Contributions To Phenomenology 81

Peer F. Bundgaard
Frederik Stjernfelt *Editors*

Investigations Into the Phenomenology and the Ontology of the Work of Art

What are Artworks and How Do We Experience Them?

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Introduction

Peer F. Bundgaard

The purpose of the present volume is to investigate the multifarious aspects of the relation between an artwork (visual, literary, or musical), its objective properties, the meaningful experience of it, and the cognitive skills and acts involved in the latter. Each of these aspects is a genuine and irreducible part of what I here will call the "aesthetic complex," and each of them thus constitutes an autonomous domain of research or an object of scholarly interest: that certain visual or cognitive capacities are activated in the interaction with aesthetic objects; that the experience of aesthetic objects has a particular phenomenology, either because it is accompanied by an appreciative judgment (or a rewarding feeling) or because it is about a specific kind of object (artful objects); that artful objects have properties that plain objects—natural as well as cultural—do not have; and, finally, that aesthetic objects manifest or represent a meaning in that they give shape to or embody an artistic meaning intention. The psychology, the phenomenology, the ontology, and the semiotics of the artwork each aims to lay down the above characteristics in each their domain, with each their methods.

The contributors to this volume are philosophers, psychologists, literary critics, and semioticians. As such, they address only one or just a couple of the above-mentioned aspects. Each chapter will show, however, that the inquiry into one of the essential aspects of the aesthetic complex naturally raises research questions related to one of the other essential aspects. It is thus difficult to consider meaning-making in art without considering those structures and properties in artworks that embody that meaning or produce that meaning effect. Similarly, it is difficult to lay bare the essential properties of artworks (or of artful representation) without analyzing them in light of those properties of the human cognitive system or of the

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visual brain that make man particularly responsive to such qualities. In short, even though scholars, for obvious reasons, distribute their efforts selectively and focus their attention on one of the aspects of the aesthetic complex, these domains of inquiry are complementary.

With this volume we therefore hope not only to give the reader access to recent research within the ontology, the phenomenology, and the semiotics of the artwork, but also to manifest the complementarity of work done in each of these domains.

In the remainder of this Introduction, I shall first go into some more details with regards to the different aspects of what I have called the "aesthetic complex" and next give a short introduction to each of the chapters of the volume.

As the subtitle of this volume suggests—*What are Artworks, and How Do We Experience them?*—one can distinguish two correlates in the aesthetic complex: a subjective correlate, encompassing whatever relevant properties of the experiencing subject or whatever relevant goings-on in the cognitive system; and an objective correlate, concerning whatever relevant properties of the object likely to elicit a characteristic subjective response.

The emergence of Aesthetics as a philosophical discipline is coextensive with the discovery of the sensitive subject as the pivotal element of aesthetic experience. The object of inquiry becomes—already from Alexander Baumgarten's *Aesthetics* (1750) and definitely with Kant's *Critique of the Power of Judgment* (1790)—the subjective correlate of the aesthetic complex, i.e., the cognitive dynamics activated in the viewer when perceiving artworks or when experiencing things considered beautiful, valuable, or of aesthetic interest. When Kant characterizes beauty in his *Third Critique*, he defines it not as a property of an object but as a feeling that is the outcome of a certain "harmony of the faculties," a specific balance between certain cognitive centers (Imagination and Reason). Or, to use present day terms, a characteristic way of processing information that differs both in function and content from the way non-aesthetic information is processed.

In the same vein, Kant pinpoints another essential aspect of aesthetic experience that is exclusively subjective (not in the "relativistic" sense, but instead pertaining to the experiencing subject): the mental set in which the object is attended to, which is "disinterested" in that it does not pursue any theoretical (epistemic) or practical (moral) interest, nor does it pursue the fulfillment of any desire of any sort.

Whether Kant is right or not in claiming the disinterested nature of aesthetic experience is not important here. What matters are the two basic tenets of what could be called the Kantian legacy in aesthetics writ large: (1) aesthetic experience should be defined not in terms of the object that elicits the feeling of beauty but instead in terms of particular activation of the cognitive system; (2) subjects can attend to aesthetic objects—or objects deemed beautiful—within an intentional framework (or a mind set) that is different from the framework through which we relate to objects for epistemic or moral purposes; (3) since aesthetic experience should not be understood and explained with reference to certain properties of an object and therefore does not require a specific competence for capturing those properties (both perceptually and intellectually), it is not the privilege of a particularly apt or trained section of the population—the aesthetic subject is a general subject.

The philosophical and scientific enquiry into aesthetic experience which has developed in the wake of the *Third Critique* has, of course, not been Kantian through and through: the apriorism proper to Kant's system, the complex mechanics that keep the harmony of the faculties together have not been part of most, if any, of the research programs in this domain. Many such programs can nevertheless be considered post-Kantian because: (1) the experiencing or sensitive subject is brought to the fore; (2) the feeling of beauty—or, independently of the feeling of beauty, the experience of artworks—is considered as being a specific cognitive response resting on general properties of the human "mind," the visuo-cognitive system or human "sensitivity" in general, and therefore amenable to description or scientific description.

Marshaling such general positions, of course, does not warrant any unity, nor does it define a research program. With regards to point (2), there is considerable difference between approaching the response to beauty within Fechner's empirical aesthetics (Fechner 1876) or present day neuroaesthetics (Zeki 1999; Chatterjee 2010; Ishizu and Zeki 2011; Nadal and Skov 2013) and addressing aesthetic experience in terms of those perceptual structures that are meaningful (not necessarily beautiful) for the visual brain (Arnheim 1954, 1969; Petitot 2009; Bundgaard 2009, 2014). Yet, however different such research programs may be, they address a series of issues that are all related to the subjective correlate of aesthetic experience broadly taken (both as an experience accompanied by a rewarding feeling and as an experience of a specific kind of objects, namely artworks). Some of these questions are: if we attend to aesthetic objects differently than to plain everyday objects, then what characterizes this intentional attitude or mindset? If there is a difference between the phenomenology of seeing three apples, a photo of three apples, and a painting of three apples, then what characterizes the phenomenology of aesthetic experience? If artworks affect us perceptually by virtue of their qualitative (visual, textual, or acoustic) layout or design, what are the phenomenal or qualitative properties that are particularly significant for us and how do we process visual information (e.g., how do we reconstruct represented objects from depicting surfaces)? What attracts our attention or facilitates our memory when perceiving or reading artworks? If artworks affect us by virtue of given properties of our visuo-cognitive system, then what are the relevant properties exploited to that effect? If there is a specific phenomenology of aesthetic experience, does it follow that there is a general brain state or a neural dynamics that correspond to that phenomenology? If the feeling of beauty indeed often accompanies aesthetic experience, then how is it to be described? Is it a unitary response, triggered off by the same kind of stimuli for natural or biological reasons? Is it conventionally or socially imposed or is it idiosyncratic?

As already mentioned, the subjective correlate of aesthetic experience is nevertheless only one part of the full story. It is—and has indeed been—difficult to maintain an exclusive focus on the subjective aspect of aesthetic experience. If the feeling of beauty is considered a response to a given object or state of affairs, it seems natural to ask if certain types of states of affairs or designs cause such responses. This is the hypothesis that drove Fechner's seminal research in

experimental aesthetics and a central endeavor in both Zeki and Ramachandran's (Zeki 1999, Ramachandran and Hirstein 1999) work in neuroaesthetics. It consists in laying bare the objective sources of the rewarding feeling of beauty (artists' alleged capacity of revealing the essence of things represented is claimed to be one such source [cf. Bundgaard 2014 for a critique]). Moreover, from an ontological point of view, artworks differ from plain everyday objects in different respects. Painted landscapes resemble real landscapes, but they don't look like them, as it were: they pertain to an entirely different category of things. So even though the feeling of beauty or of aesthetic interest—in short, the hedonic aspect of aesthetic experience—may be elicited by both natural phenomena (land-, city-, or soundscapes; faces and bodies) and artifacts, the latter display *sui generis* properties which make them essentially distinct from natural or biological phenomena (be it only because they have been produced by an intentional agent). Here again, it seems natural to ask whether the categorical properties of the object[1] inform the phenomenology of perception or inflects the visuo-cognitive system's processing of information and sense data. In short, a new cascade of research questions follow from taking one's point of departure in the objective correlate of aesthetic experience: what properties do artworks possess that plain objects don't? Where does art come from (evolutionarily speaking)? If artworks depict or represent something, then what exactly is depiction or pictorial representation? If artworks are intentional objects par excellence, how is this intentionality encoded in them and how can it be retrieved if it is to be retrieved in the first place? If artworks are valuable in a sense that plain objects are not, what do we mean by "value?" Do artworks, in virtue of their formal structure, embody a meaning that affects the way in which viewers (or readers) attend to them or process the information conveyed by them?

The latter question opens yet another domain of inquiry, one situated somewhat between the purely subjective and objective components of aesthetic experience or between the phenomenology and the ontology of the artwork: the domain of (pictorial) meaning, the semiotics of the work of art. Paintings are not only intentionally arranged so as to elicit an appreciative judgment for such and such reason. Artists give shape to meaning intentions that, of course, cannot be reduced to the simple objects depicted in their paintings. The semiotics of the work of art can be addressed in different ways and in different theoretical (psychological, philosophical) frameworks. The frameworks and the basic theoretical commitments notwithstanding, the key question is arguably how paintings, in virtue of their formal structure (their design), "embody" a meaning. Throughout his work, Rudolf Arnheim has incessantly repeated that painters are not illustrators—that is to say they do not just depict a scene, however artfully. Crucially, they also interpret to

[1] This also holds true for literary art or, rather, fictional discourse: does the fact that a text is accessed as a piece of fiction affect the phenomenology of reading or the reader's interaction with the text (cashed out in, e.g., what a reader remembers of a text, how much, and in what way)? Experimental studies tend to support an affirmative answer to this question (cf. Hendersen and Clark 2007; Zwaan 1994).

the viewer's eye the meaning that the motif is intended to communicate to his mind and do so with purely pictorial or painterly means. This implies that the meaning addressed here is not the one captured in a global interpretation of the work (such as "The glorious Napoleon from Jena," or "The vanquished Napoleon on Saint Helena"), but those more or less local meaning effects that serve the purpose of embodying aspects of that global meaning. Here is how Arnheim formulated it: "In a work of art, an abstract pattern organizes the visual matter in such a way that the intended expression is directly conveyed to the eyes" (1954, p. 152). A similar claim is made by John Hyman in the present volume: "Artists exploit *the communicative possibilities inherent in the medium as such* [. . .] with specific *materials, tools and techniques* to communicate *thoughts, feelings and perceptions* in a work of art" (Hyman, present volume: pp. 205).

The semiotics of the work of art—here understood as the pictorial meaning expressed in the painting through the tools and techniques employed by the artist to this effect—also gives rise to intricate research questions and conflicting research programs: is pictorial meaning in the final analysis conventional, the outcome of a grammar shaping pictorial expression from the outside, as it were? Or do artists exploit both hardwired properties of the visual brain and ontological properties of the medium (surface properties, brushwork, shapes, spatial relations . . .) with a view to producing such and such meaning effects? Regardless of the answer one is inclined to give to such questions, it seems reasonable to assign a status to the domain of pictorial meaning that is irreducible to both to the phenomenology and the ontology of aesthetic experience. Paintings can for example convey meaning without eliciting a feeling of beauty; or two different paintings can tap into the same automatisms of the visuo-cognitive system (say, processing by means of grouping) and produce different meaning effects.

As already mentioned, the present book is intended to address all these three issues. The book has been structured so that the first chapters mainly concern issues in empirical and phenomenological aesthetics, followed by chapters mainly addressing the ontological properties of artworks (that make them distinct from other objects or which characterize them in general), concluding with chapters which approach artworks as semiotic objects, either as regards the meaning-making devices proper to artworks or as regards the semiotic mechanisms in virtue of which objects are assigned a status as artworks. However, as the reader will quickly realize, almost all chapters develop topics that recruit insights from the neighboring domains of inquiry.

The first two articles are developed within the framework of "empirical aesthetics." This research program is relatively recent (Miall and Kuiken 1999; Bortolussi and Dixon 2003; van Peer 1986; Sanford and Emmott 2012), but it has roots back both to Roman Ingarden's phenomenological studies into the ontology and the cognition of the literary work of art—in particular his characterization of the phenomenology of the reading process (how readers, in order to obtain a full representation of the fictional universe, must "concretize" information given by the author, and how they must "fill-in" all those spots the author has left undetermined [Ingarden 1931])—as well as to the notion of "defamiliarization"

or "foregrounding" developed by the Russian formalists in the beginning of the twentieth Century (Shklovsky 1917). Pivotal to approaches such as those of David Miall, Marisa Bortolussi, and Peter Dixon is the intention to lay bare the cognitive mechanisms and empirical properties of the reading process at large: what do readers actually respond to and how do certain textual properties affect the reading process, information processing, recall capabilities, and emotional responses?

In "Temporal Aspects of Literary Reading," Miall readdresses the readers' experiences of "defamiliarization" with an aim to laying bare the different mental processes which are activated when feeling strangeness and which may be considered as subjective correlates underpinning the presence of "literariness." Miall's model of literary reading covers two domains: first, on the basis of neuroscientific studies of EEG waves, he addresses the initial moments (the first few hundred milliseconds) of the experience of literary reading: these include absence of habituation, the deferral of intention, the thwarting of prototypical feeling, bodily alertness, and the experience of animacy; each of these are considered as aspects of "defamiliarization." In the second domain, he considers some sequential features that guide and shape response on a larger scale, focusing in particular on the processes of feeling and their impact on the reader.

In *Psychonarratology* from 2003, Marisa Bortolussi and Peter Dixon experimentally tested the actual effect well-known narratological tools for meaning-making have on readers' information processing and representations of the textual world (these comprised phenomena such as "perspective," "narrator," "free indirect speech," and so on). In the chapter "Memory and Mental States in the Appreciation of Literature," they address yet another crucial aspect of the reading process: namely readers' memory skills. Ideal readers are considered to have unconstrained access to the text. Bortolussi and Dixon show instead that the processing of literary narrative is contingent upon the fragmentary memory of real readers. In their chapter, they highlight a decisive determinant of memory: the variation in readers' mental states during reading in terms of mind wandering, in which the reader momentarily gives relatively little priority to processing the text, and engagement, in which the reader constructs elaborate and personally meaningful representations of the story world. They show how variations in both these parameters affect reading processes and determine memory for both text and aesthetic reactions. Their analysis and claims are further supported by the results of two experiments in which readers' mental states were probed online during reading.

Cathrine Kietz's chapter, "Temporal Conflict in the Reading Experience," aims at capturing a neglected aspect of text processing, which is likely to be exploited by authors for both aesthetic and semiotic purposes. Kietz' claims that readers are imposed a perspective analogous to visual perspective, which she calls a temporal perspective that spans beyond the present singular point in time. The idea is that characters in a story of course have a visual perspective on the represented world, whereas the reader has a temporal perspective that transcends the local perspectives and embraces the narrative as such. To that extent, the reader's temporal perspective is somewhat displaced with respect to the represented visual perspective: there is a temporal distance between the represented events and the reader's point of view.

With examples from Flaubert and Kafka, Kietz shows how this temporal distance can be exploited aesthetically and semiotically to create a conflict between the world represented in the literary work of art and the way it is presented.

The empirical investigation of aesthetic experience in the domain of visual art was launched by Fechner. Fechner's main concern was to establish the laws of aesthetic preference—this goal is still eagerly pursued within neuropsychology of aesthetics. Yet, another primordial branch of the empirical study of aesthetic experience attempts to characterize perceptual interaction with visual artworks by means of eye-tracking. This method—as it was used by, for example, the Russian psychologist Yarbus (1967)—has provided with important insights into what visual phenomena attract the attention of viewers (i.e. which are intrinsically significant for viewers) and in what ways the perception of artworks differs from the perception of plain depictions. In the chapter "The Aesthetic Experience with Visual Art 'At First Glance,'" Paul J. Locher, who has himself made important contributions to this field, presents a key aspect of visual behavior in the aesthetic domain as well as a review of the literature on this subject. Studies have shown that aesthetic experience with visual art occurs in two stages (Locher et al. 2007). A viewer first spontaneously generates a global impression, or gist, of the work. This gist includes a sense of the general content of the painting, its overall design and style, meaning, as well as an affective response to it. When gist information in a painting durably attracts the attention of an observer, a second stage of aesthetic processing ensues. This consists of directed focal exploration of the image and follows the goal of increasing knowledge about the work's compositional features and organization. This chapter presents an overview of research findings that have identified the types of visual properties and semantically related information that collectively lead to the activation of what is labeled a "painting gist" (Locher's own term). It concludes with a discussion of the influence of the painting gist response on the focal exploration of paintings.

