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An Approach Influenced by Categorization Research within Cognitive Psychology

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Narrativity and Time in Static Pictures

An Approach Influenced by Categorization Research within Cognitive Psychology

Contemporary aesthetics, perhaps most notably analytic aesthetics, has to a considerable extent been concerned with the analysis and clarification of concepts such as "art", "meaning", "metaphor", "aesthetic value", and so forth. Especially the notion of "representation" has been dealt with at length, chiefly by discussing so-called copy theories of art which describe (or prescribe) the function of visual artworks to depict particular and singular *objects*.

Still, numerous works of art have throughout history been created in order to render (i) specific activities or actions extended in time, and (ii) types of actions rather than particular ones. In this paper I intend to discuss how and by which means static visual representations (such as paintings, sculptures, photographs, etc.) are capable of rendering narrative and temporally extended themes and, moreover, in which way such renderings_may correspond to conceivable beholders' preestablished expectations. Some proposals from narratology and especially cognitive psychology will be taken into consideration.

During the last few decades, narratology has become a growing field of interest within the humanities, most notably among literary analysts, linguists, and semioticians. Quite frequently, narration has been associated with verbal discourses,

whether in written or oral form, where, briefly put, events or situations are represented in a time sequence. Accordingly, theoretical discussions concerning narrativity have usually focused upon literature and drama, though also on cinema films and television. However, the ability of static pictures to represent actions and to narrate stories seems to have received much less attention in art theory contexts. Accounts of pictorial representation are frequently concerned with the general nature of depiction, e.g. whether and how the relation between a picture and the depicted object or state of affairs can be analyzed by referring to some kind of natural resemblance or solely to certain conventions. Moreover, related concepts such as "portrayal", "symbol", "expression", "fiction", and "imagination" have been (more or less thoroughly) examined, and especially one issue has puzzled numerous scholars, namely how flat pictures can represent space, perspective, or threedimensional objects. Astonishingly, though, the question as to how static pictures are capable of representing actions and time sequences has been treated quite superficially. Among art historians, on the other hand, the narrative aspects of visual art have of course constituted a prevalent focus of interest, though chiefly from a descriptive, interpretative, and historical point of view. This concern is hardly surprising; visual narratives are undoubtedly occurring in most historical and cultural contexts. With regard to Western art, we

may find examples of pictorial "storytelling" at least as early as in ancient Egypt, Greece, and Rome as well as in the Middle Ages, the Renaissance, and so forth (and numerous examples from the Orient could unquestionably be mentioned). Still, any deeper theoretical reflections on this matter occur often only as scattered remarks even among art historians - which for obvious reasons is somewhat unfortunate. Erwin Panofsky, one of the most influential art historians with outspoken theoretical concerns, may be credited for having elaborated the socalled iconographical or iconological methods. According to Panofsky, a fruitful investigation of works of art should be striving for an analysis of their meaningaspects (in contradistinction to their formal aspects). These aspects occur on several levels.¹ First, we have a preiconographic level - the depiction of human beings, animals, natural or artificial objects, etc. The identification of gestures, expressive qualities, and simple actions would also belong to this level. A second interpretative level - the iconographical analysis - consists of identifying the subject matter or the theme of the artwork. An iconographical interpretation would demand an identification of the depicted agents as certain persons (for example, the Virgin Mary or Heracles) or maybe personifications with certain attributes and would, if necessary, contain some reference to relevant myths or tales (i.e. complex action sequences).² So far, so good.³ The exact nature, however, of such narratives (in contrast to e.g. the rendering of space and perspective), i.e. the various means used by the artist in order to convey them and the presuppositions needed on part of the beholder in order to understand them, is analyzed disappointingly scarce. It should be pointed out that Panofsky by no means is an exception in that respect; indeed, among art historians, as well as aestheticians, problems of narrativity in pictorial art seem hardly to have received any continuous and thorough attention compared to those issues mentioned earlier.

