Greenhouse and Field: Two Field Domains that Cultivate Designers

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Abstract. Based on the Ruskin's comparison of the designer, the design education and the national environment to the seed, soil and climate respectively, and combining with the background of industry and design development in our country at the present stage, this paper analyzes the internal and external causes of the designer's growth and development, and puts forward the comparison of greenhouse and field that the professional education and social practice in colleges and universities is the two field domains for the designer's growth, emphasizes the importance of integration of higher education and social practice, proposes that social practice is the main field for designers to grow up. The enlightenment to the development and growth of designers in our country at this stage is discussed.

1. Introduction
In 1895, John Ruskin used seeds, soil and climate to describe the growth of designers in Modern Manufacturing and Design. Soil and climate are the external factors for the growth of designers, which represent the design education and the national environment related to society, economy and technology. Seeds are the individual designers and the internal factors for the growth of designers. Ruskin's idea of artistic design is a specific product of his time, which expresses the artists and theorists’ opinions and judgments criteria on the trend of artistic design in that time. The important role played by British creative industries in economy is closely related to the deep insights of early theorists and critics, the policy intervention and support at the medium-term national level, and the courageous exploration of design education. Ruskin's metaphor of "seed, soil and climate" in designer training are also adopted in this paper, and "greenhouse and field" are used to describe the designer's campus education and social growth. It not only looks at Ruskin's artistic thoughts from a historical perspective, but also reflects on the development needs of China's design industry, especially the development of the design industry and the reform of the training of design talents.

2. Seeds, Soil and Climate: Designers, Design Education and National Environment
In the late 19th century and early 20th century, the "happy and modern British life" described by Ruskin became a reality. Only the right soil and climate can seeds grow, germinate, branch, blossom and bear fruit. Designer's artistic ability, thought and morality are the internal factors to cultivate designers. In Ruskin’s opinion, only in a happy and modern British life can designers truly appreciate the needs of the people, keep innovating, so as to design for the masses. The power of art is a nobler and simpler power, which is the endogenous power to serve the masses. Designers should find a balance between hardship and luxury to achieve a moderate state of peace and reflection. Therefore, the peaceful art, happy family life and the general recognition of national culture are regarded not only as the premise
and foundation for manufactured goods to meet the needs of the people, but also as the standard for good product design. At the same time, designers as individuals can also change the society, for instance, designers attract public attention, get decision-making power, and then produce meaningful works. This view has also made the government to pay more attention to the cultivation and creation of star designers. Art and design is an invisible force, which can permeate people's lives and cultures through works and concepts, "inform the soul with facts, touch the heart with sympathy, give comfort to the angry, and give civilization to the rude".

Design education is a direct external factor in training designers. Ruskin emphasizes the importance of perception in design learning by saying “Your design ability depends entirely on your own feelings and judgments. “Only when we have a deep and firm understanding of the design principles and put them into practice can it be meaningful”.

Another external factor in training designers is the national environment, which is mainly manifested in the following aspects. 1) The slogan of "learning from nature" is clearly put forward, which considers that nature is the source of art and all creativity. Respecting for nature and learning from nature are the same as an old saying that “the art comes from nature but the inner feeling is the source” in ancient China. If we “ignore the natural form in pursuit of art, it will lead to the degeneration of temperament and intelligence”. These expressions are directly related to Ruskin's passion for painting flowers, birds and natural scenery. 2) Although industrial development can promote economic prosperity and enhance national strength, there is also the destruction of the natural environment caused by industrial production and the demand for natural materials behind the seemingly booming economy. If the nature, which is the source of creativity nature is destroyed, people will lose their creativity. The occupation of agricultural farmland by industrial development has resulted in people moving passively or actively away from the countryside, initiatively entering or being forced to go into cities. As for designers and artists, they lost not only a good pastoral life, but also the spiritual home and spiritual sustenance. "The influences of modern industry on modern ornaments include industrial development, the rise of cities, the abandonment of rural houses in the Middle Ages, but people yearn for real rural life. Returning to the countryside and pastoral areas is the essence of Britain." 3) It confirms the positive effect of political rights on the development of art. The national-level political attitude and policy towards design art are also important factors in the development of design and the cultivation of design talents. In 21st Century Design, Woodham J.M. exemplifies the external environmental factors of the development of Ruskin’s design industry, such as government policy support and national-level design attitude. In many exhibitions in the 1930s, the British exhibits and the focus of official publicity mean that the "happy and modern British life" expected by Ruskin has become a reality.

3. The Current Background of the Growth and Development of Designers

3.1. Design to Adapt to the Development of the Times and to Meet the Industrial Needs

Design industry is naturally linked with art culture, science and technology, and commercial economy. With the traditional industry development, transformation and the rise of new industries brought by the Industrial Revolution and the Information Technology Revolution, the government, enterprises and universities not only reflect on the past development model, but also construct the design industry from an all-round and multi-level framework. Design has undergone the evolution from traditional design (design 1.0) and modern design (design 2.0) to innovative design (design 3.0). Design 3.0 presents new features of green and low-carbon, network intelligence, open integration and co-creation and sharing. Different from the western countries with developed design, China has several different design times carried out at the same time in China due to China’s special national conditions and complex historical development. The rapid development of economy and the industrial needs constantly raise new requirements for the knowledge structure and growth system of designers, therefore, the art design specialty in colleges and universities should meet the needs of the development of multiple industries and train innovative talents in many aspects necessary for society.
Under the background of economic globalization, technological innovation and network development, and with the constant industry optimization and upgrading, the new context of design industry is gradually taking shape and China’s design education is facing new opportunities and challenges.