John M. Kennedy and Marta Wnuczko also discuss a pivotal aspect of visual representation in their chapter, "What Is a Surface? In the Real World? And Pictures?" The crux of their argument is that pictures are depicting surfaces that show or represent surfaces. In this sense, the perception of pictures is twofold in a sense akin to Wollheim's (1987). To understand this double property of pictorial perception—that we see a surface and in that surface see represented surfaces—a theory of surface perception is required, which is outlined in the chapter. Linear perspective, characterized by foreshortening, is what allows perceivers to experience real surfaces and representational pictures use perspective to depict surfaces with great fidelity. The authors, in their plea for realism, show that surface information is picked up by the viewer in the natural world. A further claim is now that perception of representational pictures is based on such rich and easily retrieved information from and for surfaces. The authors conclude their chapter with a caveat: their defense of perceptual realism has natural limits: perception of surfaces (or the extraction of surface information) can be erroneous, particularly in the case of highly foreshortened surfaces. The dynamic relation between the two aspects of the twofold perception triggered of by representational artworks may be a source of illusions.

Patrick Colm Hogan's chapter "The Idiosyncrasy of Beauty: Aesthetic Universals and the Diversity of Taste" comes to grips with what has always been considered a cornerstone of aesthetic experience: the feeling of beauty. If by "beauty" we understand an aesthetic response, we must acknowledge the existence of a great variety of individual aesthetic response while still having to account for what they have in common. Hogan argues that one may assert the existence of universal principles of beauty without being forced to claim that everybody has the same experience of beauty. Hogan shows that it is indeed the other way around: when understood and defined correctly, universals of beauty predict and explain individual diversity. The two main principles underlying the feeling of beauty are claimed to be two main information-processing factors: (1) non-habitual pattern recognition and (2) prototype approximation. When such processing takes place—i.e. non-trivial pattern recognition and acknowledgement of a resemblance with an internalized template of beauty—the experience is felt as rewarding. While universal, these principles also explain the great variety of responses there may exist, since people clearly may have different skills for pattern recognition and may have developed different prototypes for beauty and different prototypes *tout court* (contingent upon their previous experiences). As Hogan shows, a viewer possessing the prototype for, say, pointillist painting may have a finer, more well-attuned or sensitive response to a late Seurat painting than a viewer who would simply assess it as a token of the prototype "painting." The article thus accommodates scientific findings about the experiential phenomena that activate the reward system (non-trivial pattern recognition in challenging environments), thus proposing a principled account for the experience of beauty that is universal in its scope while still being able of not only subsuming the diversity of individual responses, but also predicting it.

Another important component of aesthetic experience is that it has to be sufficiently "immersed"—the definition of which is probably still to be refined. The point being that immersion is not simply to be understood as a partial loss of world awareness—something which may obtain in plain thinking, meditation or when reading a particularly interesting scientific text—but as a partial imaginary enaction of an alternative reality. This holds particularly true for the reading of fictional works (or film-watching) which has to be accompanied by what Coleridge called the "willing suspension of disbelief," i.e., some sort of decoupling of those cognitive processes in charge of asserting the veracity or plausibility of what we are experiencing. The capacity to engage in pretense is a necessary condition for playing games, reading, watching movies, and perhaps even seeing paintings. This capacity designates a human skill to partially enter alternative realities—and, of course, to exit them at will. This skill—the imaginary action in and interaction with alternative realities—is the topic of Shaun Gallagher's "Why We Are Not All Novelists." Drawing from findings in psychology, psychopathology, phenomenology, and neuroscience, Gallagher proposes a graded continuum of pretense-cognition, with at one pole, say, children's game playing and at the other pole different sorts of pathologies involving delusional subjects getting more or less stuck in their alternative reality (e.g., subjects suffering from the Capgras syndrome)—and in-between different degrees of passive immersion. For example,

from a reader's immersion in the fictional universe up to more active, but still non-pathological immersions, epitomized, according to Gallagher, by novelists' enhanced ability for creating/entering into multiple realities and sustaining them longer and more consistently than lay people. This enhanced capacity for fiction—for durably creating and sustaining alternative realities—is, according to Gallagher, "quasi-solipsistic" and "remains short of dysfunction or delusion," which is exactly the reason why we are not all novelists.

Jean-Marie Schaeffer develops a double argument in his chapter "Aesthetic Relationship, Cognition, and the Pleasures of Art." Within a phylogenetic "costly signal" approach to aesthetic activity and experience—based on the structural, *not* functional homology between art-making and costly signals in the animal world: in this case among bowerbirds—he identifies one essential property of aesthetic perception: its attention is inflected away from standard cognitive attention to a non-economical use of mental resources characterized, among other things, by the fact that its finality is not exhausted in and by the recognition of the represented objects. As regards this quality of aesthetic perception—its style of attention is shifted—Schaeffer also develops a neo-formalist hypothesis about a property of artworks that likely causes such an effect: it is the fact that their semiotic function is altered or defunctionalized; the finality of visual representations of water lilies, children, interiors, landscapes, or abstract figures is not, contrary to what is the case in plain images, simply to make us recognize such objects, but rather or also to indulge in the qualitative presence of such objects, that is to say the very perception of them. The second aspect Schaeffer claims is essential to aesthetic experience is its hedonic character. In a Kantian vein, Schaeffer grounds this property from the visual or attentional system's awareness, as it were, of its own processing dynamics. Pleasure or aesthetic interest results from an auto-appraisal of the visuo-cognitive activity, not simply from an evaluation of the properties of the object. This point is cognate with Patrick Colm Hogan's claim to the effect that aesthetic pleasure is grounded on non-trivial pattern recognition that implies some sort of agreeable perceptual effort and thus some evaluation of visual processing itself (for example as a worthwhile effort). This idea is further elaborated in the author's notion of a bi-directional feedback between attention and hedonic calculus, which finally leads him to assess the relationship between cognitive fluency (as developed by Rolf Reber [Bullot and Reber 2013]) and positive aesthetic experiences, arguing that fluency can explain the aesthetic pleasures of art only in conjunction with a second and opposite source of pleasure: curiosity.

As suggested by the title of his chapter, "More Seeing-in: Surface Seeing, Design Seeing, and Meaning Seeing in Pictures," Peer F. Bundgaard considers the phenomenology of aesthetic experience as twofold, in a sense akin to Wollheim's (1987): we see an object in a painting, and, simultaneously, we see the constructed surface in which or in virtue of which the object appears. However, as regards the perception of artworks proper, the notion of twofoldness needs further specification. In the wake of Wollheim, the philosophy of pictorial representation has addressed the second, 'configurational' aspect of twofoldness in rather vague terms as awareness of the "surface" in which a depicted object is recognized or as a sort

of co-perception of pictorial "design," without really addressing the aesthetic or pictorial function of this correlate of aesthetic perception. Following Lopes (2005), the author calls such co-awareness "design-seeing" and assigns two properties to pictorial design. First, he identifies a depicting property of design that is a distinctive property of pictures; that is to say, not something all pictures necessarily instantiate, but something pictures can that other objects can't: design in pictures is such that it can depict two (or, in rare cases, even more) fully consistent objects without the picture becoming ambiguous. This property is called the multiply depicting design of pictures and it is shown to exploit basic grouping automatisms of perceptual processing. The experience of artworks is not simply doubled with an awareness of the material support in which something can be seen (e.g., a wall or a canvas), but rather with an awareness of the depicting surface in virtue of which something is represented; in certain cases the design of the depicting surface can give rise to two well-structured visual experiences. The second refinement of Wollheim's notion of twofoldness is semiotic in nature: the design structure of a painting is not simply a structure in virtue of which something is represented to the eye, but also a structure in virtue of which meaning is conveyed to the eye, thus seeing-in doubled with design seeing occurs every time lines and shapes do not only depict, but also mean something (in virtue of their morphology and qualitative properties and in virtue of the relations between them).

In the chapter "Depiction," John Hyman defends a version of the so-called 'resemblance' theory of depiction: pictures are different from texts in that they resemble the objects they represent. The classical version of this theory has become increasingly unpopular. For two reasons, both of which, according to the author, are wrong. Critics have mistakenly taken that resemblance is only a relation: a relation, moreover, between two existing particulars. Thus, if "resemblance" demands the existence of two particulars, which look like each other, then, trivially, "depiction" cannot be suitably captured by a resemblance theory since a picture, as an individual thing, does not look like the thing it represents (Napoleon, a tree or a horse). Moreover, the definition of "resemblance" is flawed. Hyman shows that expressions such as 'resembles,' 'is like,' 'looks like' can indeed function as two-place predicates and thus express relations between particulars (e.g. 'SoHo is like Hampstead'); but, importantly, they can also function as copular verbs—that is, as part of a one-place predicate (e.g. 'SoHo is like a village'). Obviously in the latter case, the resemblance is not claimed to hold between two particulars. Hyman, in contrast, develops a neo-Fregean framework for a full characterization of depiction, claiming that all figurative pictures have some generic content (say, *a* horse), but only some portray (e.g., Bucephalus or Dan Patch), just as all descriptions have a sense but only some refer. ('The greatest integer' has a sense but does not refer.) Hyman shows how these mistakes are related in that reference is a relation whereas sense is not, and the general point is—grossly said—that what pictures represent is not their reference, but the sense of the reference, its mode of presentation (as Frege had it in: "Sense and Reference"). In other words, pictures are predications of the objects represented in them. To that extent, Hyman concludes, a resemblance theory should not be interpreted as a theory of pictorial reference—in which case it falls short—but as a theory of pictorial sense.

The final three chapters address the artwork from a more accentuated semiotic perspective. In "Green War Banners in Central Copenhagen: A Recent Political Struggle Over Interpretation—And Some Implications for Art Interpretation as Such," Frederik Stjernfelt considers a specific aspect of artful objects, namely the way in which they, to different degrees, express propositional contents and therefore lend themselves to interpretation (as well as over- and misinterpretation). In order to pinpoint some of the possible pitfalls of interpretation, the author introduces the Peircean doctrine of Dicisigns—proto-propositions—that embraces a range of sign vehicle types able to instantiate propositional content, such as signs involving pictures, diagrams gestures, etc. Taking a particular Danish controversy—that of a military "cartouche" at a Copenhagen barracks—as an analytical example, the paper argues that the ubiquity of Peircean Dicisigns makes it possible to envisage different strategies and degrees of weakening the propositional strength of Dicisigns as we typically find them in the art domain: fictionalization, dispensing with parts of propositional structure of the Dicisign, as well as weakening the functional structure of the Dicisign.

Groupe μ are also concerned about the sign processes involved in the perceptual interaction with the work of art. In "The Appropriation of the Work of Art as a Semiotic Act," they do not, however, focus their attention on the logic subtending the representation of "sense" or quasi-propositional contents in artworks (as both Hyman and Stjernfelt did, each in their own way). Rather, they address the semiotic acts in virtue of which given objects in space are assigned a specific sign status, namely as artworks. Such acts require the existence of a certain instance assigning that status for someone—hence the emphasis put on the interactive character of the process. In their chapter, the authors unfold a series of key properties of the sign type involved in the appropriation of objects as works of art, i.e. the 'index,' which plays a pivotal role in this social dynamics, both with regards to the declarative instance selecting and qualifying an object that thereby count as artful and to the object that is selected as well as the subject for whom the object is thereby selected and qualified.

This volume concludes with Wolfgang Wildgen's case study "Sculpture, Diagram, and Language in the Artwork of Joseph Beuys." Wildgen unravels the meaning effects produced by Beuys in an analysis of both the ontological properties of the artist's works (materials, of course—from steel and stone to fat and animal matter—but also their temporal specificity) and the semiotic devices he exploits, particularly in his programmatic diagrams (words, graphics) but also in the integration of language in his artistic work. A special point of interest in this chapter is indeed Beuys' transition towards language as a symbolic system and the philosophy of art he exposes in his drawings and diagrams as well as the general relation between art and science in his artwork.

Through these contributions, our hope is thus that the present book will cover essential aspects of what I have here called the "aesthetic complex," i.e., the ontology, the semiotics, and the phenomenology of the work of art. Obviously, investigations in each of these domains can, to some extent, be conducted independently of findings produced in the neighboring disciplines. Artful pictures have properties that can be characterized irrespective of the way in which they

are experienced. Similarly, important elements of the phenomenology of aesthetic experience—for example, the intentional framework for picture seeing compared to the one for plain object seeing—can arguably be unraveled and laid down without resorting to experimental psychology. And, e.g., perspective as a tool for meaning-making can be examined on purely semiotic grounds. However, since the aesthetic complex is indeed irreducible—visual or literary artworks are intentional objects shaped to produce certain experiences—it would most likely be counterproductive to investigate, for example, the phenomenology of aesthetic experience without ever taking into consideration fundamental ontological properties of the object perceived as well as the forms and techniques in virtue of which it not only depicts or represents something, but also produce determinate meaning effects. By the same token, the phenomenological inquiry into the arcana of aesthetic experience at large—i.e. both with regards to the feeling of beauty or the interest triggered by aesthetic objects and with regards to the experience of artistic objects as such, regardless of the feeling they produce—may be taken in an empirical direction in order to track down the actual effects written or visual artworks (and tools for meaning-making) produce in human beings (with respect to, say, attention, gaze behavior, memory, and interpretation). As appears from the short presentation above, this volume also contains contributions from authors working in the domain of empirical aesthetics—or employing methods therefrom. Such experimental approaches to both visual and literary art should of course not supplant traditional methods in philosophical, phenomenological, and semiotic aesthetics, but rather complement them. Indeed, if a painter does employ specific techniques to produce meaning effects, force specific visual experiences upon the beholder, and communicate certain contents (emotions, ideas), another essential aspect of the "aesthetic complex" is the way in which human beings, in virtue of their psycho-physic constitution, actually interact experientially with such intentionally shaped objects and thereby pick up or respond to the artist's meaning intentions. Thus, another relevant task for aesthetic inquiry is to investigate how the visuo-cognitive system, text-processing systems, the attention system, and the memory system contribute to the actual experience and understanding of aesthetic objects.

One volume is obviously not enough to even outline the aesthetic complex thus understood. We are convinced, however, that the contributions to the present book will make it clear why aesthetics, as the scholarly investigations of artful objects, must constantly keep track of what artworks are, how they mean, and how they are experienced.

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Temporal Aspects of Literary Reading

David S. Miall

Abstract One of the prominent features of literary reading is a sense of defamiliarization: a passage describing an object, event, or person in the mundane world unexpectedly seems strange, so that the reader is made to pause or slow the pace of reading in order to reflect. In Owen Barfield's words, such moments seem to come from "a different plane or mode of consciousness" (Poetic diction: a study in meaning. McGraw-Hill, New York, 1964, p. 171), and they demonstrate the "unfamiliar" of the artwork discussed by Shklovsky (Art as technique. In: Russian formalist criticism: four essays, eds. and trans. Lemon LT, Reis MJ. University of Nebraska Press, Lincoln, 1965, p. 12). I identify several mental processes that help constitute the sense of strangeness and that may contribute distinctive elements to the presence of literariness. I examine the initial moments of the experience of literary reading, those occurring in the first few hundred milliseconds as suggested by studies of EEG waves: these include absence of habituation, the deferral of intention, the thwarting of prototypical feeling, bodily alertness, and the experience of animacy. I then consider some sequential features that guide and shape response on a larger scale, focusing in particular on the processes of feeling and their impact on the reader.

Keywords Literature • Defamiliarization • Reader • Electroencephalography • Feeling

1 Introduction

Literary readers are in the strange position that they do not necessarily understand what it is they are reading; yet the text may impel them to pause, perhaps momentarily, to reflect on what they have just read, or it spurs them to read on with the prospect of clarification to come. Shklovsky's well-known comment that

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art should prolong our experience of perception invokes these initial moments of strangeness, usually in response to foregrounding (unusual stylistic features). He argues that literature is a different kind of experience from other verbal effects:

> The technique of art is to make objects 'unfamiliar,' to make forms difficult, to increase the difficulty and length of perception because the process of perception is an aesthetic end in itself and must be prolonged. (1917/1965, p. 12)

This sense of defamiliarization and consequent difficulty is often mentioned. For example, Owen Barfield (1964) suggests the "*interior* significance" of defamiliarization "must be felt as arising from a different plane or mode of consciousness" (pp. 170–171).

