

PERSPECTIVE IMAGES OF ARCHITECTURE IN THE PAST AND TODAY – PART I

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Abstract. This paper discusses the issues of architecture illustration in the perspective way, either in the intuitive way originating from observations of nature or in the graphical, geometrical way as well as in the form of computer simulation. Examples of paintings taking up this subject from various periods have been given, with particular emphasis put on Renaissance as the period of heyday in the art of perspective. The status of the perspective in the modern days has been presented as well (its creators and receivers).

Keywords: perspective, architecture in painting

Perspective as drawing discipline has already been known in the Ancient times. Its foundations were created by Euclid (300 B.C.) the author of the ‘Elements’ and treaty on optics. Nevertheless, the influence of his theories on works of artists, painters remains unknown. From Vitruvius’ description (100 B.C.) it results that in the Ancient times scenography was used for creation of an illusion of the reality. The author elaborates this method of depiction of space in the following way: ‘*Scenography* is a shaded drawing of the facade and side walls done in such a way that all of the lines come together in one point – the *center*.’ ¹ The ways of constructing foreshortening were explained by Democritus and Anaxagoras. The oldest paintings of perspective features remained in Pompeii. Fragments of landscape and views of buildings give acceptable effect (Fig. 1).



Fig. 1: Pompeii paintings of 100 B.C.

In the Medieval paintings buildings were presented schematically ‘in a simplified, general, shortened manner, with little care for correct ratios and style character’². They played a symbolic function in religious presentations, filled out the backgrounds, were used to situate a plot or as an attribute of a character (Fig.2a,b). Byzantine art is characterized as dynamic, reversed and created from many points of observance perspective (Fig.2c). Resulting space is unreal, conventional, and distant from reality, having mystical expression.

¹ K. Bartel *Perspektywa malarska* vol.2, PWN, Warszawa 1958

² M. Wallis „Noakowski”, Warszawa 1965, p. 14

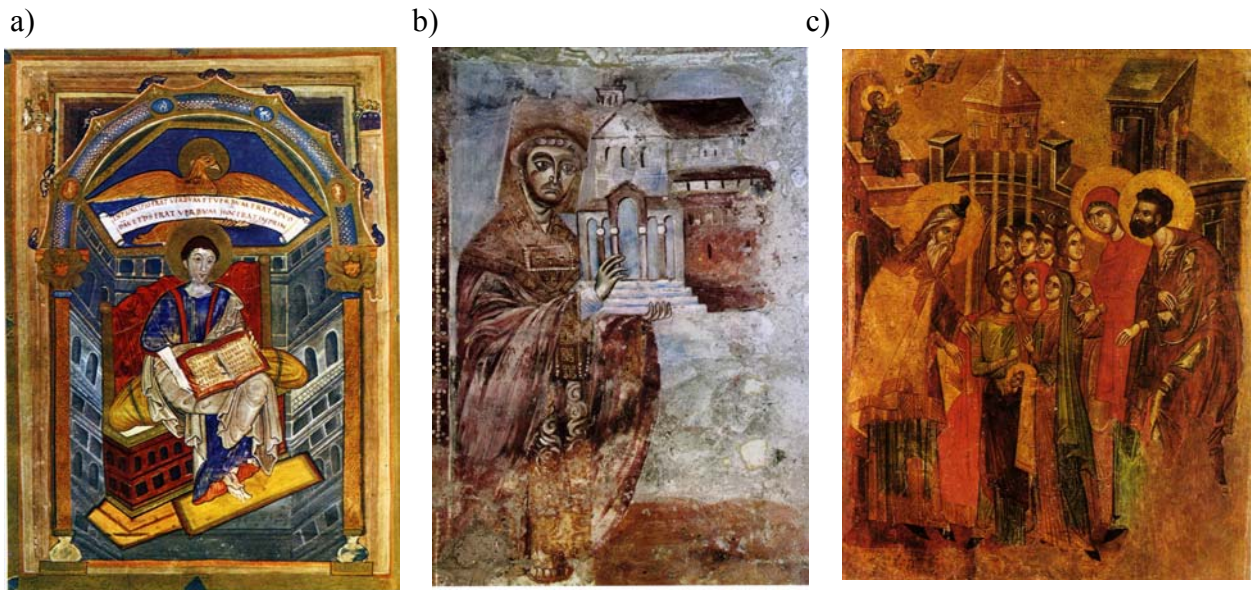


Fig.2: Carolingian painting in 900 A.D (a); Romanesque fresco *Abbot and a church* year 1070 (b); Byzantine painting – fresco of 1295 (c)

