

RESEARCH ON LANGUAGE OF PERCEPTION STILL-LIFE AS A VISUAL APHORISM

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This article describes a categorical structure of perception of still-life painting. Analysis is done on the system of visual opposition elements in still-life. A still-life is considered a “perceptual statement about the world”, and a “visual aphorism”. The research is based on such methods as: semantic spaces constructing and their transformation at introduction of additional elements in still-lives. It also gives full analysis of an interpretation of complex images and understanding of types of still-life as a visual hermeneutics.

Keywords: categorical structure, language, image, symbol, art

Preamble

In the middle of 1970s at Psychology Department of Moscow State University in a series of researches initiated by the dean A. Leontiev, the image generation was studied by method of pseudoscopic transformations (see the collection of works edited by A. Leontiev “Perception and action”, 1976). Research was carried out by contemporary young staff V. Stolin, A. Logvinenko, A. Puzirey, V. Petrenko. This technique of pseudoscopic transformation of perception objects born under the influence of phenomenology of E. Husserl and Gestalt psychol-

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ogy, when disparity of binocular vision changes through the prisms of Dove (see: Kompanejsky, 1975; Stolin, 1976). During pseudoscopic transformation visual paradoxes arise. They are caused by so-called inversion of depth, when distant points of an object appear to be in proximity, but close points seem distant. Space seems to be turned inside out, and the convex objects are perceived as concave. This can involve the paradoxes in perception, a kind of a consequence. A heavy ball seems a balloon floating in the air, the cone standing on the floor turns into a funnel, and the shadow of the cone vanishes, so as not to contradict the subject logic (the cone cannot make a shadow), a bowl of tea through pseudoscopic transformation turns upside down and the tea in the bowl seems a piece of metal or a sticky jelly (because the liquid cannot remain unleaked on the bottom of an upside down bowl), etc.

For A. Leontiev these studies gave an important empirical confirmation to his hypothesis about the role of meaning and the subject of logic in making a visual (and not only visual) image. Having discussion on the results, we (V. Stolin, A. Logvinenko, V. Petrenko) used the linguistic analogs by F. de Saussure (the plan of expression and the plan of content) for a visual material, we also discussed the possibility of considering perception as a kind of language that had its semantics and syntax.

Developing the interpretation of perception as a kind of language and image as a “perceptive statement about the world” (Petrenko & Korotchenko, 2008 a, b) our further analysis of a still-life will be within this context.

Like the way the literature has ballads, novels, short stories, and also the small folklore genres such as proverbs, aphorisms, couplets, epitaphs, idioms; the same way the painting has its small genre, such as a still-life, created apparently as a part (fragment) of scene painting, together with the easel (scene) painting, a portrait and a landscape painting. Verbal small folklore due to its brevity and idiomatic character is useful as an object of study of consciousness or ethnic mentality (see: Petrenko, Nistratov, & Romanova, 1989; Petrenko & Surrmanidze, 1994; Petrenko, 2010). An outstanding researcher on Cultural studies and Semiotics Ju. Lotman (Lotman, 2002) in his essay, named “Still Life in the perspective of Semiotics” wrote: “A thing in the certain cultural-semiotic situations tends to become a word”. Still-life as a representation of the objects that

become symbols due to artist's intention is highly semiotic, and from our point of view, is a kind of visual statement, a kind of aphorism carrying valuable judgments about the world.

However, the still-life as an aphoristic statement has multi-interpretational and semantically vaguer content, since it uses visual symbols (rather than concepts as verbal aphorisms). The language of symbols, a "mild language" – the term given by V. Nalimov as a comparison with the expression of thought in concepts (words), is more emotionally loaded and associative, which allows to make the semantic links and establishing analogs between the remote areas of the human spirit and the material world.

This research is devoted to above mentioned statements and the description of the content of a still-life as a visual aphorism.

Still-life in terms of art history

Still-life in terms of art history differs from other painting forms by its subject (compare with historical genre of painting, landscape, etc.). Still-Life (French "nature morte" – "dead nature") in 15th -16th centuries was considered as a part of a historical or genre composition. As an independent genre it was developed in Netherlands under the more euphonious name "stieven", which means "quiet life", and then became an independent genre. A still-life is an image of inanimate objects combined into a single composition. But should it be understood only this way? Often in a still-life the artists represents the objects having symbolic meaning or acquiring the symbolism in the context of other objects. The hand-made objects, bearing the impress of thoughts, desires and passions of the owner are depicted together with the objects created by nature: shells, fruits, flowers, etc. In this work we study a still-life from the psychological perspective, by analyzing the language of images and symbols through which a work of art was made, and try to realize the functioning and perception of this language.

The attention of the artist in a still-life is drawn to the human-made things, such as skillfully implemented vases, candlesticks, goblets, glasses, etc., and things created by nature. In our point of view, the objects having different origin, make such an opposition as "live vs lifeless", "eternal vs ultimate", which sets a specific semantic space in a still-life. It can be assumed that the combination of human-made and

natural, profane and sacred, eternal and ephemeral as opposed to each other creates a semantic construct for the viewer.