Here, then, we have an impression of literariness, that is, how the literary experience is distinctive. But how is this achieved? What is occurring in those first moments of response to the literary artifact? What are its formal or stylistic fingerprints? We have very little direct evidence on this issue. For the most part, attempts to understand what is occurring must draw upon less direct evidence—on guesswork or speculation. In this contribution, I can only offer a brief sketch of some of the possible components of literariness.

That readers find literary narratives strange at times and express their sense of defamiliarization is shown by one of our earlier studies (Miall and Kuiken 1999)—the narrative in question here was "The Trout" by Seán O'Faoláin (1980). The story was divided into 84 short segments, mostly one sentence in length, and presented on computer screen cumulatively, one segment adding to previous segments. Readers paced themselves through the story by pressing the space bar to reveal the next segment.

In generating comments on the story as part of a think-aloud study, we found that among the different types of comment it was the frequencies of associations, comments on style, and queries that most strongly predicted reading times (we collected reading times data per segment during a parallel study). Associations, for example, correlated highly with reading times, $r = .402$, $p < .001$; queries were significant at the same level, $r = .438$, $p < .001$, as were comments on style, $r = .387$, $p < .001$. In these and other ways, readers showed a sensitivity to several dimensions of the literariness they were encountering—elaborating their understanding of settings or actions, appreciating literary devices, or expressing their queries about the meaning of various passages. In fact, queries were the third most frequent type of comment at 10.1 %, following character explanation at 33.6 % and quotations at 21.5 % (132). Quotations correlated highly with foregrounding in the story, $r = .463$, $p < .001$, suggesting that readers found the passages they quoted unfamiliar and challenging, hence the need to repeat the passage aloud.

But what makes such passages distinctive, calling for the additional depth of attention indicated by lengthened reading times? There can be no one feature responsible for such experiences of literariness: in what follows I will mention several possible features that may be responsible for that experience of strangeness. I will refer in particular to events that, in the light of several (non-literary)

EEG studies, can be postulated as occurring very early in the reader's train of response, at moments half a second or less following an encounter with the unusual linguistic features of a foregrounded passage or a twist in our experience of the narrative.

Unlike the reading of expository prose, which elaborates and develops a model that is based on an initial organizing concept, literary reading is typically prospective, sustained by anticipations of what is to come, and slowed as we have seen by a need to engage with foregrounding, or to entertain more than one meaning for what the text at a given point or as a whole might be saying. In this context, readers may delay closure on what a text means.

As Zwaan (1993) notes, to the extent that literary texts are indeterminate or ambiguous, they are likely to invite a bottom-up mode of processing, which is typically slower than top-down (p. 148). This may also lead to a more loosely organized textbase, since more information may turn out to be relevant. As he puts it, there is evidence that "readers of stories pay special attention to details, especially when they are mentioned in isolation from other details" (pp. 149–150). Another way of putting it is that the reader forms a weak situation model and defers closing in on a coherent one that can account for all the information. Here is one apparent difference in how literary reading feels compared with reading for information. But in promoting Barfield's sense of strangeness, what makes the difference in the case of literary reading? A number of implications come to mind, but these five modes of processing in particular seem possible contenders for the creation of moments of strangeness (further research may reveal other contenders). I consider next some evidence that each may occur early in the response process, that is, prior to the 400–500 ms at which consciousness of an event occurs:

- No habituation
- Intentionality deferred
- Thwarting of prototypical feeling
- Bodily alertness underlies representation
- Animacy of events and objects.

Common to each may be a rapid processing that predisposes consciousness to generate insights from such earlier phases of response, especially the creation of new meaning (as in response to a novel metaphor).

In what follows, I refer to "The Trout" for examples of the kinds of interpretive processes implied by specific moments in the story. The story concerns Julia, a 12-year-old girl, at the beginning of her vacation in the country. With her younger brother Stephen, she enjoys a pleasurable fear running through the "Dark Walk," a tunnel of old laurel hedging in her garden, where she finds a live trout in a small well. She tries to find out how it could have gotten there, including an interrogation of Old Martin the gardener, but to no avail. Eventually she gets up at night and rescues the trout, releasing it into a nearby river.

2 No Habituation

Literature, as we saw, is said to enable us to see the world freshly. In his *Defence of Poetry*, Shelley claims that a chief effect of poetry is that it "purges from our inward sight the film of familiarity which obscures from us the wonder of our being" (1840/1988, p. 295). The question then is whether with repeated encounters with the same texts we tire of such defamiliarizing novelty and cease to experience it. In Colin Martindale's literary-historical account (1990), literary creation is shaped by the need for an increasingly defamiliarizing style; only by devising ever more vivid and unusual stylistic effects can a poet retain an audience. For example, Keats exceeds Wordsworth in stylistic innovation; Tennyson exceeds Keats; and Swinburn exceeds Tennyson. Yet we continue to read Shakespeare, Wordsworth, or Keats with pleasure and, as the years go by, perhaps even greater insight. One explanation lies in our first responses to detecting evidence of emotion.

In the case of pictures that evoke emotion, it has been found (Schupp et al. 2006) that virtually no habituation takes place: responses occurring within a 150–300 ms window remain almost as strong after repeated exposure as the first time (pictures used were of erotic, neutral, and mutilation themes). The study focused on the differences in rapidly processing pleasant and unpleasant pictures compared with neutral pictures. As measured by EEG, differences were shown by a larger early posterior negativity (EPN): a highly significant main effect due to emotion (compared with neutral pictures) was shown over temporo-occipital and fronto-central sites, beginning around 160 ms following exposure of the picture and being most pronounced in the 200–300 ms time window. The authors suggest that "the detection of emotionally significant stimuli in the environment is an obligatory task of perception, evincing little evidence for habituation as a function of passive stimulus experience" (p. 368). As the implication of these findings most likely extends to literary reading, where response to single words or sounds is obligatory, it seems we are designed always to react, in Irving Massey's words, to "the unquenchable freshness" of the words (2009, p. 89).

While the study of Schupp et al. (2006) shows evidence of dehabituation (as we will call it) occurring as early as around 200 ms, this is dependent on rapid and frequent exposure of emotional pictures. How far is this likely to illuminate the reader's response to literature? Prompts to feeling occur at the stylistic level of much literary language: most obviously we find repeated phonemes (alliteration, assonance) often deployed to underline the intensity of a mood conveyed by description of a setting or the predicament of a character. For example, in "The Trout," after running through the Dark Walk, Julia "emerged gasping, clasping her hands, laughing, drinking in the sun." This exhibits in close proximity three long /a/ sounds, five /ing/ sounds, and several other features that illustrate at the level of sound Julia's half-fearful excitement which, as it is read, helps create and sustain the same emotion in the reader. In the light of the Schupp et al. study, no habituation is occurring while these repeated phonemes are encountered. Moreover, such repeated phonemes suggest their own meanings, underlying the overt verbal meaning of the

text. The long /a/ sound seems to connote exhalation, relief. While phonemes do not have a fixed meaning (Miall 2001), they take on a local significance determined in part by the immediate context, contributing to the array of meanings activated for the reader during this moment of reading.

Other neuropsychological studies of habituation indicate that it is negative emotional experience that is most likely to show resistance to habituation. In an ERP study, Carretié et al. (2003) showed that negative emotional pictures were more resistant to habituation than positive or neutral pictures. They indicate that this provides an example of the *negativity bias*, that is, a more rapid and intense response that occurs to aversive events. The EEG component that was the object of this study was the N1 (a negative wave peaking at 100 ms), which has been found to be an indicator of level of attention; thus, higher attention signifies lower habituation. As the authors put it, "analyses of N1 indicate that the highest resistance to attentional habituation is specifically produced in response to S- [negative pictures]." While this study used pictures, previous studies suggest that N1 is not limited to visuospatial attention (Wang et al. 2008).

Another study, by Marchewka and Nowicka (2007), looked at the concept of priming, which also implies a measure of habituation. In a series of presentations, such as pictures, where each picture is the same or similar to the preceding one, the later presentations can be regarded as primed, that is, expected, by the previous ones. Participants were required to respond to a verbal or visual stimulus while their reaction time (RT) was measured. When neutral words or images were shown, repeated presentations showed the effect of priming (participants had become used to this kind of stimulus), and RTs became shorter. When presentations were emotionally negative (fearful faces were used), no effect of priming was found; RTs remained at the same level. It was also found that new negative stimuli (images or words) were detected significantly faster than new neutral stimuli (p. 87). Overall, no effect of priming was seen for emotionally negative stimuli, and this result occurred whether presentation was to right or left hemisphere—although the right is said to be specialized for responses to emotionally negative materials (p. 88). The study can be said to demonstrate the adaptive value of a fast response to negative events, which most likely had a high survival significance in the ancestral environment. Thus it would also be significant that the response to negative events is not attenuated with repeated presentation. The authors point out that no conscious control is exercised over the response: "Automatic stimulus evaluation is a very fast process and occurs at a very early stage of information processing." It is, in other words, another response occurring prior to the threshold of consciousness (set at around 400–500 ms). Each word of Julia's half-fearful "gasping, clasping [. . .] laughing" will be experienced by the reader with a similar force, a similar degree of dehabituation, thus helping to develop that slight sense of Gothic threat that a number of our readers have noticed.

A comparable finding in music, although one not dependent on millisecond timing, is reported by John Sloboda (1991). Sloboda studied the occurrence of emotional and bodily responses to music, such as tears, shivers, or racing heart. Participants reported such feelings to be quite reliably experienced in relation to

particular pieces of music, often a specific phrase or theme; and this held even when they had listened to the same piece 50 or more times: "Clearly," Sloboda comments, "listening to a piece of music very many times does not always entail a diminishing of strong emotional response to it" (p. 113).

This freshness of emotion may persist as a part of the ensuing emotional experience, as though the emotion lacked temporal markers. As Coleridge put it, "All intense passions *have faith in their own eternity*" (1957–2002, III, p. 4,056).

3 Intentionality Deferred

When accounting for our stance as readers towards literary characters, an important part will be played by the attribution of intention to a character. Since intentions cannot always be inferred automatically from actions or dialogue, intentions may be ambivalent. Old Martin reaches for the trout when it is pointed out to him. Is this because he intends to rescue and release it or because he would like it cooked for supper? And what does Julia intend by forcing Old Martin to leave the trout where it is? Studies of mirror neurons in humans suggest that an observer will simulate the initial pre-motor and motor phases of this action while inhibiting its execution, whether based on visual, sensory, or verbal stimuli (and in the case of humans, a goal for the action is not obligatory; "intransitive" movements may also stimulate a response: Gallese et al. [2004, p. 397]). Thus a reader will acquire a sense of the intentionality inherent in the behavior and comments of both Julia and Old Martin—an array of intentions or the absence of intention that will contribute to the situation model being constructed by the reader. This represents the straightforward account. In its early phases, however, we may witness a somewhat divergent situation. I mention three example studies below that tend to complicate the issue.

First, the early phases may be marked by an attribution issue. The standard mirror neuron account, as far as it concerns the first several hundred milliseconds, is questioned by an analysis of Becchio and Bertone (2005). At the early phases of response (prior to 500 ms), intention is not unambiguously present; later (after the elapse of a second or so), intention may be assigned through sympathy or empathy for a character that establishes intentions and goals, or intention may be assigned to a narrator. Following analysis of mirror neuron systems, Becchio and Bertone (2005) remark:

> When observing other people acting, the activation of *shared neural representation* allows us an immediate access to their motor intention. Given the existence of a neural substratum shared between the self and the other, the problem of the other, we argue, is reversed in its own presuppositions: the problem is no longer 'how is it possible for part of the I-experience to refer to others?' but rather 'how one can distinguish one's own action/intention from those of other people?' (p. 21)

Or, as Jeannerod and Pacherie (2004) have shown, "We can be aware of an intention, without by the same token being aware of whose intention it is" (p. 140).

This issue over intentionality contributes to literariness in so far as it is developed by, for example, the uncertainty, ambiguity, or conflict of intentions of a character, as in the exchange of Old Martin and Julia, or by the unreliability of a narrator (Miall 2012). We might assume, also, that an inability to attribute intention that implicates one or more characters, the narrator, or the reader may at times create, albeit momentarily, that sense of shared significance, of community, which we experience as literary readers. The mirror system, under favorable circumstances, may eliminate the wall of solitude that separates two consciousnesses, even though one is present merely as words on a page (see Keen [2006] for an account of empathy in literary reading and mirror neurons).

Second, a study of response to faces raises the possibility of an absence of intentionality over the first few hundred milliseconds under certain conditions; I will raise the question whether this is likely to generalize to literary response. In a study by Rellecke et al. (2012), intention on the part of the viewer was absent when viewers processed an angry face compared to processing a neutral or a happy face. As shown by ERP visual components P1, N170, and EPN (early posterior negativity)—ERP components that have been implicated in face and emotion response—early processing of negative stimuli occurred without intention, that is, unaffected by one or other of several simple tasks required of participants in response to the faces. These included passive viewing, or judging the emotional expression of a face, or stating whether the presentation is of a picture or a word. Positive (happy) and neutral faces, on the contrary, showed the influence of intention. The authors conclude that two different kinds of processing are occurring: "an automatic threat-related processing bias at perceptual stages, while higher cognitive emotion encoding is subject to voluntary control" (p. 23).

While the authors consider only one negative emotion—anger—in their study, the findings are suggestive. They show that such an emotion cannot in its first moments be controlled or modified by any intentional perspective, that intention is suspended or absent. In this respect, it indicates that a new, unassimilated experience is occurring, one that will call for attention. For example, here is one occasion when Julia demonstrates anger: interrupting her mother's tale of how the trout came into its hole, "Passionately she had whirled and cried, 'Mummy, don't make it a horrible old moral story!'" That her response is characterized as passionate suggests an involuntary excess of angry emotion; in that it is unwilled it can be regarded as a contribution to Julia's increasing sense of emancipation from the parental ward, a growth in her being that is at first unattributed. It is not, in other words, a negotiated state, but one basic to her transition to the state of womanhood. It will conclude with her bold rescue and release of the trout at the end of the story. Anger may be only one of several basic, negative emotions that run off initially like anger without the influence of intention, in that for the system experiencing them the emotion process is obligatory. This seems essential with fear and likely to be the case with disgust. In this way, the system is signaling that the emotion preempts any other cognitive or emotional process currently in train and must be given undivided attention.

The third example I will describe stems from well known studies by Libet et al. (1983), studies of the moment of choice that appear to cast doubt on our

possession of freewill. A recent study by Rigoni et al. (2010) focused on evidence for unconscious preparation for action, the Readiness Potential, shown by EEG measures occurring from 500 ms up to 1,000 ms (a slow negative-going potential) prior to action. Thus preparation to act was shown to occur in the brain some 300–800 ms before participants reported a conscious decision to act. Explicit intention to act is said to be attributed retrospectively, and to occur only about 200 ms ahead of action. Hence, the Readiness Potential can be considered preparation for any possible action, but one that gives a spurious sense of freewill, as though the action had been freely chosen. The findings of this study are replicated in a number of other studies, with

> evidence suggesting that the sense of volition is not a driving force in the initiation of our behavior. Rather, it seems that the subjective experience of free will is a construction, derived from the brain's motor system producing a movement and somehow 'informing' consciousness of the movement, with the effect that we feel as if the action has been freely chosen. (p. 2)

Action thus only appears to coincide with intention retrospectively.

The study asked participants to press a button and report when they formed the intention of pressing the button. The button press was supposed to coincide with auditory feedback (a computer emitted a 200 ms beep), but feedback was systematically delayed by a number of milliseconds, varying randomly between 5, 20, 40, or 60 msec. Findings showed that the later the feedback, the more the report of the participant shifted to a corresponding later moment. This suggests that the experience of the moment of choosing to act is an artifact that in some way the brain has unconsciously already made a decision to act, so that our awareness of choosing is belated. (For a critique of these studies of Readiness Potential and freewill and some alternative construals, see Ellis [2005, pp. 144–146]).

