ALTERNATIVE FORMS OF INK AND PEN DRAWING IN CONTEMPORARY HUNGARIAN ARCHITECTURAL GRAPHICS

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Abstract

The pen and ink techniques play basic and important role in the architectural graphics and in the process of the architectural design. The study attempts to summarize and present the basic graphical effects that were achieved by these techniques in the recent Hungarian architectural graphics.

Keywords: architectural graphics, pen drawing, linear drawings, shaded drawings.

1. Introduction

Two phrases in the title of the essay need to be explained in greater detail, namely the terms of architectural graphics and pen drawing call for a more exact definition.

Architectural graphics is the commonly used name for the graphic material created in different phases of the process of architectural planning, a collective name for architectural sketches, planning graphics and view-plan drawings. Similarly graphic works not closely related to architectural planning, created by architects are also regarded as architectural graphics both by the general public and in the architectural profession: sketches and graphics of free association, loosely related to architecture.

The expression graphic itself is slightly confusing too, because in art history by graphic first of all graphic works created with the help of duplicating methods (etchings, prints, etc.) are meant, while as compared to these drawings directly made by hand are distinguished. If the marginal field of computer drawings, which are difficult to define in a classical sense, is removed from the scope of architectural graphics discussed here (which restriction is supported by the fact that my field of research is concentrated on traditional forms of graphic expression, and the present study deals with expression by pen-drawing), then it can be accepted that the use of the word 'drawing' is more correct than the use of the word 'graphic'. We can also agree with H. Hutter, who, on the basis of the terms sculptor drawing and the sculptor's drawing, uses the definitions architectural sketch and the architect's drawing [1], the former phrase defining graphic designs in connection with architectural planning, and the latter phrase defining autonomous drawings created by an architect. So while an architectural sketch is directly related to the individual

phases of the planning process and presentation, the architect's drawing is first of all distinguished from the works of other artists by the fact that its author's approach to architecture involuntarily seeps into the work of art. However, Hutter's statement according to which scheme plans forming the greatest part of works belonging to the category of architectural sketches are 'work drawings directly subordinated to the purpose, without any artistic demand [2] must be argued. It is contradicted by the graphic materials exhibited in architectural galleries all over the world, having an independent – even commercial – value, the artistic construction of the scheme plans prepared in schools of architecture (János Gerle mentions this tendency increasing from the 19th century in his study about the drawings of Imre Makovecz), and among the graphic publications of the present essay there are also scheme plans with an independent aesthetic value. Especially the picture architectures of constructivism and neoplasticism connecting the art of the 20th century and modern architecture, flirting with architectural standards and plan sheets could be artistic examples of similar ideas of planning graphics (*Figs. 1, 2*).

Fig. 1. Matzon, Ákos: Geometer   *Fig. 2*. Rimanóczy, Gyula: Site plan

The influence of these two artistic trends onto each other is mentioned by Pál Pátzay: 'the geometric nature of cubism had and still has a fertilizing effect on modern architecture. It is understandable, as in architecture quantities are designed, and geometry is the measure and logic of quantities' [3]. At the Department of Drawing and the Study of Forms at the Technical University of Budapest during the seminars instructed by Gábor Üveges, assistant lecturer entitled 'From the architecture of picture to the picture of architecture' experiments are carried out through the works of the students.

For the present study I selected graphic materials of varied subjects to represent the complete spectre of genres of architectural sketches and the architects' drawings as much as possible by the drawings, which also have graphic-artistic values.

After all this the phrase 'pen-drawing' also needs to be defined more accurately. Heribert Hutter mentioned above discusses pen-drawings under a smart collective name: 'mediating drawing tools' [4], as the drawing tool itself is only a

mediator through which the ink is applied to the paper.

The tools of pen-drawing in modern graphic art: cane pens, ink-pen, fountain-pens, ink fountain pens, and also self-recording ball pens and different felt-tip pens also belong here, although the latter ones are less popular mainly because of their shorter life and restricted artistic expressiveness.

Brush drawings can also be added to the above, provided that the mediated material is ink, as the technique of backing and filling is an essential element in all studies on pen-drawings.