Giotto introduced the first elements of classic perspective. He adopted one point of observation known as the viewpoint. He depicted houses in perspective but characters in supernatural sizes, possibly it was intentional, and served emphasizing their importance in religious and symbolic expression of a painting (Fig.3a).

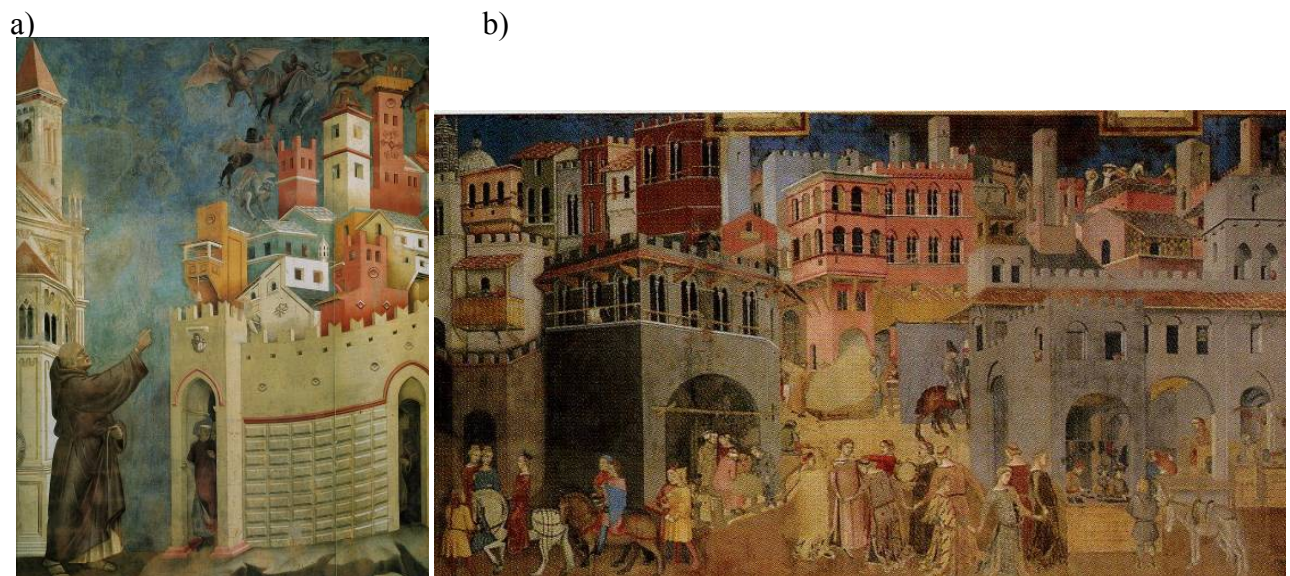


Fig.3: Giotto di Bondone *The Expulsion of the Demons from Arezzo* of 1300 (a); Amrogio Lorenzetti *Fresco of Good Government* of 1339 (b)

Ambrogio Lorenzetti draws a picture of late-Medieval city in wall painting in Siena. Multiple shifting of the viewpoint is visible. The theme of the view is an architecture fantasy (Fig.3b).

In the 15th century due to huge economical and political development of cities, strong growth of cities, it was the city which started to interest painters as theme (Fig.5). Artists tried to depict the similarity, space and depth using the rules of perspective faithfully. They created almost portraits of architecture, which remained a valuable source of information on forms of historic objects.

