

# A Genealogy of Drawings: The Evolution of Fine-arts Architectural Education

Toward history, we should be tolerant as it assimilates various stories so as to memorize the rise and decline we were, and we are experiencing.

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Drawings were introduced into architectural education as long as the formal architectural education was set up. Afterward, discussion on drawings continued growing in accordance with the changing of the definition of architects, the upgrading of drawing techniques, as well as the transformation of social backgrounds. As traditional paper drawings are weakened by fast digital representation today, in some senses, to rethink the limitations and contributions of academic drawing system, which is regarded as a significant part of academic design, will reflect changes of historical consciousness in architectural education.

Literally, *history* is a narrative term, looking backward to the past, while *tradition* is a contemporary discourse, probing the former from the present perspective. These two intertextual aspects constitute the foundation of architectural history research. Drawings, as the basic representation approach of architectural design, stem from the Ecole des Beaux-Arts which is known as *Academicism*. Therefore the rise and decline of drawings closely relates to the controversy of Beaux-Arts tradition.

## FADING OF TRADITION

The academic education in Beaux-Arts is the start point of formal professional architect training. From the academic view, architecture is regarded essentially as a fine art in which principles of formal composition of the classical tradition are considered of first importance.<sup>1</sup> The duplicating of those sophisticated fragments, of course, as well as their composition principles, inspired architects enthusiasm in archeology and obsession in rendering. Thereby a scientific drawing system, including sketches and rendering of plan, elevation and section, was set up to serve such aesthetic value. In the 1920s, the academic drawings were attacked by some modernism motivators as “paper architecture” due to increasing enthusiasm in exaggerated depiction of ornaments and details. Thus the dignity and orthodox of academicism was denounced as conservatism. When the Beaux-Arts education was eventually sentenced to the end in 1968, everyone took it for granted.

Although architectural representation approaches are various in the present time, the consciousness that architecture is a fine art has never changed. There were several slightly

revivals of Beaux-Arts in the following decades, with memory to humanity in the neo-classical period, including the traditional drawing skills. Compare to modern and post-modern representation, there is nothing but freehand sketch can grasp the preliminary ideas of design right in time. Essentially, most radical views against Academicism can be explained as rejection to its classical tastes and forms which were associated with social ideology. In other words, the objectivity of drawings which is irrelevant to fashions intends to be timeless. That is why rendering was abandoned while drawing system remained. Therefore, review on the evolution of architectural drawings draws out the dual attitudes toward tradition: instant and constant.

### ART OF IDEALISM

The Ecole des Beaux-Arts divided into 3 sections: painting, sculpture, and architecture, which all followed aesthetic disciplines of classical fine arts. The pedagogy in the Fine-Arts college triggered controversy of definition of architects and artists. Donald Drew Egbert redefined "Architect" from four fundamentally different points: the academic, the craft, the technological, and the sociological, in his manual *"The Beaux-Arts Tradition in French Architecture"*.<sup>2</sup> The professional training at the Ecole should exactly be the academic one in which elaborated drawings of the classical fragments were considered of first importance. In that case, what is the difference between paintings and architectural drawings?

Architects do not depict buildings as they appear to the eye of the beholders due to the conviction about the theory of orders which is based on classical idealism. The system of plan, elevation and section is idealized abstraction of the real world. Perspectives, with fixed observers, immobile perceptual fields, stable visual scopes, were not asked for in Grand Prix de Rome d'Architecture, even specifically forbidden in 1786 and 1787 as they were not objective projection of architectural thoughts. Such ideological representation standards did ensure the scientific drawing system to be neutral without too much impact of personal operation.

On the other hand, to fulfil the classical aesthetics, academic architects developed a way, which led them closer to artists, to refine academic drawings. Rendering was supposed to use ink to depict stereoscopic buildings in two-dimension versions (Figure 1). Those classical antiques and patterns were adequately expressed under the elaborately described casting shadows. However, this time-consuming and complicated process could not avoid the involvement of styles and forms which were related to the prospect of the authority and public. Visual fashions took the priority to memorize the dignity and glory toward the past. Simultaneously, academic drawings, specifically rendering, turned to be a tool to serve "moment" during history and resulted in the paradox between ideality and reality. Therefore, it is another perspective to understand why enthusiasm for rendering has faded away, while the scientific system becomes timeless.