In fine arts and also in architectural sketches the most commonly used materials for pen-drawings (or brush-drawings) are ink and Indian ink. While earlier on the basic materials of ink were oak-gall and iron vitriol, from the 19th century oak-gall was replaced by chemicals. Inks made of basic materials containing carbon, without the addition of iron are also used.

Deep black ink is gained from the soot of burnt wood (olive, vine). Usually its binding material is acacia gum. The names Indian and Chinese ink refer to the origin of black ink: in ancient Egypt, India and China ink has been the most commonly used painting and writing material for thousands of years. In Europe it has been used since the 15th century, first in a solid form as little square rods, which were rubbed and then diluted with water. Today ink is available and it is used first of all in a diluted form.

The four foundation pillars of planar art expression are: line, tint, colour and finally construction, which unites them all. The structure of the present study is based on pen-drawings and tinted representation, as colours do not play a significant role in the case of an originally monochrome technique, while the composition principles are basic and general standards, which, due to their neutrality with respect to genres, stand for all graphic works universally, including pen-drawings.

2. Linear Techniques

'The line is the spirit and spine of fine arts…

The essence of artistic drawing lies in the expressiveness of lines' [5] – wrote Nándor Lajos Varga . The line is the most expressive tool of a drawing artist, as Bernát Alexander writes: 'Lines will express all sorts of things: strength, delicacy, playfulness, gentleness, power, peace, etc.' [6].

At the same time we must also know about lines, again with the words of Alexander, that 'The line is an abstraction, there are no lines in nature' [7].

The wide-scale expressiveness of a line results from its intellectual richness, which expressiveness culminates in lines drawn in ink.

In architectural graphics two basic appearances of lines can be distinguished: regular lines drawn with a ruler, and less regular, 'many-sided' free-hand lines, which enable expression on a wider scale.

In the drawing by István Janáky showing the façade of the Town Hall of Szombathely (*Fig. 3*) the stricter and freer pattern of the parallel lines drawn close

to each other results in a composite, plastic drawing. The abstract material-like nature conveyed with lines drawn in ink is an expressive and popular method in architectural design. In the drawing the double possibility provided by the ink fountain-pen as a drawing tool can be seen as well as the masterly exploitation of these possibilities: the exact, rather thin lines can be drawn nearly optionally close to each other, and the even effect of the lines, about which Jenõ Barcsay writes the following: 'For me the use of ink fountain-pens drawing an even line instead of ink-pens drawing shaded lines meant great liberation. It forced me to connect the forms in the sight with lines, to write them on the paper, as it were' [8].

Fig. 3. Janáky, István:

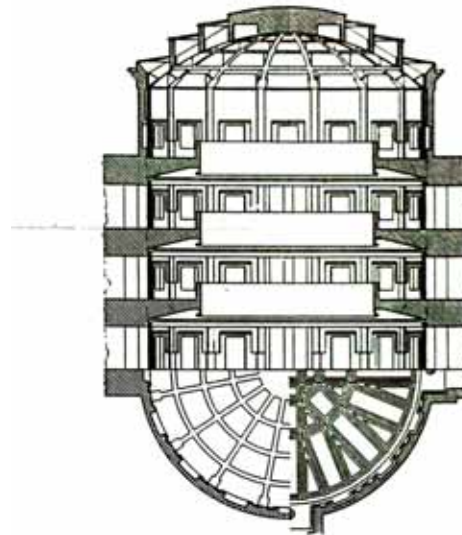*Fig. 4*. Jánossy, György: Staircase
of the Museum in Eger

Fig. 5. Magyar, Péter : State Office Build-
ing in Montgomery

In the drawing by György Jánossy (*Fig. 4*) showing the stairs of the Museum of Eger the lines are dynamic, their pattern suck the viewer into the space of the drawing making the viewer part of the perspective. The primary task of the lines

sketching out the architectural surface only roughly in this case too is to give a surrealistic visual effect.

At the same time a constructed line-drawing can be the media of a clear, calmly constructive, reductionistic architectural sketch; a nice example of this is the graphic world of Péter Magyar, his compositions inspired by classicism, like the section drawing of the State Office Building of Alabama (*Fig. 5*).

Free-hand lines can carry an even more manifold graphic expression or meaning.

