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THE EYE AND NARRATION: RELATIONS OF ARTISTIC EXPERTISE AND MODE OF INTERPRETATION OF NARRATIVE AND NON-NARRATIVE PAINTINGS

Art experts claim to interpret art in purely visual terms and therefore understand better the pictorial language of art than naïve observers. Previous research suggests that untrained viewers focus on the reality of the elements of the displayed scene, not on the specifically artistic aspects. This experiment tested the relevance of type of education to the pattern of perception and interpretation of an artwork. The stimuli consisted of ten realistic paintings. Five of them were semantically complex compositions (so-called “narrative paintings”), suggesting recognition of emotional and social meaning of the depicted scene and its consequences. The remaining five were paintings similar in style, but with less complex meaning (non-narrative). The results demonstrate that training in art relates to a higher involvement in visual perception, and stimulates more specifically artistic and less object-focused interpretation. However, strong “narrative suggestion” can unify some aspects of art reception among both trained and untrained viewers.

Introduction

Natural observation suggests that artistic education should increase the ability to focus on the visual aspects of the picture, and consequently to describe it rather in terms of composition, chromatic balance etc. than object-related interpretation.

Like any task-related training, formal artistic education changes the functioning of cognitive structures of the brain (Schle Witt, 1998). After training, some aspects of visual processing become automatic (Wróbel, 2001), so tasks like analysis of compositional balance can be integrated into a natural process of image perception. The experiment of Bhattacharya and Petsche (2002) showed that in

artists, as compared with non-artists, the right hemisphere was more active (higher phase synchrony measured by EEG) during visual perception and imagery. Untrained participants presented much more equal activity of both brain hemispheres. Authors suggest that for experienced viewers, perception of paintings is much more visually engaging, and its interpretation is related mostly to the visual code, while the perception of naïve observers stimulates more verbal interpretation.

Research demonstrates that untrained viewers tend to focus on the semantic aspects of a picture (Cupchik & Gebotys, 1988; Hekkert & van Wieringen, 1996; Winston & Cupchik, 1992), treating the painting as the means of conveying information about objects and their relevance to the emotional content of the artwork (for example they successfully identify facial expressions of models, Seifert, 1992). Lack of art-related knowledge and common training in the visual recognition of objects and their emotional meaning may induce this style of interpretation among naïve observers (Cupchik, 1994).

On the other hand, learning the specific “language of art” enhances a person’s ability to recognize more subtle elements of the artwork. Noticing small differences may enable the viewer to respond more fully to a painting in its artistic form, and to judge its compositional balance and artistic value. For that reason, knowledge about the conventions of a particular style (like pop art or abstractionism) correlates with artistic preference for this style (Furnham & Walker, 2001). Moreover, artistic education can provide a new cognitive scheme for interpretation of the whole painting, and not only representations of the tangible objects of which it consists (Seifert, 1992). On this account, it is possible that sophisticated observers regard the whole picture as one complex object, concentrating on its visual form, while naïve viewers focus on particular elements (like models and their expressions) seen as meaningful objects. This view is supported by Nodine, Locher and Krupinsky (1993) who found that untrained viewers scan a visual composition more selectively (concentrating on fewer elements of the picture) than artists, who look at it in a more systematic, general manner.

Based on these facts we can suppose that, depending on a person’s artistic education, both the path of visual attention and conscious interpretation of the image should differ. However, according to some theories of perception there are important restrictions to this rule.

Writers on art often hold the view that the structural skeleton of an artwork (its composition) consists of “points of special importance” that present the greatest informational value and of some more neutral areas (Attneave, 1954; Ingarden, 1958). These meaningful points form the so-called “semantic network” of the composition. Since a painting is a form of communication, these crucial areas form the most important parts of its meaning. Thus attentive observation of these elements enables the viewer to understand the message of the painting.

Many authors have observed (e.g., Ingarden, 1958; Vygotsky, 1925/1971), that apart from the semantic skeleton, an artwork is a purely visual structure of

forms and colors, and this visual skeleton forms its artistic expression. The formal and semantic structures are identical, not even necessarily related, though in the masterpieces this is usually the case. According to Arnheim (1974), in a good artwork the visual and semantic frames of the composition should be similar. The unity of form and meaning enhances integrated reception, as it enables the viewer to come to an understanding of its message naturally while perceiving the most conspicuous features of an artwork. This view was also supported by Molnar and Ratsikas (1987). In that research, the eye paths of semantically or formally inclined observers were similar contrary to expectations. These authors declared that this was probably the influence of a particularly balanced composition (*The anatomy lecture of Dr. Nicolaes Tulp* by Rembrandt van Rijn, Mauritshuis, Hague), in which the formal and semantic structures were unified.

The idea of balance between form and message of a composition is prevalent in academic art theory. It could have been related to the popularity of “literary topics” in painting (Lambourne, 1999). So-called “narrative painting”, based on a story (either literary, historical, or originating from common social experience), was supposed to communicate this story by visual means (Moure & Hoopes, 1974). Like verbal narration, it should present a hero in a specific important action with some appealing consequences. The presented activity should suggest possible endings of the story, as well as to create suspense.