A still-life can be both an independent artwork with its own meaning, and a part of the picture of a different genre. As a genre of painting a still-life has several periods of prosperity in art history: in 17th century the Dutch still-life acquired its popularity, the still-lives by European painters of the late 19th and early 20th centuries are also well known.

In Russia a still life became a part of art in the 18th century. The “birth” of still life as an independent genre is related to the overall formation of the Modern European Art, the creation of easel painting and the formation of an extensive system of genres. In the artworks of Italian and especially the Dutch artists of Renaissance the specific attention was given to the material world, the beauty of things; the images retained their symbolic meaning, or acquired the symbolism within the context of other co-images.

Below we give analysis of several types of still-lives: by subject-matter they can be called “breakfast”, “desserts”, “tricks” (in which the portrayed objects look real), “vanitas”, etc., and there are schools of a still-life: a Dutch still life, Russian, Italian, etc. Still-lives by the Dutch in the 17th – 18th centuries are especially diverse by subject and elegant in design (see pictures 1, 2, 3, etc. in illustrations). Since it was a Dutch still life that developed this genre, let us give its analysis. A big number of artists were engaged in Dutch still-life, unlike other less popular genres of that time, for this reason there is a large variety of types of a still life.

The art of painting in Netherlands was in high demand: well-off families used to buy paintings for their houses. One of the most popular artists in Netherlands was Willem Claesz Heda, who specialized on “Breakfasts” (Picture 2 in illustrations). His paintings did not depict a human being, but a sliced ham, broken off bread, peeled lemon – all have the impress of a human presence. A viewer not only sees a picture, but unconsciously makes contrast of cold reflectance of silver to transparent fragility of glass, soft forms to sharp ones, fragile glass to strong metal, soft bread to solid surface of a dish: here we can see a kind of a dialogue of symbols, dialogue of images, an internal rhythm. One image in painting addresses to another and the latter to the third one. For example, there is an elegant oriental jar with curved contours placed next to the heavy round glass.



Pic. 1. V. Kalf. Still-life of a Jar



Pic. 2. Willem Claesz Heda.
A Crab Breakfast

The Dutch artists portrayed the world of objects, living their quiet, frozen lives. The term “frozen life” (Dutch “stilleven”, German “stilleben”, English “still-life”) started to be used to describe the genre of a still-life in the middle of the 17th century. The objects in the still-life paintings by Dutch and Flemish artists of the 17th century often depicted the fragility of the earthly life, which was specifically expressed in a genre of still-life named vanitas (Latin “vanitas” – vanity, conceit), its name dates back to the biblical verse (Ecclesiastes 1:2): “Vanitas vanitatum omnia vanitas” (Vanity of vanities all is vanity!). Paintings of this genre were a reminder of a transience of life, the vanity of pleasure and the inevitability of death. Vanitas paintings often portrayed such symbols as a skull (a reminder of death), smoke, a watch (a symbol of the transience of time) (see picture 3 in illustrations).

The still-life genre appeared at Leiden University is no less symbolic, in our opinion. It was called a “scientific” still-life or “memento mori”. This genre is the most intelligent type of a still-life, which focuses on a viewer, who refers to the Bible in his everyday life and has deep knowledge of religious symbols (pictures P. Steenweik and D.Bailly, see: picture 4 a-c in illustrations).



Pic. 3. Adriaen van Utrecht. Still-life of Bouquet and Skull



Pic. 4 a. D. Bailly. A Vanitas Still-life of the Bust of Seneka



Pic. 4 b. P. Steenweik. *Ars longa, vitta brevis*



Pic. 4 c. P. Steenweik. Emblem of Death

In the still-life paintings the eye tricks are often used, which create optical illusion (Getashvili, 2004). Let us analyze the type of a still-life named “trompel’oeil” (a trick) as an example. In such still-lives, the attention is given to the accuracy of the depicted objects. The depicted objects look very realistic, being an exact duplicate of the reality and creating a living scene on the canvas. On picture 5 (in illustrations) we can see how skillfully and accurately hunting equipment and a trophy are portrayed, as though they hang on the wall in reality, and a slightly crumpled piece of paper makes a shadow.

This genre was widely expanded in late 16th – the beginning of 17th centuries. During this period, the true-to-life colored still-lives were created (see picture 6 in attachment). The painter here is rather fascinated with the form than with the symbolism of depicted objects.

Vegetables, fruits, flowers, household utensils, books, musical instruments are frequent elements of an Italian still-life of the 17th century. In this genre images (often trivial) are less symbolic than in the Dutch still-life, and the emphasis here is made on the form (see picture 7 in illustrations).



Pic. 5. Jacopo de Barbari. Still-life of Partridge And Iron Gloves



Pic. 6. Jan Bruegel. Still-life



Pic. 7. Juan Sanchez Cotan. Quince, Cabbage, Melon and Cucumber



Pic. 8. P. Steenweik. Emblem of Death. (mirrored image)

The Dutch still-life can be described as the most symbolic among others. It is appropriate to cite Ju. Lotman, “there are times when the still-life steps forward... The Dutch period of still-life is the era when things are not just material, but uniqueness, self-contained existence,

integrity, and a special authenticity, independent of man and his ideas” (Lotman, 2002 a, p. 340). An object depicted on the canvas, cannot be only the thing, but could “be included in the sphere of direct emotional perception” (Ibid.). “A thing tends to become a word in the certain cultural-semiotic situations” (Ibid., p. 341). That is what we observe in the classic Dutch still-life.