The façade plan of Antal Pless Clinic (*Fig. 6*) is a relaxed, elegant line-drawing. The simple lines introduce the main façade elements and the surface raster system in a concentrated way. The slight uncertainty of the line drawn by free hand gives the drawing the freshness of spontaneous thoughts.

Freshness, lightness, the ad hoc character and spontaneity are common features of free-hand line-drawings inducing by this intimacy between the subject, the creator and the viewer of the drawing.

This lightness, the radiation of the skills of an accomplished artist can be detected even on a precisely made drawing with a concrete architectural content, such as the ink-drawing by István Balogh showing the church of Chorin (*Fig. 7*). The drawn façade recreated brick by brick seems to be an authentic depiction and at the same time a genial artistic study due to the variety of free-hand lines.

Fig. 6. Pless, Antal : Policlinic of the 13th District

One of the widest area of using traditional steel or cane ink-pens in line-drawing is the world of sketches and sketch-plans. In these drawings the primary intention of the architect is to record the freshness of an experience quickly, to understand and grab the main point of the sight or thought in order to remember it.

The puritan classicism of the sketch made by Béla Pintér show the remnants of the Roman theatre in Sabratha (*Fig. 8*) makes it an express image of the architectural forms of the ancient world. There are only a few but important and precise sketched lines to radiate authentically the world of forms, vaults, columns and fascia of the Roman era.

With the use of classical ink-pens, which draw thicker lines when pressed down the drawer can emphasise certain elements of the picture, and with the help of lines of different thickness he/she can intensify the sense of perspective reality (it is well-known that thick lines seem closer in space, while lighter, more gently drawn lines seem more distant.)
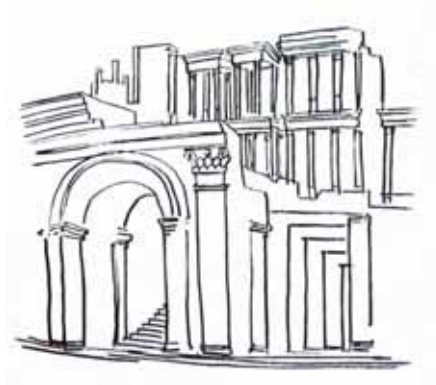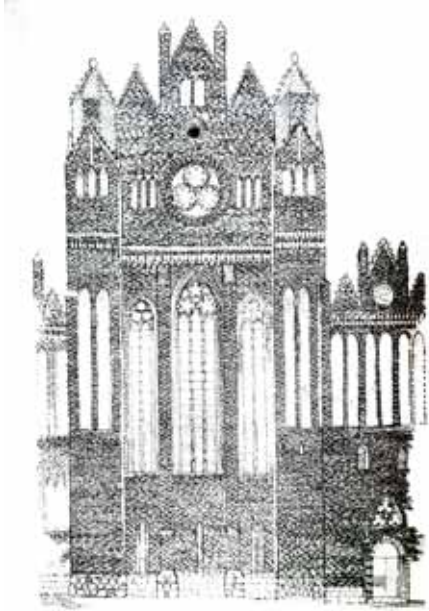
Fig. 7. Balogh, István: Church of Chorin   Fig. 8. Pintér, Béla: Sabratha (1982)

In the drawing by István Balogh showing a street in a small town (*Fig. 9*) and in the drawing by Ferenc Callmeyer showing the fortress church of Prázsmár (*Fig. 10*) the balance between the elements drawn and the elements left out, the proportion par excellence of the sketched and accurately defined architectural forms expresses graphical generosity and confident architectural routine at the same time.

Fig. 9. Balogh, István : Street in a small town Fig. 10. Callmeyer, Ferenc: Prázsmár

Intuitive ink-drawings are also suitable for the quick and substantive repre-sentation of large building groups and landscape elements, like István Balogh's

drawing of the Houses of Parliament in London and the banks of the river Thames drawn with a few quick lines and dynamic composite sketches of the main masses (*Fig. 11*).

Fig. 11. Balogh, István: The bank of the Thames in London

The use of dashed, dotted dash-and-dot lines can make expression by line-drawings even more exquisite. Although in these drawings the delicate values of shaded representation seem to appear, in a technical sense they are still line-drawings. In the general layout plan of the monument in Muhi made by György Vadász (*Fig. 12*) the delicate tissue of continuous and dashed lines gives the picture a continuously changing world of shades. The lines of different directions and intensity create a whirling figurative world, similar to the pattern of a snail shell chosen as a plan view form.

