On Hermeneutics in Infographics

Gleb Netchvolodov

UNIVERSITY OF TARTU, INSTITUTE OF SEMIOTICS

Abstract: Hermeneutics has long been known as one of the most effective methods of analysis of visual structures, which includes an extensive range of analytical works written by a wide spectrum of authors. Nevertheless, despite such a lengthy body of work and developed methodology of analysis, a whole range of visual material remains nearly out of hermeneutical study focus: the so-called informative graphics or infographics (hereinafter - IG). The latter includes a variety of reduced visual form image classes, such as pictograms, ideograms, etc. Indeed, due to a number of epistemological reasons, genres of fine art still remain the dominant hermeneutical study objects, whereas IG, especially since the post-modern turn toward signifier reduction, has been analyzed from the standpoint of graphic design, sometimes semiotics or visual perception. This article discourses the plausibility of applying hermeneutic analysis to the informational graphics units.

Keywords: Semiotics, Infographics, Hermeneutics, Inter-disciplinarity, Image, Communication.

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Functionally IG is a tool of an alternative communication system, designed for transfer and reception of messages by another, distinct from verbal language. Therefore the basic functional goal of an IG unit is maintenance of an adequate interpretation by both participants of dialogue as meaning and understanding generating in Ricoeurean perspectives, i.e. in dialectics of textual sense comprehension at its material form, created by means and rules of the certain language. Due to translatability and understanding difficulties in natural languages, there were attempts to simplify the problem, having raised the question about understanding by means of artificial languages developing, with precise structure, indisputably interpreted logical con-

stants and a fixed set of clearly functional categories. Yet Frege, Linzbach and B.Russell, for instance, have been fascinated by this approach, along with Bliss, Neurath and others. From this point of view, IG may be considered as yet one more typological attempt at understanding mechanism constructions by artificial language design. The effectiveness of the message here depends on several factors, the analysis of which is beyond the scope of this article. The problem of a reduced graphic sign sufficient interpretation remains the one of key glitches in pictograms complex information strategy development. Thus creators are often guided solely by artistic or technical keynotes and as a result produce vague and "hard to read" images of IG, interpretation of which is often ambivalent and unclear (Fig.1).

Fig.1

Aberration in an understanding of such images may occur due to two systems of visual code perception / interpretation overlay: the so-called images saccadic reading and historical and cultural experiences that forms an interpretation [Monaco, 2000]. Observing definite visual structures eye coheres certain constructive key elements pairing points that form a signifier. Since most of the IG signs intentionally designed for mono-semantic instant interpretation, such image constructive elements instantaneous "reading" may deliver an appearance of a certain interpretive links, based on an immediate individual visual experience conveyance. In turn, these elements configuration is usually caused by author's solution formed by culture-specific frames of a creator or his visual elucidation of an instant phenomenon.

Such outcome is quite predictable indeed, if traditional approaches may be used, i.e. through design and perception reflection from a narrow platform of static hermetic structure. But in the case of approaching IG understanding problematic as not just a narrow aspect of a sufficient interpretation ad hoc strategy, and from the position that understanding between people, carried out by means of language, is not a one-way process, the hypothesis opens ability to much wider epistemological spectrum of analysis. Taking into account that language itself influences cognitive activity formation along with the conceptually-semantic apparatus, what has been emphasized by Humboldt as:

> <...> language is not just a means of understanding, but also the cast of an ideology and the spirit of the speaker; society is a necessary environment for its existence, but it is not the only purpose it aspires. The ultimate goal of it remains the same – an individual, to the extent that individual can be separated from the whole humanity. And that can move from the outside world and from the depths of the spirit to the grammatical structure of the language, may consolidate, adapt and evolve intrinsically. And so it is, according to the vitality and elegance of language consciousness and its specific focus. [Humboldt, 2000: 397]

Considering poly-disciplinary intentionality of developed IG units, an application of hermeneutical instrumentarium is very promising and pertinent. Up to this day, IG has been analyzed primarily from the standpoint of graphic design or its direct communicative function; hence, the wholeness/discreteness of a visual sign was considered among the overall representative style or the signifier perceptual features accordingly. Since in this article hermeneutics as an analytical tool in its "pure" form is applied to the IG for the first time, it would be quite logical and sufficient to shape our conclusions based on the works of a mentioned discipline classics.