### OBJECTIVITY OF DRAWING

Construction does not always rely on drawings. Before the development of drawings, craftsmen who could themselves erect building, instead of making designs to be carried out by others, often used language and literature to record the building process (nowadays the approach is still in existence). Then as a much more visualized and efficient way to convey building techniques, drawings were introduced into professional training. Architectural drawings in ancient China were used by craftsmen to express constructing process in detail, describing the position and conjunction of architectural components, while drawings in the western academy aimed to represent aesthetic value by visual "realism". Because the former tried to express the logic stemming from materials and constructing, rather than to deploy them according to routine composition principles, the images it presented to us were much more concise (Figure 2).

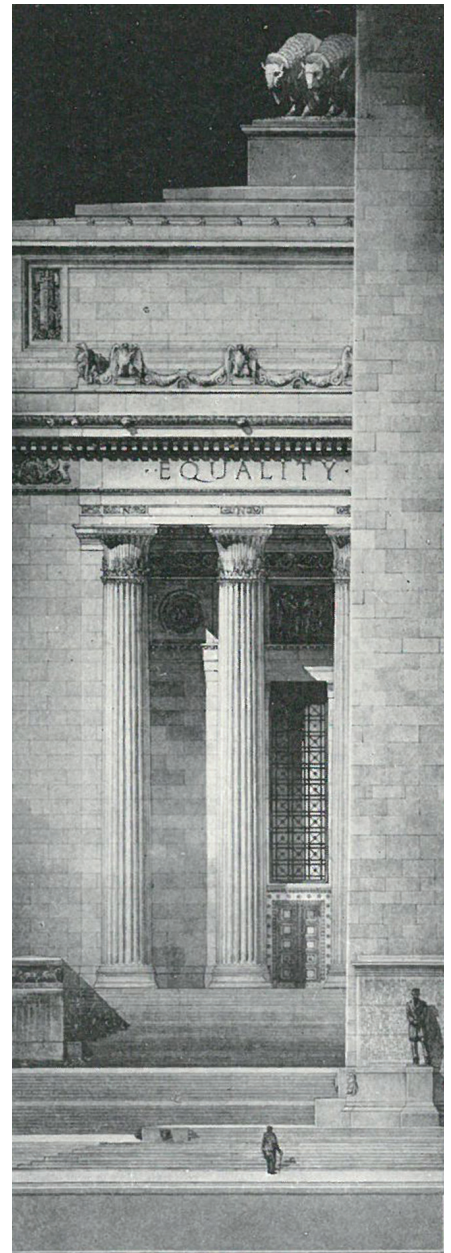
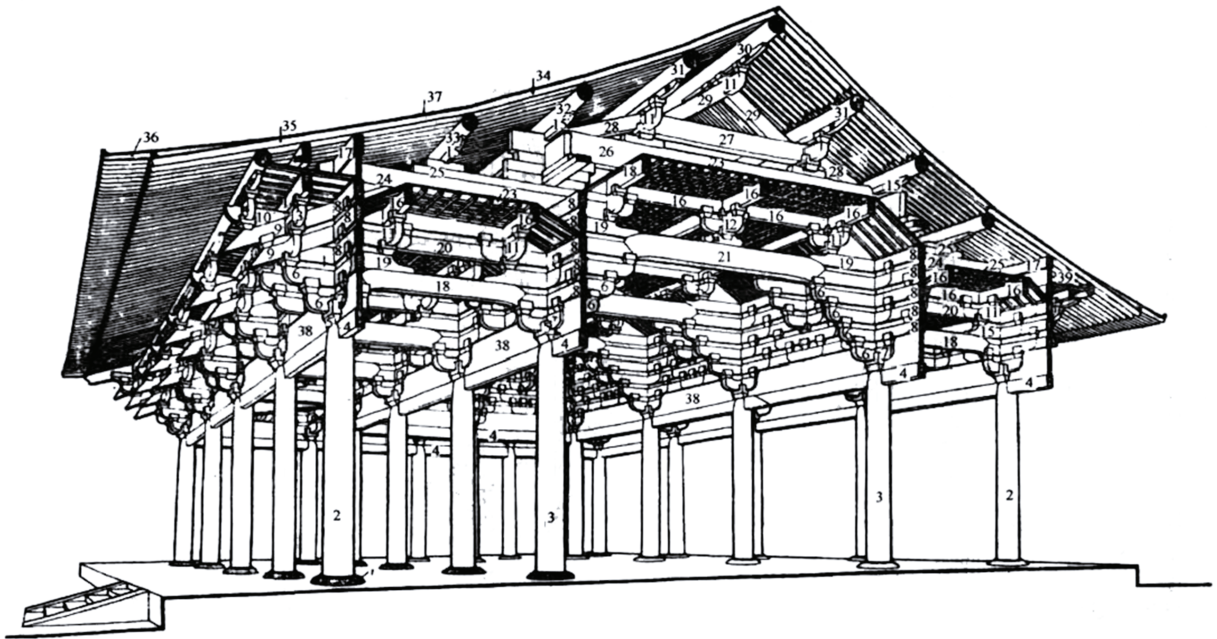


