's voice to interact with them. The highlight arrived when the big spherical screen turned into a dandelion, and as people shouted to the loudest, the image of dandelion disappeared like being blown in the wind. This was fabulous. But I suddenly felt very sad. Interactive experience includes interactive arts, multi-media, computers and many other professional areas, so it is the model of interdisciplinary design. However, what is the ultimate goal of this interdisciplinary design? To experience the excitement of seeing dandelion being blown in the wind? But nearly everyone has similar experience when picking up a dandelion in the field, which is fresher and more romantic in memory. Today, we are devoting enormous human resources, materials and time to create this artificial experience, but the result is not as prefunding as the one in our childhood, because what we think of during this highlight is the feeling experienced in our childhood.

Example 2. Reflections on the Beijing Subway

When I was taking subway in Beijing one day, I noticed that most people were holding smart phones and wearing earphones to be buried in their own worlds. When we recall our daily life, we would notice that, no matter on the streets or in classrooms, we can see people who are confined in their own worlds. But real life should not be like that, since the core characteristic of human as social animals is the communication and interaction between human beings, instead of self-complacence and self- constraint. Smart phone is the excellent work by integrating many areas, but it leads users to be self-centered, which is as tragic as the self-constraint brought about by internet addiction. So where are the boundaries of interdisciplinary design?

Human, as civilized creatures in the world, should possess two basic attributes to get distinguished from other creatures: natural attribute and social attribute. The boundaries of generalized design should be these two attributes. Any design that is contrary to natural attribute and social attribute of human would bring about many problems, such as the examples I listed above. These problems deserve our careful reflection. How to be inspired by these boundaries? The effective method is to turn to philosophy's question of human essence. That's why leading figures in many fields would turn to philosophy after breaking the constraint of their own profession and gain success and freedom. They would talk about the essence of life, but this has transcended the boundary of individual professions to help them to find the ultimate shore of mind, and that boundary is the only and ultimate boundary of generalized design-humanity.

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