Hereafter, which aspects of analyzed subject can be reflected through a prism of mentioned discipline? As an undoubtedly key element of application, it is achievable to consider the main hermeneutic principle of wholeness and parities unity, mentioned by Gadamer:

> Since the movement of understanding is constantly moving from the whole to the part and part-to-whole. And the problem always in building concentric circles that expand the unity of meaning, which we understand. The interaction of the individual and of the whole is every time criterion of the correctness of understanding. [Gadamer, 1991:72]

Agreement (interpretation) is specified by the understanding of wholeness in which all the varieties are coordinated by systemity, preliminarily loaded in our sensations and perception [Schiller, 1957:366 -367]. To the most adequate interpretation and criterion of judgment validation, thus, personal incorporation should proceed into content [Scheler, 1994:200], determined by language systemity and interpreter's empirical cases.

Indeed, despite an entropy problem formed by an "open dictionary" strategy (i.e. by graphical units unlimited freedom of choice), IG signifier structure, either a logo or complex image, represents a communicative platform in which, as well as within any artificial language, the minimal structural components (pictograms) are functioning in system unity: in this certain case – within an non-natural language. And here we're stepping into the area essentially significant for the analysis not of any artificial, but rather visual (pictorial), language. An understanding of information, which is carried out by the majority of artificial languages, consists in transportation of firmly codified conventional signs when flexibility of interpretational fields of the latter is reduced to a minimum. Hence, a perception and the reconstruction of information shaped by the memory storing mechanism and stiff signified and signifier relations. Here an empirical sphere of communication correlates with a per-

ception in a similar way of Schiller's pre-loaded systemity, i.e. perception means that experience at any instant may be coordinated with an experience of any previous and any subsequent phase, along with individual and inter-subjective experiences, representing an integral text [Merleau-Ponty, 1999:85]. However "to live" and "to narrate" are two critically different matters [Ricoeur, 1995], and there is always a gap between life experience and a narrative (representative) discourse. In the case of pictorial language usage, his gap widens directly proportional to the conventional valences lowering. *Pictorial language* itself as a part of visual investigation is quite broad and ambivalent term. It contains a corpus of discussions on the minimum unit of an image, its syntax, translatability etc. and will not be analyzed in this article. Thus, the use of this term here can be reflected as the basic terminological universality, pertained to 2D visual constructs.

Thereby, the pictorial language specific compels to operate with quite different approach caused, first of all, by symbolic image poly-semantics in the case of IG strengthened with "open dictionary" entropy. Each pictogram of a supposed visual construction represents an iconic, indexal or symbolic shape, called up to substitute verbal communication by its hypothetical visual analogue. In other words, a set of characters (pictograms), mentioned above, should represent every Umwelt categorial variety, i.e. all possible types of subject matters and concepts, which are relative in their existence to the normal human organization [Scheler, 1994]. The main problem from understanding point of view, however, lies not within the unlimited capacity of the vocabulary, but rather in a plane of semiosis distinction formed by discrete (letters) and continual (images) symbols. Any symbolic system, discrete or continual, leads to a configuration of the reality [Ricoeur, 1995]. However, this distorted reality discloses itself differently through the prism of verbal or pictorial texts. In the case of discrete symbols, i.e. at perusal of the text, consisting of letters a perceptual memory mechanism connecting signifier and signified by clear associative connection in the first instance, thus any subsequent chain of associations caused by verbal expression is secondary in relation to the direct interpretation of the verbal unit. Conversely, at pictorial images perception, especially those that have symbolical character, construction of diverse related associations, classifying a represented denotatum, is primary. Let's take a word like stool, for instance. By reading a precise association with a specific tool of certain shape and function occurs. Such connotative associations as "low", "wooden", "broken", "on sale in a shop" appear after the initial one. At the same time, in case of reduced (pictogrammatic) image form, a paradigm of associations, often distanced from an anticipated signified, is frequently expected. In case of the latter, a context, restoring synchronic or diachronic discourse for an establishment of precise link between signifier and signified, is necessary. Here, a certain perceptual paradox consists in an assumption: that an image should emphasize just the most meaningful and necessary matters, avoiding any accidental connotations and excesses - i.e. should follow an Occam's Razor principle - to become an ideal information and essence of the subject transfer mediator [Schelling, 1996:232-234]. Structurally, any image of an IG system, in general, aspires to follow an above stated principle, designed for easier "reading" and consequent interpretation purpose. Also, both language systems - verbal and pictorial - are typologically identical from their functional structure point of view, as both of them build a matrix of understanding by means of the whole (language) / part (language

elements) ratio. Thus, why there is a key difference in interpretation sequences of verbal and iconic text perception?