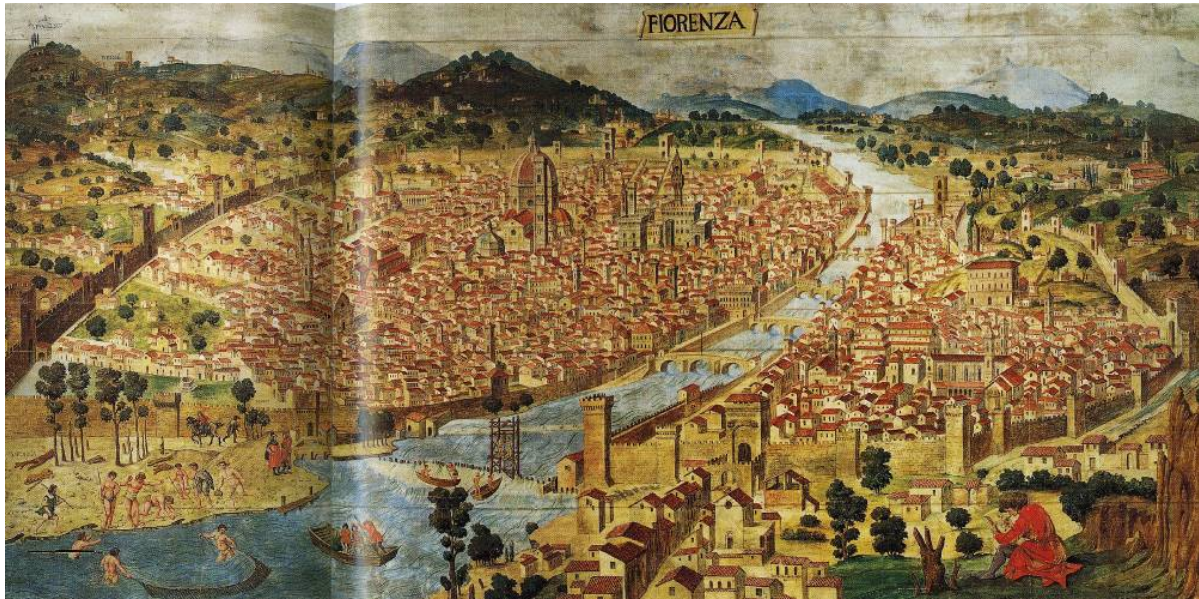


Fig.4: Panorama of Florence – Renaissance

Piero della Francesca was a genius of the perspective, theoretician and painter of the Renaissance period, as well as an author of several treaties where he explains foundations of foreshortening. He presented the method of indirect perspective which is known today as the architectural one. A display of skill of making use of this kind of spatial illustrating is visible in ‘The Ideal City’ painting which is an architectural fantasy (Fig.5). It is a study of a development of a city with no human silhouettes.