Now, a minimal requirement for something to be a narration appears, as already indicated, to consist of the representation of at least two (real or fictive) actions, events, or situations with a temporal link on the content side (i.e. concerning the represented world).⁴ At first glance, such representations have predominantly been manifested by verbal means. According to Gotthold Ephraim Lessing, for example, who as early as 1766 attempted to characterize the distinctive features of painting vs. poetry *qua* signs, the representation (or "imitation") of actions does primarily (and best) occur in poetry.

Objects which exist side by side...are called bodies. Consequently bodies with their visible properties are the peculiar subjects of painting. Objects which succeed each other...are actions. Consequently actions are the peculiar subjects of poetry.⁵

The claims put forward by Lessing are thus that painting essentially is an art of space, while poetry is an art of time, the latter being privileged in narrating actions, that is, the succession of events in time. To some extent painting is capable of indicating actions, though only indirectly through suggestion, namely by choosing the most pregnant, arrested movement in an imagined action sequence.

Painting, in its coexistent imitations, can use but a single moment of an action, and must therefore choose the most pregnant one, the one most suggestive of what has gone before and what is to follow.⁶

Lessing's view has, not surprisingly, been a matter of controversy among art theorists (for example, his essentialist distinction between spatial and temporal arts has been put into question).⁷ Still, it seems, narratology's primary concern with temporally extended arts such as literature, movies, and so on could perhaps be interpreted as having been influenced by similar lines of thought. Let us, however, take a closer look at some (though not all) ways in which pictures seem to have a narrative function.⁸

First, all of us are of course acquainted with pictures which have an explicit temporal character due to the fact that they occur in continuous, seemingly uninterrupted series, such as in motion pictures. Perhaps more interesting in our present context, we have numerous historical examples where static and quite distinct pictures are linked in narrative series having a fixed reading order. Modern instances of this kind of pictorial narration can be found in strip cartoons, but do actually occur as early as in antiquity and the Middle Ages (e.g. the scenes from the Old and New Testaments on the bronze doors of the Hildesheim Cathedral, c. 1015).

Second, and perhaps most widely taken into consideration by art historians, there are single pictures showing different events and persons in the same pictorial space. In these cases, sometimes called "simultaneous succession", various phases in an event series are represented simultaneously.9 Such forms of pictorial narration can also be found throughout history (e.g. the epic-documentary representation on the column of Trajan of the emperor's war against the Dacians, c. 101-106 AD.; Massacio's fresco "Tribute Money", showing St. Peter three times in the same pictorial space, c. 1427).¹⁰

Third, we may also think of static pictures which only implicitly have a narrative function, that is, where a frozen scene in a tacit action sequence has been chosen, from which what has preceded and will follow has to be inferred by the beholder. Thus Lessing's idea of the "pregnant moment" would very well fit into this category; only an arrested moment is directly represented, though implying a wider, temporally extended action sequence. The hellenistic sculpture group "Laocoon and his Two Sons" (1st century AD.), which Lessing himself discussed at length, may be mentioned as an example where the depicted scene is referring to a series of mythological events. However, we may also think about static scenes which, instead of implying mythological, religious, or political narratives, simply refer to simpler and more common action schemes, such as Gustave Courbet's "A Burial at Ornans" (1849-50), showing a group of persons participating at a funeral.

This short survey of some forms of pictorial narration is of course by no means exhaustive and needs undoubtedly a more detailed account. For example, narrative and temporal aspects in pictorial representations may also occur in implicit renderings of nature's and the seasons' cyclic processes, of man's ontogenetic and phylogenetic development, of cultural and historic situations as related to other contexts or even the present (i.e. the context in which the picture has been created), and so on. Furthermore, it should also be kept in mind that these three types of pictorial narration may overlap; for instance, a picture may belong to a narrative series of pictures while at the same time as well showing the "pregnant moment" within a more limited action sequence.

There is, however, a more basic question which I intend to touch upon, namely how the rendering and comprehension of pictorial narration might be investigated from a more general perspective. As I have argued elsewhere, theoretical discussions about the arts might very well profit from taking empirical/psychological findings into account.¹¹ With regard to the problems at issue in the present context, this might likewisely be the case. Especially recent research within cognitive psychology and – more specifically – categorization research seems to be fruitful in this respect.

