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Analysis of Visual Systems of Painting by Schematization

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Abstract

The understanding of painting works as visual systems implies the analysis of these systems by the method of graphic schematization, which allows to the revealing the interaction of all visual elements of the system. Schematization corresponds to the spatial construction of visual images, which is the basis of visual activity. With the help of graphic schematization one can effectively develop the basics of visual literacy, as schematization is the most important tool for any visual studies. The article describes the author's method of visual-graphical analysis of works of painting. One of the key innovations of the author's method is the identification of implied lines rather than depicted lines, which are no less significant elements of visual systems created by the authors of painting works. Examples of this analysis demonstrate the different possibilities and great creative potential of graphic schematization for interpreting and actualizing painting works from different epochs that remain things-in-themselves until today.

Keywords: *visual literacy, schematization, visual systems, analysis of painting*

Introduction

Visual culture has a huge heritage. Is it possible to perceive visual heritage only in the form of art historians' retellings? Visual heritage is one of the most difficult areas of cognition. This is the main informational paradox of visual culture—objects created for perception without verbal comments lose their informational accessibility after the loss of the historical context. “Entire arts—and the greatest of the arts, such as Egyptian and Etruscan painting—were created to remain invisible” (Francastel, 2005, p. 18). Pierre Francastel takes the position that “it is necessary to consider works of art, and painting in particular, as objects of civilization, cognizable, evaluable only by deciphering them, that is, by comparing them with their primary perceptual sources–most often very difficult to reconstruct—and with our own laws of comprehension of the external world” (Francastel, 2005, p. 7).

The complexity of perception and understanding of works of painting is connected with the peculiarities of semantic construction. This applies not only to ancient art but also to art of all epochs. Henri Matisse said in an interview: “Every work of art is a system of signs invented at the time of its creation and according to the requirements of the moment. Once out of the composition for which they were created, these signs lose all efficacy. A sign possesses definiteness only when I use it, and only in relation to the subject with which it is to contribute” (Diehl, 1954, p. 105).

The desire to discover and understand visual heritage defines the epistemological goal of visual literacy. Understanding the content of visual heritage is based on the "decoding" capabilities of the intellect—cultural experience, historical knowledge, associative thinking, and imagination. For example, knowing the story of St. George, one can recognize the main episode of this story in Vittore Carpaccio's painting *St. George and the Dragon*. Among the stories of the *Golden Legend* collected by Jacobus de Voragine (1993), one of the most famous stories tells of the Christian knight George saving a Libyan princess sacrificed to a dragon. *The Golden Legend* was one of the most popular literary works of the Middle Ages and numerous images of George with the dragon were clear to everyone and were perceived as illustrations to this text. However, it is this diversity of visual interpretations of one plot, one set of semantic elements that testifies to the presence of completely different ideas expressed by different authors with the help of specific visual means.

But to understand that what is depicted here is not an illustration of myth but a visualization of the model of eternity as a dichotomy of good and evil is impossible without the skills of analyzing a visual system by means of its schematization. Verbal analysis, used by historians and art theorists, is based on describing and interpreting the semantic structure of visual works. Such an analysis is of great importance for understanding visual heritage. However, visual works are not only sets of semantic elements, but also organized spatial structures, visual systems designed for visual perception. Understanding a visual work

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as a visual system organized according to the possibilities of visual perception and thinking, opens up new possibilities for understanding visual art. It is obvious that the process of visual perception of any visual system is based on its schematization; identification of its inherent connectivity of parts.

The notion of a painting as a complexly organized structure—an entire visual system—has been described by various authors. One of the most profound and still relevant is the way the visual system is understood by Giorgio Vasari, quoted by Erwin Panofsky. Here is how Vasari describes the concept of drawing (blueprint)—a graphic means of expression with the help of which one can cognize and express the regularities of the organization of the surrounding world:

> Drawing (disegno) is the father of our three arts extracts a general concept from many things, like the form or the idea of all the creatures of nature, assigning in its exemplarity to each its own measure, hence it follows that it cognizes the relations of the whole to the parts and of the parts to each other and to the whole, not only in human bodies and animals, but also in plants, as well as in buildings, sculptures and paintings. And since from this cognition is born a certain concept and judgment, so that something is formed in the mind, which, being then expressed by hands, is called a drawing (disegno), then we can conclude that this drawing is nothing else than a visible expression and explanation of the concept, which is in the soul, which man imagined in his mind and which is created in the idea. (Panofsky, 1999, p. 45)

Another significant concept of visual system as a spatial and temporal phenomenon was developed by philosopher Pavel Florensky in his book *Analysis of Spatiality and Time in Artistic and Pictorial Works* in 1924 (Florensky, 1993). He distinguishes two levels of the visual system and two schemes of their organization - the scheme of the formal organization of the image, which he defines by the traditional notion of composition, and the cognitive scheme of the organization of semantics, which he defines by the notion of construction.

> An artistic work is always dual, and in this duality is rooted the necessity of a dual approach to the work, and consequently of a dual scheme. … An artistic work is the organized unity of its pictorial means; in particular, it is the organized unity of color, lines, points, and geometric forms as a whole. This unity also has a basic scheme for its structure; this is called 'composition. … The unity of the depicted must by no means be confused with the unity of the image … this scheme, or this plan of the artistic work, from the side of its meaning should be called a construction. (Florensky, 1993, p. 116)

Florensky's idea of the point-event is of fundamental theoretical importance for the concept of the visual system. “All reality is spread out in the direction of time no less than it is spread out in each of the three directions of space. Every pattern of reality, once it is really perceived or really accepted, has its own line of time, and every point of its abstractly statistical section is in fact a point-event” (Florensky, 1993, p. 195). A painting in this sense is an aggregation of such points linked together into a single system. And our perception of the artistic reality of such a system is related to our perceptual response to these spatio-temporal events.