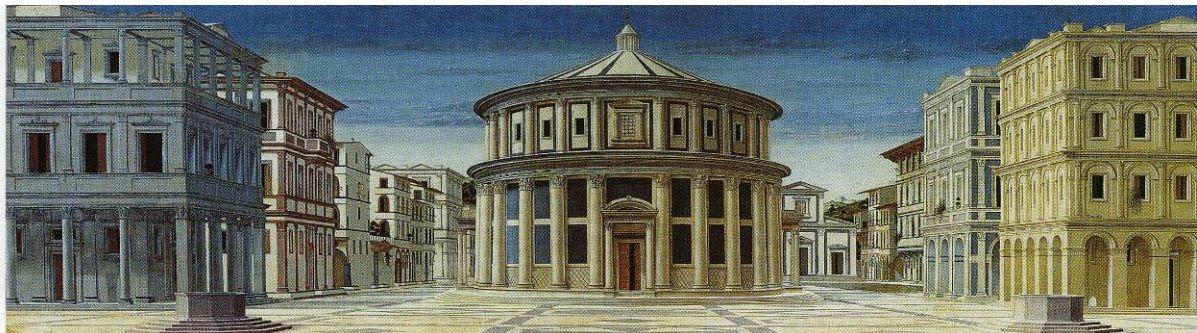


Fig. 5: Piero della Francesca *The Ideal City* half of XVth century

Leonardo da Vinci determined the rules of perspective basing on laws of optics. Apart from linear perspective he developed aerial perspective. Aerial perspective employs varying intensities of colors and contours. Colors saturation and dynamics give an illusion of moving away or towards the object. Creation of painting was most often preceded with drawings and hand made sketches of composing elements of the given painting. These works were not revealed by artists, quite contrary they were destroyed by them. Few which preserved are still a rich source information on the painter’s workshop. An example here is the ‘Perspective’s Etude’ sketch (Fig.6) of Leonardo da Vinci. The painter used output of such Italian architects and perspectivists as: Filippo Brunelleschi, Leon Battista Alberti, authors of treaties on drawing in perspective in particular with the use of a grid of squares, the so called perspective grid. Alberti in his ‘Treaty on painting’ stressed out that he ‘shall work not as a mathematician, but as a painter, because mathematician omits the matter and studies the thing with reason, and painter wishes to see it with the eye’.

Masterful control of the space is visible in the works of Rafael. ‘The School of Athens’ is the most outstanding painting in which he used foreshortening, characteristic for his works.

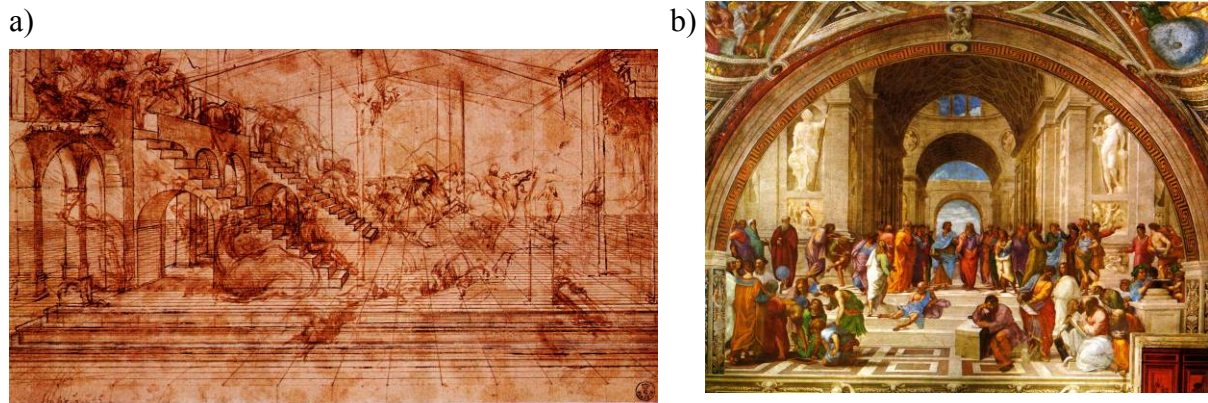


Fig .6: Leonardo da Vinci *Perspective's etude* of 1481 (a); Rafael *The School of Athens* 1511 (b)

During the period of Baroque, techniques of drawing of various perspective depictions, e.g. from several viewpoints, depictions from below, sideways depictions, bird's eye depictions, were developed. Phenomena of perspective illusions were studied and used in particular in paintings of vaults. A fictional architecture, which created a new illusive storey, which was an extension of the already existing elements of the building interior, was created. (Fig.7).



Fig.7: A. Pozzo *Painting in the nave of the St. Ignatius Church in Rome* of 1694

A theme popular at the beginning of the 18th century are interiors of Gothic churches which were painted with great precision and in detailed manner. A picture representative for this trend is Neefs' 'Interior of a Gothic church' painting from 1620. Similarity is only approximate as the author reasoned correctly, that human eye is incapable of noticing small deviations of linear concurrence. Anamorphoses appear in the drawing of the floor.

a)



b)



Fig. 8: Peeter I Neefs *Interior of a Gothic church* 1620 (a); Peter Bruegel *The Tower of Babel* of 1563 (b)

Faithful, realistic representations created from nature, coexisted with free creativity of a mind, which was unhampered like a fantasy, a complete fiction presenting unreal buildings (Fig. 8b).