In the graphic of Balázs Méhes showing Michigan Avenue in Chicago (*Fig. 13*) the nearly chaotic set of dots and lines is the adequate and accurate imaging of the gigantic architectural world and bustling life of the American city.

3. Tone Techniques

Although line-drawings themselves can carry a meaningful message, tinted, shaded graphic representation makes the further development of graphic expression possible. First of all plastic representation helps the viewers of the drawing to create a realistic picture of the building, so it advances communication between the creator and the viewers. As compared to picture drawn simply with lines the emotional and intellectual intensity of these drawings may be weaker, but because they give a more perfect picture of reality, they suit the originally mimetic purpose of architectural sketches better.

The shaded surfaces appearing on ink-drawings can be patches or raster tissues created from a network of lines. Patch-like shades can be created by applying the ink onto the paper with a brush, a piece of cotton or any other water-absorbing material. Raster-like shades consist of a set of lines drawn with an ink-pen. Raster lines drawn

Fig. 12. Vadász, György: Site plan of the   *Fig. 13*. Méhes, Balázs: Chicago 2001
Muhi memorial

with an ink fountain-pen or a traditional ink-pen can be distinguished, the former results in even lines, while the latter results in raster lines of various intensity. On the basis of the raster line system three basic procedures can be distinguished. The shade system can be made with regular, parallel lines the regularity of which can even be as strict as the harsh graphic world of classical copper engravings or copper etchings. At the same time a freer, more 'picturesque', more 'confused' – as compared to the one before –, more emotional line system can also be used. The third basic possibility is when the raster of lines follow the forms of the represented subject. Below we shall discuss the individual raster methods, analysing and giving examples of their graphic effects.

In a sketch made by József Finta in Rhodes (*Fig. 14*) the patch-like darkness of sky, supplemented with the deep shades of the shapes and windows, highlights the whiteness of the walls of the houses, and the strong contrast created in this way results in the intensive expressionism of the world of the picture.

The patch-like representation of the environment can be an interesting and important supplement to strictly constructed, accurate architectural representation; in this case the primary graphic value of the drawings lies in the opposition between the preciseness of the drawing and the picture squeness of the background. In the drawing by István Balogh representing a point-block in Szolnok (*Fig. 15*) the gloomy monumentality of the building represented strictly and accurately suiting the world of forms of modern architecture is softly eased by the picturesque patches of clouds and the fine, patch-like shades radiating the presence of the foreground

Fig. 14. Finta, József : Rhodos

and the natural environment.

József Finta has the opposite effect with his graphic representing the tower-blocks of Salgótarján (*Fig. 16*). In the drawing the similarly strict monumentality of the houses is intensified by the agitated background solved with a dramatically intensive contrast of shades: We have the feeling that the building appears in a sharp, cutting flash of light.

Fig. 15. Balogh, István: Highrise building in Szolnok

Fig. 16. Finta, József : Highrise buildings in Salgótarján

The different systems of shades created with a network of lines provide a wide range of possibilities of graphic expression. The technical skills, visual inspiration of the drawing architect as well as his/her intention to express something create a rather great diversity of graphic representation, of which I shall introduce a few basically characteristic examples as the introduction of the complete horizon of drawings would exceed the limits of the present study. Line shades can be made by putting precisely drawn (with a ruler or by free hand) straight lines next to each other. In these drawings the changing of the density of the lines or the changing of the direction of the lines results in shade or surface differences. In the axonomentric drawing of a building by István Balogh (Budapest, Educational Centre in Villányi street) (*Fig. 17*) as a visual rhyming to the architectural and pictorial geometry of the modern building the shading of the background is created with a parallel raster-system of strict linearity, as a modern version of copper etchings.
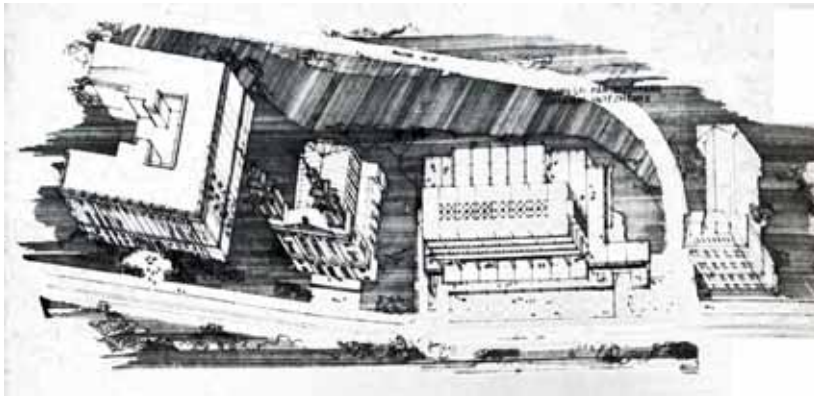