The most natural forms of “visual storytelling” include the simultaneous presentation of the episodes within the same pictorial space or the sequence of images on the successive incidents (Murray, 1998). In Western art, however, particularly in the XIXth century, the most popular mode of narrative representation was the single episode. The presented moment was carefully selected, so as to show the most dramatic scene, suggesting the beginning and the plausible end of a depicted event. There could be only hints, never the actual visions of past and future. This type of painting was very demanding on viewers, on their knowledge of literature or popular stories, and their “narrative capacity”. For this reason, numerous conventions were used to facilitate the narrative reconstruction of the painting. The unity of spatial and chronological structure of the depicted scene allowed artists to suggest a future course of events – for example, the foreground often depicted the present situation, while the background presented allusions to the future or to an alternative course of events (Poprzęcka, 1986). Another suggestive strategy was the visual enhancement of the importance of a heroine among other characters (e.g., literally highlighting her figure, as in *The Execution of Lady Jane Grey* by Paul Delaroche; Figure 1).

The purpose of these conventions was to achieve the greatest possible communicativeness of the depicted story and the emotions of its heroes, inducing the viewer’s empathic reaction (Adams, 2002; Okoń, 1992).

Narrative paintings (especially those based on mythology or history) were regarded as the most noble art genre (Lambourne, 1999, pp.10-11); therefore, according to art critics, one of the most important elements of painting was com-



Figure 1. *The Execution of Lady Jane Grey* by Paul Delaroche; 1833, oil on canvas, 246x297; The National Gallery, London

position (Zgórniak, 1998, pp. 127-128). A balanced composition with a proper informative skeleton was crucial for inducing an understanding and emotional involvement in the story's progress. For all these reasons, narrative pictures needed to precisely bind their visual and semantic structure.

It is hardly surprising that the perception of such complex stimuli should differ from reactions to less emotionally and intellectually engaging pictures. Roman Ingarden's theory of typical aesthetic experience (1958) consists of 4 stages, while in the case of narrative painting he includes a 5th stage. According to him the phases of art reception are:

- A. Primary emotion – only if the viewer is moved by an artwork would he investigate it more thoroughly;
- B. Focusing the whole attention on the artwork – other subjects seem temporarily less important;
- C. Attentive perception of the range of visual qualities – the observer creates his view on the artwork, his individual “mental aesthetic object”;
- D. Experiencing the subjective aesthetic object – by comparisons with other artworks or individual associations.

Only in the case of a narrative painting, the aesthetic experience involves:

E. Reconstruction of the depicted scene and the following emotional reaction.

In this phase a viewer constructs his own explanation of the presented situation, and its future prospects.

We may suppose that the structure of a good narrative painting should stimulate the eye and mind of the observer to follow a more similar pattern of perception than the typical, non-narrative artwork. Only by concentrating on the crucial motives, by eye scanning leading from one informative point to another could a viewer understand its complex meaning.

Narrative interpretation of an image may possibly be mediated by the narrative mode of thought. According to Bruner (1986), the narrative mode of thought is, along with the paradigmatic mode, one of two major cognitive schemas. The paradigmatic mode reflects intellectual knowledge and logical operation of the schemas of reasoning and interpretation, whereas the narrative mode refers to common knowledge and social experience. In the paradigmatic mode truth and reliability of reasoning is particularly important, while in the narrative mode, the probability and life-likeness of the presented events is absolutely vital. Additionally, the cognitive frames of these two modes differ: in the paradigmatic mode it is comparison, intellectual analysis, etc., and in the narrative mode the most typical structure would be a story. Narrative structures are more related to our experience (an individual usually considers his life as a story with him being the hero, Trzebiński, 2001), while the paradigmatic mode is formed by education and theoretical knowledge. For that reason, narrative messages are often more appealing than paradigmatic statements and more easily arouse emotions, for example, alarming titles of newspaper articles.

A schema of narrative interpretation is also acquired early in life (Nelson, 1989). For all these reasons we can presume that narrative interpretation (also concerning an artwork) will depend on formal education less than on the paradigmatic analysis.

The theories and findings cited above lead to the following **hypotheses**:

- 1) Since trained observers are more able to notice the fine details and have more complex cognitive schemas to interpret the painting, they should spend more time looking at the picture and focus more attention on it;
- 2) Trained viewers more often interpret the picture in purely visual, artistic terms than naïve observers;
- 3) In general, untrained viewers focus their attention primarily on the elements of the painting that represent tangible objects, while experienced observers focus their attention also on the other elements of the composition;
- 4) However, in the case of narrative paintings the pattern of attention fixation is more similar among trained and untrained viewers than in other, non-narrative images;

- 5) Narrative paintings induce longer and more attentive observation than other paintings, because of the additional fifth phase of aesthetic experience;
- 6) Narrative compositions are more often interpreted in terms of a presented story and its reconstruction, regardless of a viewer's formal educational background.

Method

The purpose of this “within-subjects” experiment was to determine the impact of visual narration on the perception and interpretation of artworks with regard to the educational profile of the participants.

Variables

The independent variable was the level of visual narration of the presented pictures (very narrative versus non-narrative images). The dependent variable was the observed course of the perception and interpretation process. Measured indicators included: watching time, number and location of magnified elements of a composition, number and location of “the most important areas of the painting” selected by the viewer, choice of one of the stimuli, structural and semantic features of a text about the selected picture. The differentiating variable was the participants' profile of education. Gender was the controlled variable.