The evolution of painting has formed a huge number of ways of organizing images on the plane, based on the visual consonance or dissonance of object forms and spatial pauses, the use of implied rather than depicted lines, geometric abstractions, the techniques of rhythmic coherence, and dynamic resonance. The ability to analyze the structure of a picture through the schematization of its visual system opens up a vast resource of knowledge about the human experience and perception of the world that has been hidden from the vast majority of the world's population for centuries. Everyone can develop schematic analysis skills as one of their cognitive competencies.

The desire to discover and understand visual heritage defines the epistemological goal of visual literacy. Verbal analysis, used by historians and art theorists, is based on describing and interpreting the semantic structure of visual works. But visual works are not only sets of semantic elements, but also organized spatial structures, semiotic systems designed for visual perception.
Francastel justifies the need to develop a specific analytical approach to the study of artistic heritage.

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> Visual analysis cannot be considered as one application of some general method, it cannot follow the model of linguistics, mathematics or any other science, … It must find its place alongside the other great disciplines developing in our time. It forms an interpretive system no less worthy of our attention than mathematics or physics, psychoanalysis or linguistics, which have flourished in recent decades. Art criticism must finally catch up in this field with the artists who have been among the pioneers of spiritual renewal. (Francastel, 2005, p.7)

Understanding a visual work as a visual system organized according to the possibilities of visual perception and thinking allows us to organize visual research more effectively. It is obvious that the process of visual perception of any visual system is based on its schematization, identification of its inherent connectivity of parts.

What is schema and schematization? The concept of schema is used in different fields of activity, but in painting research I find the concept of perceptual schema, which was developed by Ulric Neisser, the most productive. “Perceptual schemata are plans for gathering information about objects and events, for acquiring new information” (Neisser, 1998, p. 74). In describing schema as a mechanism for organizing perception, Neisser speaks of the perceiver's having an anticipatory schema that creates the very conditions for perception.

> In constructing the anticipatory schema, the perceiver performs some act involving his own cognitive mechanisms. He himself changes as a result of receiving new information. This change is not a matter of creating an internal copy where there was nothing before; it is a change in the perceptual schema, so that the next act will flow in a different direction. Because of such changes, and because the world reveals to the skilled observer an infinitely rich informational background, in fact two perceptual acts are never identical. (Neisser, 1998, p. 76)

These are the key ideas. Perceptual scheme is always a process of self-renewal, development through research activity. It is an endless process of creative cognition. On the basis of this natural process of thinking, I develop a method of creative self-development through graphic reconstruction of perceptual schemes of visual systems of figurative painting. To denote this method, I use the concept of schematization.

The tool of visualization of the reconstruction process is a graphic scheme immanent to the basic concept of scheme as a principle of organization of any elements in space. A graphic scheme is a visual fixation of the thought research process by means of conditional geometric graphics (lines, arrows, in general, any graphic elements). With the help of a graphic scheme, spatial relations are established not only within the pictorial system, but also the position of the picture in the context of the surrounding space, as well as the interaction between the observer and the image.

However, how can one define the limits of one's competence for interpreting visual heritage using schematization? The epistemological goal of visual literacy solves this motivational problem, opening the way for creative construction analysis. The paper reveals the author's concept and practical experience on the examples of analyzing visual structures of several works of fine art created in different historical epochs. It also presents different approaches to schematization, driven by practical purposes.

Method

My main thesis is that in this research there can be no right or wrong solution, but only interesting and fruitful or meaningless and without content. Each revealed scheme should give birth to meanings, associations, hypotheses that is a conduit for your new personal content. Every work of art is a multi-layered system where each layer has its own organization. Naturally, all layers, all levels, are interconnected. And the method I propose allows you to pay attention to each of these layers, without putting the task of collecting everything in one single scheme. It is clear that this general unified scheme will turn into a jumble of lines.

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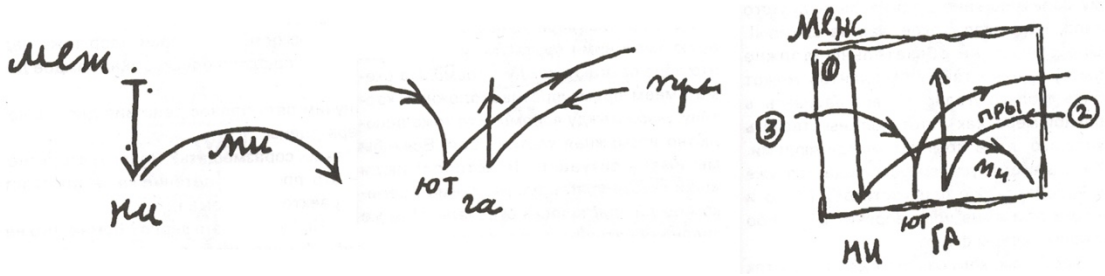
The process of schematization of any aspect revealed in a work of fiction becomes a creative discovery and personal discovery of the author of the scheme. Even a trifle can become a starting point for deep and relevant reflections. Therefore, I understand schematizations as a media accompaniment of creative perception. But schematization is not exclusively a graphic interpretation. An integral part of the schematization process is the verbal process of constructing a set of metaphors to describe the schema. The intellectual process of comprehending with line and word is one.