In further development of the genre we observed an increasing degree of targeting decorativeness rather than the meaning, and symbolism of images; the different features of the genre are more essential. For example, the impressionists' still-lives have smaller number of objects, but bright in colors, conveying the mood. Their pictures were focused on an easiness of life and momentary serenity rather than the life and the death and the eternity (for example, still-lives by C. Monet, E. Degas). A still-life for Russian artists was not the most popular genre, but nevertheless it has its own peculiarities: sensual beauty of the objective world, realism is essential for the Russian still-life.

In regard to the change in the still-lives in the course of the formation of this genre, we can see that the classic Dutch still-life contained foreground characters, which are shifted to the background in a modern still-life or vanished. Classic still-lives by the Dutch painters contain “coded” message, expressed through the symbolic objects, but the modern still-life becomes a copy of staged scene, representing for example, household objects. The artists no longer give sense to the pictorial text, being more fascinated by the form. It is possible to notice a kind of regression of symbolism in a still-life.

Great importance in paintings is drawn to the arrangement of objects on the canvas according to the possible direction in “reading” the meaning of symbols. For example, in European tradition the direction of reading text is from left to right. The same is true in “reading” artworks, including still-lives: visual perception of the objects on the picture goes from left to right. It was noticed by B. Vipper: “There is no doubt that we take one side of the picture a little earlier than the other, considering it as a beginning and the other as an end ... In other words, any picture is perceived by us not only in space but also in time” (Vipper, 2004, p. 21). Therefore, an exact meaning is revealed in the certain sequence. Let us conduct a mental experiment. The still-life “Emblem of Death” by Pieter van Steenveik (picture 4c in attachment), depicts the symbols of transience of life: a skull, an empty bag (alle-

gorical journey into another world), extinct candle and the symbols of earthly pleasures are represented as a contrast: a lute, a pipe, tobacco, a jug, and books. This composition represents that the end of life is inevitable. The viewer's eye glides over all subjects: over the skull and all the way into the void.

If we look at the reflected version (see picture 8 in attachment), we might think of something joyful: the light is directed (according at (the reading of the picture from left to right) from below to upwards and goes to imaginary sky. The all items are in light and contain the joys of life: travel (travelling bag), fun (wine), and teaching (books). Within this interpretation the condemnation of earthly delights disappears: an unpacked travelling bag, wine, a lute, books – everything here, on the contrary, is breathing with the upcoming joys. Thus, by inverting the space (up/ down, left/ right) it is possible to change the spirit an image. In this case, the mirror had reflected not only the topic and story, but the semantic meaning (see: Piter van Stenvejk 2008).

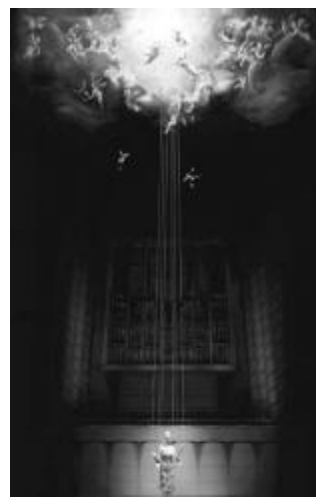
It is considered that in the history of art, the still-life set the aesthetic value on habitual, every-day objects. This genre deliberately depicts excessive luxurious utensils or delicacy, etc. At the same time an admiration with household items, their shape, texture, and color is involved in still-life. An artist through a still-life does his best to convey his own way of vision of objects, atmosphere, convey the mood and the "essence" of things using a visual metaphor as the language (Petrenko & Korotchenko, 2008 a). In terms of what depicted on the canvas, and in terms of the way it is depicted, the critics can use the following definitions: "sincerity", "naturalistic language", "hidden essence of things", "silent dialogue", etc. Thus, the mood of the picture can be given through a metaphor: "...In an underlined artistic stroke, the tender glass reflects some subtle cold of caste coming from the portrayed women" (see: a fragment of the still life on picture 9, in illustrations) (Russkij natjurmort..., 2006). "G. Grishman is portrayed in multi-household detailed background. In order to introduce an intrigue in composition V. Serov introduced a mirror, which significantly expands the space of the room, and also creates a 'going-around-the-model' illusion" (Illjustrirovannye pis'ma..., 2008).

If a landscape painting focuses on an image, the still-life focuses on a meaning of the depicted objects. A still-life, an advertising picture, and so forth are the text consisting of symbols. And very often such text is

made up on a visual metaphor. The language of symbols is blurred unlike the verbal text. So it is essential how a particular person interprets the symbol. And, of course, it is essential for the creator of such a visual text to convey the meaning.