Participants

106 students (age range from 15 to 19 years, $M=17,42$; $SD=0,87$) from the same high school in Warsaw, who volunteered to participate in this experiment, were divided into 3 educationally profiled groups. The “artistic” group (major subjects: art, art history) consisted of 31 persons, the number of participants in the “humanistic” group (major subjects: literature, history, languages) was 46 persons, and the “scientific” group (major subjects: biology, chemistry, mathematics) consisted of 29 individuals. Notwithstanding the relatively small aesthetic expertise of the “artistic” participants it was expected that their educational profile would be related to a specific pattern of examining the artworks. It was also anticipated that despite the general cultural expertise of the “humanistic” group, the lack of specific knowledge of visual arts would assimilate their perception and interpretation with the “scientific” group. Gender proportions of participants (71% female, 29% male) reflected the structure of the examined population and did not depend on a group.

Stimuli

The visual stimuli were computer reproductions of ten realistic paintings of a very high and a very low level of visual narration. The actual stimuli were selected by five independent raters (art historians, familiar with the concept of visual

Table 1. Mean viewing time and mean number of magnified areas according to educational profile

	Educational profile			Comparison of the artistic group vs both non-artistic groups
	Artistic	Humanistic	Scientific	
Time (in seconds)	37,93	21,45	19,03	$t(105) = 6,64; p < 0,005$
Number of magnified areas	2,31	0,98	0,61	$t(105) = 4,87; p < 0,05$

narration) from a set of 20 pictures. The set consisted of initially selected artworks from the XVIth to XIXth century. In the set both potentially highly and non-narrative pictures were paired according to their artistic style. To avoid a simplified categorization, all pictures presented people during some activity and were similarly visually complex. Instructed raters rated the images on a five-point scale of visual narration (W-Kendall coefficient of concordance was 0,86). The paintings rated highest (W-Kendall mean ranks from 16,4 to 17,4; $n=5$) and lowest (mean ranks from 3,7 to 4,6; $n=5$) on a visual narration scale were selected as stimuli in the present experiment. The list of initially and finally selected paintings is presented in the Appendix.

Procedure

In a dimly lit room participants (max. two at a time) were presented with reproductions of the ten paintings. A computer program registered subjects' age, sex, and educational profile, and displayed all five narrative and five non-narrative images (with titles) successively in a random order, and enabled participants to magnify the elements of each picture by clicking on them. The time of watching each stimulus, the number and location of the magnified elements were measured. The magnified areas, which provide the possibility of focusing attention on the details analogically to eye fixations in typical image perception, should display the viewer's interest in particular elements. After examining the images, participants chose one of the reproductions which they wanted to see again, and after a presentation of the selected picture, wrote a text about it. It was not specified whether the text should be a description, a story or an essay, in order to avoid unnecessary suggestions of an interpretation mode. In the final stage, participants were asked to define the "most important areas" of the selected painting (there was no suggestion referring to their semantic or formal quality).

Results

The SPSS version 12.0 was used to measure differences between groups (ANOVA, t-test or post-hoc tests). As expected, significant differences appeared

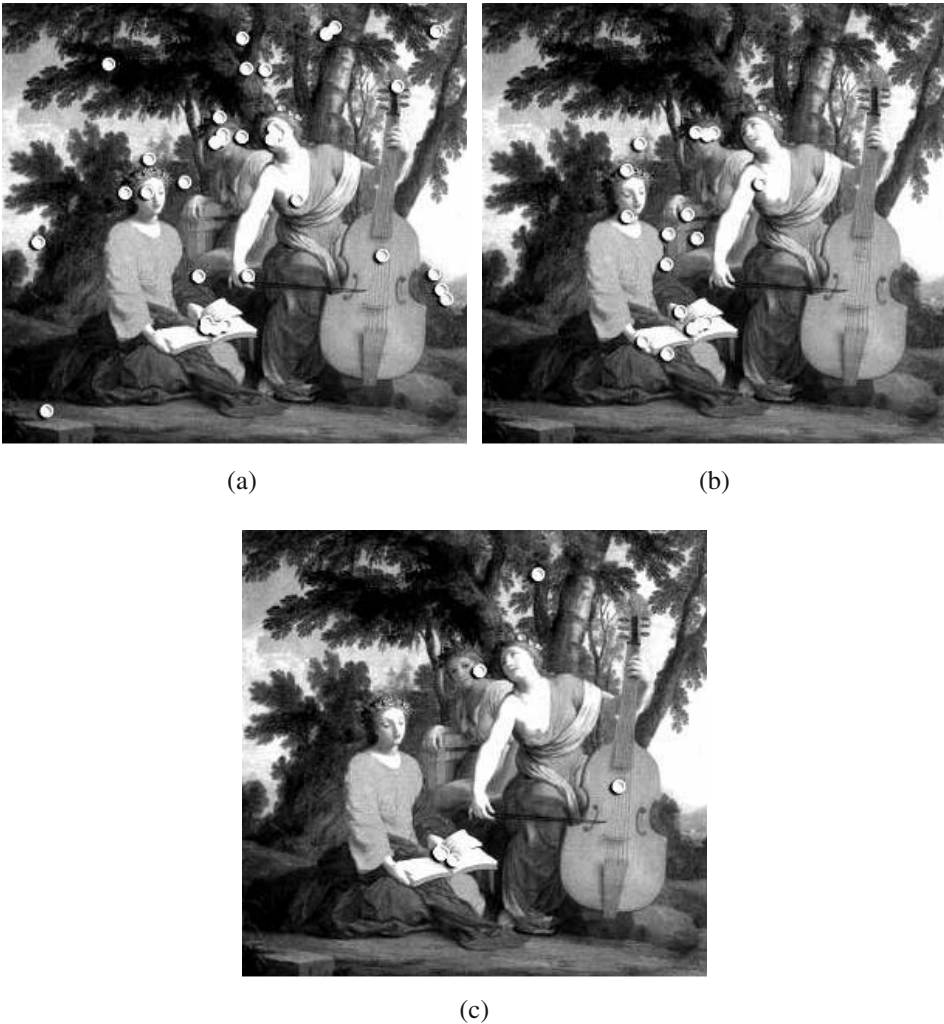


Figure 2. Sample visualization of the attended (magnified) elements of the non-narrative paintings by le Sueur according to the artistic (a), humanistic (b), and scientific (c) groups