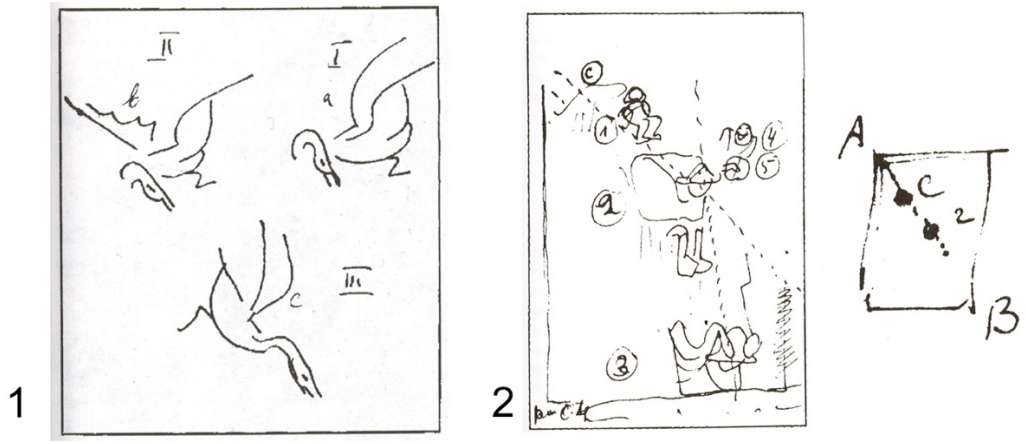
The unity of the process of graphic interpretation and the formation of verbal metaphors was the subject of the theoretical work of film director Sergei Eisenstein. “Eisenstein investigated how the syntactic combination of two images (e.g. two pictograms or hieroglyphs) conveys the ‘graphically unimaginable” (Ivanov, 2019. p. 23). Eisenstein wrote in *Pushkin the movie editor* about the use of schemes to visually comprehend poetry (Figure 1)—“These schemes are by no means schemes for reading poetry, they are schemes for a graphically sensuous vision of the action within the poem” (Eisenstein, 2000. p. 285).

Figure 1
Graphical Scheme of Organization of Semantics of a Poetic Work (Eisenstein, 2000)



Eisenstein was perhaps the first to make extensive use of graphic analysis of paintings (Figure 2).

Figure 2
Graphic Analysis of Successive Phases of Movement in Works of Painting (Eisenstein, 2000)



Note. A fragment of the scroll "One Hundred Geese" by the Chinese artist Ma Feng (1) and the painting "Suvorov's Crossing of the Alps" by the Russian artist Vasily Surikov (2).

Perhaps the most meaningful example is the analysis of El Greco's painting. For example, Eisenstein identifies signs of bodily expression from various works by El Greco that express exaltation and ecstasy (Figure 3).

Figure 3
The Ecstatic Movement of Figures in El Greco's Paintings (Eisenstein, 2000)

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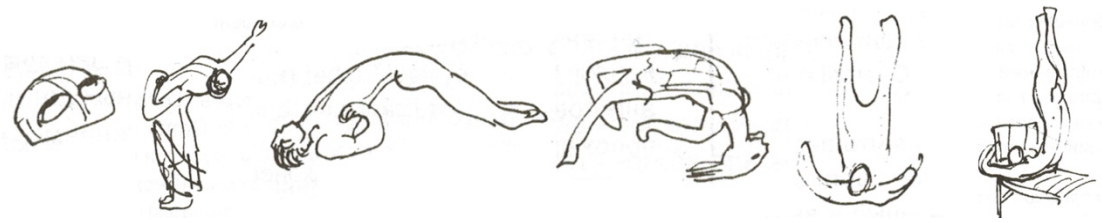

Another example is how Eisenstein graphically analyzes the dynamics of the visual system in El Greco's painting *Laocoon*.

> In *Laocoon*, the two sons together again give the idea of a leap from the *arc* phase to the *circle* phase. … here the compositional technique is achieved by a sense of continuous outward bending and *gathering into itself* of the sons arranged in a circle, which creates a sense of changing positions ad infinitum. The movement reads as a continuous *wheel*: VAVAVA....
> A: Leaning the figure forward. Arms unfolded.
> V: Concave figure (Eisenstein, 2000, p.448) (Figure 4)

Figure 4
Rotational Movement in El Greco's Painting 'Laocoon' (Eisenstein, 2000)

So, what is the subject of my analysis, what do I visualize with the help of graphic schemes?
Each artist, holding the whole visual system in attention, establishes connections between its parts, based on different principles—by semantic meaning, by different kinds of correspondences, or, for example, by suggesting the viewer to imagine the result of a continued movement. If we try to designate these connections graphically, new information appears, which begins to interact with the picture, creating new content.

Each scheme is conceptualized in the context of the entire visual system of the artwork. The result of comprehension is a verbal metaphor that defines the highlighted pattern. Schematization is an effective means of developing visual literacy. It combines two processes—spatial analysis of the visible and its interpretation in a sign-symbolic form.

Psychological and physiological bases of my method:

- “At all levels of generalization there is a translation of the relation displayed in the concept from the symbolic language into the language of the simultaneous spatial scheme, as a result of which the content of the concept is embodied in the spatial pattern of not figurative but general thought type” (Vekker, 1998, p. 357).
- The process of intellectual understanding is the translation of sign-symbolic forms into the form of a spatial scheme. This is a fundamental property of the thinking process.

My method is based on extracting schemes from a complex visual system. It is not a matter of reduction, simplification and abstraction in order to find some main organizing principle, like trying to fit the depicted objects into a circle or a triangle. Such schemes allow to see stereotypical features of style of any epoch or creativity of the artist. Such schemes are justified to use for deciphering the so-called sacral geometry in

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the art of the Middle Ages and works of some artists of the Renaissance. But for analyzing a complex visual system these general schemes are not very informative.