Cognitive psychology has, to a considerable extent, given attention to the capacity of humans and other living creatures to categorize objects and events. It seems unquestionable that this capacity is essential for organisms in order to survive and to improve their living conditions. The formation of categories enables us to apply previous experiences to new ones. to make inferences, to make predictions about the future, and they provide efficiency in communication - just to mention a few examples. Important questions, however, are how categories arise at all (i.e. whether, or to what extent, they are the result of environmental features or constructive processes on the part of the categorizer), and how they are represented in consciousness. Numerous cognitive psychologists have, following Eleanor Rosch's pioneer work, attempted to investigate the nature and acquirement of categories in general, most notably that of taxonomic categories.¹² A major tenet in cognitive psychology is the assumption that the mind should be regarded as a symbol-processing system, and that one important goal is to identify and explain the representations and symbolic processes involved in cognitive activities. A significant characteristic of cognitive psychology, which clearly distinguishes it from traditional behaviourism, is thus the supposition that intelligent organisms are capable of constructing and manipulating mental representations.

Such mental representations may provide us with information that enables us to distinguish members of a category from non-members. A number of cognitive psychologists have proposed that perception and cognitive activities are hierarchically structured. New information is compared with and assimilated into broader schemata or categories which are necessary for object recognition, explanations, predictions, and communicative activities. Put in another way, humans seem to be able to store mental representations which have something like type-character. These a representations are thus some kind of abstraction stored in long-term memory with which external objects are compared. Common taxonomic categories are acquired after encountering several particular instances of the category in gory in question, after which relevant characteristics are.extracted and integrated into category knowledge.

Numerous studies within cognitive psychology indicate that category formation in general, whether we think of categories such as *furniture*, *fruit*, *birds*, *animals*, and so on, may be explained as outlined here. It should also be emphasised that these studies are empirically based, making use of sophisticated and rigorous experimental and statistical methods, thus giving the hypotheses put forward, as I believe, additional strength compared to pure philosophical reflections.

Now, with regard to pictorial art, it may be assumed that the rendered content more or less corresponds to mental representations which are shared by a relatively large group of beholders. As, for example, the art historian Michael Baxandall convincingly has claimed, artists have usually adapted their work to the general cognitive demands and presuppositions of the intended beholders.¹³ Although Baxandall chiefly has focused on strategies for pictorial representation used in fifteenthcentury Italian painting, it seems quite possible to take his account as suggesting a more general point. The production of visual works of art is influenced by the demands and needs of a certain public. The artist responds to these demands and offers opportunities for the beholder to apply his background experience of his 'way of life' (in this case including the knowledge of biblical stories) as well as artistic conventions. The beholder interprets a work of art according to acquired category systems and habits which the work has been adapted to. The recognition of familiar items or themes, the experience of something as typical in some sense, may give the beholder a feeling of satisfaction. With regard to the historical context discussed by Baxandall, such recognizable (and enjoyable) motifs may be typical religious events, typical geometric forms or mathematical relationships, and typical dance formations.

The presuppositions on part of the beholders can of course vary considerably among different individuals. An important task of artists, however, appears to be able to abstract and visualize those types of subjects which can be recognized and appreciated by a larger public, that is, which provide some kind of common denominators among individual beholders' mental representations. Such visual renderings may be regarded as more or less typical by the intended beholder.

Research within cognitive psychology suggests that not only objects, but also events may be regarded as belonging to more general categories, i.e. action schemas. For example, events such as buying a ticket, or wearing a dark dress may belong to categories such as going to the cinema or going to a funeral (which may be further categorized as instances of an entertainment event, or an occasion for grief). Sequences of such stereotypical and categorizable actions are commonly called scripts or event schemas in cognitive psychology.14 These schemas thus incorporate generalized knowledge about event sequences (e.g. the order in which specific events will take place; causal, enabling, or conventionalized relations between these events, and what kind of events occur at all in certain action sequences). Moreover, there are also scene schemas which are rather characterized by spatial than temporal relations. For example, we have certain expectations as to how the rooms, streets, and buildings look like where particular activities (such as going to a restaurant or going to a funeral) take place. Hence we have mentally stored inventory information, i.e. what kinds of objects normally appear in such situations, as well as spatial-relation information, i.e. concerning the usual spatial layout of a scene.15