between art-trained and naïve observers. The “artistic” group spent more time examining the pictures and, on average, magnified more elements of each composition. These differences were significant with reference to both other groups; see Table 1. Differences between the “humanistic” and “scientific” groups were not statistically significant. This suggests that sophisticated viewers in general focus more attention on the visual compositions than participants untrained in arts, regardless of their educational specialty.

Moreover, informal analysis of the visual data seems to indicate that in typical non-narrative paintings untrained viewers almost without exception locate their

attention and consequently magnify only the elements of the painting representing semantically meaningful objects. On the contrary, participants from the “artistic” group focus their attention also on other elements of the composition, possibly because of their pictorial importance; see Figure 2.

The second hypothesis, that trained viewers more often interpret the picture in purely visual, artistic terms than do naïve observers could be confirmed only by a text analysis. All the sentences in the texts about the selected painting were divided into 3 structural categories and 9 semantic categories. A single sentence was regarded independently as an unit of structure and information.

Structural categories were determined according to the specific of a predicate as:

- 1) description (e.g., *stands, has, holds, looks*);
- 2) argumentation (e.g., *think, suppose, seem, suggest*);
- 3) fable (e.g., *laugh, love, fight, play*).

There was no differences in preference for these categories between the groups. Semantic categories after exploratory analysis consulted with fellow-researchers, were defined as follows:

- 1) emotional and symbolic expression (e.g., *These people relaxing in the sun remind one of summer, freedom, and light-heartedness*);
- 2) presented reality – depicted objects (e.g., *He is holding an axe or a hatchet*);
- 3) presented reality – social and interpersonal meaning (e.g., *He wants to abuse her*);
- 4) formal artistic means (e.g., *Dark and cold colors are used*);
- 5) style of painting or its creation (e.g., *This is a baroque painting*);
- 6) “I” related sensations, feelings, knowledge (e.g., *This scene seems familiar to me*);
- 7) common social knowledge (e.g., *Cold-blooded killing of people is not typical of human nature*);
- 8) history or literature (e.g., *King Solomon asked God for wisdom*);
- 9) meta-commentary on the conducted research (e.g., *I hope that my text will help you in your work*).

Each sentence was categorized according to its formal structure and semantic content.

It was found that the only significant difference between the groups in the frequency of particular categories concerned thematic categories on formal art interpretation: “formal artistic means” and “artwork style and its creation”. As expected, the “artistic” group more often referred to “formal artistic means” than did the “humanistic” group ($t(76) = 1,124$; $p < 0,05$) and on the tendency level than the “scientific” group ($t(59) = 1,124$; $p < 0,1$). The sentences on “artwork style and its creation” were also more likely to appear in the texts of the “artistic” group than of the “humanistic” ($t(76) = 1,086$; $p < 0,05$) and “scientific” groups (t

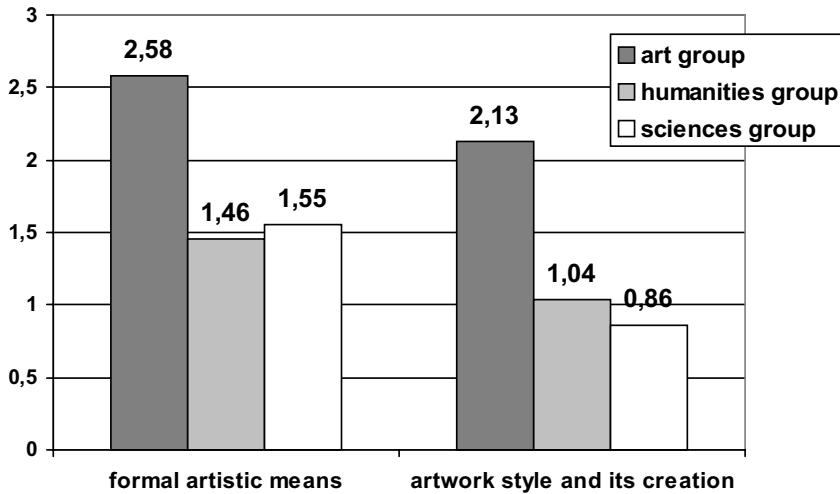


Figure 3. Mean number of sentences in the thematic categories on formal art interpretation: “formal artistic means” and “artwork style and its creation”, according to the educational group

(59) = 1,267; $p < 0,05$); see Figure 3.

Finally, two key categories were established, combining structural and semantic aspects. These categories reflect the division between the paradigmatic and narrative modes of thought, as the major cognitive styles (Bruner, 1986) used in art reception. It was expected that the paradigmatic mode related to formal education would be more frequent in the interpretations of art-trained viewers, and also refer to argumentation on the formal and stylistic aspects of paintings.

For that reason, argumentative (the second structural category) sentences about formal artistic means (semantic category no. 4) and/or style of painting (semantic category no. 5) were chosen as indicators of the paradigmatic mode of thought. The accuracy of these key categories for the paradigmatic mode was supported by correlation of the frequency of the categories “argumentation on formal artistic means” and “argumentation on style and creation of the painting” ($r = 0,403$; $p < 0,001$).