Pic. 9. V. Serov. Portrait of G. Girshman (1907)



Pic. 10. Printed theater ad

The elements of the symbolism characteristic of a still-life can also penetrate into genres, irrelevant to the philosophical thinking. Thus, in the modern advertising the metaphor techniques can be found, similar to literary and poetical tropes (Petrenko & Korotchenko, 2008 b). (See picture 10 in illustrations.) This poster is a visual version of the well-known idea that people are puppets in the hands of higher powers. It is clear that this idea can be expressed by words in different ways, but the general meaning will remain clear, and the painting itself does not need verbalization. This is what that important in the language of images.

Any idea, which is verbalized, can be translated into a visual form (but having altered meaning like any translation has). On the contrary, the visual metaphor used as an image can be expressed in words. Only thanks to this the visual metaphors are widely used in advertising, design, in any creative work related to visual expression. Metaphor is a

kind of puzzle to be deciphered. M. Black expressed this idea as follows: “Once again a reader enjoys the solving the task or admires the skill of the artist to balance between hiding and revealing what he meant. And sometimes metaphors arouse a feeling of ‘pleasant surprise’ ” (Black, 1962, p. 34).

“The selection of significant and insignificant elements of reality is essential for every act of semiotic comprehension” (Lotman, 2002 a, p. 395), it is important to highlight the key objects which a viewer gives an immediate look on a still-life. An illustrative experiment was conducted by use of a special device for tracking eye movements on a still-life in the screen, fixing “eye stops” of the viewer. The result is illustrated on picture 11 in illustrations.

It should be noticed that in the first place the light and dark spots attract the viewer’s attention in the still-life, change in a shape, but this is what which can be observed and that concerns the shape. The viewer pays attention to the key parts of the painting bearing certain meaning, contrasting a skull to flowers, candles to cards, glass goblet to paper and roses.



Pic. 11. Points of eyes fixations on a still-life

In these objects and in a manner to looked at them the principle of semantic oppositions is set: a skull as a symbol of death is in contrast with the flowers symbolizing life, an extinguished candle in combination with the symbolism of the skull implies the end of life, emptied glass car-

ries out the meaning of ephemeral pleasure. The eye movement tracking gives the opportunity to compare verbal description of the meaning of the painting and eye movements on the image. Such an experiment can illustrate the train of thinking of the viewer and open the key semantic elements of the image which builds a visual text.

Art construct as a concept

Gilles Deleuze and Felix Guattari in a work “What is philosophy?” suppose that function of perception of the world is conceptualization as “sustainable clusters of sense”. The concept is based on the construct. The construct by G. Kelly (Personal Constructs Theory) is an individual form of categorization of the world, people, a person’s self. Construct is setting number of peculiarities into an individual cognitive etalon. Social stereotypes, fragments of canonical texts, aphorisms of the great thinkers, proverbs, and even fragments of advertising texts, substituting the system of philosophical or religious outlook in the everyday consciousness may be a specific constructs of social consciousness, which have been assigned to the individual and became his personal constructs.

Academic works of L. Vygotsky, M. Bakhtin, Ju. Lotman show dialogic nature of consciousness, where the genesis of higher mental functions seen through internalization of social interaction, and dialogue of a human with significant others. M. Bakhtin described a particular form of art, most clearly represented in the works by F. Dostoevsky, so-called a polyphonic novel where every character is a true equal voice in polylogue designed to find and prove its own truth of life (Bakhtin, 1979). In terms of physics each character of a polyphonic novel is a certain frame of reference, and without an absolute coordinate system (it is usually the position of the author of a literary text), polyphonic novel describes relativism of the worldviews, being anxious to be understood and heard. Judgments and actions of characters can be viewed as a part of this dispute.

Based on the idea of M. Bakhtin, we define the concept of art construct as a contrast of characters’ attitudes. For example, characters of Don Quixote of La Mancha and his unfailing sword-bearer Sancho Panza form the oppositional pair, here the “romantic idealism, detached from reality” is opposed to “worldly wisdom and everyday earthliness”.

The author using the language of character (which contrasting makes up a literal construct) expresses the idea which has no concept in the language, or this idea is multi-aspect, and cannot be expressed by verbal concepts but may be represented by the contrast of symbolic images. The characters can rise to this level of symbolic images. The system of characters' contrast oppositions is a simultaneous structure of the idea, which then unfolds in narrative text.

Investigation of the categorical structure of the perception of still-life

The **purpose** of the study is to single out the categorical structure in perception of a still-life and analyze the change of the semantics of visual art when a new symbolic art element added, creating the forms of opposition to elements of the original version of the artwork (and, hence, sets the new artistic constructs).

The **objective** of the study is to identify basic categories of perception of the selected still life, find out the subjective aesthetic preferences of these images and compare the position of objects in the semantic space, which gives possibility to track the change in the meaning of still life as the new objects being introduced (flowers, carnival mask, new books, a cylinder, a red clown nose, bread).



Pic. 12. P. Claesz. Vanitas



Pic. 13. Still-life #2

Subjects. We used the still life “Vanitas” by the famous Dutch painter of 19th century. Peter’s Claesz (picture 12 in illustrations) and its six altered variations, which differ from the original painting by one of the

elements altering the content of the painting (see the still life of flowers – picture 13 in illustrations). Respondents were to evaluate seven still-lives and six altered fragments. Each altered still-life has a number and illustrated on picture 14, all fragments are illustrated on picture 15.