In the 18th century masterful control of perspective was visible in panoramas and town scenes. Aids were used for construction as well, e.g. ‘camera obscura’ was used. Bernardo Belotto known as Canaletto used it among the others, thanks to it he achieved extraordinary precision and exactness while picturing details of buildings. His architectural portraits, in particular of Warsaw, were very useful during the post World War 2 period and were used for reconstruction of demolished historic buildings (Fig. 9).



Fig. 9: Canaletto: *New Town Market Square with St. Kazimierz Church* 1778 (a); *Dresden* 1747-1753 (b)

In the 19th century departing of painters from rigorous application of perspective construction was noticeable. They used color and aerial perspective in order to picture the space (Fig. 10).

a)



b)

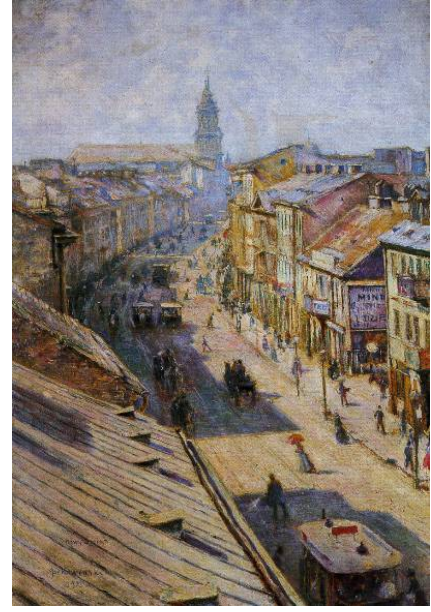


Fig. 10 : Pierre-Auguste Renoir *Pont Neuf, Paris 1872* (a) ;
Władysław Podkowiński *Nowy Świat street in Warsaw of 1892* (b)

The 20th century gives up the convention of realistic, perspective presentations. Rejection of the realistic art and oncoming of photography influenced experiments with individual types of perspective, e.g. curvilinear, cubic or futuristic ones (Fig. 11).

a)



b)

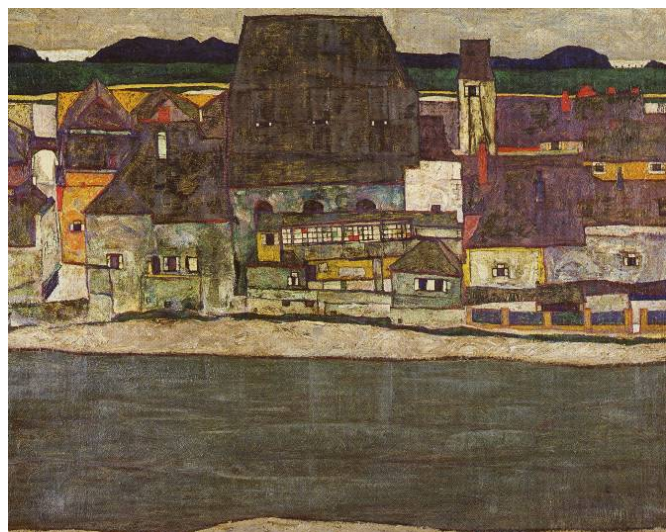


Fig. 11: Marc Chagall *Paris through the window of 1913*(a);
Egon Schiele *House Wall by the River of 1914* (b)

Contemporary views on the perspective as well as tendencies in art will be presented in the next part of the paper.

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O OBRAZACH PERSPEKTYWICZNYCH ARCHITEKTURY DAWNIEJ I DZIŚ

Praca niniejsza podejmuje zagadnienia obrazowania architektury w sposób perspektywiczny zarówno intuicyjny z obserwacji natury jak i wykreślony, geometryczny oraz w formie symulacji komputerowej. Przedstawiono przykłady dzieł malarskich z różnych epok podejmujących tę tematykę, ze szczególnym uwzględnieniem renesansu jako okresu szczytowych osiągnięć sztuki perspektywy. Zaprezentowano również pozycję perspektywy w czasach współczesnych (jej kreatorów oraz odbiorców).