Statements of intention and fulfillment of intention are very frequent in literary stories. The opening sentence of "The Trout" conveys the implicit intentions of Julia as she and her family arrive. "One of the first places Julia always ran to [. . .] was the Dark Walk." She wants the frightening experience of running through its dark tunnel and out again into the sun. Questions to consider are whether Julia's intentions are realized and, if so, does she recognize them only as they are fulfilled; or if at certain moments when she acts or responds, she has no intentions, only behaviors. Her behavior running through the Dark Walk in the opening sentences of the story appears to repeat a favorite activity, but the odd evocation of memory and the tone of fright with which it is described argues that her running ostensibly connotes a new experience that she claims only after its completion (she and the younger brother who also runs behind her "came back to the house to tell everybody that they had done it"). What appears to occur, shown by Julia's screams of pleasure, is that she is setting herself a challenge that will in time develop her personality in ways that are hinted as the story progresses. The activity seems childish, but in fact it tests her mettle, her determination, her ability to face an ordeal. But these are implicit meanings: if they are intended, it is her character, not her conscious self, that instantiates them. She is the instrument that carries them out. I am assuming

here that the Libet-type study, which concerns motor intentionality, can be scaled up to capture the kind of more global intentionality that Julia demonstrates. How far this capacity can be shown in the case of literary readers will require further research.

Another sentence early in the story helps set the paradigm for belated intention that occurs elsewhere in the story. At the beginning of her run, "For the first few yards, she always had the memory of the sun behind her." Note that the first phrase is empty, a merely temporal expression appearing to connote the time taken to run a certain distance. Yet her experience of this as a period of time is immediately cancelled by the term "always," evoking a presence in her memory much more significant than the running itself. In sum, the author uses the experience of late attribution of intention almost as though it is this that pulls Julia into transcending her childish phase and constructing her own maturity. An effective example of this process is this sentence, a page further on, after being asked if she saw the well: "She opened her eyes at that and held up her long lovely neck suspiciously and decided to be incredulous." Here it is the body that holds open a space for intention (her eyes, her neck), until an explicit claim to intention (being incredulous) is made. It is striking that Julia's primary intention, to rescue the trout, is not made evident until the last quarter of the story.

4 Thwarting of Prototypical Feeling

As Greg Smith (2003) puts it, prototypical emotions are generally seen as object-oriented, intentional, directed at something, and including an action tendency (p. 21). Whatever we are reading (including non-literary texts), the system may recognize early on that an emotion is apparent and situate it in relation to whichever prototypical emotion it prompts; such an emotion (for example, pity, anger, joy) will run off without hindrance and create an unequivocal emotional situation, one that the reader will recognize as familiar and through which she will shape her expectations about how the text will continue. Here, for instance, is part of a paragraph from an article in *The Guardian* about the surveillance carried out by the British spy agency, GCHQ, and whether it is necessary (Lanchester 2013):

> We do have enemies, though, enemies who are in deadly earnest; enemies who wish you reading this dead, whoever you are, for no other reason than that you belong to a society like this one. We have enemies who are seeking to break into our governments' computers, with the potential to destroy our infrastructure and, literally, make the lights go out [. . .]

We readily identify the main emotion in question in the first sentence here: fear. The text continues by elaborating and justifying this claim, giving reasons: our enemies are breaking into important computers; the lights may go out; and so the article continues, offering additional reasons for feeling fear, and redirecting the cause of fear onto the spy agencies themselves. The prototypical nature of the fear in question throughout the article is not questioned.

In literary reading, however, the text may thwart the systematic development of the emotion in relation to this first situation—perhaps through conflicting phonetic patterns or an ambiguous reference to a character; or the action suggested may become other than what was first implied by the prototypical emotion. In this way, a literary passage can shift the reader's attitudes and inclinations away from what first seemed in question to a prospect that is unfamiliar and challenging. An action plan is still in evidence, but it may propose ends that we have trouble recognizing (hence perhaps the "fresh emotions" shown in Cupchik et al. 1998), or ends that we now find aversive. Such emotions can be powerful: they may call into question interpretive processes already underway, such as the markers of aesthetic structure that we create to orient ourselves to the text, the breakdown of monovalent understanding into a multivalent one, or our empathic regard for the protagonist in the narrative.

In "The Trout," we seem to be offered an experience of fear halfway through the story as Julia jumps out of bed at night: "somehow it was not so lightsome now" with the prospect of "dim mountains," "black firs," and the barking of a dog. But it seems that Julia does not hesitate and the initial fear transitions to include Julia's boldness, her courage in navigating the nighttime visit to the Dark Walk (another mark of her maturing), and then extends to the situation overall as she finds the trout—she cries aloud, she is "mad with fright" along with the trout, but she is still courageous, "her teeth ground." And in this passage phonetic coloration provides a third emotional perspective to be experienced alongside the fear and the courage: the main terms "dim mountains," "black firs," and "bark-bark" have a presence to them given by their adjacent strong stresses that sets them down like the pillars of a temple. Another supporting sound structure is "the cool but cruel gravel" that helps animate the setting, underscoring what Julia must contend with as she approaches the Dark Walk and its inhabitant. In terms of the aesthetic frame of the story, it is notable how this moment of rescue sees Julia again racing through the tunnel, a fearful complement to racing through the dark for the pleasure of terrifying herself that opens the story.

5 Bodily Alertness Underlies Representation

As Kuijpers and Miall (2011) showed, bodily responses seem to occur systematically while reading a literary text. In their study, participants reported when they experienced a bodily sensation while reading a modernist short story, describing how it felt and marking its location on a diagram of the human body. One important finding was that the frequency of bodily responses to specific passages in the story correlated significantly with the occurrence of foregrounding in the passages being read. It seems probable that bodily responses of this kind are elusive and hard to recognize, and difficult to capture empirically. However, they can also be found at times in the descriptions of novelists; this would make an interesting study in itself.

For example, striking examples of bodily responses that create an aesthetic experience can be seen in Virginia Woolf's novel *The Years* (1937/2009). Here we watch Martin walking across London and arriving opposite St. Paul's Cathedral. "He crossed over and stood with his back against a shop window looking up at the great dome. All the weights in his body seemed to shift. He had a curious sense of something moving in his body in harmony with the building; it righted itself: it came to a full stop. It was exciting—this change of proportion" (p. 216). Here is evidence of the active role of the body in shaping an aesthetic experience—a process of which Martin is conscious, but this is not necessary; much that we perceive or experience occurs below the level of consciousness yet still exerts some influence on subsequent attention and processing: "Unattended objects [. . .] may still be processed to fairly high levels, and the processing itself may summon attention" (Posner and DiGirolamo 2000, p. 882).

We don't often think of the mind as influenced by the body, but this was one of the major insights of the poet Wordsworth. This is elaborated in a number of places in Wordsworth's early writing. For example, in 1799, while sketching early drafts of what was to become his great autobiographical poem *The Prelude*, he refers to bodily shaping and realization of mind, how sensations internal and external provide materials out of which the mind is created. Thus he claims a sensibility "quickened" by emotion, where "all my thoughts / Were steeped in feeling" (1799, II, 447–448), showing how early experience, as Richardson (2001) notes, "implies a mind shaped by and realized in bodily organs, though not entirely defined by them" (p. 71). In his response to nature, images are "Felt in the blood, and felt along the heart" ("Tintern Abbey," p. 29, in Gill 2000)—images that persist and help shape the mind:

> By force
> Of obscure feelings representative
> Of joys that were forgotten, these same scenes . . .
> Become habitually dear, and all
> Their hues and forms were by invisible links
> Allied to the affections. (Wordsworth 1799, I, 435–442)

Thus the literary power of a text, in a similar way, may enforce itself upon the reader's body, forging "invisible links" that shape response for years to come.

6 Animacy of Events and Objects

It has often been remarked (e.g., Coleridge 1983, I, p. 9) that not a word can be missed from a literary text; we commonly respond as though all words and sentences are relevant, although during an initial reading it may be too soon to judge if this is the case. Yet we endow objects and events with the gloss of final significance, such that whatever is said, done, seen, felt, etc., while reading is considered to contribute somehow to the total aesthetic experience and meaning of the text. This assumption underlies what I will call animacy tracking: if all is relevant, then each

separate mention embodies a relationship to the overall meaning. Supposing a tree is described: then the tree must be inherently implicated in the unfolding feelings and perceptions of the narrative and that is why the description of it has been included by the writer. This is exemplified by the "pathetic fallacy" to which Ruskin objected (1897, III, pp. 161–177)—the attribution of human emotions to objects in nature so that they participate in forwarding the narrative drama that is infolding. (One feels that Snoopy in the *Peanuts* cartoon is about to commit this fallacy when he begins his novel: "It was a dark and stormy night.") To produce, on the contrary, a sense of the ordinariness, the randomness of events and objects is actually nearly impossible. And as many writers have observed, animacy is the default assumption when a questionable object in the environment attracts attention. This enlivenment of the verbal may extend to objects that we read about in the first few hundred milliseconds of response. The sense of other presences, of dimly sensed consciousnesses, may then continue to animate the ensuing narrative. As Wordsworth put it, in a fragment of verse: "There is an active principle alive in all things" (Wordsworth 1979, p. 676).

Julia evidently feels some affinity with this power in nature: she is aware of the landscape beyond her bedroom window, as the poetic description of it suggests: "the dim mountains far away and the black firs against the breathing land." Yet this does not dissuade her from getting up and going outside, where she becomes an active agent herself in the animate world of the trout. Here too as she releases the trout we find animation in how "the moon-mice on the water crept into her feet."

My comment here around the Wordsworth passage is speculative, but it is in accord with what we are coming to know about embodied cognition and the role and powers of feeling in particular, what Ellis (2005) describes as the "intentionality of feelings—what they are 'about'—[which] includes aims as well as environmental affordances and triggering objects" (p. 6). Although literary response articulates these premises, they have been little studied until now with serious attention to the bodily correlates of reading. Here, as Mark Johnson (2007) puts it, "immanent bodily meaning is paramount" (p. 209).

7 Sequence Issues

Given the five processes I have just reviewed, it remains for us to see how they can be placed within a functioning psychological system, one that does justice to the complexities of literary response as far as possible, and one that would help account for that early sense of strangeness. Here is where questions of sequencing become important. First, what sequence is in question when we consider emotion itself?

Arguments over the place of emotion or feeling in the cognitive and bodily system, in particular the place and nature of appraisal, have been occurring for over a 100 years. Does appraisal, that is, realizing the meaning of an event, precede our development of feelings towards the event? Notice how, in the following description emotion is placed last in the sequence. This is David Brooks' account of emotion in his recent book *The Social Animal* (Brooks 2012).

In what Brooks terms the Emotional Positioning System, or EPS, the system "senses your current situation and compares it to the vast body of data it has stored in its memory. It reaches certain judgments about whether the course you are on will produce good or bad outcomes, and then it coats each person, place, or circumstance with an emotion [. . .]" (pp. 501–506). This looks a plausible process, but emotion is put at the wrong end. First, an emotion occurs informed by a preliminary sense of context, situating us in relation to a future state if the emotion were extended; this possibility is then appraised, with the assistance of our autobiographical memories; finally the future situation evoked by the emotion is evaluated, i.e., judged as constituting a good or bad outcome for the self (e.g., what kind of person would I become if I gave free rein to this anger). Development of this system begins in infancy when emotional responses are learned through social referencing (Feinman 1992), as it has been called. In this situation, when infant and mother regard the same object, emotion and perception of the object or event are learned simultaneously by the infant—especially if the mother's response is a vocal one: the intrinsic acoustic properties of vocal affective expressions, such as loudness and pitch, may induce emotions directly, a phenomenon that we can also infer from the EEG studies of responses to emotion over the first 400–500 ms in language and other media.

To summarize the processes we have suggested with a view to their sequencing: The early, i.e., preconscious, occurrence of emotion during verbal response (not yet literary) may, we can suggest, be inflected by the precursors of intentionality (as in the Libet-type study) or its ambivalence, or even its absence in the case of the negative emotion; by the absence of habituation that marks the freshness of the emotion; and by experiences of animacy that will be striking if applied to objects that later (within a second or two) turn out to be inanimate (e.g., the "smooth, sinewy branches" of the Dark Walk). At the same time, response may recruit areas of the body that help shape and prolong the aesthetic sense. It is when there is a thwarting of the prototypical emotion on the cusp of consciousness (at 400–500 ms) that literary response begins to develop, as it picks up and is shaped by the implications of the sequence of phenomena—as intentionality shapes the sociality of the described moment, as alternative scenarios develop and trouble the emotion prototype, and as the body resonates to the emergent flow of awareness. Here is where the strangeness of the literary is emergent, with its complexities and ambiguities, its divergent perspectives that propose themselves to the evaluative regard of the reader.

The actual sequence of events will depend on the interaction between the text and the individual reader who brings to each moment of reading her own proclivities and experiences. For instance, in the following segment Julia is beginning her run through the Dark Walk:

> then she felt the dusk closing swiftly down on her so that she screamed with pleasure and raced on to reach the light at the far end

In the opening section of the story up to this point Julia's intentions in running remain unspecified, although this is certainly the most significant piece of information that a reader requires so far. Readers will either fill this gap

with their own concept of intention taking up whatever clues may have emerged preconsciously, or they will leave intentionality in abeyance until this segment, which supplies a first draft, as it were, of Julia's intention. This is signified by the phrase "so that," from which we learn that she "screamed with pleasure." The ambivalence of this emotion is developed by subsequent references to Julia's "ordeal," to "terrifying" her younger brother, and to their "fear." These references summon negative emotions, suggesting points in the story where habituation will not occur, thus ensuring the freshness of attention that the reader must bring to a key aspect of the story. In the present segment, we also find another hint of animacy in attributing motion to "the dusk closing swiftly down"—an image that one reader we studied compared to "something like a blanket closing around me when I read," a bodily response that other readers may also have experienced. In addition, as we noted earlier, a description of action, which is also the case here, activates the motor and premotor neurons while inhibiting execution of the action, and this enlivens the reader's imagery of Julia's behavior.

The text continues to guide us, of course, in shaping the parameters of response. Somewhat as in social referencing (as we mentioned earlier), where the baby shares its mother's line of gaze, readers look to a narrator for simultaneous guidance on what to pay special attention to and how to feel about it (drawing on our version of this capacity as adults); in literary response, there may be more than one line to follow here—in the most dramatic examples, both acceptance and rejection, both belief and disbelief, etc. (think of *The Turn of the Screw*). But all normally felt experiences of literariness are likely to share these moments of emergence, the set of impulses from processes initiated and shaped preconsciously during the first few hundred milliseconds of response. Such processes, or their traces, are hard to detect—and will be difficult to study empirically.

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Memory and Mental States in the Appreciation of Literature

Marisa Bortolussi and Peter Dixon

Abstract An implicit supposition in literary studies is that ideal readers have unconstrained access to the text. However, we argue instead that the processing of literary narrative must be mediated by the fragmentary and distorted memory of real readers. In the present chapter, we focus on an important determinant of memory: the variation in readers' mental states during reading. In particular, we identify two prevalent fluctuations that have critical implications for memory and literary appreciation: mind wandering, in which the reader momentarily gives relatively little priority to processing the text; and engagement, in which the reader constructs elaborate and personally meaningful representations of the story world. We describe how the variation in these mental states over the course of reading affects reading processes and determines memory for both text and aesthetic reactions. This analysis is supported by the results of two experiments in which readers' mental states were probed online during reading.

Keywords Narrative processing • Cognitive psychology • Memory • Mental states • Mind wandering

1 Introduction

One of the most profound but least understood insights concerning literature is the phenomenological idea that, until read and processed by readers, literary works are merely physical objects. As Escarpit (1966) put it, "when we hold a book in our hands, all we hold is paper. The book is elsewhere" (p. 7). Today, no one would dispute the intuitive metaphor that works come alive in the minds of their readers. But what precisely this entails is still the object of considerable debate. At the heart of the controversy are some thorny issues: the nature of the text, the nature of

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the reader's processing, and the relationship between texts and their readers. More specifically, we need to resolve whether the text can be considered an objective entity and to what extent it can be reproduced in readers' minds. Ingarden (1973) and Iser (1978) were inspired by ideas from phenomenology and acknowledged the active role of reading. However, their reader was nonetheless conceived of as a textual counterpart with little creative license, the text was conceived of as an objective entity, and the reading process was conceived of as a decoding activity. Implicit in this conceptualization is the fundamental assumption that aesthetic response is to the objective text as reproduced in readers' minds during the reading process. But these assumptions, which continue to pervade literary studies, are undermined by an abundance of psychological evidence that has emerged in cognitive psychology and discourse processing. This research sheds light on some of the real limitations of human memory and attention and their consequences for reading and readers' mental representations of text. In particular, it indicates that comprehension is not just a text-driven process but also a constructive activity. That is, mental representations are not reproductions of text but rather more schematic "situation models," dependent to a large extent on both the reading context and reader variables such as mental states, capacities, interests, goals, and so on. Thus, any appreciation or aesthetic response cannot properly be thought of as related to the text per se but rather to this reconstructed representation of the text. When considered seriously, this body of research leads us to some fundamental revisions of phenomenological accounts of literary processing and aesthetic response.