Further, fable-type (the third structural category) sentences about social and interpersonal meaning of a presented reality (semantic category no. 3) and/or history and literature (semantic category no. 8) indicated the narrative mode of thought.

According to the hypothesis, participants from the artistic group, because of their deeper knowledge of art and frameworks of formal interpretation, should use the paradigmatic mode more often than did subjects from the other two groups. The results appear to confirm this view, though only differences between artistic and scientific groups were significant (in the category “argumentation on formal artistic means” $t(59) = 0,59$; $p < 0,05$). In the category “argumentation on style and

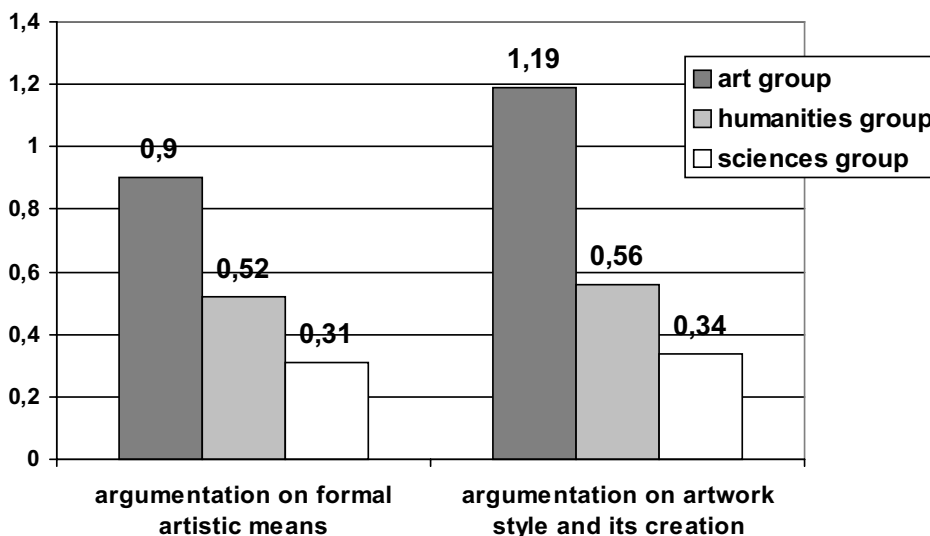


Figure 4. Mean number of sentences in two key categories of the paradigmatic mode of art interpretation: “argumentation on formal artistic means” and “argumentation on artwork style and its creation”, according to the educational group

creation of painting” analogical differences showed only a statistical tendency ($t(59) = 0,85$; $p \leq 0,07$); see Figure 4.

The other group of results concerns the differences in perception and interpretation of the narrative and non-narrative paintings according to the educational profile of participants.

The visualizations of the magnified (and thus attended to) elements of narrative representations suggest that the fixation pattern of attention is much more similar in artistic and other groups than in the non-narrative images; see Figure 5.

In conformity with the previous findings, the artistic group magnified more elements than did the other groups. However, the locations of those elements seem to be more similar between groups, forming a map of the most informative and crucial points of semantic structure. The relevant similarity of the areas attended to by trained viewers (more interested in formal aspects) and by naive observers (attentive to the renderings of concrete objects) may indicate that indeed in narrative paintings the formal and semantic structures are similar, though theoretically we may still differentiate them.

Apart from these informal findings, examination of the quantitative data showed that the processing of the narrative images is performed differently, and may impose even the expert-like style of art perception. The measure of the time of observation, as an indicator of the cognitive processing of the visual stimuli, varied significantly, depending both on the type of education and level of visual narra-