An answer may be found in several planes, one of which is a concept of sensation, incorporated into the analysis of perception. An iconic image (figure) insight, unlike perception of a verbal sign, contains a process of transformation of so-called dots commotions, or impressions, collected as a result of visual experience [Merleau-Ponty, 1995]. Visual experience, in turn, is directly connected to imagination which, by its nature, always aspires to the images, embodying abstraction and inherently heterogeneous [Schiller, 1957] and which is a major factor of creativity. Thus, bearing in mind an association occurrence mechanism, it is possible to determine a process of verbal or iconic sign interpretation, in their individual appearance or within systemic contexts, via arbitrarily rational / creative dichotomy. In IG modeling, the signifier formal simplification indispensability conducts a truncation of some subject's characteristics, turning the latter to the wider "opened" unit for interpretation condition, i.e. to creative thinking triggering as an instrument of subsequent semantic filtration. To the contrary, an inflexible mechanism of denotatum and designatum linking, caused by memorizing of verbal language system, first of all, operates by cogitandi rationalis, eliminating wide signified interpretations. Hence, reasoning

> <…> deals with only a partial view or concepts and seeks to separate individual signs within the whole live phenomenon <…> [Schiller, 1957]

Undoubtedly, a creative (imaginative) process does not completely exclude an influence of a rational aspect; however, a perceptive difference in primacy and secondariness of rational / creative dichotomy allows the emphasis a distinction in verbal and iconic texts Wholeness understanding. This distinction consists in a deductive approach, applied to IG, for instance, and in an inductive one, concerning verbal models. Interpretive polarities of both methods have the precise construal meaning as the cognitive center of an interpretation field, caused by perceptual stimuli of verbal or iconic signs. Here, meaning reduction or an entropy process goes in concentric circles from the periphery to the center or vice versa. Because, ontologically, subject matters of being (Lifeworld) may, with a diverse range of accuracy, ~~to~~ be reflected through verbal or iconic signs (in an ideal system the verbal sign should have a pictorial analogue in its iconic, indexical or symbolical form, i.e. at the perception of a verbal sign a visual image occurs and, divergently, pictorial image triggering a certain verbal association; thus, the Wholeness meaning disclosing process assumes a binary system of decoding. Therefore, a movement from the periphery to the center (precise meaning) and from the center to peripheries (context) creates a full cycle of textual interpretation, stressed by Schleiermacher as

> A certain textual part understanding is possible in connection with the whole text only: it is necessary to trace the role played by a separate part in an overall composition of the text, how it arises from both the previous and joins the following discourse. [Schleirmacher, 2004:27],

or as a Hermeneutic circle, determined in IG by dual-coding system and developing an understanding reconstruction through deductive and inductive polarity.

Meanwhile, an ideal model is a construct, at the most effectively functioning within a theoretical sphere, whereas a pragmatics and practice often correlate initial parameters, integrated into the model.

Problems with an adequate interpretation, for instance, may arise in the case of direct visual and verbal denotatum analogue absence In that case a breakage in a deductive or inductive chain occurs, and the cycle (circle) of meaning reconstruction remains incomplete. In Eskimo vocabulary, for example, there are 117 shades of snow meanings, but there is not a single analogue to axe, though a functionally similar tool used for igloo construction is widely used. Eco has considered this problem in detail through the prism of Cognitive Types and Nuclear Content [Eco, 1999:123-223].

Besides that, yet another significant reason for hermeneutic cycle integrity infringement may appear, strangely enough, from Fine Art, or, to be exact - a specific iconic character of the latter in application on the informational pictorial sign. As both phenomenon - informative graphics and fine art - represent models, using continual language, along with semiosis, conveyed by means of iconic type signs, thus, transferring of the certain analytical methodology of fine art onto info-graphics seems valuable within the limits of a narrow semiotics approach. At attempts of wider application of art, a dissonance may be observed, caused by different cognitive and interpretive natures of fine art itself; hence, in order to avoid incorrect application of the latter, it is important to focus at the following points.