Pic. 14. Set of still-lives made on P. Claes's still-life basis

Pic. 15. Additional fragments included to original still-life (6 variations)

Respondents: four men and six women aged 20 to 40 years, interested in painting. The experiment lasted long and required attention, the respondents revealed interest in the whole course of the experiment.

Method of research conducted within psychosemantic approach was a particular semantic differential (29 bipolar scales).

Research hypothesis: the introduction of a new additional element in the picture is able to change its whole meaning, which affects on the position of the object in the semantic space.

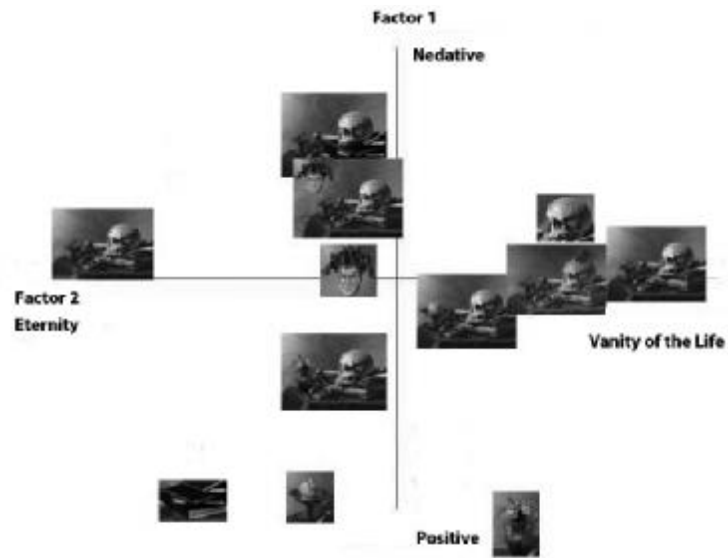
Procedure. A respondent was supposed to evaluate original still-life by P. Claes (#1) and six of its altered variations # 2 – # 7), (see # 8 – # 13). Respondent also evaluated six additional fragments (a vase of flowers, hat, new books, clown nose, etc.).

In addition, respondents gave a brief description of each still life, expressing their meanings. After evaluating the still-lives each respondent received individual matrices which are then summed and the results were made through factor analysis (with Varimax rotation). By scaling 13 objects and 29 bipolar scales of 10 subjects was obtained the data cube, which was then subjected to cross-section in various planes. Stages of data processing are described in three series of experiments.

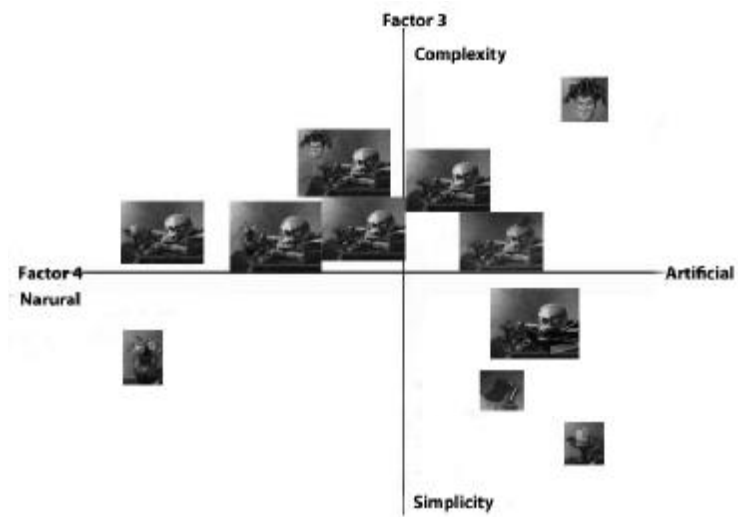
Table 1

Factor Matrix (N=10, number of objects: 13)