Many patterns can be found, and each pattern will be represented by a separate diagram. One idea is one scheme. And it turns out that one painting can become a generator of many ideas. It is pointless to make a scheme that unifies all ideas. The result of such schematization will be a confusing graphical drawing. The purpose of schematization is to discover and highlight some and interesting aspect in a visual system. Therefore, it is more fruitful to discover at least a few interesting patterns. And after their graphic visualization, comprehending them in the context of the whole image.

In visual-graphic research, there can be no right or wrong solution. I understand schematizations as a media accompaniment of creative perception. Works of art are multivalent—are multiple meanings and involve multiple interpretations, the discovery of multiple meanings. Schematization allows us to perceive this multitude of meanings. The result of schematization is a word—a verbal metaphor defining the selected regularity.

Examples

Examples of the use of schematization to analyze works of figurative painting illustrate the main aspects of my method.

- **St. George and the Dragon (Vittore Carpaccio, 1502)**. It is housed in the Scuola di San Giorgio degli Schiavoni in Venice. An example of the spatio-temporal construction of the point-event that Florensky wrote about.
- **Judgement of Solomon (Giorgione, 1500-1501).** It is in the collection of the Galleria Degli Uffizi of Florence. An example of the investigation of hidden content in the process of graphic analysis, when the size of depicted objects and their location become the basis for deciphering the meaning of the work.
- **The Three Philosophers (Giorgione, 1508-1509).** It is housed in the Kunsthistorisches Museum in Wien. The direction of a character's gaze in works of figurative painting is one of the most important parts of the entire visual system.
- **Composition in Painting (Michael Alpatov, 1940).** Implied lines extending beyond the image boundary.
- **Annunciation (Simone Martini & Lippo Memmi, 1333).** It is part of the collections at the Galleria degli Uffizi of Florence. The characters in the paintings are silent, they communicate ‘telepathically’. This example shows that communication takes place literally in the form of a text message.
- **Blessed Agostino Novello Triptych (Simone Martini, 1324-1328).** It is housed within the Pinacoteca Nazionale in Siena. This is an example of an aggregation of points-events (according to Florensky) sequentially linked together into a single system.
- **Lamentation—The Mourning of Christ (Giotto Di Bondone, 1305).** It is painted on the interior walls of the Scrovegni Chapel in Padua. An example of a spatio-temporal visual system consisting of several autonomous point-events organized around a single point. Autonomous points-events are expressed in the form of signs.
- **The Return of the Prodigal Son (Rembrandt, 1669).** It is housed in the Hermitage Museum in St. Petersburg. An example of a scheme of a visual system turned into a sign.
- **The Blind Leading the Blind (Pieter Bruegel the Elder, 1568).** It is housed within the Museo di Capodimonte in Naples. An example of a reconstruction of the anticipatory schema (according to Neisser) used by an artist to express the meaning of his work.

Example 1: St. George and the Dragon (Vittore Carpaccio, 1502)

The figures of St. George and the Dragon are arranged symmetrically opposite each other and parallel to the picture plane. St. George's horse and the Dragon stand on the rack in a single impulse of decisive movement towards each other. St. George holds a spear directed at the dragon's head obliquely from top to bottom. The spear pierces the dragon's head, goes through, but breaks. The fracture of the spear is at the very center of the image between the knight and the dragon.

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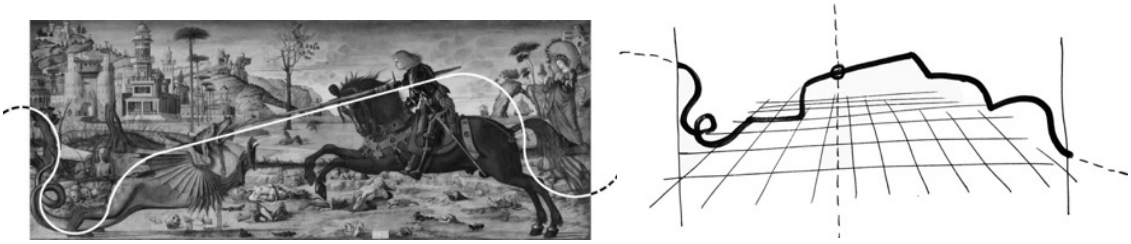
St. George and the Dragon are connected by the line of the spear, which expresses the movement of the two characters towards each other. They are so united by this line that we involuntarily begin to follow with our gaze the development of this line's two sides. And the completion of the ends of this line on the right and on the left are very similar (Figure 5).

Figure 5
One Line that Connects St. George and the Dragon



The line on the dragon's side curls into the spiral of the tail and continues with the trunk of the tree beyond the border of the image. The line on the George side continues with the tail of the horse, and also goes beyond the border of the image. This line continues beyond the borders of the painting into infinity, and on the painting itself we see only a fragment of this line. The center is highlighted on this fragment. What ideas do we get when we look no longer at Carpaccio's painting, but at this scheme?

This line breaks in the center, the spear is broken, but the line between St. George and the Dragon is unbroken. The dragon is not yet defeated, and George continues to move. We see an unfinished event, this moment—the spear strike. The dragon's fate is sealed. But this moment will last forever (Figure 6).

Figure 6
The Place Where the Spear Breaks

The action of the characters is located on the plane of the stage, going away from the viewer into the depth of the image. This plane is divided into three parts—the strip where the battle takes place, the strip where the tree grows, the strip of the distant background. Each strip contains explanatory attributes. The battle lane is filled with human and animal remains, among which we see shells. The battle strip is depicted as if a step below the middle and far strip, and the presence of shells here indicates that the battle takes place in the archaeological layer, below sea level (Figure 7).