What, first of all, characterizes a work of art? It is the uniqueness, originality (unless, of course, we're not talking about a deliberate replication of an artifact) and exclusive topicality, which open boundless opportunities for endless interpretations [Gadamer, 1991]. On the contrary, IG has quite a different goal - to reduce possible interpretation paradigms to a minimum. A significant point of distinguishing lies not even in that IG empirically excludes the possibility of multi-interpretation (after all, the nature of pictorial sign is poly-semantic by itself, along with possible breakage of deductive or inductive chains, mentioned above), but in the mandatory openness of a work of art, in its interpretational heterogeneity and freedom of meanings and choice of implications. The rhetorical "So many men, so many minds" formula, being neutral for an artwork evaluation, is unacceptable for information pictorial systems from the latter functional purpose point of view. With rare exceptions, including propagandistic exemplars, an art does not setting an achievement of signs-stimuli and signs-signals activation [Kravchenko, 2001] with the subsequent directed performance reaction. By Vygotsky,

> Art <...> never generates any of practical action by itself, it only prepares the perceiver for this kind of action [Vygotsky, 1987: 238].

The basic functional goal of art is an aesthetic reaction summoning, indirect formation of affection, which may be experienced with full reality and power but through a prism of imagination, required for perception of art [Vygotsky, 1987]. Thus, in visual fine art analysis, deductive or inductive interpretational chains can be consciously interrupted at any stage of approximation to the center (precise meaning) without essential deformation of the semantic block. In the case of IG, an aesthetic component fades into the background, and the information aspect becomes primary. This move is reached by methodical development of the minimal visual language elements (pictograms) and, in particular, by signifiers design, aspiring at

maximum to reflect depicted objects peculiar categorical features. A running person figure within an information graphics system should represent running only, i.e. to pass an idea of an individual high-speed movement. An artist, conversely, embodying the running man or woman in a material shell, is able to denote in his work an idea of any abstract category of Lifeworld, whether it be impatience or horror - here, for the author, a transfer of semantic core by aesthetic conversion of a reality will be primary. In general, art aims to

> Give a sense to things as a vision, not as recognition: the reception of art is a method of "making strange" along with obstructed form development, that increases the difficulty and timing of perception since an art receptive process is auto-reflective <…> [Vygotsky, 1987].

By experimenting with form, an artist achieves a boomerang effect of precise information transmission, when the content becoming either is destroyed or diffused [Arnheim, 1954]. It is possible to say that an artist, shaping a form, besides direct certain action or event fixation, at the same time models a transfer of an abstract categories spectrum, which means reconstruction is achievable at artifact wholeness analysis only. Thus, sculpture, for instance, ontologically being a volumetric (3D) art, in order to prevent a concept understanding fragmentariness, assumes mandatory examining of the latter from several counterpart points of view for the most adequate notion perception. Works of fine art denotation reconstruction, achieved by fragments analysis, is more likely an archeological, paleo-graphics and restoration practice prerogative. Surely such a fragment represents a part of the whole construct and can be considered as a source of certain connotative information: for instance, an authorship establishment, work manufacturing chronological frame, etc. However, any detail of an artifact, randomly excerpted from a work of fine art, cannot be considered as a pictorial language minimal unit, due to the lack of its definition, remaining uncertain and ambiguous up to date. This problem has been stressed by Kress [Kress/van Leeuven, 2006], Horn [Horn, 1998] and Arnheim [Arnheim, 1954] repeatedly; however, the final solution still remains imprecise.

An absolutely opposite picture is observed with IG pictorial language minimal elements, where each unit (pictogram), being a constructive and systemic forming cluster, possesses necessary informative independence and self-sufficiency (mentioning pictograms, whose conventional coding is widespread enough for an adequate understanding). Each pictogram represents not just a fragment of a cognitive mosaic required for the Wholeness reconstruction, but may be admitted as the Wholeness in miniature, as a complex and completed semantic block within a certain pictorial language structure. In this miniature, the pictogram condenses the main semantic categories of an object or a concept and realizes them through the distinct form of an image-signifier, following Occam's razor principle, multum in parvo. A remedies and efforts saving rule, in other words - a creation of ideal interpretational stimuli in instant reconstruction of sense – is a real goal of an ideal communicative tool.