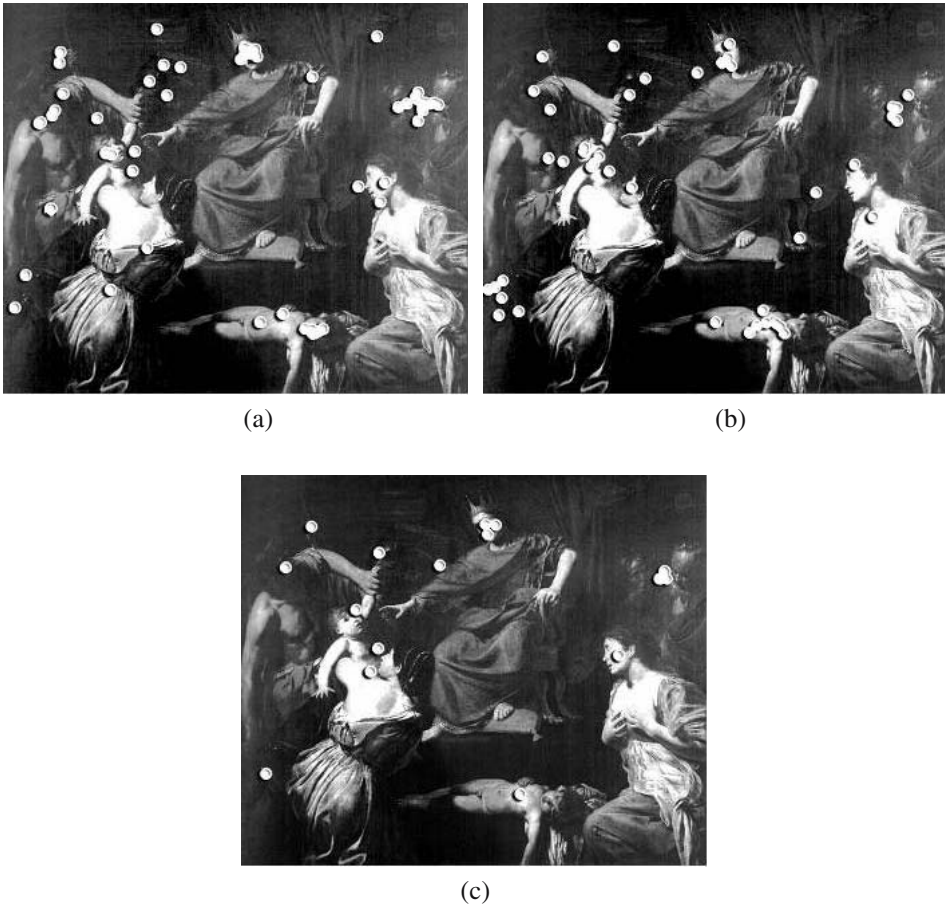


Figure 5. Sample visualization of the attended (magnified) elements of the narrative paintings by de Boulogne according to the artistic (a), humanistic (b), and scientific (c) groups

tion. As expected, narrative compositions on the average were generally examined longer (28,9 s) than the non-narrative (20,9), and this difference was statistically significant ($t(105) = 7,75$; $p < 0,001$).

Similar results were obtained by examining the number of magnified composition areas. The mean number of magnified areas was higher for narrative stimuli (1,29) than for their non-narrative counterparts (0,85; $t(105) = 5,435$; $p < 0,001$).

Further comparisons of viewing time within each group demonstrated that a longer time of examining narrative images appears only among naïve observers: humanistic and scientific groups (respectively: $t(45) = 2,04$; $p < 0,05$ and $t(28) = 2,57$; $p < 0,02$). In the artistic group, the difference of time spent on looking at narrative and non-narrative images was not significant.

These results suggest that, in untrained viewers, narrative paintings induce longer and more attentive observation than do other paintings, possibly because of the additional fifth phase of aesthetic experience – the mental reproduction of the story and its possible consequences. It is difficult to state the same about art experts, as they examine the picture for an equally long time, regardless of its narrative topic. Possibly their schemas of interpretation are so sophisticated and complex that they don't need any additional enhancement (such as a narrative suggestion) to examine the painting with attention. It may be possible, however, that even art experts try to identify the story displayed in a narrative picture.

To establish whether the longer time and greater attention that naïve observers involve in their reception of a narrative painting are related to a mental narrative reconstruction of its meaning, the texts concerning these paintings were analyzed. A text analysis was meant additionally to determine whether the trained viewers also tend to reconstruct the narrative message of the painting, or if they focus only on the formal aspects of the paintings.

For each participant to write a text on a painting it was necessary to select beforehand one of the images for repeated presentation. The majority of the participants (69.5%) had chosen one of the narrative paintings, and consecutively more persons wrote a text on a selected narrative painting than on a non-narrative one (30.5%). This was not surprising, since narrative stimuli could attract more attention because of their emotionally involving content. There was no difference in preference for narrative stimuli between the “artistic” group (74.2%) and “humanistic” group (73.9%). The “scientific” group was slightly less inclined to prefer narrative paintings (57.1%). However, these differences in preference for the two types of paintings created a disproportion in the numbers of subjects in sub-groups (writing on a narrative or non-narrative painting) within each educational group. This made impossible the “within group” comparison of the text analysis for participants writing on a narrative or non-narrative painting. For this reason, all comparisons were conducted between educational groups or within the group of all examined participants.

It was expected that narrative compositions would be more often interpreted in terms of a presented story and its reconstruction, therefore the key categories representing the narrative mode of thought should be used more frequently in the texts about narrative paintings than in the texts about non-narrative images.

As previously mentioned, fable-type sentences (third structural category) about social and interpersonal meaning of a presented reality (semantic category no. 3) and/or history and literature (sem. cat. no. 8) were used as indicators of the narrative mode of thought. These types of sentences actually appeared more often in the texts about narrative painting; see Figure 6.

As expected, those participants writing texts on narrative paintings on the average created more narrative sentences with social and interpersonal meaning of the presented reality (2,45), than subjects describing non-narrative paintings

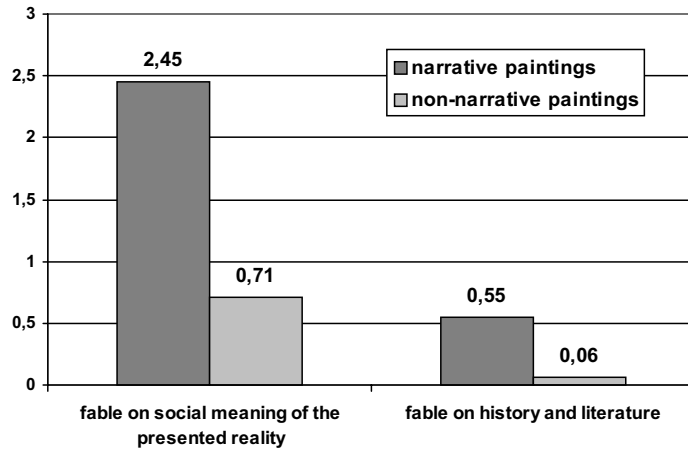


Figure 6. Mean number of sentences in two key categories of the narrative mode of art interpretation: “fable on social and interpersonal meaning of the presented reality” and “fable on references to history and literature” regardless of educational groups

(0,71; $t(105) = 2,621$; $p \leq 0,01$). They also more often (0,55 vs 0,06) referred to narration of the historical or literary background of the depicted scene (though it is only a statistical tendency; $t(105) = 1,547$; $p \leq 0,1$). This suggests that the literary type of images indeed induces a narrative reflection, which according to Ingarden (1958) is the last phase of aesthetic experiencing of a narrative painting.