Nº		Factor 1	Factor 2	Factor 3	Factor 4	Factor 5
	Scales	24,3	23,9	21,3	10,5	6
	Dispersion					
1	Death – Life	-0,868	0,193	-0,348	0,005	-0,117
2	Ephemeral – Eternal	0,006	-0,861	0,036	-0,337	-0,144
3	Permanent – Temporary	0,141	0,859	-0,342	0,237	0,063
4	Absurd – Rational	-0,604	-0,669	-0,366	-0,077	-0,004
5	Order – Chaos	0,575	0,445	0,608	0,100	0,008
6	Suffer – Pleasure	-0,705	0,109	-0,454	-0,008	-0,173
7	Ugliness – Beauty	-0,732	-0,147	-0,348	-0,239	-0,192
8	Short-term – Long-term	-0,122	-0,948	0,143	-0,048	-0,096
9	Calmness – Movement	-0,100	0,801	0,504	0,017	-0,035
10	Weak – Strong	-0,661	-0,528	0,261	-0,150	-0,209
11	Simple – Complex	0,147	-0,242	0,806	-0,141	-0,298
12	Mystic – Realistic	-0,327	0,038	-0,864	-0,217	0,137
13	Sham – True	-0,639	-0,471	-0,412	-0,356	0,101
14	Bearing a symbolic content – Bearing a specific content	-0,202	-0,236	-0,839	-0,121	-0,092
15	Artificial – Natural	-0,431	-0,193	-0,164	-0,624	0,397
16	Cheap – Expensive	-0,552	-0,544	-0,064	0,084	-0,479
17	Dislike – Like	-0,900	-0,055	0,011	-0,011	0,141
18	Unpleasant associations – Pleasant associations	-0,760	0,258	-0,555	0,059	-0,027
19	Heavenly – Down-to-earth	0,276	0,223	-0,351	0,277	0,667
20	Profane (everyday) – Sacred (filled with a profound meaning)	-0,248	-0,727	0,385	-0,259	0,319
21	Incomprehensible – Comprehensible	-0,194	0,192	-0,836	0,085	0,093
22	Secular – Religious	0,047	-0,525	-0,151	-0,541	0,432
23	Collective – Personal	-0,064	-0,230	-0,041	-0,934	-0,130
24	Public – Individual	-0,063	-0,060	0,074	-0,765	-0,079
25	Replete – Devastated	0,888	0,155	0,074	0,147	0,005
26	Not making to think – making to think	0,070	-0,509	0,672	-0,323	0,292
27	Sorrow – Joy	-0,540	0,575	-0,155	0,360	-0,372
28	Harmonious – Contradictory	0,533	0,456	0,540	0,103	0,045
29	Hidden – Observed	-0,264	0,633	-0,628	-0,050	0,255



Pic. 16. Semantic space of F1 and F2



Pic. 17. Semantic space of F3 and F4

Results

Series I

Data cube was flattened: matrixes of all respondents were summed. Then by factor analysis factor structures were identified, founded loads of scales on the factors. Totally 5 factors have been singled out for the summarized matrix. Factor matrix is presented in Table 1. Pictures 16 and 17 illustrate the semantic space formed by the strongest (first and second, third and fourth) factors, in the pictures can be seen the location of objects in the space of factors.

The **first factor** – the “Positive evaluation – Negative evaluation” (24.3% total dispersion) – high factor loads included scales, such as: Life – Death, Pleasure – Suffer, Beauty –Ugliness, Like – Dislike, Pleasant associations – Unpleasant associations, Replete – Devastated, True – Sham. Fragments of paintings (of flowers in a vase, a fragment “new books” and a fragment of “bowl with bread”) have an extreme position in the first factor (positive pole), and the negative pole is given to almost all of the variations of still-lives of a skull (Except a still-life having additional piece – a vase with flowers) (see picture 16).

The **second factor** – “Eternity – Vanity of Being” (23.9% of the total dispersion) – consists of the following scales: Eternal – Ephemeral, Rational – Absurd, Long-term – Short-term, Sacred (filled with a profound meaning) – Profane (everyday), Permanent – Temporary, Calmness – Movement, Hidden – Observed. Original still-life took an extreme position at the pole “Eternity” of the second factor. On the opposite pole – “Bustle of life” – of this factor is still-life of a skull wearing a clown nose (see picture 16).

The **third factor** – “Complexity – Simplicity” – has 21.3% of the total dispersion. This factor combined scales Order – Chaos, Simple – Complicated, Making me thinking – Don't making me thinking, Realistic – Mystic, Bearing a specific content – Bearing a symbolic content, Comprehensible – Incomprehensible. At one pole of this factor the fragment “mask” (seen as something mystical) took an extreme position, and at the opposite pole – a fragment “vase, with bread”, a fragment “hat” (cylinder), and the fragment “vase of flowers”, which are perceived as something realistic (see picture 17).

The **fourth factor** – Natural – Artificial (10.5% of the total dispersion) – includes the following more powerful scales: Artificial – Natural, Secular – Religious, Collective – Personal, Public – Individual. On the pole “Natural” was a fragment “vase of flowers”, as well as variations of original still-life with the skull, which include additional samples: “vase with Flowers”, “bowl with bread”, “clown nose” and “mask”. Apparently, the image of the skull was dominant to the additional elements (fragments) and “pulled” a holistic perception of the still-life variations at the pole of Nature. On the pole “Artificial” are: the fragment “mask”, “bowl with bread”, “cylinder” and variations of still-life of skull, including an additional element of “new books” (the image of a “book” is like something created, written by someone) “pulled” a number of variations of the still-life of the skull on a pole Artificial (see picture 17 in illustrations).

The **fifth**, weak, factor is 6.0% of the total dispersion, and it was named “Heavenly – Down-to-earth”. The highest load has Heavenly-Down-to-earth scale. Extreme position on the factor has a fragment of “round bread” as worldly (Ordinary), but on the opposite is a fragment of the picture with new books Otherworldly.

Discussion of the first series of studies results

Studies revealed the following results: the introduction of an additional element into the picture generates a new semantic relations with all substantive elements in the still-life, creating a new semantic text – a new visual aphorism, stating about the world and the attitude to it. For example, a still-life with an additional element of a “Vase with Flowers” acquires a different semantic shade unlike the original still-life: flowers bring a “recovery”, “everything becomes a background for them”. The eternal confrontation of life and death is shown here: the flowers are life, the skull is death, they oppose one another, “flowers symbolize life, and in this picture they are near physical death which makes up an unusual ... contrast of life and death”. (Here the respondents singled out two objects, making up the whole visual narrative within the context of contrasting meanings). “Eternity is ugly in its static character... although the flowers will fade soon... a single minute

of bloom is more beautiful than eternity, depicted by image of books and bones". Here is another interpretation: "Life is short and ephemeral unlike with eternity".