Figure 7
Two Time Levels of The Same Event

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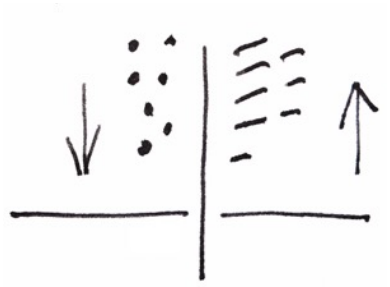
Between the battle strip and the middle strip there is a contrasting border—a layer of soil with grass. On the left side of this boundary, we see a cut tree, and on the right a young girl with her hands folded in prayer (Figure 8).

Figure 8
A Space of Past and Future Separated by a Tree Trunk

The trunk of the tree in the center divides the space in the depth into two parts vertically. The right part with St. George is the sea, the horizon line, ships under sails. This is the space of the possible, the future. The left part on the dragon's side is the shore, heavily built up with fanciful buildings. This is the world of the embodied, the space of history, the past. The schemes allow us to understand the Carpaccio work as a model of time, in which a historical event; it is a moment between past and future, is situated in the context of eternity. Are the past and evil synonymous? (Figure 9).

Figure 9
The Tree is Like an Indexical Sign Dividing the Space of The Painting into Past and Future



Example 2: Judgement of Solomon (Giorgione, 1500-1501)
Another example is Giorgione's painting *The Judgment of Solomon*, in which the artist interprets the famous parable of King Solomon, who found out the rights to a child in a dispute between two women by means of a monstrously provocative decision - dividing the child in half. The real mother of the child renounces her claim, thus confirming her rights. What insights does schematizing this work bring us? The largest visually active part of the painting is the landscape, and the figure composition illustrating the parable takes up 1/3 of the image (Figure 10).

Figure 10
Silhouette of the Dominant Figure of the Composition

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The main thing is the landscape. Its center is occupied by a black spot in a shape resembling the 'funnel' of a tornado, consisting of several dark tree crowns. This 'funnel' of the black tornado visualizes the terrible and paradoxical judgment of the sage.

The graphic analysis of this work also allows us to discover which of the depicted characters is the child's real mother. Giorgione uses a formal technique and repeats the shape and color of the funnel in the dress of the woman in the foreground. But for me, the most interesting thing in graphically analyzing this work was thinking about why Giorgione depicted a separately growing tree with a thin graceful trunk, the crown of which is in contact with the silhouette of the funnel. It looks strange, drawing attention to itself with this strangeness. Is it a hint of a cunning plan, a double meaning of King Solomon's decision? I suppose it is.

In addition, between this thin sloping trunk and the 'funnel' we see an idyllic landscape with shepherds. This is the most deeply formed space of this painting. The receding space is also a kind of funnel, perpendicular to the frontal scene, on which all the characters of this mise-en-scene are placed. I understand this construction as a metaphor for hope. The space of depth, into which our perception is directed by the artist, is formed by means of a certain trajectory, a line moving away from us in the direction set by the artist. When Giorgione painted the picture, his perception was based on this unrepresented trajectory. But when we graphically analyze an image, we can use these not depicted, but implied lines, which opens up many new and unexpected things (Figure 11).

Figure 11
A Spatial Funnel in the Center of the Picture Between the Thin Trunk and the Main Mass of Trees

Implied lines

In my visual-graphic analysis I include not only what is depicted, but also implied lines, continued lines of started movements, directions of looks, aspiration of figures, directed emotion. There is a psychological peculiarity of our thinking—when we see the beginning of a movement, our intellect tries to complete the

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started movement, to visualize the whole trajectory. In paintings, these trajectories are not visualized, but are a means of organizing the pictorial system.

Example 3: The Three Philosophers (Giorgione, 1508-1509)
Such an unrepresented, implied line could be the direction of the gaze. Where is the character's gaze directed? The perception of the meaning of the work may entirely depend on it. A striking example is again the painting by Giorgione, his painting *The Three Philosophers*. This painting is analyzed by art historian Pierre Francastel, in his book *Figure and Place. Visual Order in the Quattrocento Era* (2005).

In this painting, Giorgione juxtaposes three Philosophers from different eras against a landscape. A dark spot occupies most of the image on the left—it is a collapsed part of a hill. One of the Philosophers, a young man crouched on a rock with a piece of paper, a charcoal and a circular in his hand, is facing the hill. This is how Francastel describes him—"And it is quite certain that the third Philosopher, the young man who observes and measures the sky, represents a new science" (Francastel, 2005, p. 298). Likely, that Francastel had not seen the original of this work, and the quality of the reproduction left much to be desired. The trajectory of the young man's gaze is not directed towards the sky, but towards the center of the dark spot (Figure 12).

Figure 12
The Trajectory of the Young Philosopher's Gaze

This is perfectly visible on the digital reproduction published on the museum's website. Moreover, if we look into this spot, into this exposed mysterious space under the hill, under the roots of trees, we will see an oval-shaped aperture. Perhaps it is the entrance to a cave? Thus, the young man is not preoccupied with the sky, but with the fundamental mysteries of nature. It is not known whether Giorgione was familiar with Plato's famous metaphorical parable of the cave. Nevertheless, this picture involuntarily evokes associations with Plato's cave, at the exit of which stand philosophers whose eyes are not afraid of light. Moreover, the gaze of the youngest of them is directed towards this cave, a problem he is trying to understand with the help of the tools of science. These are the insights that visual graphic analysis can bring.

I first encountered the idea of identifying implied lines in works of painting in art historian Mikhail Alpatov's work *Composition in Painting* (Alpatov, 1940). Alpatov used the method of formal analysis of pictorial composition for the works of Edgar Degas. Analyzing Degas's painting *Ballerina*, Alpatov graphically develops the movement of the depicted lines beyond the boundaries of the image. He describes this development of lines as a replenishment of the "decorative motif" begun in the painting (Figure 13).