We begin by identifying and briefly reviewing some of the prevailing assumptions concerning the appreciation of literature in some branches of literary studies. This is followed by a summary of relevant psychological research, and especially the constraints on the cognitive processes of attention and memory. Finally, we describe two experiments that provide evidence for a revised model of literary processing and response. This new approach takes into account how readers' mental states fluctuate over the course of the reading and how such fluctuations affect their mental representations of, and aesthetic response to, the text.

2 Literary Studies

In his extensive 1931 work, Ingarden explained that due to the finite and limited nature of literary texts, objects can only be partially represented, and the gaps in the representation, which he calls "spots of indeterminacy," must be fleshed out by the reader. He identifies two such processes: "concretization" and "filling-out" or completion. "Concretization" refers to the reader's active representation of what has actually been mentioned in the text; "filling-out" refers to the reader's representation of what is not mentioned in the text. Since different readers respond differently, the results of the concretization and completion processes can be innumerable. Although Ingarden recognized this inevitable fact, he by no means believed that any concretization or completion was acceptable. As Bundgaard (2013) explains:

"idiosyncratic associations foreign to the meaning universe of the artwork [. . .] can rationally be rejected as irrelevant" (p. 175). For this reason, as Holub (1995) explained, Ingarden specified that not all concretizations are licensed by the text but rather that "they must be based on a faithful and accurate reconstruction of the text" (p. 302). Used in this sense, the word "reconstruction" refers to a process of decoding and implies that texts are objective entities that can be faithfully reproduced in readers' minds. Following in his mentor's footsteps, Iser (1974) agreed that meaning does not reside in the text, but rather arises in the interaction between reader and text. However, like Ingarden he allowed for only a minimal margin of creativity: Readers may supply trivial details not provided by the text, such as the color of a character's hair, but their processing must conform to the demands of the text. His "implied reader" was in fact a hypothetical correlative of the text, an idealized projection of what is presumed to be a stable, objective encoding of an intention.

Many traditions of literary scholarship betray the persistence of this phenomenological legacy in their descriptions of literary texts and the presumed effects of textual features. Below, we consider, in turn, the positions of narratologists and stylisticians. Both groups of literary scholars at least implicitly endorse the structuralist Culler's (1975) understanding of the text as an objective entity, decodable by competent, ideal readers who have mastered the literary conventions required for successful comprehension.

To begin with, narratologists also seem to share this sensitivity. When one aggregates the vast quantity of features and devices that narratologists deem important for competent readers to notice, track, remember, and associate in textually mandated ways, one is lead to the inevitable conclusion that the competent reader is nothing short of a super reader, endowed with a super brain. With respect to just the characters in the story, readers must notice and remember who said what to whom; who thought what and when in what kind of language; who was where at any given point in the story; and who noticed what and where; who knew what and when, and so on. The cognitive narratologist Lisa Zunshine (2006) echoes this intuitive expectation by stating that "the ability to keep track of who thought what, and felt what, and when they thought of it, is crucial" (p. 60). Furthermore, with respect to the discourse, readers must also notice and decipher all the metaphors, similes, and grammatical and syntactical deviations, and they must distinguish between narrator and character discourse and relate those entities to a narrating agent. Besides tracking all of this information, they must also retain it in working memory so as to make necessary associations and periodically update their inferences. As well, all of this processing must be informed by all of the relevant literary conventions and traditions, presumably encoded in readers' long-term memory and retrieved effortlessly as needed. The theoretical assumption is that all relevant textual features are noticed, tracked, interpreted, and remembered. Although no narratologist has claimed that such copious amounts of information can be processed in one reading, the implicit assumption is that is achievable through a series of different activities, such as rereading and note taking. However, the assumption is undermined by the contradictions and debates arising in narratologists' own laborious attempts

to identify the features and devices of narrative texts. Well-known polemics, such as the discussion of within-sentence shifts in speech and thought representation (Bal 1977) or the more than 40 years of theorizing about the nature and features of focalization (Bronzwaer 1981; Fludernik 2001; Nieragden 2002; Herman and Vervaeck 2004; Margolin 2009; Klauk 2012), suggest that defining what is in the text is often reader (and narratologist) dependent, with the result that mental representations of the text differ even with careful, scholarly analysis.

Second, within stylistics, one issue that has received considerable attention is the notion of foregrounding. Like Ingarden, Iser, the structuralists, and the narratologists, stylisticians assumed that foregrounding could be objectively defined, a belief that lead to the establishment of toolkits of foregrounding features (e.g., Leech and Short 2007). Wishing to advance our understanding of the function of foregrounded features, some scholars in the empirical studies of literature attempted to investigate their effect on real readers (van Peer 1986; Miall and Kuiken 1994). However, as Sanford and Emmott (2012, pp. 82–83) cogently demonstrated, empirical studies of the forms and functions of foregrounding in particular texts have been methodologically flawed. One of the main weaknesses, they explained, is that the determination of which textual features can be considered foregrounding devices is the product of inconsistent, subjective judgments. The second is that the relationship between features and effects in these studies is merely correlational, not causal: Because foregrounding features were studied in situ, we have no evidence that any of these features have a causal effect on readers' response. They may or may not be noticed, they may or may not form part of the reader's mental representation of the text, and they may or may not be retained in memory. Indeed, van Peer's (1986) seminal study demonstrated very weak memory for foregrounded elements. In sum, while theoretical concepts such as the ideal reader allow us to anticipate a variety of possible text-consistent responses that could potentially arise, the evidence for effects of foregrounding in actual readers is not overwhelming.

As we demonstrate throughout the remainder of this chapter, no reader's processing can ever reproduce the original text, owing in part to the limitations of human memory implicated in the reading process. Reading, like stories, unfolds over time. This may seem like a trivial fact, yet its implications for mental processing have yet to be fully appreciated. Precisely because reading is a temporal process, every portion of a read text is consigned to memory, and therefore must be retrieved from memory. At any one moment, only a small window on the text is immediately available for processing and for detailed inferences. As the reader progresses through the story, this window scrolls over the text, with the previous content continually replaced by current portions. Thus, short sequences of text are only available in the window for a limited period of time, and then they are gone (cf. Fletcher 1986). In other words, the full text is never present in a reader's mind. If any information is relevant for understanding subsequent aspects of the text, it must be retrieved from memory at that later point. This retrieval might be optimal for an ideal reader with ideal memory. However, as will be demonstrated in the following section, human memory is by nature incomplete and distorting; anything consigned to memory must be pieced together from fragmentary and fallible memory traces

(cf. Bortolussi and Dixon 2013). Therefore, the very nature of the human mind renders complete reproductions of the text impossible. In turn, this implies that the aesthetic response engendered by the text is not, precisely speaking, a response to the text. Rather, it is a response to the reader's own mental representation of the text, with all of the limitations that implies.

Because everything that is read is consigned to memory, all aspects of literary response—comprehension, emotional reactions, inferences, interpretations, and appreciation—are mediated by memory. All of these processes are dependent on what we recall about characters' conversations, spatial configurations, the narrator's status and discourse particulars, stylistic devices, and so on. Once the memory-dependent basis of literary processing is acknowledged, one must acknowledge that aesthetic response is to the reader's representation of the text. As we describe in the following section, that representation can only be a distilled, schematic outline of the text.

3 Evidence on Memory for Text

As we have argued previously, the limitations of human memory are well appreciated in cognitive psychology. For the present purposes, two well-known facts about memory are central: First, far from acting as a video camera that replicates past experiences, memory is fragmentary and incomplete. Second, memory reconstruction is susceptible to distortion by a variety of influences independent of the information to be remembered. It is worth considering each of these points separately. The term "reconstruction" is used here, as in cognitive psychology and discourse processing, to refer to a fallible and indeterminate process of inference rather than the straightforward decoding mechanism envisioned by Ingarden (as described by 1995).

Elizabeth Loftus, among other researchers, exposed the flawed "memory as video camera" metaphor. In their classic investigation of eyewitness memory, Loftus and colleagues (1978) showed subjects a series of slides depicting a traffic accident, in one of which a red car appeared on a road in front of either a stop sign or a yield sign. Subjects were asked to pretend to be eyewitnesses to the scenes. They then answered questions about the slides, one of which linguistically presupposed the existence of either the stop sign or the yield sign (e.g., "Did another car pass the red Datsun while it was stopped at the stop sign?"). Subsequent recognition of the slides showed a substantial "misinformation effect": Recognition accuracy was 71 % when the presupposition matched the original slide but only 41 % when it mismatched. These results demonstrate that memory can be distorted by verbal information that is independent of the original perceptual experience.

Carmichael (1932) provided another demonstration of the influence of contextual information on memory retrieval. Subjects studied ambiguous line drawings (e.g., two circles connected by a straight line) along with verbal labels (e.g., "eye glasses" or "dumb bells"). Subsequently they were asked to draw the pictures from memory.

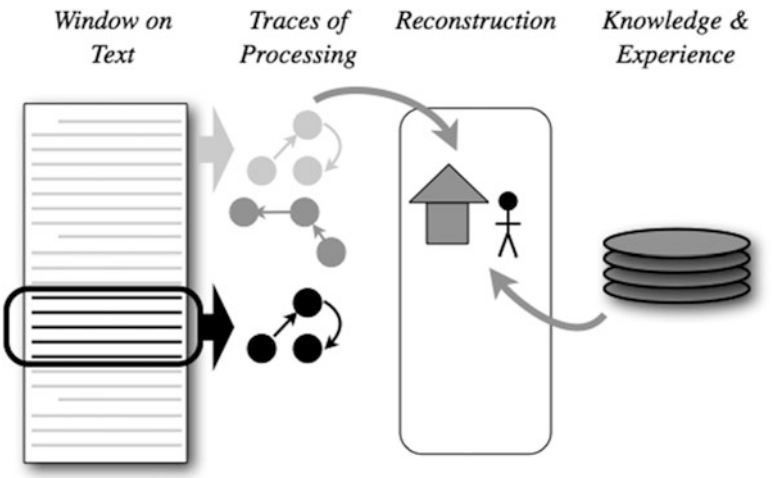

Fig. 1 Representations and processing in the comprehension of text. On the *left* is the immediately available text currently being processed; to the *right* are the traces of that processing; to the *right* of that is the story world situation as reconstructed from the memory traces and knowledge and experience

Results showed that their drawings from memory were affected by the nature of the label, independent of the perceptual information in the drawing. This result suggests that people do not retrieve some form of verbatim perceptual information from memory but rather that they must make inferences—based on all sorts of available information—in order to reconstruct what they saw. The same must be true of text: Readers do not have a recording of what they have read, but rather must reconstruct that information from fragmentary memory traces.

These findings have serious implications for the processing and appreciation of literary narratives, some of which we illustrate in Fig. 1. The figure outlines why we can only reconstruct a schematic representation of the story we just read from the fragmentary traces of processing. On the left of the figure is the text. The highlighted lines indicate that limited portion of the text that is currently being processed. As described above, this is the only portion of the text that is immediately available for processing and inferences; material from earlier in the text must be reconstructed from memory. Just to the right of the text are processing traces that remain in memory. These are schematic representations of concepts and relationships rather than a verbatim copy of the words of the text. The traces near the top are depicted in light gray to suggest that traces become increasingly difficult to retrieve over time. Although we are mostly concerned with the traces of textual processing, as we discuss later, traces of other, extra-textual processing will also be found in memory. The actual representation of the situation and events described by the text are then reconstructed based on these traces; this is depicted in the box just to the right of memory traces. The depiction is intended to indicate simply a schematic situation model, or distilled representation, that has been reconstructed from the

textual information we read. Further, as shown on the far right, comprehension and reconstruction rely substantially on world knowledge and personal experience. Thus, the schematic representation of the text will inevitably be intertwined with other knowledge. This means that the two can become confused (e.g., Bower et al. 1979). As with Carmichael's (1932) ambiguous pictures experiment, what is recalled is not a replica of the original experience, but rather a reconstruction that is based on other information besides the original processing. On balance, memory, either for past experience or for previously read text, is not only incomplete but also a function of a wide range of other information; the distilled outline that emerges in the reader's mind is at best a distorted reflection of the original narrative. The implication is that appreciation of the text and aesthetic response pertains to this reconstructed representation, not the text itself.

It must also be emphasized that memory is not only fragmentary and distorting, it is also ephemeral. Discourse processing studies have shown that memory for all aspects of text is short lived, making the mental representation of the read narrative more unreliable still. Three levels of memory representation have been identified: memory for surface structure, which dissipates almost immediately (e.g., by the end of a clause or sentence, Goldman et al. 1980); memory for the textbase, or propositional content, which has been shown to last a little longer (e.g., Singer and Kintsch 2001), and memory for the situation model, which lasts longer than the other two (cf. Zwaan et al. 1995). However, the situation model is far from complete or accurate. For example, Graesser and colleagues (1999a) demonstrated that memory for one critical aspect of the story, who said what in a story, is generally very poor, although it is better for the speech acts of first person narrators than for those of characters or third person narrators. In his classic experiment, Bartlett (1932) demonstrated that recall is very difficult and quite inaccurate when the material read was from a cultural background different from the reader's. These results were replicated more than four decades later (Kintsch and Greene 1978). Furthermore, it has been shown that the contextual knowledge at the time of reading has a great impact on memory and recall (Bransford and Johnson 1972). Graesser et al. (1999b) found that judgments concerning who knows what in the story are not a function of episodic memory (i.e., the ability to retrieve the speech act of agents in the story world) but were rather based on inference processes incorporating a range of different types of knowledge.

Together, these findings pose a serious challenge to approaches to literary response that include no role for the limitations of human memory. In literary studies, the topic of memory is only studied as a theme, such as the way in which memory for historical events is represented in specific literary works. The issue of how memory constrains the reading experience of real readers has received almost no attention in this field. Thus, scholarship in this tradition cannot provide an accurate account of reader processing. One of the few literary scholars who did foray into this terrain was Norman Holland (1975). In an informal study, he had five readers retell a story they had read, and found numerous changes in the retelling. This was taken as evidence that memory reconstructs rather than reproduces (cf. Bartlett 1932). Within the field of linguistics, Emmott (1997) acknowledged the

limitation of real readers' memory in the reception of literature. She drew on cognitive psychology to better understand the mental activity of reading literature and reflected on "the minimum amount of textually presented information needed for the text to make sense" (p. 121). Apart from these limited exceptions, there has been relatively little rigorous, systematic study in linguistic and literary studies of the topic of memory for text.

As explained above, the general nature and role of memory have been studied extensively in discourse processing. Some attention has also been dedicated to the investigation of individual differences with respect to memory capacity. However, the contextual or situated determinants of textual memory have received less attention. Indeed, common theoretical approaches to reading in discourse processing often ignore the impact of context on reading, implying in effect an ideal reader and an idealized reading situation. In the following section we discuss the constraints that the situated nature of reading poses on the understanding and appreciation of literary texts.

4 Text Processing in Context

Reading and, by extension, readers are situated in the sense that reading does not occur in a vacuum; it transpires over time in both a mental and environmental context. Readers' mental states and factors peculiar to the environment necessarily affect processing. We describe two aspects of readers' mental states in particular that have an impact on the processing of the text: variations in attentional focus and variations in reading engagement.