Pictorial narration, I believe, is frequently based upon the existence of such mentally stored action and scene schemas on part of the beholders. These mental schemas are usually constituted out of earlier experiences of action series and events, either due to the beholders' previously acquired, direct familiarity with them, or due to the beholders' acquaintance with written, oral, and of course pictorial descriptions of certain events (e.g. religious or mythological tales). Pictorial narration, we might assume, consists of representing (more or less significant) components of action sequences familiar to the beholders, sometimes only by rendering a specific, arrested moment which can activate a wider, mentally imagined event schema.

Furthermore, pictorial narratives may also hint at states of perfection, defined in terms of goal-efficiency. In this context, one interesting proposal made by, for instance, the cognitive psychologist Lawrence Barsalou, deserves mention. According to Barsalou, people frequently employ and construct so-called goalderived categories, where typicality, or a graded structure, is related to the value (or efficiency) for fulfilling a certain goal.¹⁶ Items in these categories, such as things to take from one's home during a fire, or foods to eat on a diet, are more or less typical (or central for category membership) depending on their value for accomplishing the goal or ideal in question (in these cases, for example, money for the ideal minimizing loss, and celery for the ideal minimal calories). Goal-derived categories are, at least to some extent, less concerned with how things are (or have been), but rather how they should be, i.e. reasoning about these things' ideal (or goal-efficient) properties plays a significant role. For example, the category things to pack in a suitcase is not constituted by having encountered particular shirts, toothbrushes, socks, and so on. Instead, the establishment of such a category is usually the result of private preferences, characteristics, goals, and how to optimize a certain plan (such as planning to go on a trip). An important ingredient in goal-derived categories may, as suggested by Barsalou, be called conceptual

*combination.*¹⁷ Quite frequently people construct new concepts by combining preexisting ones in new ways. Such constructive processes are to a lesser extent passive and automatic, than the acquisition of taxonomic categories may be, but rather demand relatively active efforts on the part of the categorizer. In our example above it is obviously necessary to combine concepts for *things*, *pack*, and *suitcase* in order to establish the category in question. It seems quite clear, I believe, that conceptual combination is one of the most important elements in many kinds of creative – and artistic – activities.

Many goal-derived categories are probably ad hoc, that is, derived in order to achieve novel goals in certain contexts. For example, the category activities to do on a vacation in Japan with one's grandmother would usually not come into existence before the occasion in question.¹⁹ There are numerous ad hoc categories (such as things to pack in a small suitcase, or ways to spend the weekend) which arise idiosyncratically, depending on the individual's personal preferences, goals, and available means of realizing them. Thus, we might expect such categories, due to the fact that they are not acquired through exemplar learning or are based upon similarly perceived properties of their members (as in the case of taxonomic categories discussed above), to vary considerably with regard to different individuals' typicality ratings. Still, some goal-derived categories seem to be relatively stable when it comes to between-subject as well as to within-subject agreement. As experimental findings obtained by Barsalou and his colleagues have revealed, typicality ratings of members of goal-derived categories may sometimes be roughly as stable as those of common taxonomic categories. In several cases, including rather bizarre ones such as ways to escape being killed by the Mafia, goal-related categories have shown to exhibit prototype structures quite similar to those in common taxonomic ones.¹⁸ Although

people have never encountered or memorized members of such categories before, thus apparently lacking any basis for judging some of them as more typical than others, it is not the case that they are regarded as equivalent. In the last example mentioned, it may be admitted that moving to South America would be more efficient or even optimal for achieving the relevant goal than moving to Copenhagen, if one lives in Stockholm. However, in both cases one is basically assuming that maximizing the geographic distance between oneself and the Mafia should optimize the chance of goal success. Such a category member would thus have something like a central or prototypical status within the category in question, with a relatively high degree of intersubjective agreement. According to Barsalou, this stability may at least partly be accounted for by taking underlying causal principles into consideration. Further, as I would like to add, the occurrence of intersubjectively shared normative ideals may likewise play a significant role. Thus we may suspect that most people have pretty much the same goals concerning self-protection, avoiding pain, prolonging the lives of loved ones, and so forth. There are still further fundamental human needs such as youth, health, wealth, power, sex, and so on, which can be assumed to have constraining effects on manifold goal-derived categories. Apart from such basic interpersonally and cross-culturally stable goals, we may likewise conceive of other shared goals, though with a more limited range of acceptance due to, for example, specific historical, ideological, or religious conditions.