Figure 1: Elevation Drawing by Paul Cret, pencil over watercolour, from Joan F. Harbeson, "The Study of Architectural Design," The Pencil Points Press, 1927

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These two ideas mentioned above encountered in China in the 1920s. Formal education of architects training was set up with the American Beaux-Arts<sup>3</sup> making its way across the Pacific. This complete collegiate education system challenged toward Chinese tradition. A question arose over: how to implement this exotic academic system, and preserve the existing cultural tradition simultaneously. Essentially, the answer is about instant and constant, while drawing is the key to it.

Due to the marvelous popularity of Academicism, the apprenticeship in tradition workshop was replaced instantly at the beginning. Meantime, Chinese drawings were weakened by visualized rendering of classical European forms. However, in the 1930s, some pioneers made important attempts to revive the awareness of nationalism by introducing Chinese architectural training into collegiate education. In addition, nationalism inspired historians in the field of archaeology of Chinese constructions. Compared to the design training, history research kept its relatively independent works. *Society for the Study of Chinese Architecture*<sup>4</sup> was an association which dedicated to systemize traditional architecture in China. Their works resulted in the renaissance of architectural line drawings and revealed the constructing logic of traditional structures as well.

In the 1950s, centralization of the authority in China reformed the attitudes and approaches toward tradition preservation. Resulting from the impact of ideological identification to Beaux-Arts from the Soviet Union, the academic education was regarded as the most powerful model to make the great buildings for the nation and groom the talents of their designers. The tendency reversed to fine-arts training of the Ecole once again. In order to enlarge absolute authority of the government, national architecture symbols were linguistically used to reinforce impression of Chinese tradition. For instance, as a well-known experiment, Chinese composition practice, which was based on the western composition practice, intended to represent the forms, structures, details and materials of traditional Chinese buildings with monochrome rendering skills (Figure 3). As a result, most of these works honored the aesthetic of fine arts rather than design with too much concentration on the trick of light and shadow. Frankly speaking, the composition, which satisfied visual entertainment, took the place of “timeless” constructing logic. It might be a period of “lost”, the time we suspected our national tradition.

Figure 2: Drawing of main building of Foguan Temple, Shanxi, China, see Guxi Pan, “History of Chinese Architecture,” Beijing: China Architecture & Building Press, 2004: 148

However, with the imitation and compromise to western system, a rigorous standard of educational institution had been established. The transformation in the 1950s led to localization of academic training, which we called *Chinese Beaux-Arts*.

### ACCESS TO SPATIAL DESIGN

In the 1960s, a new pedagogy stemming from a series of teaching experiments in Texas, the United States spread out over the world. In the past half of century, rendering was always the main issue of the controversy as it was an imitation to classical forms and styles. Projects were carried out superficially on the level of representation, with less reference to the cause, meaning, and content of architectural space. Therefore, the educators were seeking a way to make design “teachable”<sup>5</sup> rather than relying on purely empirical methods.

However, in China, the transformation did not took place until the 1980s. Some educators became increasingly unsatisfied with the situation in architectural education which was still under the shadow of Academicism. The question is how to replace the strong “artistic” personality with more rational design ability. So the changes firstly started from the revolution of representation medium.