Readers' mental states inevitably vary from moment to moment over the course of reading any text, a fact ignored by idealized concepts of the reader. For example, Nell (1988, p. 9) maintained that "because of the heavy demands reading makes on conscious attention, the reader is effectively shielded from other demands, whether internal or external." But in real-world reading contexts, external stimuli, such as even mundane changes in the environment—phones or doorbells ringing, temperature fluctuations, background noise—could alter a reader's priorities, causing a cessation of the reading or a decrease in attention. Other internal factors can also influence attentional resources devoted to the reading task. These include factors such as bodily needs, caffeine or lack of caffeine, the time of day, personal priorities, responsibilities, preoccupations, or even personal recollections prompted by the text (Dixon and Bortolussi 2015). Indeed, recent research on mind wandering has demonstrated that attention is never unwavering for any reader, under any circumstances. For example, Schooler, Reichle, and Halpern (2004) claimed that mind wandering can occur up to 23 % of the time. Mind wandering varies with the interest value of the text but is still common for compelling and engaging texts (Dixon and Bortolussi 2013; see also Unsworth and McMillan 2013). As one might suspect, mind wandering has an important effect on memory for the text (Schooler

et al. 2004; Dixon and Li 2013), reconstruction of the text during recall (Dixon and Bortolussi 2013), and inferences from the text (Smallwood et al. 2008).

Some of the effects of mind wandering can be understood with reference to Fig. 1. As discussed above, the read portions of the text are registered as traces in the reader's mind and must be distilled into a schematic outline of the narrative. However, mind wandering introduces processes, and memory traces of those processes, that are independent of the text. In the figure, these are depicted in the middle set of memory traces, unconnected to the text. Some of this processing may spring from personal preoccupations or desires, such as an up-coming trip or meeting with a difficult authority. Others may be prompted by the text itself: For example, a character in the story world might produce recollections and a mental image of someone known to the reader who in some way resembles that character. In other cases, passages may require the reader to stop and reflect on past experiences in an effort to understand some characters' thoughts, feelings, or behavior, and others still may prompt philosophical musings about human existence. Inevitably, this intermittent extra-textual processing affects the traces that are used during reconstruction, potentially interacting with memory for details of the text, and ultimately affecting the reader's ability to reconstruct the text.

Engagement is another mental state that may affect memory and the reconstruction of the text. Engagement—also known as narrative immersion, absorption, or transportation—has been the object of a variety of empirical investigations (e.g., Gerrig 1993; Green and Brock 2000; Green 2004; Green et al. 2004; Busselle and Bilandzic 2009; de Graaf et al. 2009; Tal-Or and Cohen 2010; Johnson 2012). The motivation of much of this work is to capture the idea that readers can be immersed in, intensely absorbed by, or engaged with the fictional world, experiencing it as if they had been transported into that world. English has its own expression to capture the phenomenon—"to be carried away by a book"—and, as Nell (1988, p. 50) has pointed out, many other languages have an equivalent expression. The idea itself is hardly new: Plato considered immersion a dangerous illusion (Herman et al. 2007). Since then, many literary scholars and critics have alluded to this notion to defend some essential point about the literary experience; transport is a property of some kinds of texts (Green and Brock 2000, p. 719) or a requirement for meaningful, productive reading experiences.

Some of these studies stress the mechanisms that enable the experience of immersion, particularly simulation and emotional involvement (Currie and Ravenscroft 2002; Herman et al. 2007; Bal and Veltkamp 2013). Others stress the effects of transport, including increased appreciation and deeper processing (Craik and Lockhart 1972; Busselle and Bilandzic 2009), although some have reported that cognitive depth and transport are conflicting processes (Green and Brock 2000). More recently, Janit (2011) suggested that transportation might lead to better memory for text. However, since the materials used in Janit's study were stories in textbooks, more research with literary narratives is needed before we can reliably conclude that transport into fictional worlds has a beneficial effect on memory for text more generally. Some of the alleged effects include attitudinal and behavioral

changes (Appel and Richter 2007; Johnson 2012). In all of these accounts, it is taken for granted that transportation entails the full attention of the reader; readers are described as being so focused on the reading that they are even unaware of their immediate surroundings. The metaphor suggests deeper processing; presumably readers lose track of their surroundings because their minds are actively engaged in processing the text.

As we argued elsewhere, the transport metaphor has become so entrenched and naively accepted that it is no longer questioned (Bortolussi and Dixon 2015). Yet many questions have not been adequately addressed, if at all. For example, does transport necessarily entail sustained attention? Does emotional engagement always enhance attention to and memory for textual details, or might a gripping scene cause the reader to divert attentional resources from some textual features, such as linguistic or stylistic devices and reallocate them to emotional musings? How, specifically, are attentional resources distributed, and, concretely, what aspects of the text that are read in an engaged state are remembered? In fact, empirical studies of literature devoted to transportation bear much in common with traditional literary studies in terms of assumptions about the nature of the text: Transportation is a property of certain texts or the capacities of the reader; readers have the ability to sustain focus and attention; and there is an optimal text-reader relationship in which readers respond as intended. But transportation is not necessarily a property of certain kinds of texts, that is, a unitary phenomenon that may or may not happen for any given story. Rather, attention and engagement are more likely to vary across texts in accordance with textual shifts and changes; for example, some portions of any given text might be more evocative than others in the same text. While it is logical to assume that writers produce fiction for the purpose of inducing transportation and artfully employ techniques to achieve that purpose, whether and to what extent readers notice, track, associate, and process them accordingly is an empirical question.

More generally, the relationship between reading focus and engagement has not been carefully articulated. Although it seems intuitive that being engaged involves attending to the material, these variables need not be the same. For example, one may be engaged with the story in the sense of thinking deeply about the situation and characters and attempting to analyze and understand the relationships in the story world. However, such processing might mean actually paying *less* attention to the details that are presented in the text. Indeed, such details may be suppressed if they are inconsistent with the broader inferences drawn by the reader. For example, Green and Brock (2000, p. 711) argued that engaged readers "appeared more accepting of the story" and were "less likely to doubt, to question, or to engage in disbelieving processing." Under other circumstances, being engaged might entail considering personal experiences related to the story; a form of mind wandering would ensue if such considerations become deeply involving. Conversely, one could carefully focus on the text without generating much in the way of an understanding of the story and its more profound implications. In this case, the reader would generate only a superficial representation of the story-world events. Thus, it is plausible that under at least some circumstances, textual engagement is not tantamount to reading focus.

One possibility is that neither does engagement imply focusing on the text, nor does reading focus imply engagement. Instead, both processes may be determined by other factors. (de Graaf et al. 2009 considers some related complexities). In particular, it seems reasonable to suppose that one such variable is the interest value of the text (Hidi and Baird 1986). For example, if readers find the material interesting, they are likely to focus on the material more carefully (Giambra and Grodsky 1989). Similarly, the relationship of the text to the reader (which presumably determines reader interest) has been shown to be related to engagement (Green 2004). Thus, although it is intuitive that readers will more likely appreciate a text in which they are interested, it is critical to consider the variables that are likely to mediate that relationship, among them, engagement and focus.

5 Evidence on Mind Wandering and Engagement

In the following, we describe two empirical studies that demonstrate the importance of mind wandering and engagement in memory for the text. As we discussed at the outset, memory is the basis for any kind of literary interpretation, and hence any aspect of processing that affects memory can be a factor in interpretation. We used two texts, one that was likely to be of interest to our readers and one that was likely to be relatively uninteresting. Our general goal is to explore how variations in processing over the course of the text affect memory. Both experiments employ what might be termed a mental-state probe procedure in which subjects are occasionally interrupted while reading and asked to report on the nature of their mental state (e.g., Teasdale et al. 1995).

5.1 Method

We asked separate groups of subjects to read an interesting story (the initial 7,342 words of *Interview with the Vampire* by Ann Rice) or a less interesting story (the initial 7,753 words of *The Story of Pendennis* by William Makepeace Thackery). (Our description of *Interview* as interesting and *Pendennis* as less interesting is based on our intuitive judgment but was borne out by the reactions of subjects to these materials.) In Experiment 1, 19 subjects read *Interview* and 18 read *Pendennis*; data from 10 other subjects were not used because they appeared to be skimming large portions of the text. In Experiment 2, 21 subjects read *Interview* and 14 read *Pendennis*; data from 9 other subjects were not used because they were skimming. The texts were read on a computer screen one sentence at a time. After reading each sentence, the subject pressed the spacebar to continue on with the next sentence. At ten unpredictable locations in the text, instead of the next sentence, subjects were asked about their mental state. The mental state probe in

Experiment 1 took the form of the question, "Were you fully comprehending the story or were you thinking of something else?" Underneath the question was a line with points labeled with: "Definitely thinking of something else," "Thinking of something else to some extent," "Not sure," "Comprehending to some extent," and "Definitely comprehending." Subjects used a computer mouse to click somewhere along this line. The response that was measured was a number, ranging from −225 to +225, indicating the position (in pixels) along the response scale where subjects clicked. Experiment 2 was precisely the same except that the question used was, "Do you feel like you're experiencing the story as if you were there or are you just reading superficially?" Points along the response scale were labeled with: "Definitely reading superficially," "Reading superficially to some extent," "Not sure," "Experiencing the story to some extent," and "Definitely experiencing the story."

After reading the text, subjects were given 20 multiple-choice questions. There were two questions concerning the material just prior to each of the mental-state probes. Thus, accuracy on the questions could be compared to the probe response that was made previously. For example, in Experiment 1, when a subject responded to a probe by indicating that he or she was on task, one would expect the subject to have less difficulty with the questions pertaining to the just-completed material. Similarly, in Experiment 2, when a subject responded to a probe by indicating that he or she was engaged with the story, one might expect the subject to be more accurate for that material.

5.2 Results

Briefly, the results of the first experiment show what we intuitively would expect, that is, that the more interesting story produced higher on-task ratings. Further, better memory occurs when the on-task ratings are the highest. Critically, being on task appears to be the sole determinant of memory: The more interesting story does not, by itself, lead to better memory.

The pattern of results is shown in Fig. 2. There are four aspects of this figure that deserve explanation. First, for a variety of statistical reasons, the accuracy of the subjects' response to the memory questions was measured in log odds correct. For comparison, on a log odds, or logit, scale, 50 % correct would be 0, 75 % correct would be 1.1, and 90 % would be 2.2. In Fig. 2, although subjects' responses were substantially better than chance, they were far from perfect: Accuracy scores in the figure ranged from about .5 to 1.0 logits. Second, the on-task response is shown along the horizontal axis, with higher values indicating greater focus on the text. Thus, values at the right of the graph (higher on-task rating) should go with higher values on the vertical axis (more accurate memory). This general trend was found, although the increase in accuracy was not substantial unless the on-task rating was fairly high. Third, for each story, we divided all of the responses into a high

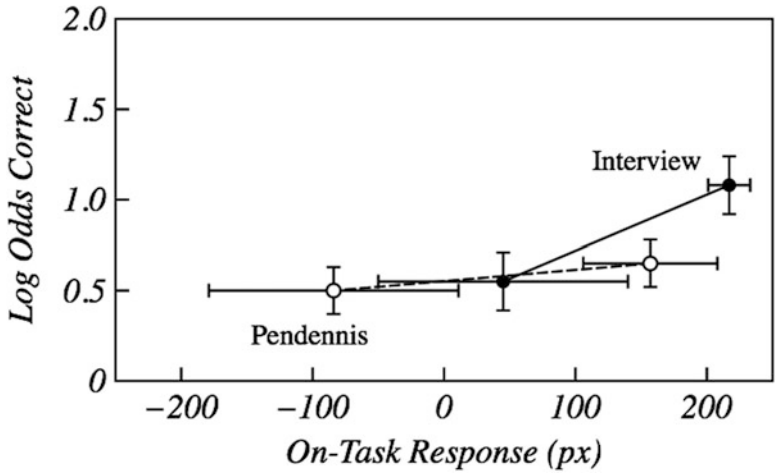

Fig. 2 Memory accuracy (in terms of log odds correct) in Experiment 1 as a function of story and on-task probe response

group and a low group based on a median split. In order to indicate how spread out each group was, the standard deviation of the scores in each group is plotted as a horizontal error bar in the figure. As described above, subjects were more on task with the interesting story (*Interview*, shown with the solid circle and line) than with the less interesting story (*Pendennis*, shown with open circles and dotted line). In effect, interesting stories keep subjects on task. Fourth, for each high and low group, the overall accuracy associated with those responses is shown by the vertical position. The vertical error bar indicates the standard error of the accuracy as derived from a statistical model fit. Although accuracy is relatively unrelated to on-task response over most of the range, very high levels of on-task response (the right-most point for *Interview*) is associated with some improvement in memory.

We turn now to the results of the second experiment in which engagement was probed. In this case, the results were different in several important ways. As expected, subjects were more likely to be engaged with the more interesting *Interview* than with *Pendennis*. Moreover, memory was better for *Interview*; this can be seen as replicating the effect of interest value found in Experiment 1. However, engagement by itself had little impact on memory. For both stories, more engagement had little positive (and perhaps even a negative) effect on memory. In this sense, being engaged is quite different from being focused on the text.

Figure 3 shows this pattern of results in a manner analogous to the previous figure. Not surprisingly, *Interview* lead to greater engagement than the more tedious (for our subjects) *Pendennis*; thus, the *Interview* responses are generally to the right of the *Pendennis* responses. However, unlike the on-task rating, there was no relationship between engagement and later memory for either story by itself. This is depicted in the figure by the slope of the *Pendennis* line and the slope *Interview*

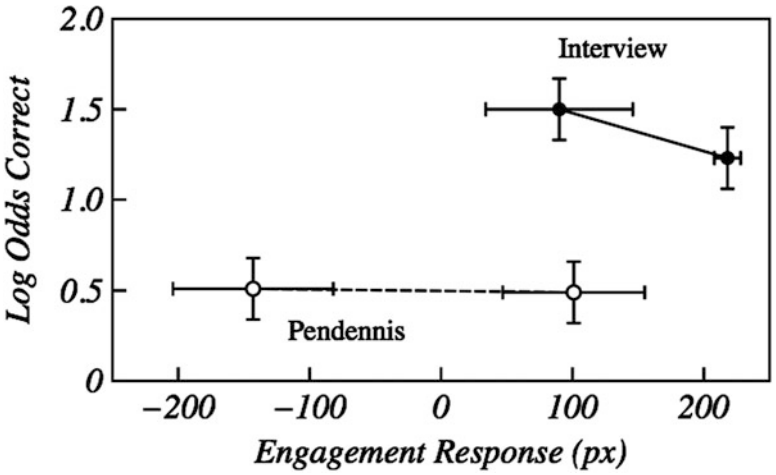

Fig. 3 Memory accuracy (in terms of log odds correct) in Experiment 2 as a function of story and engagement probe response

line: Neither slopes up as would be expected if engagement affected memory. In other words, greater engagement with a given story did not produce better memory. Indeed, there was a small trend for greater engagement with *Interview* to be associated with weaker memory. There was, of course, an overall difference between stories: *Interview* was remembered better than *Pendennis.* However, the results make clear that this difference is not due to greater engagement. This is a surprising revelation.

5.3 Discussion

The results from the two experiments illuminate how memory is affected by mental processing over the course of the text. The first experiment demonstrated that high levels of attention to the task can lead to improved memory for the text. This, of course, is perfectly intuitive: If you want to remember what you are reading, you should concentrate on the material. However, there are two constraints on this intuitive interpretation. First, the effect on memory was fairly modest and only occurred at the very extreme of the on-task scale. Overall, being on task had a relatively small effect on our measure of memory. Second, there was no *independent* effect of interest value on memory. Although memory was generally better for *Interview*, the results suggest that the story led subjects to focus on the material more, and this increase in attention led to better memory. For example, in Fig. 2, the high on-task group for *Pendennis* had the same on-task rating as the low group for *Interview,* and the result was comparable levels of memory. In contrast, Experiment

2 demonstrated that this was not the case when engagement was measured. Although the more interesting story was rated as more engaging and that story was more memorable, within each story, engagement had no effect on memory.

Making sense of this pattern of results requires a careful analysis of the causal connections in the processing of the text. Our interpretation is illustrated in Fig. 4. We selected two texts that we assumed varied in interest value. In turn, the interest value had clear effects on both the extent to which subjects focused on the story and the degree of engagement. Memory, on the other hand, seemed to be only related to focus, not whether or not they were deeply engaged with the story world. Thus, while engagement might make for a more memorable reading experience, it doesn't necessarily lead to a better recollection of story details. Our memory test was designed to assess the quality of the memory traces (being based on textual details) rather than the reconstructed situation in the story world.