It should be mentioned that an image has a much broader range of meanings and possible interpretations opposed to words. There is always a heap of meanings, becoming limited in the context of other objects (images, things). And indeed, if the picture is analyzed as a text, containing holistic sense, made up of meanings of the objects portrayed in the picture, and their relations and oppositions, our research shows that the semantic content of a still-life can change as a new visual element is added in the picture.

Flowers bear a concept of life coming into opposition to the idea of death. Bread, next to a skull refer us to religious thought and ceases to be edible, but becomes merely one of the objects in the picture (which also indicates that the additional element also undergoes the alters in meaning), a carnival mask introduces the concept of theatricality (masks change, reflexive thoughts: an observer's words as if saying upon seeing the life from aside: "Have a think!").

Series II

This research is devoted to analysis the change of connotative meaning of a still-life by adding a new element into the picture. At the operational level it is shift of image coordinates in the semantic space. Charles Osgood (Osgood, 1979) suggested that the connotative meanings of the compound concepts (e.g. "red ball") will be on a line connecting the connotation of the term "ball" and the connotation of the term "red" in the semantic space, it shifts towards the connotation with larger module. We tested Charles Osgood's hypothesis relating to the images involved in the previous study. The position and distance in the semantic space was done for the original still-life, for the additional element (e.g. "vase of flowers") and a new version of the still-life, containing an additional element (the "vase with flowers"). Such calculations were made for distances of three objects: the original still-life, the additional element, and the variations on the still-life, containing the additional element. These calculations were conducted for all six new versions of the still-life (flower vases, cylinder, masks, cakes, clown nose, new books).

Factor analysis was conducted with the summarized value for all six matrices for each variant of the still-life. For each still-life were found five orthogonal factors in a space of images: original still-life, fragment, variation of a still-life. In the space of these factors module factor and the distance between objects were found.

Factor module shows total removal of an object from the center in the factor space:

$$\text{Mod } X = |\vec{X}| = \sqrt{\sum_i F_{X_i}},$$

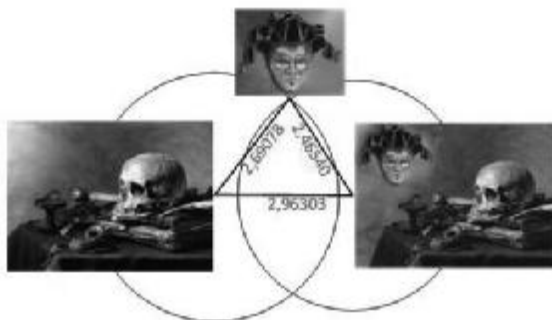
where F – is load on the factor, X – an object.

The distance between objects in factor space:

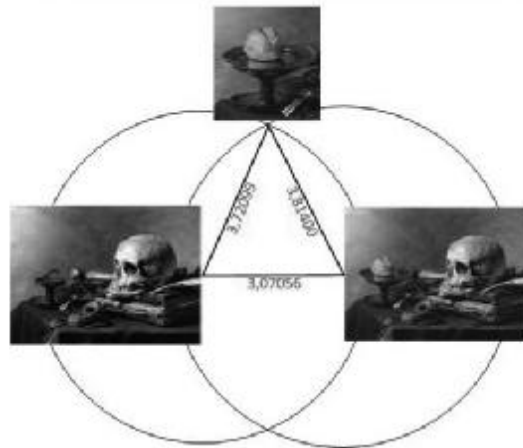
$$\text{Mod}(X - Y) = |\vec{X} - \vec{Y}| = \sqrt{\sum_i (F_{X_i} - F_{Y_i})^2},$$

where F – is load on the factor, X and Y – objects.

The results were presented graphically. Take a few examples (picture 18a, 18b in illustrations). As seen from the figures, Charles Osgood's hypothesis is not confirmed in reference to complex images which do not make a simple sum of the components. Connotation of a new concept is not on the same the line, uniting its parts, i.e. adding a new element, bearing a new meaning and making a new relation between images make us to reconsider the whole thing, form of a new gestalt of meaning, and therefore form the new semantic interpretations



Pic. 18a. Images in 5 -metric semantic space



Pic. 18b. Images in 5-metric semantic space

The experiment of the second series once again demonstrates the absence of simple laws (similar to the classical laws of psychophysics) regarding to complex visual “stimulus”, enriched with human sense and being cultural-historical symbols that should be “read, comprehend and understand” in the context of a text.

Series III. A problem of visual text hermeneutics Typology of interpretations


The meaning of the original still-life having additional objects, as shown in the previous series of studies, changes and new interpretations of the complete image appear. In this case, we were interested in selecting of psychological rules, and analyzed the summarized data matrix. Differences of interpretation of the still-life variations pose a problem of individual differences in the perception of complex images – a work of art. Data input (cube: image x scale x subjects) was split, after that were obtained seven matrices (for each variant of the still-life), composed of estimates on all scales. Factorization of the original matrices “on the respondents” allows obtaining certain typology of the

interpretation of each still-life, by combining similar interpretation in semantic blocks.