There was no general influence of education type on the disposition to interpret the paintings in narrative terms. Art experts analyzed the story underlying the picture similarly to naïve participants, as there was no significant difference between educational groups (for participants describing the narrative painting) in frequency of indicators of the narrative mode. This result suggests that narration was an equally popular interpretation of the narrative picture among naïve and expert observers. The visual narration also seems to stimulate a specific narrative mode of art reception, and to induce narrative interpretation regardless of the viewer’s education.

Discussion

In the present experiment a course of perception and interpretation of narrative and non-narrative images was investigated in order to gain insight into the relative importance of narrative and paradigmatic modes of art reception for viewers differing in expertise. The presented findings correspond with Bruner’s (1986) view of narrative and paradigmatic modes as two basic cognitive schemas. In general, the results strongly confirm the expected relationship of preference for a

particular mode and artistic expertise. This suggests that it is acceptable to apply Bruner's concept of two major modes of thought to art reception as well as to use combined structural and thematic categories of text analysis as their indicators.

One of the most important effects observed was the influence of artistic education on the paradigmatic mode on art reception. Indeed, art-specific knowledge and experience is related to a more attentive approach to the visual perception of artwork, and use of strictly aesthetic categories in their interpretation. Participants from the "artistic" group focused their attention on a wider range of compositional motives (not only representations of tangible objects), possibly because of the pictorial importance of these motives (which corresponds with the findings of Nodine, Locher, & Krupinsky, 1993). On the contrary, the perception of the naïve viewers tended to focus on elements of represented reality and their resemblance to real-life objects.

It might be explained that due to art-related education, experts "develop more art-specific cognitive models or categories that influence the perception and evaluation of art" (Hekkert & van Vieringen, 1996, p.129). In other words, they learn to apply the paradigmatic cognitive mode to art interpretation. The art-models of inexperienced viewers are an extension of their everyday experience. For that reason they look at the painting to identify the objects as meaningful elements, and sometimes to judge their relative beauty. If the artwork fails to intrigue them on a particularly emotionally dramatic theme (as in narrative painting) or to impress strongly their aesthetic taste, their attention would fade very quickly. This view on the impact of expertise on art reception corresponds with numerous previous publications (e.g., Hekkert, & Snelders, 1995; Solso, 1994; Winston, & Cupchik, 1992).

However, despite the crucial influence of education, there are artworks that seem to induce an early acquired and more prevalent narrative mode of thought and therefore to unify the interpretation of naïve and expert observers to the highest degree. Models of narrative involvement of untrained and trained viewers have yet to be examined empirically, but some theories of aesthetic experience aim to explain their mechanisms. Ingarden (1958) suggested that initial emotion is a prerequisite for a process of aesthetic involvement. For experts, this emotion may be related with specifically artistic means, but both experienced and inexperienced viewers will respond to a highly emotional representation. In a way, a moving scene will be more likely to be an object of attention and thematic reconstruction than any other motive, regardless of the viewer's social and educational background. This explains why in the XIXth century, when public art exhibitions were increasingly numerous, but representing very different levels of artistic education, so many paintings displayed narrative motives, dramatic stories and heart-breaking episodes (see e.g., Lambourne, 1999).

Emotional appeal is not the only necessary condition for narrative suggestion. Gombrich (1964) claimed that to induce a reconstruction of a presented story some uncertainty as to its possible outcome is indispensable. An observer must

actively seek a plausible ending, even though the painter may suggest by composition one of the future courses of action. Possibly a reluctance to leave the visual puzzle unsolved (corresponding to the well known Zeigarnik effect) along with induced emotional empathy towards the heroes (Adams, 2002) increases the attention of naïve viewers and stimulates experts to include some narrative reflections in their interpretation.

It may be argued that, because the image-related response of untrained observers includes both verbal and visual processing (Bhattacharya & Petsche, 2002), a verbal suggestion in the title (rather than a narrative composition) is the actual trigger of narrative reconstruction of the painting's meaning. It is true that authors emphasize the role of the verbal code in the reception of visual message (Eco, 1968), and particularly in the interpretation of a narrative painting (Brooks, 1998). I expect the title to be the vital element of a literary painting, but not a unique factor determining the narrative suggestion of an image. This view, which will be examined in further research, is based on a participant's remarks, both relating to the importance of the title, and to the appealing power of the image.

The last element determining the shape of a viewer's narrative reconstruction is probably their individual experience and knowledge. The understanding of an unequivocal message is often based on the individual's social and cultural competence and life experience (Kliś, 2004). The same effect most likely applies to the understanding of the visual stimuli. An informal illustration of this could be a comparison of reactions on the same narrative painting (*The execution of Lady Jane Grey* by Paul Delaroche; see Figure 1) by two participants.

“I remember the best painting on the execution of Jane, because it excited my most intense emotions. (...) The question that makes me think is why this young and pretty girl was condemned to death. Possibly she was unfaithful to her husband, and in those times it was (...) punished very severely. Apart from Jane, the figure that attracts attention is the executioner, who is standing unmoved and is looking calmly at the tragedy of the girl's relatives. (...) I wonder how can a man do such a cruel job as being an executioner. The cold-blooded killing of people for money is not typical of human nature. Moreover the hay (...) is possibly there so that the blood, pouring out from the wound was absorbed somewhere. This is a painting inducing really strong emotions, and is rather drastic. Maybe not the actually presented scene, but imaginative persons can imagine what will happen.” (woman aged 17.5; scientific group).