This is not to say that engagement has no effect on reading. On the contrary, we suspect that being engaged with a story leads to a more elaborate and detailed representation of the story world, one that makes a greater use of world knowledge and personal experience. In other words, the reconstructed representation in Fig. 1 would be elaborate and extensive when readers are engaged with the story world. This is illustrated in Fig. 4 by causal connections from both engagement and memory to reconstruction. In other research, we have found evidence for more elaborate story-world representations when engaged: The more engaging a story is, the better subjects are at *recalling* the story rather than simply recognizing details (Dixon and Bortolussi 2013). Finally, Fig. 4 illustrates our overarching point that any appreciation of the text must depend on the reconstructed story, not the text itself. The appreciation of a story must necessarily be mediated by a complex of processes and memory representations.

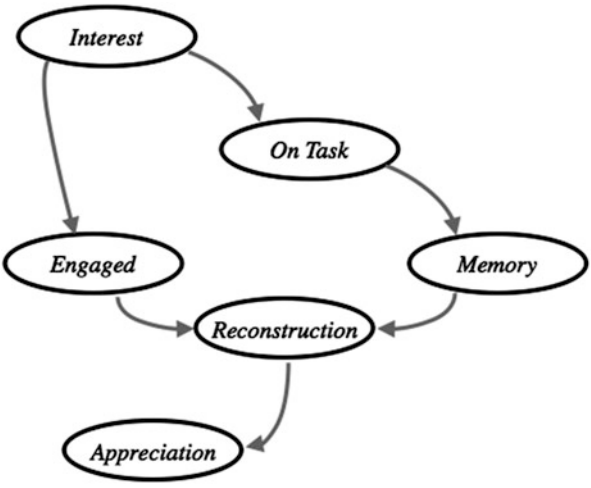

Fig. 4 Hypothesized causal relationships. Interest leads to an increase in on-task processing and engagement; being on task (but not engagement) leads to better memory; reconstruction depends on both memory traces and engagement; and reconstruction provides the basis for appreciation

6 Conclusions

We began with a brief review of the phenomenological legacy in theoretical accounts of literary processing. Phenomenology, explained simply, "is the way in which human beings come to understand the world through direct experience—the perception of a phenomenon, whether an object, event, or condition" (Littlejohn and Foss 2011, p. 47). For early proponents of a phenomenological approach to literary studies, such as Ingarden (1931) and Iser (1974), the object of the experience was the text. One can infer from their works that competent, alert readers can potentially be aware of everything in the text as well as their mental actions on the text. In other words, appreciation of literature was mediated by what the reader had available in consciousness and what was in consciousness was dictated precisely by what was in the text. In contrast, we are concerned with the complexities of how the mind is known to work. We know, for example, that awareness, perception, attention, and memory are limited, and that the use of these capacities varies dynamically over time. Thus, a variety of mental mechanisms intervene between the text and the reader's appreciation, and many of these mechanisms operate without awareness. We cannot, in fact, have an account of appreciation based simply on conscious introspection. We have shown how the understanding and interpretation of literary texts requires memory and have discussed the well-documented limitations of memory: Memory traces are fragmentary and ephemeral and the reader's representation of the story world must be reconstructed based on a variety of extra-textual sources of information (cf. Bortolussi and Dixon 2013). To these limitations, we add the varying mental states of the reader. He or she may or may not focus on the text at any point in time, and he or she may or may not be fully engaged with the story. These mental states have implications for what processing traces are available in memory and how this information is used in reconstruction. Further, the mind supplements textual information with extra-textual input, and confuses what is in the text with what is not. Readers notice what is of interest or relevant to them, filter out what is not, and can draw unpredictable connections. In other words, we process literature in terms of how we interact with it. Each reader's interaction is selective.

A serious endorsement of these limitations of the real reader's mind has extensive implications for the understanding of literary processing. Perhaps one of the most interesting is that aesthetic reaction is not to the text, but rather to readers' mental representation in memory, and that this mental representations bears a pale resemblance to the original. What is produced in the reader's mind can never, for any reader under any circumstances, be the equivalent of the text. Rather than bemoan this reality, as literary theorists might, we should instead recognize that it is that very outcome of the reading process—the mental representation—that makes literature memorable: Readers interact with the text, bringing themselves to it, so that the product of their processing is a unique combination of the objective and subjective, of the text and themselves.

Although our understanding of the reader's mental states is only beginning, there is no question that such an understanding is fundamental to a description of literary processing. In order to understand the nature of a reader's literary appreciation, we cannot depend on the phenomenological supposition that appreciation is available to the conscious mind. Rather, the phenomena of appreciation among real readers must be understood only with carefully designed empirical evidence.

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Temporal Conflict in the Reading Experience

Cathrine Kietz

Abstract Analogous to our visual perspective, we also have a temporal perspective spanning beyond the present singular point in time. In literary narratives, the characters in the story have a visual perspective on the represented world whereas the reader has a temporal perspective on the narrative as such. The reader's temporal perspective is a bit eschewed to the represented visual perspective in that there is a temporal distance between the represented events and the reader's point of view. This temporal distance can be exploited aesthetically to create a conflict between the representation and the presentation of the literary work of art. In a vein similar to the 'conflict' in Husserlian picture consciousness, there is a temporal conflict in reading consciousness that will be discussed here with reference to literary examples from Flaubert and Kafka.

Keywords Phenomenology • Literature • Reader • Temporal perspective • Grammatical aspect

1 Introduction

What characterizes the reader's phenomenological experience of literary artworks? Edmund Husserl has intensively investigated the phenomenology of the different acts of perceiving, remembering, imagining, and picture-viewing. Acts of perception are presentational acts, acts of imagination and memory are representational acts, but acts of picture-viewing are a special combination of presentation and representation. The experience of pictures is characterized by an experience of a

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conflict between presentation and representation, which makes the experience of even the most realistic picture (a trompe l'oeil) non-illusionistic.[1] But how, again, do we experience literary artworks? Is it like looking at pictures?

While Husserl himself has not conducted a thorough investigation of literary artworks,[2] his pupil Roman Ingarden certainly has (Ingarden 1931, 1968). In this article, I will focus on a hitherto neglected part of Ingarden's investigations, namely the relation between the literary artwork and the reader's temporal perspective,[3] which, as I will try to show, has the ability to capture that experience of conflict in a representation.[4] Pictures are present in our *visual perspective*, but the represented objects of literature can only be 'seen' with the mind's 'eye;' thus the reader's actual visual perspective is irrelevant when it comes to the represented objects of literature (unless we are dealing with concrete typographical poetry). I will argue that, instead, the reader's *temporal perspective* is relevant—because literary artworks are present to temporal perception. Thus, the relevant conflict to be analyzed in literary artworks is a temporal conflict (rather than a spatial conflict).

I will first discuss the presentation of literary artworks, where I will argue that there is a pure presentational layer that is temporal and available to temporal perception. For that reason, I will argue that, during reading, literary objects have a special affinity to remembered objects compared to imagined objects proper. The similarity between literary reading and remembering will be further explored in regard to the concept of temporal perspective. Both memory and literature can show us events from different temporal perspectives: the temporal distance to events varies—similarly to how the spatial distance to objects varies in visual perception. The hypothesis will be put forward that the temporal presentation of events in literature can create a temporal foreground-background structure to the reader. On the basis of Roman Ingarden's investigation of temporal perspective in reading, I will discuss literary examples of temporal conflict from Gustave Flaubert's *Madame Bovary* and Franz Kafka's unfinished tale *The Burrow*.

[1] On conflict: *Widerstreit*, see Husserl on intentionality LU 1900–1901, and picture consciousness 1898–1925.

[2] Husserl does have some notes on the relation between fact and fiction somewhat mirroring the relation between presentation and representation. But more often than not, *fiction consciousness* is understood as illusion and seems to be the very antithesis of *picture consciousness* with its illusion-breaking 'conflict' (*Widerstreit*). But what interests me is the experience of the non-illusionistic elements, the conflicting intentions, in "representation" in general, especially in literary representation.

[3] See the chapters on temporal perspective in Ingarden 1972.

[4] As opposed to Ingarden's recap of the term *quasi* from Husserl, as in quasi-judgements in fiction for instance, which are somewhat illusion-preserving. On the other hand, the concept of *Widerstreit* seems to reemerge in Ingarden's ontological analysis as the existential moment of heteronomy, which applied to all man-made representations (see Ingarden 1931, but also Ingarden 1965). But what I am looking for here is something a little less general and more readily applicable to literary analysis.

2 Presentation of Literary Artworks and the Reader's Temporal Perspective

My initial question concerns the experience of *literary* works of art, and is, as such, more narrow than the question of the experience of represented objectivities in general. In what way does it matter which *type* of artwork a represented object is dependent on? Ingarden defines the literary artwork as opposed to other artworks *both* ontologically and epistemologically. Ontologically (Ingarden 1931), artworks (or representations) are stratified formations and the literary work of art is the most stratified with four different strata: word sounds, word meanings, schematized aspects, and represented objectivities. The presence of language elicits two strata by itself; visual artworks, for example, only have the strata of aspects and represented objects. When he investigates the *cognition* of the literary work of art, Ingarden (1968) addresses this entire stratified formation and not just the stratum of the represented objectivities. Secondly, since he investigates an *art*work, he is mainly interested in the aesthetic reading (and, in relation to this, the possibilities for scientific readings of the work before and after the aesthetic reading, i.e., literary analyses). Aesthetic reading in general is a process with different phases,[5] but the particularly literary experience is further characterized by three features (Ingarden 1968, §26; cf. Kietz 2013):

1. *Only the qualities appearing in the stratum of word sounds are accessible to the senses.*
2. *The whole work cannot be apprehended in a single moment, but only in temporal phases.*
3. *The experience is constituted on a purely intellectual understanding of the semantic units.*

I will concern myself primarily with the second element of the literary experience since it is in particular the relation between the non-actuality of the derived purely intentional object on the one hand, i.e., the non-temporality of the represented object, and the temporality of the process of reading on the other hand, which interests me.

First of all, Ingarden's description of the three elements of the literary experience corresponds very much to that of the Enlightenment philosopher G.E. Lessing's (cf. *Laokoon* 1766/1887), in that the temporal structure, and hence the temporal experience, is distinguished as elements in their own right. Lessing's thesis concerning the natural signification of literature was that the relation between word sounds and

[5]Cf. Ingarden 1968, §24.

semantic units should be mediated by the temporal structure, which would create structural iconicity between the stratum of word sounds and the semantic stratum.[6]

Scholars have mainly investigated the temporal presentation of literature in two ways:

1. From the perspective of the stratum of word sounds.
2. From the perspective of the semantic stratum.

The first perspective is generally applied in relation to poetry; the second perspective is generally applied to narratives. The first perspective is available to sense perception, but the second perspective is based on a purely intellectual understanding. Underscoring Lessing's thesis is the possibility for an *intuitive*, i.e., perceptual, apprehension of both poetry and narratives. Unless prosody is important to the narrative, perception seems to be reserved for poetry only. But (according to, e.g., the tradition of cognitive semiotics), semantics also rely on schematic structure. Schematic structures are formal structures and, as such, must be available to categorial perception. So, the word sounds are accessible to *sense perception*, i.e., material perception, and the semantic units, given that they rely on *schemas* are accessible to *categorial perception*, i.e., formal perception. But what about the second element, the *temporal* experience itself? Both the rhythm of the word sounds and the discourse (in which the events are presented) are dependent upon *temporal* structure, so how is temporal structure available to us? I will venture the hypothesis that the temporal phases and their relations are accessible to *temporal perception*. Temporal perception resides somewhere in-between sense perception and categorial perception in that time is neither purely material nor purely formal.

The question of different types of perception lies at the heart of Gestalt theory. In the founding essay by Christian von Ehrenfels (1890), it was the existence of temporal gestalts, like melodies, that initiated the theory. A melody is something more than the sum of its material parts; it can be transposed, for instance, to a different key while remaining the same as a melody. The theory of gestalts concerns our ability to perceive something independently of material and time—our ability to perceive forms, what Husserl calls categorial perception. But Husserl was not satisfied with the explanation of our experience of a melody through categorial perception alone. In his lectures on the phenomenology of the consciousness of internal time (1893–1917), he argues that we must also be able to *perceive time* in itself, if we are to perceive a melody.

> When a melody sounds, for example, the individual tone does not utterly disappear with the cessation of the stimulus or of the neural movement it excites. When the new tone is sounding, the preceding tone has not disappeared without leaving a trace. [. . .] If they [the tones of a melody] were to remain unmodified, then instead of a melody we would have a chord of simultaneous tones, or rather a disharmonious tangle of sound, as if we had struck simultaneously all the notes that had previously sounded. (Husserl 1905/1991, p. 11)

[6] In this sense, Lessing's thesis is the exact opposite of Roman Jakobson's 'poetic function,' where the iconicity is established by *dis*regarding the temporal structure, i.e., projecting the principle of (spatial) equivalence from the paradigmatic axis onto the syntagmatic axis. But my interest concerns *temporal* structure.

The individual tones of a melody do not disappear completely from consciousness after they have sounded; they remain present, albeit in a modified sense as *just-past*. According to Husserl, time consciousness is a tripartite structure composed of both the present moment (*impression*), a memory of the just-past moment (*retention*), and an anticipation of the immediate next moment (*protention*). If we are to perceive time as a *continuity*, and not just as discontinuous, punctual instances (pearls on a string), our experience of time must have a certain *extension* (similar to William James' idea of a specious present). Husserl says we have a temporal field in analogy to the visual field:

> The original temporal field is limited, precisely as in perception's case. Indeed, on the whole, one might dare to assert that the temporal field always has the same extension. It moves, as it were, over the perceived and freshly remembered motion and its objective time in the same way as the visual field moves over objective space. (Ibid., p. 32)

The temporal field, or temporal perspective, moves over objective time like a visual perspective moves over objective space. Despite the fact that Ingarden saw the beginning of Husserl's turn to idealism exactly in his lectures on internal time—and, therefore, tried to explain temporal continuity as belonging to the mode of real being and not to the intentional mode of being (cf. Ingarden 1965)—he does retain the concept of temporal perspective. As Ingarden says in regard to the second element of the literary experience:

> The second essential element of the literary aesthetic experiences which distinguishes them to a certain extent from the aesthetic experience of painting, sculpture and architecture is contained in the fact that a literary work of art can be apprehended only in an aesthetic experience occurring in several phases, in which all the successive parts of the work must be reconstructed one after the other, and the fact that there is no phase of this experience in which the whole work can be apprehended all at once in full actuality. And in every phase—except for the last—only a part of the work is cognized and made familiar and always only in a *temporal perspective* characteristic of this phase. (Ingarden 1968, p. 227, my italics)

Each phase of the experience of the literary work of art corresponds to a specific temporal perspective. In every present visual perception, the temporal perspective is always the same; but in memory, as we remember and re-present past events, our temporal perspective changes: we can, for example, recall an event in detail and thus have a more proximal temporal perspective on the event as opposed to when it is floating vaguely in the back of our memory, e.g., when we have trouble recalling something. Ingarden takes temporal perspective in memory as the basis for his investigation of temporal perspective in literature.

3 Temporal Perspective in Memory

Ingarden has formulated the question of our experience of literary artworks in the following way:

> How can we be witnesses to the events portrayed in the work when, in dealing with a purely literary work, we do not actually perceive these objects and events in the strict sense of the word? (Ingarden 1968, p. 98)

And he continues:

> In any case, it is impossible to be satisfied with the stereotyped view that the reader simply 'imagines' the objects when he reads. One would at least have to say that there is a particular way of 'imagining' that makes the 'imagined' object present to us. Husserl speaks of a 'presentification' [Vergegenwärtigung] that, though different from the 'presentifying' [Gegenwärtigung] that takes place during perception, is definitely related to it. (Ibid., pp. 98–99)

The 'presence' of the objects and events that are represented in a literary work of art must be understood in a *temporal* sense. One way of making things present in time that are no longer present in space is through memory.