3.2. Responsible Design
It is constantly insisted that design theorists and educators should design for the masses, therefore, the design modernity has a natural and inherent democracy, which means the social responsibility of design, whether big or small. Along with the development of socialist ideology, this democratic artistic spirit has been influencing the Pioneer Design Movement throughout the entire twentieth century. Influenced by the founder Walter Gropius, BAUHAUS, a well-known modernist master, associated the dream of a "design power" proposed by Deutscher Werkbund with design, which changed from small responsibilities such as designers’ practicability and reliability of their works, and the goal of not pursuing the short-term commercial success, into a great responsibility for the prosperity of the country. At present, the Craftsman’s spirit strongly advocated by our country is also a kind of concern for occupational social responsibility, which is in line with the national development strategy of "making a country prosperous by manufacturing and a powerful country by designing ".

4. Greenhouse and Field: Two Field Domains that Cultivate Designers
The greenhouse shelters the weak seeds from the wind and rain. At the same time, carefully cared for in the greenhouse, the seeds are germinating, and growing with branches and leaves, and then transplanted into the appropriate fields, with the appropriate sunshine and rain, it is growing into the owners of the fields.

4.1. Greenhouse: Colleges and Universities are the Visiting Field to Train Designers
Excellent and qualified designers need not only theories and professional education from design universities, but also practical operation and vocational training of social industries. However, looking at the current situation of art design education in China, the current development speed of industry far exceeds the pace of the reform of university design education, so it is difficult for the cultivated talents to meet the needs of industry, that is to say, the university design education fails to meet the needs of industry for the cultivation of design talents. In 2015, the definition of industrial design was rewritten and updated, which further put forward new requirements for design education. However, " it takes ten years grow trees but a hundred to rear people", so talent training is not a problem that can be solved in a short time. At the same time, professional education lags behind the development of industry, which does not exist only in the design specialty. Almost all colleges and universities have this problem in their professional education, but the particularity of the design industry determines that the design is always related to the cutting-edge new technology, new materials, and new users’ needs and so on, therefore, there is a clear distance between the two endpoints of talent output on campus and social input. The change of ideas is equally important for educators and students. It must be clarified that the four-year college education is not equal to lifelong vocational education. Design innovation and change, not only refers to the transition and originality of design thinking, but also to the dynamic process of design practice constantly seeking the best solution because of the ever-changing market and challenges. Although students majoring in design are armed with design theories and methods in colleges and universities, their accumulated application skills and experience are difficult to fully deal with the actual work. Just as the result of ideal state and formula calculus, there is always a little practical error. Thus, colleges and universities are just an visiting field to train designers.

4.2. Fields: Society is the home field for designers to grow up
The words that "Genuine knowledge comes from practice" and "learning by doing" are the best generalizations of the professional characteristics of design. Before the Industrial Revolution, design was a craftsman's explicit or implicit workmanship and skills. The comprehensive activities of eyes,
hands and hearts and their characteristics are also the common basis of art and design. Because of the practicality of design major, students need to enter the real social work environment to gradually release the energy accumulated in school. Even more simply and crudely, as for time and energy in the training of design talents, no famous school can guarantee that the four-year knowledge reserve can cope with more than 40 years’ professional careers. Therefore, society is the home field for designers to grow up.

5. Enlightenment to the Growth and Development of Designers
Design industry is a service industry with the characteristics of "production relationship", which is facing the real industry. Design industry is related to any real industry, but it does not belong to any real industry. This "inter-" nature determines that design activities are the key to the design industry, and designers are the main body of activities. Design industry is naturally related to art culture, science and technology, and commercial economy, which makes it necessary for design education to enable designers to adapt to and actively "connect, integrate, cross and merge" among industries, disciplines, technologies and humanities, human knowledge and material knowledge.

To be an excellent designer, the concept of lifelong learning should be established and the habit of autonomous learning and active thinking should be developed from the time of students. For the students majoring in design, only with lifelong learning, self-learning, active thinking and daring to take the responsibility can they meet the future professional needs. It is suggested that designers take the initiative to shoulder the social responsibility and national responsibility, to serve life and society by design, to carry out design in a responsible manner, to lead life with a healthy and positive concept.

One of the external reasons for training designers is the transformation of university design education to meet the needs of industry. On the one hand, design universities strengthen their relationship with industry, such as establishing normal and two-way communication with enterprises, and penetrating enterprise projects and research contents into professional courses. Enterprises hold special design lectures from time to time in schools. Even career guidance courses consist of interviewing teams composed directly of human resources departments and design directors of enterprises, which can make it not only courses but also a real job interview drill. On the other hand, the industry's demand for design talents can also complement each other from the social education level to establish the professional growth education mechanism for designers. Only professional college education is not enough, the follow-up professional development and training for the designers, that is, design graduates, such as specialized design posts and highly targeted skills training. In addition, more and more enterprises have paid more attention to the training and growth of designers, and more and more industry designers have participated in the seminars of design conferences and workshops at home and abroad.

6. Conclusions
There are many issues of the growth and development of Chinese designers for industrial that should also be considered. How can greenhouses better let seeds take root, germinate, branch and blossom? How can greenhouse make seeds better adapt to the new environment, the field, after growing? What kind of soil is needed in the field to make the seeds grow strong and bear fruit? The similarities and differences in climate between greenhouse and field are also important determinants. The sustainable output of high-quality design talents and the knowledge management of professional designers are also issues that need to be considered in design education.

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