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DRAWING AS A LESSON FROM THE BUILT HERITAGE

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Abstract

The notion of drawing skills that an architect shall be equipped with has several aspects. First of all, drawing can be used as an instrument for learning the principles of defining space, its scale, composition and architectural detail. Sketches and studies of existing buildings help an architect understand the way they were assembled. These drawings represent, therefore, a compulsory phase in building up one's skills as an architect. Such is the goal of the outdoor drawing, considered as an important teaching method since the 17th century, when the French king Louis XIV founded the Prix de Rome. This drawing scholarship has endured till the 20th century and is still being imitated in other lands, giving students a possibility to gain knowledge directly from the greatest works of architecture.

Keywords: *freehand drawing*, *a study*, *drawing scholarship*, *education of an architect*

Streszczenie

Na warsztat rysunkowy architekta składa się kilka jego rodzajów. Przede wszystkim jest to rysunek służący uczeniu się prawideł kształtowania przestrzeni, jej skali, zasad kompozycji oraz tworzenia detalu. Szkice odręczne oraz studia istniejących budowli służą architektowi jako środek pozyskania wiedzy o tym, jak zostały one zbudowane. Rysunki te stanowią wobec tego niezbędny element w budowaniu warsztatu pracy projektanta. Taki jest cel rysowania w terenie, uznany za ważną metodę nauczania dla architektów już w XVII-tym wieku, kiedy król francuski Ludwik XIV ufundował nagrodę Prix de Rome. To stypendium rysunkowe przetrwało do XX wieku i jest nadal naśladowane w innych krajach, dając studentom możliwość zdobywania wiedzy bezpośrednio od największych dzieł architektury.

Słowa kluczowe: *rysunek odręczny*, *studium, stypendium rysunkowe*, *proces kształcenia architekta*

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The drawing skills of an architect, being his basic tools of work and communication, reflect not only his innate talent, but also the knowledge he has gained. In its widest sense, this notion covers the whole range of kinds of drawing and related tools. As first comes to mind the freehand drawing, which is often made as a pencil or a pen sketch, but also allows the author to reach for various painting techniques. Secondly, we ought to mention the scale drawing which permits to combine techniques typical of freehand drawing with the use of drafting tools. A particular place in the architect's workshop is obviously attributed to the project, which is a complete vision of a designed building. Essentially, a project consists of a two-dimensional representation of the space imagined. Once drafted with ink on tracing-paper, it is nowadays being widely replaced by the computer. The Computer Aided Design is now involved in every stage of design. We willingly reach out for it more and more often because of its convenience and great representation possibilities. The increasing use of computers by architects is not anymore limited to drafting, but it stretches out to become a tool of defining a three-dimensional concept as well as its aesthetic expression. Despite all its advantages, computer drawing cannot replace one of the most elementary aspects of the architect's training which is the drawing intended as a didactic tool.

When it comes to its place in the architect's formation, drawing helps to learn the principles of defining space and its scale, as well as the rules of architectural composition and detail. Freehand sketches and scaled studies of existing buildings, also those made with the use of drafting tools, serve an architect as means to gain knowledge about how they were assembled. These drawings are, therefore, a compulsory stage in developing an architect's professional skills, allowing him to seize the order and the elements of architectural form's construction. Yet, this knowledge is essential in the design practice and it might even serve as foundations for one's approach to work. This was the case of Louis I. Kahn, who based his individual definition of the ornament, far from its usual purpose as added adornment, on his observations of the buildings he drew. For Kahn, the ornament comes from "the glory of the joint"[1] and so it plays an important role in communication with the user, by demonstrating the building's order of construction Even though Louis I. Kahn does not state it, his reflections on this subject seem to have their source in his sketches of the classical edifices, whose elements of décor, like metope or triglyph, resulted directly from the order of construction.