After conducting factor analysis with Varimax rotation on all respondents, types of the interpretations for each of the still-life were identified. Each interpretation had a verbal description; it was compared with the data of factor analysis. As an example, see the interpretation of still-life with flowers (picture 13 in illustrations). It has four types of interpretations given by different respondents. Table 2 shows the factor result for each variant of interpretation. We selected the interpretations with the highest factor results. Variants of interpretations of the painting (still-life with flowers in a vase) are presented in the Table 3. The data in the Table 2 were compared with verbal descriptions of the painting's meaning from each participant of the experiment (see Table 3).

Table 2

Factors (interpretations) of the still-life 2

	Factor 1 (interpretation 1)	Factor 2 (interpretation 2)	Factor 3 (interpretation 3)	Factor 4 (interpretation 4)
Respondent 4	0,14	0,44	-0,54	0,23
Respondent 1	-0,15	-0,12	-0,92	-0,02
Respondent 3	0,27	0,64	-0,10	0,58
Respondent 6	0,81	-0,18	0,25	0,15
Respondent 10	-0,10	0,90	0,16	0,01
Respondent 2	0,42	0,07	0,46	0,44
Respondent 7	0,81	0,08	0,09	-0,01
Respondent 9	0,03	0,05	-0,04	0,87
Respondent 5	0,13	-0,52	0,24	0,48
Respondent 8	-0,64	-0,11	0,44	-0,12

Four sets of interpretations have been obtained for the analyzed still-life. Such setting is equivalent to typology of the recipients by variations of interpretation.

Based on the fact that the same element has different interpretations, we conclude that the process of interpretation involves a cultural level of the respondent. This is a "task to solve a meaning" according

Table 3

Interpretations of still-life2 (still-life with «flowers»)

I		
Key idea: concepts of death and life, which have no contradiction.		
Respondent 6	Respondent 7	Respondent 8
“This is an illustration to the Novel. Remember Hamlet and this Yorik”.	“Balanced unity of life and death. Eternity is frightful in its statical character. Even though flowers will fade soon, they are beautiful. A single minute of blossom is more beautiful than eternity portrayed through bones and books”.	“Life flies, flowers are a reminder of ephemeral life. Life is impermanent and fleeting in comparison with eternity”.
Possibility of the interpretation: 0,3.		
II		
Key idea: life and death are in contrast being in fight		
Respondent 3	Respondent 10	Respondent 5
“Here everlasting fight between life and death is portrayed. The flowers is Life, a skull is death, they oppose one another”.	“A flower is a symbol of something fragile. Life can easily come to the end. Life and death are a unity and struggle of opposites”.	“Flowers symbolize life. On this picture they are next to the physical death, and we get an unusual combination, rather than opposition of life and death”.
Possibility of the interpretation: 0,3.		
III		
Key idea: pleasant feelings, flowers are associated with friendly family relationships and with harmony.		
Respondent 4	Respondent 1	
“Very pleasant and natural picture. Lovely fresh flowers, they enliven the picture. Flowers unite with nature, create harmony”.	“This is a desk of a scientist, who has warm relationship with his family members. He studies death to help people to extend their lives”.	
Possibility of the interpretation: 0,2.		
IV		
Key idea: the picture symbolically portrays the end of the one stage and the beginning of another.		
Respondent 9		
“Flowers are alive. I see spring flowers. This is the end of one stage, but life goes on”.		
Possibility of the interpretation: 0,1.		

to A. Leontiev. The obtained results take the research beyond the area of art's perception, to the field of visual hermeneutics. To gain an insight perception of complex objects such as paintings, it is necessary to consider possible interpretations of the personal "seeing" of the paintings. The language of perception is polysemic. In everyday life our perception often faces monosemantic interpretation (we clearly perceive many objects), and perception of art (paintings) is not just a "seeing", is not the perception of objects in one interpretation, but a work with the concepts; this is like "semiotic hermeneutics". Depending on the cultural level of the viewer, his values and semantic sets, he goes to one or another level of understanding of a piece of art. A modern viewer can not know the symbols, understandable to a medieval viewer, but in the context of the cultural realities of our time he reads new meanings of the elements of the image. Picture is not only an object of perception, but also an object of comprehension and interpretation. The term "perception of painting" implies more complex processes than the generation of an image based on knowledge of a viewer, with his cultural level, values and concepts which helps to form the spiritual context in which interpretation and understanding of works of art occur. The work of art giving an opportunity to create a new senses for life, raises and spiritualizes the author (to the level, of course, proportional to the talent of the artist). But an act of a viewer's co-creation in an art work is hidden from the researcher and any form to objectify it (such as eye movements or analysis of galvanic skin response) is not possible.

Nevertheless, we believe that a development of Psychosemantics of mental world outlook, Psychosemantics of creative processes and Psychosemantics of self-consciousness can help us to explore a spirit's world and study the hermeneutics of the visual perception of art.

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