Figure 13
Analysis of Degas's Painting "Ballerina" (Alpatov, 1940)

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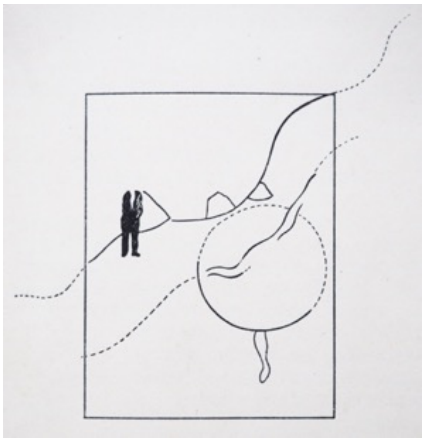
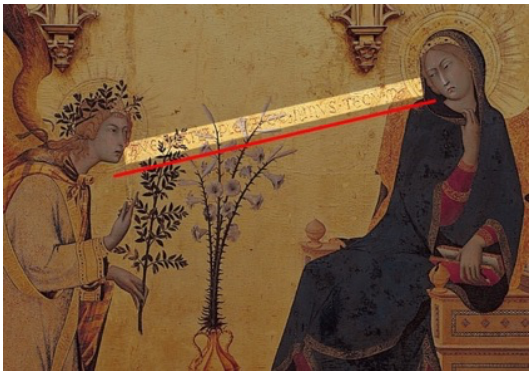


Example 4: Annunciation (Simone Martini & Lippo Memmi, 1333)
The development of a line along the direction of movement in Alpatov's scheme is just one type of these non-depicted but implied lines that organize a visual system. Here is one very beautiful and symbolic example of a visual system in which the usually hidden, implied content is visualized and represented by a line consisting of an inscription. In Simone Martini's *Annunciation* from the Uffizi Gallery, it is the good news sent from the angel to the Virgin Mary that is visible; it's an inscription (Figure 14).

Figure 14
A strip of text linking an angel and the Virgin Mary



Commentary in the form of the text, integrated into very different images from ancient Egyptian or Assyrian reliefs to modern comic strips, is well known. However, in Simone Martini's *Annunciation* this commentary demonstratively links two characters graphically, and we see the direction of this communicative act from the angel to the Virgin Mary. The meaning of this sacred inscription unites the angel and Mary into a single dynamic visual system. This example is an important argument for identifying and schematizing the cognitive basis of any visual system.

Example 5: Blessed Agostino Novello Triptych [Child Falling from a Balcony] (Simone Martini, 1324-1328)
Another work by Martini, *Child Falling from a Balcony*, is a detail of a triptych with the miracles of Blessed Agostino Novello, is an example of a complex visual system organized with the help of several types of implied lines that continue the initiated movement, establish a connection between characters by means of directed lines of gaze, and by means of associative development of pictorial motifs. The starting point for perception is the figure of the Saint, who flies into the space of the painting from beyond the boundary of the image (Figure 15).

Figure 15

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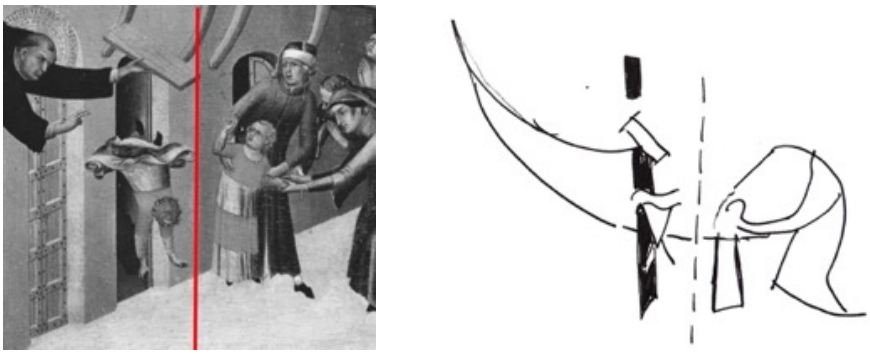
The Trajectory of the Figure's Movement from Behind the Image Boundary and the Diagonal That Crosses the Conceivable Trajectory of the Child's Vertical Fall

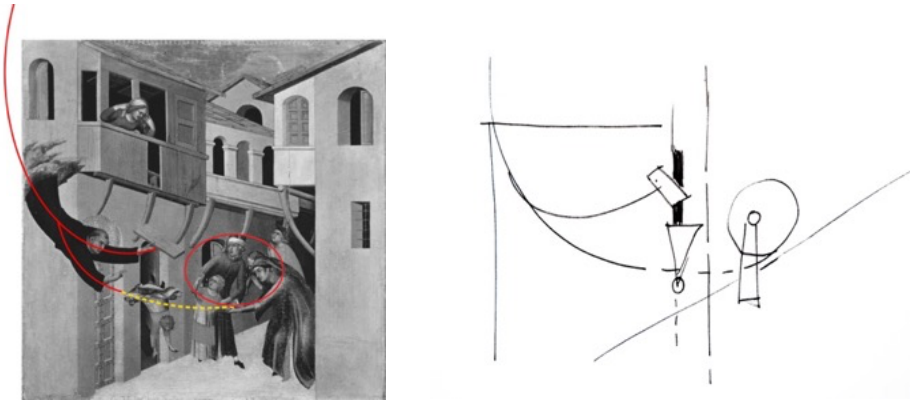
The image is divided into two parts—there are two times, the time of the event and the time after the event. The child is depicted twice: flying down and standing (Figure 16).