Sketching existing architecture is, at the same time, a method of analysing its spatial context, consciously or subconsciously giving an insight into such notions as proportion, rhythm or harmony. The Vitruvian traits of architecture can therefore be experienced by means of drawing, which allows an architect to absorb them better than from reading. Such is the goal of outdoor drawing, which has been considered an important teaching method for architects since the 17th century, when the French king Louis XIV founded the Prix de Rome. Awarded to the most talented architects and artists, this scholarship allowed them to spend a few years in Rome, where they contributed to an extensive project led by the prestigious Académie française de Rome (est. 1666). Its aim was to document and to create reconstructions of ancient Roman edifices. The target of these studies was limited neither

[1] L.I. Kahn, *Talk at the Conclusion of the Otterlo Congress*, 1959, [In:] L. Kahn, *Essential texts*, red. R. Twombly, New York–London 2003, p. 60.

to improving skills of the *envoyés* as individuals nor to gathering information about the monuments of ancient Rome. More importantly, they aimed at identifying and describing the composition principles of the Roman architecture and at transferring them afterwards to the French ground. Considered perfect since the Renaissance, the ancient edifices were precisely analysed with a particular regard to their proportions, elements and rules of their composition and architectural detail. The works of the *pensionnaires* of Académie française de Rome formed, in a way, a sourcebook of inspirations for the French architects of baroque palaces built at that time in Île-de-France region. Among other realisations of the epoch, the famous extension of Versailles was ordered by the French king Louis XIV, founder of discussed scholarship.

The interest in subsequent studies brought from Rome was not lesser during the following centuries. The French neoclassicism continued to derive from antiquity. Besides the most obvious facts, like the one that the Architectural Orders were still compulsorily used in formal architecture of institutions, it ought to be mentioned that some of the most famous edifices of the epoch had their initial concept based on the ancient Roman monuments. A perfect example is the church of St. Geneviève in Paris, inspired by the Pantheon in Rome and known nowadays also as Panthéon. It was designed by Jacques-Germain Soufflot, who was never awarded the Prix de Rome but went there for a journey in 1750 accompanying the marquis de Marigny [4]. Moreover, the propagation of illustrations representing renowned masterpieces of classical architecture fed the imagination of the greatest visionary architects of that time, like Claude-Nicolas Ledoux or Étienne-Louis Boullée. The famous perspective vision of the Royal Library (Ill. 2), presented by the latter in 1785, was admittedly modeled on the Pantheon in Rome (Ill. 1). This project, which transformed Pantheon's centrally opened dome into a vault with a full-length axial slit, was a challenge that the epoch's technical possibilities could not meet. Besides the evident reference to the widely renowned ancient masterpieces, the visionary propositions of Ledoux and Boullée showed an influence of Giovanni Battista Piranesi's individual drawing manner. Passionate about Rome, Piranesi's etchings were back then a great inspiration for the artists, and for the *pensionnaires* of Académie française de Rome in particular. For many designers of the epoch, the ancient monuments drawn during a sojourn in Rome served often as a literal model rather than only an inspiration. The Arc de Triomphe in Paris, for example, built in the years 1806–1836 as a memorial of Napoleon's victory at Austerlitz and modeled on triumphal arches erected by victorious Caesars of Rome, was designed by Jean-François-Thérèse Chalgrin, a scholar of Académie française de Rome in the years 1759–1763. The Vendôme Column in Paris, ordered for the same occasion by Napoleon and erected in 1810, is actually a copy of the Trajan's Column, which was minutely depicted in 1788 by Charles Percier, also a beneficiary of the Prix de Rome.

Popular at the time and consistent with the idea of cosmopolitanism, shifting of architectural models from one place to another was not limited to the Roman heritage, though. In the second half of the 18th century a French architect Julien-David Le Roy devoted to the ruins of the ancient Greece the illustrated publication entitled „Les ruines des plus beaux monuments de la Grèce", in which he precisely represented the features and the elements of the Architectural Orders. Commenced at the same time, the realisation of the Madeleine Church in Paris initially referred to the Soufflot's design of the church

of St. Geneviève in Paris, both by its concept and a corinthian portico. Abandoned at the time of French Revolution, the construction restarted under Napoleon. Redesigned by an architect Pierre-Alexandre Vignon, La Madeleine was erected in the form of peripteral temple in the Corinthian order, making a sharp reference to the Temple of Olympian Zeus in Athens.