Art in this sense is not following a principle of perceptive efforts savings; on the contrary, it operates with ferocious and explosive expenditures of energy [Vygotsky, 1987]. A direct parallel can be drawn here with Humboldt and his understanding of language, considering the latter not as a product of activity (Ergon), but

as an activity itself (Energia). According to Humboldt, a study of the language content as a whole should be done by going beyond its formal limits, taking into account all the sensory impressions and movement of the spirit. The integrity of a work of art is composed not by formal elements that carry semantic volume, but also by emotional reactions, inherent in artifact's intentionality. Hence, when a certain emotional category, needed for representation within IG models, acts as a passive denotatum intended for inclusion into the paradigm of other abstract categories, it is very common then that in fine art an emotional reaction turns out to become a dominant aspect of perception. Because the main vector of artistic meaning reconstruction is not in a way of information disseminating, but in one's individual ability to realize the original harmony between objective and subjective matters, that is, understanding of existence in terms of how "contemplation of the spirit" is committed [Schelling, 1996].

Consequently, what conclusions can be drawn on IG studies from the remarks, noted above?

For more effective hermeneutic model application, it is necessary, first, to consider the meaning-constructing activity of two equal sign systems - verbal and visual accordingly, and secondly, to note the difference between the inductive and deductive method(s) of these systems in the process of semantic field entropy and reduction. Both methods create a circular model in which the dynamics of meaning reconstruction is carried from the periphery to the center (precise meaning) and vice versa [Lotman, 1979:29]. Despite the same type of language and sign characters utilization, far from all fine art aspects can be applied to the IG systems development, especially those specific categories of art that relate to aesthetic and emotional facets of perception. Also, it should be taken into account that IG operates by conventional minimal clusters of informative flow in which every individual unit, similar to gene, carries a certain amount of specific information. However, the latter has a negative side as well. Thus, an abstract category depicting is a constant ambiguity in terms of finding an adequate signifier and signified correlation. Paradoxically, the key to solve this problem may be found in fine art - in its emotional instrumentarium. As an example of such a move, a paradigm of emoticons that became instant IG classics, can be advocated.

In light of the emotional component and as a promising direction, a rather controversial but dynamic theory of innate linguistic abilities that Humboldt considered from understanding evolutionary perspective in communicative processes only, may be observed. In the absence of these abilities, embodied into internal human pre-language matrix, any insight would be extremely difficult, especially in the so-called "ground Zero" dialog situations, where inductive and deductive chains breaking reaches its maximum value. Holistic understanding of a text, according to Humboldt, should not occur under the scheme of the material mechanical transmission, but on the contrary, the recipient, as well as the sender, has to re-create the material with his or her internal and emotional reserves, that is, with an internal linguistic consciousness [Humboldt, 2000]. This consciousness, as the essence of language, dialogic by its nature and consisting in a hypothetical reflection and the possibility to predict the meaning, passes by the interlocutor's information flow. Such an understanding of language essence suggests that both the recipient and the sender, building deductive and inductive chains, may narrow the interpretative field much

faster and more productively, due to internal linguistic reserves which manifest themselves in an arbitrary sign meaning anticipation.

This approach dramatically increases both of epistemological and ontological spheres of IG. Indeed, following the methodological breakthrough in design of the latter, which consisted in the understanding of universal pictogram arbitrariness and, consequently, led to the specific structuring of the system, a further language matrix development in terms of the whole text predicting abilities, seems quite logical. Here, semantic autonomy and certain inflexibility of minimal pictorial language elements along with the process of prediction, which includes aspects of creativity, will also contribute to a better understanding of the whole message denotation, because of energetic emotional and empirical background components. In other words, this is the case, when an aim to identify general language complexion should go beyond the scope of an internal language system itself.

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Краткая информация о статье

Название: О герменевтике в инфографике.

Автор: Глеб Нечволодов.

Электронная почта: gleb@ut.ee.

Место работы: Тартуский университет, Институт семиотики и теории культуры.

Аннотация: Герменевтика многие десятилетия является одним из продуктивных инструментов анализа изобразительных текстов, в первую очередь, произведений «высокого» искусства – живописи, скульптуры, авторской и станковой графики. В то же время целый пласт изобразительного материала, а именно – т.н. инфографика, включающая в себя изображения с редуцированным репрезентаменом, оставался и остается вне фокуса герменевтики, эпистемологически традиционно являясь материалом исследований с позиций дизайна, визуальной перцепции и других смежных дисциплин. В данной статье рассматривается возможность применения герменевтического инструментария к анализу инфографики.

Ключевые слова: семиотика, инфографика, герменевтика, интердисциплинарность, образ, коммуникация.