Figure 16
Two Temporal Events Linked into a Single System



The unified silhouette of the figure bifurcates. With one hand he holds a board that has fallen out of the balcony railing. The line of the saint's other hand begins the movement of the line uniting the group around the rescued child (Figure 17).

Figure 17
The Arc-shaped Movement That Unites All the Characters



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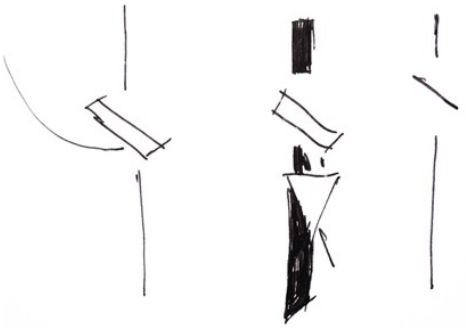
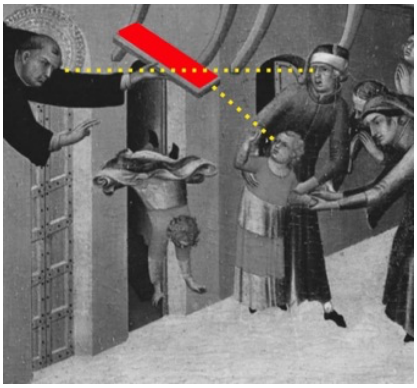
The board crosses the vertical line of the child's fall. It is a sign of denial of the inevitable. It gives the impression that the child is hanging in the air, suspended from the board (Figure 18).

Figure 18
A Sign That Articulates the Meaning of the Work



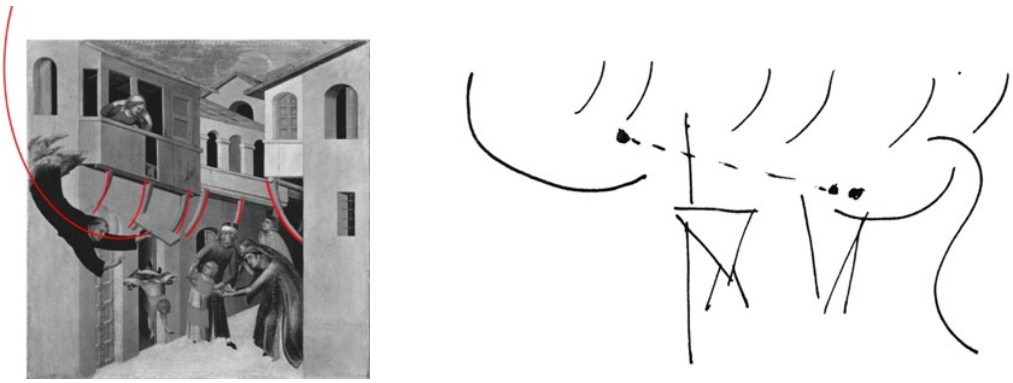
The child's line of sight is directed toward the board—a remembrance of the terrible event. The gaze of the child's father is directed toward the saint—he is the only one who sees him (Figure 19).

Figure 19
The Trajectories of the Characters' Gazes



The arcs of the balcony support that are pointing upward are both a triumph and a sign of support (Figure 20).

Figure 20
The Arc-Shaped Lines of the Balcony Supports Develop the Basic Trajectory of the Figure Blessed Agostino Novello



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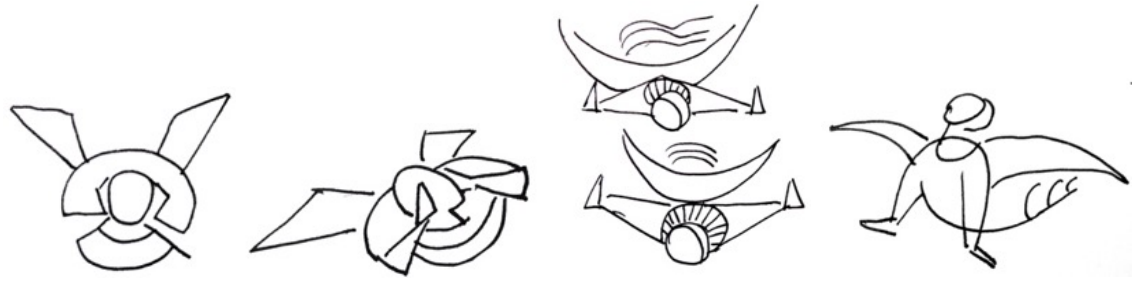
Example 6: Lamentation—The Mourning of Christ (Giotto Di Bondone, 1305)
This famous fresco is the Mourning of Christ and show how Giotto uses this property of our perception. A group of Angels hover in the sky above the figure of Christ lying on the ground. Each figure of the Angels expresses a different degree of despair and sorrow that is directed toward the body lying on the ground. The artist pushes the group of mourners apart, opening up a space between Christ and the angels. However, this space is divided by the insurmountable boundary of an earthen hill. Christ's body belongs to the earth. The angels are powerless. Their despair is of powerlessness (Figure 21).

Figure 21
Several Autonomous Groups Are Organized into a Single System with a Single Center

There is another interesting possibility in this composition. If we graphically schematize the figures of Angels, we will get a whole set of graphic emoticons expressing sorrow and despair (Figure 22).

Figure 22
Signs of Emotional States



Example 7: The Return of the Prodigal Son (Rembrandt, 1669)
The theme of the prodigal son's return to his father occupied Rembrandt for many years. The engraving of 1636 shows the characters in profile, an illustration of the parable. However, in a drawing created in the early 1640s (Teylers Museum, Haarlem) there is a figurative transformation and the illustration of the event turns into an expressive tragic scene. The figures are also turned in profile, but in this drawing a new scheme appears—the figure of the son is integrated into the figure of the father. The father seems to encompass the son.