In parallel, the imagination of neoclassical designers was equally influenced by the archeological works led at Pompeii and Herculaneum. Systematically produced documentation, accompanied by the attempts to retrace architectural landscape of these cities, inspired not only architects, historians and artists, but it also particularly nourished the useful objects' design as well as the work of decorators. The discovery of well preserved multicoloured mosaics and frescos delivered a bunch of new motifs which delighted European customers. Apart from inspiring colours, like the renowned Pompeian red, they were especially enchanted by geometrical patterns, garlands, motifs of cherub and satyr, as well as life scenes and animal representations modeled on Pompeian frescos. All these motifs were frequently used for printing wallpapers, very popular at that time and supplied by several producers, for example by the French manufacturer Réveillon.

During the following centuries, the drawings of architectural masterpieces made directly at the place did not cease to influence the designers. They formed, at the same time, a foundation of the sourcebooks containing images of renowned buildings and the architectural details that adorned them. Assembled in such a way, this ample collection of architectural models was a reference from which to derive diverse elements and traits. This source was extensively used by the eclecticism, freely reaching out for motifs typical of different architectural styles, as well as by various revival tendencies. Although the Romantic era, upcoming after the Enlightenment, directed attention of the 19th century society to the medieval architecture, and to the Gothic style in particular, the process of popularising its characteristic features and details itself did not change a lot. As previously for the classical architecture, this process was still based on observation and outdoor drawings of historical monuments. An outstanding development of the Gothic revival in the British Isles was nourished by hundreds of illustrations representing Gothic architecture and its characteristic details. Among their authors it is worth to mention a prominent draftsman Augustus Charles Pugin, whose son, an architect Augustus W.N. Pugin collaborated with Charles Barry on the design of the Palace of Westminster, which contains the two houses of Parliament of the United Kingdom. The Gothic revival became a tradition of the Pugins family, followed by the brother and both sons of Augustus W.N. Pugin. Another distinguished draughtsman and art critic of the Victorian era, John Ruskin, was equally devoted to the Gothic architecture. One of his major publications, entitled "The Stones of Venice" and released in England in the mid 19th century, contained numerous etchings and sketches representing Venetian monuments. This three-volume opus did not limit itself to depict those buildings, but it convinced that their Gothic detailing gave the artists more freedom of creation. According to Ruskin, the Gothic's naturalism, not subjected to the mathematical descriptions, resulted from the artists' intention to represent the inspirations derived from the surrounding world in the most sincere way[2]. At the same time, Ruskin resisted to the fixed separation between the

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[2] J. Ruskin, *The Stones of Venice*, ed. J.G. Links, New York 1960, p. 169.

designer and the executive of an ornament, thereby forming a moral foundation for the Arts and Crafts movement.

Thanks to the publications that revealed what benefits an architect can draw from a direct contact with the masterpieces of architecture, the outdoor drawing became a tradition and was made an integral part of the formation for architects. It was since then compulsory not only for those students who were granted a scholarship in order to produce illustrated documentation of historical buildings, but for any ambitious architect. Conscious of a financial barrier preventing students from organising study trips on their own, wealthy philanthropists and institutions granted drawing scholarships to the students selected in a competition. One of the awarded architects in such a competition was Charles Rennie Mackintosh, who left for Italy in 1890 [10]. He started his journey in Naples and, after visiting Sicily and Pompeii, he set off to the north stopping in every place famous for architecture. Unlike the precise documentation produced by the *pensionnaires* of Académie française de Rome, the journey of Mackintosh had for its goal mainly sketches and watercolour paintings which gave the author the possibility to cognize and consolidate a wide number of works of art and architecture. In the margins of his drawings of façades Mackintosh often placed schematic sections of cornices and frames, as well as the fragments of ornamentation, paintings and mosaics. Comparing the works brought by Mackintosh from his journey to Italy with those previously made by the scholars of the Prix de Rome, one can observe certain process leading to faster and, at the same time, more superficial comprehension of a greater number of architectural styles and their traits. The outdoor drawing became thus a lesson of history of architecture, supposed to give the basic knowledge on this subject and, at the same time, assist an architect's imagination.