Fine arts are the start point of architecture, but not the unique eventual destination. Besides freehand sketches and notes, models became much more popular to record the process of design. Drawing-making from the Ecole des Beaux-Arts and model-making from the Bauhaus were stressed equally in this new pedagogy. There were two characters to distinguish the model from the drawings: its conciseness independent from styles or forms, and its intuition associated with internality and autonomy of architecture. In term of the representation of architecture space, modelling, in some sense, could be seemed as an approach of “Spatial Drawing”. As the experience determined the consequences of design, the dynamic and coincidence in cutting, sticking and moving developed the two-dimensional thinking which was based on paper drawings into a more perceptible world.

However, the determination to separate from Fine arts gradually led to denigration of teaching methods adapting from the Ecole des Beaux-Arts regardless of its tremendous achievements in the early years. Actually, excluding “art” representation, academic architects were also proficient in the organization of functions and spaces. Although drawing-orientated design could not provide more prototypes of architecture, drawings were doubtfully the most basic ability of professional architects owing to the directly link to our thoughts. Relating to the new pedagogy, there came up with the dilemma that time distributed on new mediums made more and more young students intend to say no to pencils. Fortunately, the signal of the fading of tradition has driven some schools to appeal to a revival of hand drawings which indicates the artistic inherence of architects from the 1990s until now.

### TOWARD HISTORY

The ambiguous attitude toward history is not a compromise to old-fashion, but leverage between history and contemporary. Academicism, as a page of history, deserves justice not only in history study, but also in the mind of architects and educators. During the decades of radical transformation, what we lose is actually much more than what we gain, although the aim to “cultivate professional architects” has never changed since the establishment of the academic education.

At the end of the 19th century, Brooklyn poet Walt Whitman decried New York City’s “pull-down-and build over again spirit”. The remarkable pace of change only accelerated over the following generations, devoting to preserve the city’s historical buildings. The same is architectural education. Contemporary education will finally turn into a part of history. Toward history, we should be tolerant as it assimilates various stories so as to memorize the rise and decline we were, and we are experiencing.

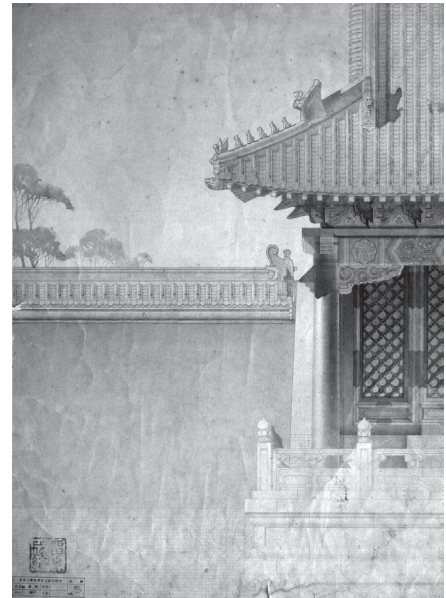


Figure 3: Drawing of Chinese architectural composition by Jiasheng Bao, the graduate from Nanjing Institute of Technology, 1955

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### ENDNOTES

1. The details and effects on the Beaux-Arts architectural education see Daqing Gu, “Introductory Education in Architectural Design: The Design Studio: Its Formation and Pedagogy,” Doctoral Dissertation, the Swiss Federal Institute of Technology Zurich, 1994; and Yong Shan, “Historic Studies of Western Academicism of Architectural Education,” Nanjing: Southeast University Press, 2012.
2. More on categories of architects see Donald Drew Egbert, “The Beaux-Arts Tradition in French Architecture: Illustrated by the Grand Prix de Rome,” Princeton University Press, 1980: 3.
3. Description of the evolution of Architectural education in the United States in the early 20th century see Arthur Clason Weatherhead, “The History of Collegiate Education in Architecture in the United States,” Doctoral Dissertation, Columbia University, 1941 ; and Joan Ockman, “Architecture School: Three Centuries of Educating Architects in North American,” the MIT Press, 2012.
4. Personal association founded 1930; dissolved 1946; made a significant contribution to the development of Chinese architectural history research by traditional architecture measurement, as well as archives and documents collection.
5. Details on this rational teaching experiment in Texas see Alexander Caragonne, “The Texas Rangers: notes from an architectural underground,” the MIT Press, 1994.