Fig. 17. Balogh, István: Education building in Budapest

In an earlier drawing by István Balogh, the perspective drawing of the Clinic in Budapest, district 13 (*Fig. 18*), the raster-system is the tissue of dynamic parallel lines drawn similarly close to each other, as a result of which the shaded surface suits the slightly lighter appearance of the perspective drawn by free hand.

Fig. 18. Balogh, István: Perspective drawing of the policlinic of the 13th district,

The same 'closely drawn' raster system inspired by copper etchings, with a different line thickness results in the ballad-like atmosphere of the drawing by József Finta representing a Székely gateway (*Fig. 19*).
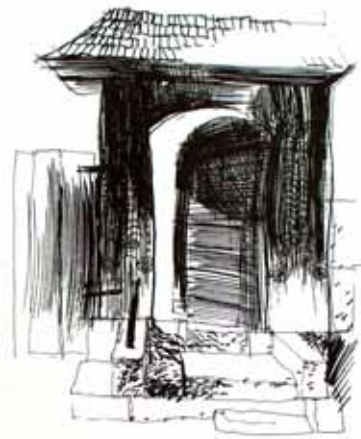

Fig. 19. Finta, József:'Székelykapu'   Fig. 20. Finta, József: Building in Maribor

Free-handed, still geometrically precise raster lines drawn appropriately close to each other in different directions make it possible to draw realizing building perspectives, where the contrast between dark and light shades results in a dynamically expressive drawing such as the drawing by József Finta representing a group of buildings in Maribor (*Fig. 20*).

The intimacy, freshness and dynamism of the sketch, the architectural idea can be expressed better with a more spontaneous raster-system with freer geometry, different from the above, as we can see in the building sketches of György Vadász and József Finta (*Fig. 21*, *Fig. 22*).

Architectural sketches have an outstanding importance both for the history of architecture and for the creating architect, as being a visual witness of the process of architectural creation, they 'promise insight into the creative process, and with their aid artists could top sources that would otherwise remain buried' (Wolfgand Pehnt).

The impressionistic seizure of the raster-system may inspire the creator to make the raster-system even looser and even more distorted, like in the author's drawing representing the Matthias Church (*Fig. 23*), and the raster-tissue may become a 'written system of lines', like in the sketch by István Janáky made in Denmark (*Fig. 24*).

In the study above I intended to examine the possibilities ink and pen drawings offer for architect drawers, and point out the characteristics of these possibilities of expression by introducing a few nice examples of contemporary Hungarian archi-

Fig. 21. Finta, József: "Csillag" buildings
in Salgótarján

Fig. 22. Vadász, György: Sketch

Fig. 23. Nemes, Gábor: Matthias Church

Fig. 24. Janáky, István: Travelbook from
Denmark 1985

tectural graphics. Even in the age of computer representation architectural sketches cannot do completely without the signs of personality in the individual drawings, which personality can be conveyed by pen-drawing perhaps the most sincerely.

At the opening ceremony of the famous exhibition organized in Berlin in 1919 entitled 'Ausstellung für unbekannte Architekten' Adolf Behne said the following about the essence and the role of architectural sketches: 'An architectural sketch continually restimulates the imagination, making it help work, help build, help will'.

Finally, to sum up the above take a look at the allegorical drawing by György Vadász (*Fig. 25*), in which nearly all the graphic tools I mentioned in my study can be found providing a pictorial inventory, as it were.