At the threshold of the 20th century travelling with a sketchbook around Europe and further became common. These journeys were usually interrupted by a few months of internship, taken generally during winter in an atelier of an already recognised architect. According to this trend, in 1907 Charles-Edouard Jeanneret began a four-year-long period of travelling around Europe. Like Mackintosh and many other architects before, he started his journey in Italy, where he was most concentrated on the Gothic monuments of Florence, Siena, Lucca, Ravenna and Venice. On his sketches Jeanneret also used to write down short notes that would help him afterwards recall the observations he made regarding buildings' proportions or detailing [2].

As far as the European students were concerned, a journey to the "sources" of architecture was achievable even without obtaining funds. However, for those who lived overseas such an excursion was often done once in a lifetime. In order to provide the most talented with a chance to gain the knowledge of defining space directly from the greatest masterpieces of architecture and, at the same time, to support the education of native architects, this field of study was covered by the American scholarship programme known as the Rome Prize. Selected in a competition, the laureates were delegated to the American Academy in Rome (est. 1894) where they participated in drawing classes as well as in various excursions led by experts in architecture and history of ancient Rome. The sojourn in Rome gave them also an opportunity to visit Greece and Egypt. Among the architects who were awarded the Rome Prize one finds, for example, George Howe (1947), Louis I. Kahn (1951) and Robert Venturi (1956). Their sojourn in Rome was without a doubt significant for the

development of postwar American architecture, and for the postmodernism in particular. For Louis I. Kahn his direct contact with the classical architecture was a source of reflections on the primordial purpose of architecture, that is to provide a given activity of human with an appropriate space. The Roman architecture also gave him the idea of interdependence of structure and light, which later became one of Kahn's essential principles of defining space. For Robert Venturi, whereas, the stay in Rome was an occasion to identify those elements among the observed details and traits of classical architecture which would later become a part of his postmodern language.