Pictorial representations of *ideal* actions may also, like those of *general* action sequences (or parts of action sequences), be based upon the cognitive demands and presuppositions of the intended beholders, although the mental representations referred to in these cases involve goal-related ideals. By means of conceptual combination applied to pictorial components, pictures of all kinds of ideal objects, subjects, activities, and environments may be constructed. Narrativity in pictorial art is thus not only a matter of representing or indicating certain events, but may in numerous cases incorporate normative ingredients.

In concluding, then, psychological research into visual perception, object recognition, schema theory and cognitive (as well as emotional) processes has made impressive progress over the last few decades, and we have no reason to doubt that additional progress will be made. As I have argued, this kind of research might very well contribute to a deeper understanding of the function and nature of pictorial narration. This assumption deserves, of course, a more thorough discussion, which, however, would fall outside the scope of this paper.

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- ¹ See e.g. Panofsky: "Ikonographie und Ikonologie" (1939/1955); reprinted in Kaemmerling (1987), pp. 207-225; Panofsky (1962).
- ² A third iconological type of interpretation would treat the artwork as symptomatic of a cultural climate or world view, that is, formulate statements suggested by the work in this respect.
- 3 Though this approach towards works of art is well-known and prominent among art historians, it has not been accepted unanimously, but has e.g. been criticized for giving a one-sided account - and evaluation - of artworks because of its tendency to reduce them to something like verbal messages. See e.g. Otto Pächt: "Kritik der Ikonologie" (1977), reprinted in Kaemmerling (1979), p. 355 (my translation): "[One]...treats the picture or work of art as if it were an emblematic mosaic, a pictorial writing...Art is seen as a procedure...for wrapping certain messages for the purpose of transportation...The task of the art historian...is then to remove the kernel from the shell...For this way of thinking the ranking of the artwork is inseparably connected with the value and the content of the message which it transports. Art is here...a means for achieving some ends, not an end in itself, and could in principle, when its task has been accomplished,...be dismissed."
- ⁴ Cf. Prince (1982), pp. 1-4.
- ⁵ Lessing (1910), p. 91.
- ⁶ Ibid.
- ⁷ See e.g. Mitchell (1986), pp. 94-115.
- ⁸ Cf. also Sonesson (1997), p. 244 f.
- ⁹ For an early work on this matter, see Rosén (1912).
- ¹⁰ For a detailed analysis of the relief on the Column of Trajan, see Brilliant (1984), pp. 90-123.
- ¹¹ See Ranta (2000).
- ¹² See Rosch (1975; 1994); Rosch & Mervis (1975); Rosch & Lloyd (1978).
- ¹³ Baxandall (1988).
- 14 See Mandler (1984). Within cognitive psychology, a number of terms have been employed to refer to mental representations of (more or less) complex phenomena. Apart from schemata and scripts, psychologists have also made use of terms such as mental models, causal mental models (which imply explanations and justifications), frames, situation models, episodic models, and so forth. Several of these concepts seem to have the same core set of attributes, though perhaps a basic distinction can be made between (i) representations of pre-existing generic knowledge, and (ii) specific representations which are constructed at the time of use. For a discussion

and comparison of the meaning of these terms, see Brewer (1987).

- ¹⁵ Cf. Mandler (1984), pp. 13-17.
- ¹⁶ See, for instance, Barsalou (1985; 1992).
- ¹⁷ For a detailed account of conceptual combination, see Barsalou (1991), pp. 4-6; Barsalou (1992), pp. 168-170.

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- ¹⁸ Cf. Barsalou (1991), p. 1.
- ⁹ Ibid., pp. 8-14.