Fig. 25. Vadász, György: Drawing

References

[1] HUTTER, H., A művészi rajz története és technikája, Corvina 1966 p. 80.
[2] ibidem p. 81.
[3] PÁTZAY, P., A kép becsülete, in Művészet 1975/5 p.8.
[4] HUTTER, H., ibidem p.132.
[5] VARGA, N.L., Vonalművészet, p. 123.
[6] ALEXANDER, B.,Adalék az esztétikai lélektanhoz, Corvina 1969 p.226.
[7] ibidem p.221.
[8] KOVÁTS, A.,A rajzról Corvina 1973 p.34.
[9] PEHNT, W., Expressionist Architecture in Drawings, von Nostrand Reinhold 1985 p. 6.
[10] BEHNE, A.,Austellung der unnbekannte Architekten, 1919 (opening speech)

Special literature on the architectural graphics:

[11] LINFERT, C.,Die Grundlagen der Architekturzeichnung
[12] COULIN, Architekten zeichnen.
[13] BARDON, A., Épitészeti grafika.
[14] MÉHES , B.,Tónus a vonal mentén – a Helyi kontraszt.
[15] GRÓH-SZILAS-TÖRÖK, Épitészeti távlati rajz.
[16] DOBÓ-MOLNÁR-PEITY-RÉPÁS, Reality, Concept, Drawing.

Sources of the presented drawings:

[17] MATZON, Á,Geometer N 1999, in : NET Matzon Ákos(catalogue).
[18] RIMANÓCZY, GY., Site plan , *Magyar Építőművészet*, 1955/11-12. p. 366.
[19] JANÁKY, I., Elevation of the Town Hall in Szombathely, in :A hely, Műszaki Kiadó, 1999, p. 22.
[20] JÁNOSSY, GY., Staircase of the Museum in Eger, in : Jánossy György építőművész, 6BT Kiadó, p. 94.
[21] MAGYAR, P.,State Office Building in Montgomery, Alabama, *Magyar Építőművészet*, 1993/1. p. 53.
[22] PLESS, A.,Policlinic of the 13th District, North elevation *Magyar Építőművészet*, 1955/11-12. p.369.
[23] BALOGH, I., Church of Chorin, in: Balogh, István: Az építészeti forma, Tankönyvkiadó, 1984, p. 96.
[24] PINTÉR, Béla : Sabratha(1982), in:Magyar Építőművészet, 1993/3-4, p. 83.
[25] BALOGH, I.,Street in a Small Town, from the Artist's Archive.
[26] CALLMEYER, F.,Prázsmár, from the artist's archive.
[27] BALOGH, I.,The Bank of the Thames in London, in: Balogh:Az építészeti forma, p. 122.
[28] VADÁSZ, GY., Site Plan of the Muhi Memorial, in: Vadász György, Kijárat Kiadó, p. 44.
[29] MÉHES, B.,Chicago 2001, in: Vámossy Ferenc: A modern mozgalom és a későmodern,Nemzeti Tankönyvkiadó, 2002, p. 385.
[30] FINTA, J.,Rhodos, in: Finta, Mundus , 1997, p. 19.
[31] BALOGH ,I.,Highrise building in Szolnok, in: Műszaki Tervezés, 1967
[32] FINTA, J.,Highrise buildings in Salgótarján, in:Finta, p. 62.
[33] BALOGH, I.,Education building in Budapest, in : Műszaki Tervezés, 1970
[34] BALOGH, I.,Perspective Drawing of the policlinic of the 13th district, *Magyar Építőművészet*, 1955/11-12. p. 365.
[35] FINTA, J'Székelykapu', in: Finta, p. 305.
[36] FINTA, JBuilding in Maribor, in: Magyar Építőművészet, 1993/3-4, p.101.
[37] FINTA J"Csillag" buildings in Salgótarján, in: Finta, p. 44.
[38] VADÁSZ, GYSketch, in: Vadász György, p. 43.
[39] JANÁKY, I., Travelbook from Denmark 1985, in: A hely, p. 86.
[40] VADÁSZ, GY., Drawing, in: Vadász György, p. 174.