   The significance of a drawing scholarship or a sketching tour is therefore not limited to improving one's skills, but it nourishes the development of architectural tendencies. Drawing the existing masterpieces helps to understand and to find the answers to the questions that concern the society of the time. These questions were varied in the history: how to give expression of an institution, how to define monumentality or how to express the author's personality. Nowadays, one of the most actual themes of research is the scale of the urban space, yet drawing the existing places can help comprehend the principles of their definition.
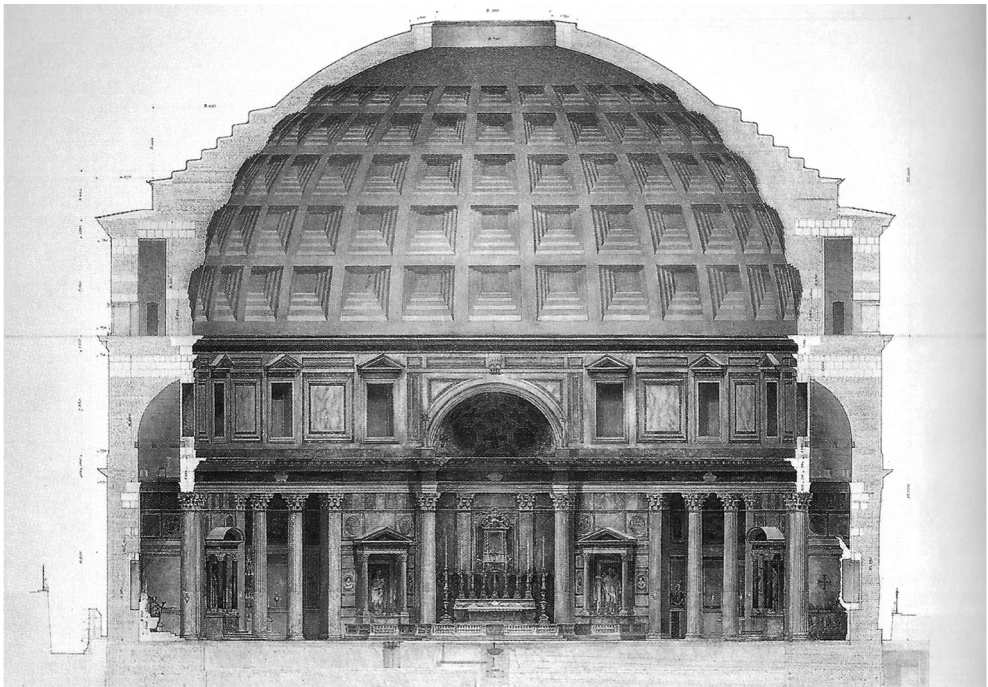
Ill. 1. Georges Chedanne, *The Pantheon*, 1891, in: R. Cassanelli, M. David, E. de Albentiis, A. Jacques, *Ruins of Ancient Rome. The drawings of French architects who won the Prix de Rome 1786–1924*, red. M. David, tł. Th. M. Hartmann, The J. Paul Getty Museum, Los Angeles 2002, p. 156
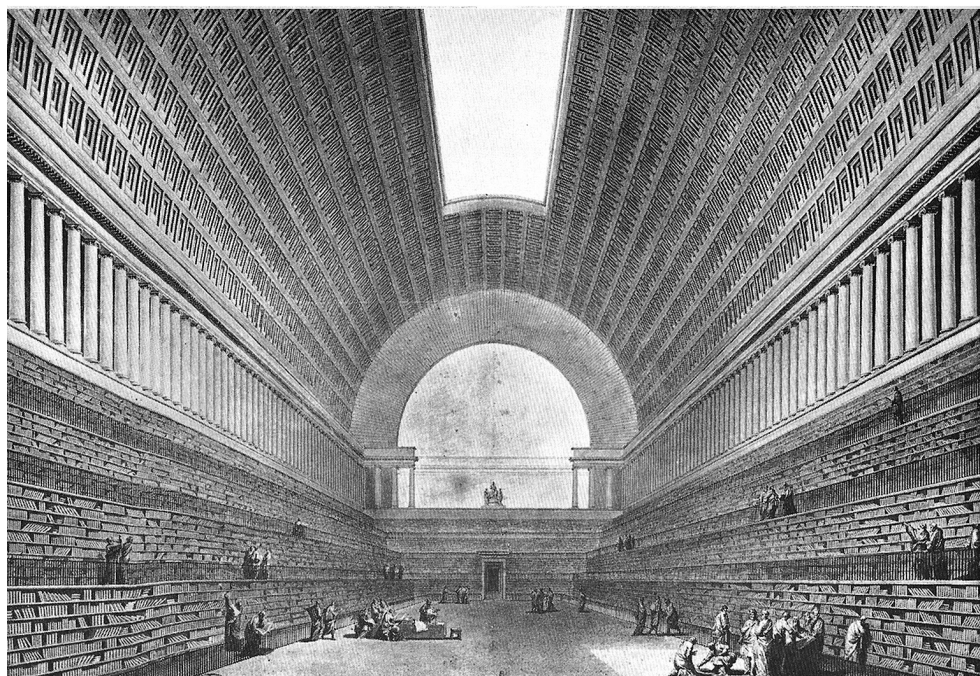
Ill. 2. Étienne-Louis Boullée, *Proposed new hall for expansion of the National Library*, ca. 1780, in: *Visionary Architects. Boullée, Ledoux, Lequeu*, University of St. Thomas, Houston 1968, p. 62

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