And finally, in a painting from the Hermitage collection, the artist places the figures of father and son frontally - the son against the father's background. The kneeling figure of the son covers the bottom of the father's figure, and they merge into a single silhouette. The figure of the father includes the figure of the son. The father cannot give birth to a son, but he can take him into himself (Figure 23).

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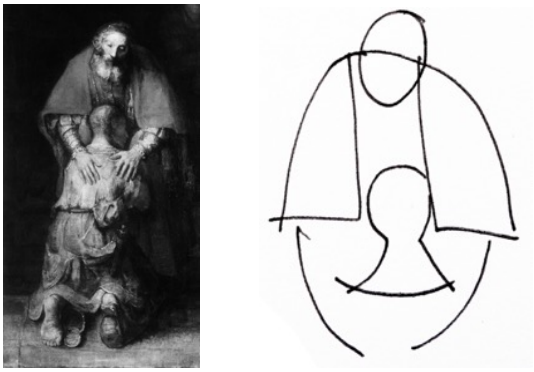
Figure 23
Schematics of a Visual System Turned into a Sign



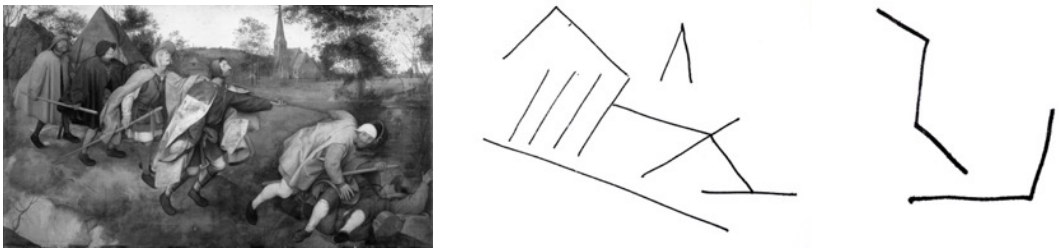
If we schematize this object, we get a sign similar to one of the canons of images of the Mother of God, the so-called Byzantine Oranta or Our Lady of the Sign, depicted full-length with arms raised and with the Child Jesus in a circular halo on the chest (Figure 24).

Figure 24
Lady of the Sign

Example 8: The Blind Leading the Blind (Pieter Bruegel the Elder, 1568)
The Blind Leading the Blind by Pieter Bruegel the Elder is one of the artist's masterpieces, which has become a tragic symbol of human limitation and spiritual blindness. Bruegel's work is based on the biblical parable of the blind leading the blind. As a metaphor, the artist uses the image of the blind, limited in their ability to perceive the world around them. Bruegel depicted not beggars, but well-dressed and obviously successful in the worldly sense of people. But they are blind and cannot see where their path is directed.

A row of figures moves on an inclined plane into a body of water. The rhythmically organized row is divided into two parts by a pause. A line connecting the two groups and pointing downward passes through the pause. In the gap between the two groups of figures is a sharp triangle of a church steeple pointing upwards. The upward direction is the church. The direction downward is the pond (Figure 25).

Figure 25
Reconstructing the Pattern of Anticipation of an Evolving Event



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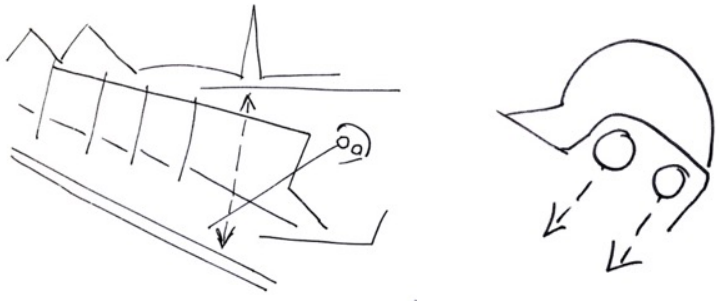
The blind man, who at this moment falls into the swamp, looks at us, the spectators, with eyes that see nothing. This is a harsh metaphor for spiritual blindness (Figure 26).

Figure 26
The Trajectory of the Central Character's Gaze Directed Toward the Viewer



But also, the lack of visual literacy can be likened to blindness which prevents people from perceiving the meaning of visual heritage. For millennia most people look but 'don't see', don't perceive the meaning of what is depicted. “The cathedral-stained glass windows had many viewers, but these viewers undoubtedly perceived mainly the general atmosphere into which the building was immersed by the light refracted by the stained-glass windows, and paid no attention to their innumerable details” (Francastel, 2005, p. 18). This problem can be solved with the help of creative perception, one of the tools of which can be visual-graphic analysis of images - their schematization.

Conclusion

The use of visual-graphic analysis by means of schematization for solving problems of visual literacy and research of works of fine art has a great cultural significance. However, the greatest significance of using schematization is connected with the fact that this method is a tool of creative cognition. Thinking about the semantic structure of complex visual systems, such as works of painting with the help of graphic means, creates new intellectual products and develops instrumental thinking capabilities, imagination, and construction, creating a basis for motivated and active perception of information. Related to creative cognition, this method allows us to develop skills for creative activity and create new knowledge.

The method of schematization corresponds to the psychological and physiological basis of human perception of visual information. The use of visual-graphic analysis does not require artistic training and professional skills for pictorial activity. Initial skills in the use of graphic means, which most people acquire in childhood, are sufficient for this purpose. Schematization does not necessarily involve any research work but can be used as an accompaniment to perceiving works of visual art. That is why this flexible and convenient tool can be actively used to develop visual literacy.

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