“The painting is charming because of its minimalism. Models forming three figurative groups attract the gaze simultaneously. Each of them is interesting because of another detail, e.g., the man on the right by the accent such as his broche and the color of his trousers. He doesn't show any emotions,

possibly because he is perhaps the executioner. The woman in the white dress – the Jane Grey in the title– because of her white dress seems entirely innocent. Maybe she is unaware of what will happen (...). An elderly man is guiding her towards the small tree-trunk on which she will be executed. (...) The colors and number of persons because of the minimalism create a colorful mystery, as the viewer is perfectly aware of what will happen. (...) The gestures and body position (of Jane Grey) remind one of an innocent child, unaware of good and evil. (...) The one positive side of this situation is the fact that the decapitated woman will not suffer psychically, but she will experience only physical suffering, which is actually a smaller torture for a person. ” (man aged 18.7; artistic group)

According to the presented quantitative results and this qualitative sample, trained observers in reception of narrative paintings combine the narrative and paradigmatic modes of thought. They try to reconstruct the motive, though their attention does not seem to be increased by the additional semantic complexity of the narrative composition. Also, their preference for narrative paintings (in the choice of one picture for repeated demonstration) suggests either an increased interest in its narrative topic or a general preference for more complex stimuli. Consequently, fixating their attention during perception of narrative paintings on the same objects as untrained observers can relate either to a greater interest in the informative content of the artwork (induced by its narrative suggestion), or to the similar structural and semantic skeleton of the balanced composition.

The present data permit one only to state that narrative images (compared to non-narrative) induce a longer and more attentive observation in naïve viewers and, in all viewers, stimulate the usage of narrative categories in their interpretation. Narrative images also seem to induce a more similar pattern of both visual attention of experts and naïve observers than other pictures.

However, to reach a more decisive conclusion it is necessary to replicate these findings in further experiments. For that reason, more experiments should be conducted in relation to narrative and paradigmatic modes in the response of experienced viewers. Also, a relationship of semantic and formal structure of the narrative stimuli could become an object of further investigation.

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Appendix. The list of initially and finally selected paintings

The paintings finally selected and used in the experiment (pictures 1-5 are the narrative paintings, 6-10 are the non-narrative paintings):

1. Valentin de Boulogne, *The judgement of Solomon*, circa 1625, oil on canvas, 176x210; Musée du Louvre, Paris
2. Jean Honoré Fragonard, *The bolt*, ok. 1778, oil on canvas, 73x93; Musée du Louvre, Paris

3. Théodore Géricault, *The raft of the Medusa*, sketch, circa 1818, oil on canvas, 38x46; Musée du Louvre, Paris
4. Paul Delaroche, *The execution of Lady Jane Gray*, 1833, oil on canvas, 246x297; The National Gallery, London
5. William Holman Hunt, *A converted British family sheltering a Christian priest from the persecution of the druids*, 1849-50, oil on canvas, 111x141; Ashmolean Museum, Oxford
6. Pierre Puvis de Chavannes, *The summer*, 1873, oil on canvas, 350x507; Musée d'Orsay, Paris
7. Domenico Fetti, *Melancholy*, circa 1620, oil on canvas, 168x128; Musée du Louvre, Paris
8. Jean Honoré Fragonard, *The bathers*, ok. 1772-75, oil on canvas, 64x80; Musée du Louvre, Paris
9. Eustache le Sueur, *Three Muses*, ok. 1652-55, oil on canvas, 130x130; Musée du Louvre, Paris
10. Thomas Lawrence, *The children of John Angerstein*, 1808, oil on canvas, 194x144; Musée du Louvre, Paris

The paintings initially selected and presented to raters (not used in the experiment); pictures 11-15 were chosen as potentially narrative paintings, 16-20 are potentially non-narrative paintings:

11. Guido Reni, *Detanetra and the centaur Nessus*, 1621, oil on canvas, 256x193; Musée du Louvre, Paris
12. Eugène Delacroix, *The death of Sardanapalus*, 1827, oil on canvas, 392x476; Musée du Louvre, Paris
13. John Everett Millais, *Isabel*, 1848-49, oil on canvas, 102,9x142,9; Walker Art Gallery, Liverpool
14. Georges de la Tour, *The cheat*, ok. 1635, oil on canvas, 106x146; Musée du Louvre, Paris
15. Joachim Wtewael, *Perseus and Andromeda*, 1611, oil on canvas, 180x150; Musée du Louvre, Paris
16. Léopold Robert, *The pilgrimage to the Madonna des Arches*, 1827, oil on canvas, 142x212; Musée du Louvre, Paris
17. Jean-Baptiste Siméon Chardin, *The canary*, 1750-51, oil on canvas, 50x43; Musée du Louvre, Paris
18. Eugène Delacroix, *The women of Algiers*, 1834, oil on canvas, 180x229; Musée du Louvre, Paris
19. Jean François Millet, *The gleaners*, 1857, oil on canvas, 83,5x111; Musée d'Orsay, Paris
20. John Everett Millais, *The blind girl*, 1854-56, oil on canvas, 82,6x62,2; Birmingham Museum and Art Gallery, Birmingham