According to Ingarden, there are two main ways of remembering past processes:

> Either we apprehend a whole temporal interval and what happened in it from the standpoint of our actual present in a single act of remembering, all at once (for example as we call to mind in one act the long period of World War I) or else we transport ourselves in memory back to the beginning of the period in question and, in the process of remembering, progress as it were simultaneously with the remembered period by calling to mind the successive events and processes phase by phase. (Ibid., p. 110)

The two main ways of remembering results in two main types of temporal perspective:

Temporal Perspective

- Distal, i.e., disparateness with events
- Proximal, i.e., simultaneity with events

But, as Ingarden points out, since memory is a re-presentational act, a proximal perspective in memory is not the same as in a presentational act:

> Absolute proximity is out of the question. If that were possible, what is simply remembered would be something perceived; but there is no genuine return to the past. (Ibid., p. 114)

In memory, only a quasi-presence is possible. A *distance* between the temporal point of view and the remembered event characterize temporal perspective in memory. I am not referring to the actual distance in objective time, but rather to the phenomenological distance in our memory—phenomenological in the sense that it is qualitative, not quantitative. For example, if there is some event we try to remember, it is not enough to be told the exact date of the event; we have to *localize* the event within our own experience; it must be *qualitatively* determined. The localization is crucial; the distance is greatest when the remembered event cannot be localized phenomenologically (ibid.), i.e., when the distance is unbounded. To remember is to localize events in our own phenomenological memory. When the event is localized, it is possible to diminish the distance even further by moving the temporal point of view back in time, as it were. The temporal point of view must also be localized: either we stay in our own present moment, and *time stands still* while we remember the past event—we disregard the fact that the remembered event is continuously sinking further and further into the past (ibid., p. 115): this is a static viewpoint. Or we transport ourselves back to the past events, our own present moment seems to disappear, and we move along with the past events (ibid.): this is a dynamic viewpoint.

So, temporal perspective in memory always entails a *distance*. The distance depends on the *localization* of both *event* and *viewpoint*.

Distance

– Localization of event
– Localization of point of view

The different possibilities can perhaps be illustrated thus:

1. *Localized perspective, non-localized event:*
   [Point of view] **Event**
2. *Localized perspective, localized event:*
   [Point of view] **[Event]**
3. *Non-localized (moving) perspective, localized event:*
   →Point of view **[Event]**
4. Non-localized perspective, non-localized event:
   →Point of view **Event**

The events are experienced differently according to the different temporal perspectives they are seen through, i.e., according to the *distance* and, hence, the different *localizations*. One possibility is, of course, that a given event is not remembered at all. This happens when the event is not yet localized (1). But there is also the possibility that what is remembered is a recurrent or habitual event, which is difficult to localize at a specific time since it has happened many times (1). Then there is the possibility of remembering an event all at once, so that there is no internal time sequence in the event. (2) And lastly, of course, there is the possibility of remembering an event in its temporal progression (3). I have included the possibility of neither point of view nor event being localized (4), which is not a real possibility in memory, but, as I will show later, this is a possibility in literature.

Event

- *Not localized*
  - None (no event remembered)
  - One-in-many (one event recurring many times)
- *Localized*
  - *Static*
    - Many-in-one (many events remembered as one)
    - One (punctual event)
  - *Dynamic*
    - One-by-one (an event remembered in its temporal succession)

The structure of a remembered event is dependent upon the temporal perspective and vice versa; they are mutually dependent. From the non-localized, non-remembered event down to the localized dynamic event, there is a change in

temporal perspective from distal toward proximal. Proximal perspective in memory is not real proximity where our real present coincides with the past present; hence, proximity can only come about if we *move* our point of view from the present back in the past. This means that distalness/proximity relies on a point of inversion between localization of event and localization of point of view; the most distal perspective entails non-localization of event (we cannot localize the event in our memory) and the most proximal perspective entails non-localization of point of view (i.e., moving our point of view away from our present temporal perspective).

Events can be remembered as independent wholes, either as several events summed up into one event or as one punctual event. In both these cases, they are remembered as bounded events. They can also be remembered by going through their dependent parts one-by-one, in which case they are remembered as unbounded. But there are two types of unboundedness. One is where the unboundedness is elicited by the non-localization of the point of view—when the point of view is immersed, so to say, in the ongoing temporal unfolding of the different parts of an event. The other type of unboundedness is elicited by the non-localization of the event—habitual events are generic and as such are not clearly bounded in relation to other events—they can vary. In other words, the boundedness of an event is dependent on the boundedness of the *distance* between point of view and event. Distance is dependent on localization of both point of view and event—so that it is bounded in both ends. If the distance becomes unbounded in either end, the event becomes unbounded. But the two types of unboundedness belong to the two different types of temporal perspective, distal and proximal, respectively.

While the reader's visual perspective might not be relevant to the experience of literary artworks, the reader's temporal perspective is. In literary works of art, there are also *temporal* aspects held-in-readiness and actualized by the reader during reading. This is what I will turn to now.

4 Temporal Perspective in Literature

The temporal perspective under discussion only appears in the *reading* of the literary work of art because the literary work of art in itself is non-temporal; the temporal perspectives must be actualized. The temporal perspective can never coincide with the represented events; absolute proximity is, like in the case of memory, out of the question—and even more so in regard to literature, where the relation between perspective and represented objectivities is not just a matter of temporal distance but a matter of a radical discontinuity between modes of being. But contrary to the spatial perspectives actualized, the temporal perspective coincides with the reader's own temporal perspective.

In the psychological research on spatial cognition, a distinction is made between an *allocentric* (distal) perspective and an *egocentric* (proximal) perspective (e.g., Linde and Labov 1975; Taylor and Tversky 1996). An allocentric perspective entails an object-to-object reference frame (e.g., North-south-East-west is defined in

relation to each other), whereas an egocentric perspective entails a subject-to-object reference frame (e.g., Right-Left defined in relation to me). Even if a literary work of art is written from the first-person perspective (or focalized from a represented egocentric perspective), the reader's *spatial* egocentric perspective never coincides with the represented egocentric perspective in the text—represented objects in a literary work of art are never to *my* right or to *my* left. But when a scene is presented from a *proximal temporal* perspective, i.e., when discourse time coincides with story time, the temporal *before* and *after* of the different parts of the represented event correspond to the temporal before and after of *my* reading. *This is because the time of reading is equivalent to the time of discourse*. The represented events belong to *story* time (representation) but the temporal perspective belongs to discourse time (presentation). A literary work of art is not temporal in itself (cf. Ingarden: it has the ontological moment of non-actuality, Ingarden 1965), the only temporality it has stems from the act of reading. As the narratologist Gerard Genette said

> The temporality of written narrative is to some extent conditional or instrumental; produced in time, like everything else, written narrative exists in space and as space, and the time needed for 'consuming' it is the time needed for *crossing* or *traversing* it, like a road or a field. The narrative text, like every other text, has no other temporality than what it borrows, metonymically, from its own reading.
>
> This state of affairs, we will see below, has certain consequences for our discussion, and at times we will have to correct, or try to correct, the effects of metonymic displacement; but we must first take that displacement for granted, since it forms part of the narrative game, and therefore accept literally the quasi-fiction of *Erzählzeit*, this false time standing in for a true time and to be treated—with the combination of reservation and acquiescence that this involves—as a *pseudo-time*. (Genette 1983, p. 34).

Genette, like Ingarden, contrasts the nontemporality of the literary work of art in itself with the temporality it gains from the act of reading. But accepting the fiction of discourse time as the time of *telling* the story emphasizes the cognitive relation to the representation, whereas focusing on discourse time as the time of *reading* emphasized the phenomenology of presentation. Instead of investigating the fictive narrator, I am *here* investigating the real reader. I will soon show how certain aesthetical features, which the phenomenological analysis can point out, escape Genette's analysis, but first let me return to the introduction to temporal perspectives in reading.

When reading literature, the temporal perspectives manifest themselves on two planes: *horizontally* during the reading process (in the reader's memory) and *vertically* in the individual phase of the reading process (temporal perspective actualized). So the different types of localization take place also within the reading of the literary work in question—the different represented events must be localized within the reader's memory of the past phases of the literary work (Fig. 1).

These two temporal perspectives cross each other during the reading; and the crossing at any given point is an important locus for the aesthetic experience, i.e., when our present temporal perspective coincides with the actualized temporal perspective. Hence, here I will only be talking about the vertical perspective, i.e., the literary representation of events with corresponding temporal perspectives. At any time during the reading, past events of the literary work can be recollected, but

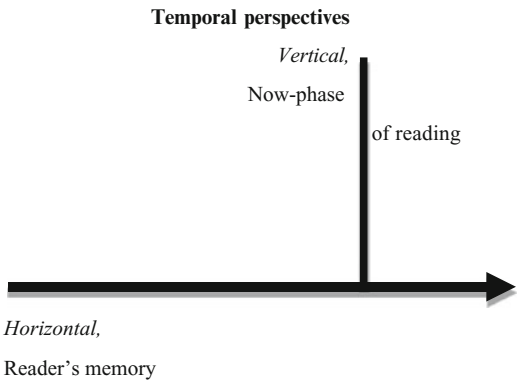

Fig. 1 The two planes of temporal perspective

if we transport ourselves back to the past events of the work by leaving our present point of view, we are, strictly speaking, no longer performing an act of reading but an act of remembering. The aesthetic experience is prompted by the reading and, hence, actualization of the given part of the work and is as such tied to the present. Yet, given the sequential structure of literary artworks, memory is necessary for the reading of both the whole and the different parts. Ingarden points to existence of what he calls active memory—a type of memory that goes beyond the retention of the immediate past moments within the given temporal perspective.

Like in memory, there are two main types of temporal perspectives in literature, a distal and a proximal, on a graded continuum. As an example of a *distal* temporal perspective belonging to a represented event, Ingarden quotes from the beginning of Joseph Conrad's *Lord Jim* (2000).

> On the lower deck in the babel of two hundred voices he would forget himself, and beforehand live in his mind the sea-life of light literature. He saw himself saving people from sinking ships, cutting away masts in a hurricane, swimming through a surf with a line; or as a lonely castaway, barefooted and half naked, walking on uncovered reefs in search of a shell-fish to stave off starvation. He confronted savages on tropical shores, quelled mutinies on the high seas, and in a small boat upon the ocean kept the hearts of despairing men—always an example of devotion to duty, and as unflinching as a hero in a book. (Conrad 2000, p. 3)

Here, the represented events are not located; the first sentence dislocates Jim's fantasy from his surroundings (cf. he would forget himself). But instead of focusing on the marks of internal focalization or the mood, Ingarden is only interested in the temporal presentation. How the distal perspective is elicited:

> [The] distance is a result of the sketchiness of the portrayal and of the constant use of the iterative in the narration. We are always given almost simultaneously a multiplicity of similar facts, which take place at different moments. Thus we cannot grasp any truly unique event in itself. As readers, we must place ourselves in a sense outside the concrete, unidirectional flow of events and cannot place ourselves mentally in any given moment, in order from there to move along with the stream of events and regard them from close up. (Ingarden 1979, p. 128)

Importantly, Ingarden here notes that the structure of events is specified linguistically by the use of *grammatical aspect*. Ordinarily, the grammatical category of *tense* concerns the temporal location in relation to other events, whereas the category of aspect concerns the internal temporal structure of an event. But because, as shown with the categories before, the structure of an event (e.g., a successive structure) determines its phenomenological temporal localization relative to perspective, grammatical *aspect* is related to the localization of events in *discourse* time—grammatical *tense* to location in *story* time. When events are cast in the iterative aspect, they are not localized in at a specific time. Localizing an event reduces the temporal distance:

> It was the dusk of a winter's day. The gale had freshened since noon, stopping the traffic on the river and now blew with the strength of a hurricane in fitful bursts that boomed like salvoes of great guns firing over the ocean. The rain slanted in sheets that flicked and subsided, and between whiles Jim had threatening glimpses of the tumbling tide, the small craft jumbled and tossed along the shore, the motionless buildings in the driving mist, the broad ferry-boats pitching ponderously at anchor, the vast landing-stages heaving up and down and smothered in sprays. (Conrad 2000, p. 4)

Here, the events are localized, yet the events are summed up; many smaller events are portrayed in one. Following Ingarden's categories, the temporal perspective is, thus, closer but still fairly distal. For the temporal perspective to become more proximal, the events must be portrayed in their successive unfolding:

> Jim felt his shoulder gripped firmly. 'Too late youngster.' The captain of the ship laid a restraining hand on that boy who seemed on the point of leaping overboard, and Jim looked up with the pain of conscious defeat in his eyes. The captain smiled sympathetically. 'Better luck next time. This will teach you to be smart.' (Ibid., p. 5)

Here we have a proximal temporal perspective, due to both the successive description and the punctual aspect. Dialogue here enhances proximity. The proximal perspective corresponds to a scenic presentation, as Ingarden says:

> Suddenly the temporal distance changes radically. A 'scene' is described in its different phases at very close temporal proximity. From a certain moment on we must in a sense become part of the course of events and move forward with them by observing them one after the other. (Ingarden 1979, p. 129)

The temporal point of view is dislocated and moves along with the progressive event—the temporal perspective is proximal and the event is dynamic. The scene is portrayed at such a small temporal distance that we almost "become eyewitnesses to what is 'just' happening" (ibid., p. 130). Herein lies, I believe, the answer to the question of how literature can make us feel as if we are witnessing the events portrayed; it is all a matter of *temporal presence*: our actual temporal perspective on the represented events becomes more proximal, i.e. more proximal to our present now. Given that temporal perspective indeed changes, as described by Ingarden, this is a real effect.

Often the more important events will be told from a proximal temporal perspective and the less important things will be told from a more distal perspective, i.e.,

background information: thereby the phenomena of temporal perspective become part of a text's semiotic structure—and all sense-making tools can be played with to create different effects. But to Ingarden, and my present investigation, it is more important what the changes in temporal perspective do to the *presentation* of the literary work of art during reading. The interchanging in the course of a literary work of art of the different temporal perspectives creates, according to Ingarden, a *foreground-background structure*:

> Only then does the portrayed world acquire plasticity and *a certain three-dimensionality* as a result of the intermittent emergence into the *foreground* and recession into the *background* of various events. (Ibid., p. 128, my italics)

The changing temporal perspectives can literally give the experience of literary artworks a *temporal depth*. With a proximal temporal perspective, the represented events come to the foreground, and with a distal temporal perspective the represented events retire into the background. If Ingarden is correct about temporal perspectives creating a foreground-background structure in time, it seems it must be the temporal perspectives rather than, for instance, the spatial aspects that yield the perception-like experience of literary artworks. Here, I say 'perception-like.' I will make the claim even stronger in saying: *if* temporal perspectives create a foreground-background structure, it means that we can *temporally perceive* literary artworks. Instead of figures appearing in a dimensionless murky space, they appear in temporal dimensions—to the *linearity* of time, temporal perspective contributes not only *width* but also *depth.*

Perception is minimally defined as a figure-ground organization: a figure stands out in relation to a background. A figure is not the same as foreground. A figure is 'foregrounded' in relation to a background, yet the foreground in, for example, a painting is not in itself a figure. The closest proximal perspective occurs in combination with a dynamic event, which is *unbounded*. A figure is something *bounded* that stands out on a background. If the distance between the point of view and the event is too small, no figure stands out—like looking at a Monet too close up. When events are portrayed as dynamic, the point of view is inseparable from the event—it moves along with it. Only when events are experienced from a *located* point of view can the figure be anchored. The temporal point of view can be considered a *ground* and the event can be considered a *figure*; hence, this temporal figure-ground structure exists *only in reading*. The change in temporal perspective can change the figure-ground organization of events and hence our *perception* of events.

In linguistics, temporal aspects have also been thought to create a foreground-background structure in discourse (Joos 1964; Weinrich 1964/1973; Hopper 1979; Fleischman 1990/2011), but there the foreground is defined as a figure, and, hence, elicited by the perfect (bounded) aspect as opposed to the imperfect (unbounded) aspect (Fleischmann 1990, p. 24). That is the difference between the concept of figure-ground in linguistics and foreground-background in the phenomenology of Ingarden. In Ingarden, unboundedness creates more proximity; the figure is an intermediary state between foreground and background.

In cognitive linguistics, Leonard Talmy (2000) has investigated figure-ground structures in language, albeit in spatial terms and not in connection with temporal aspect. He has, though, investigated the effect of boundedness and unboundedness on (spatial) perspective. According to Talmy's general thesis, grammatical elements structure lexical elements, and they can reconceptualize lexical elements by introducing a shift in their content. He has an example of a (lexically) bounded event being (grammatically) unbounded. The bounded event is to *climb a ladder* (Talmy 2000, p. 61). It can be restructured as an unbounded event by saying, "She kept climbing higher and higher up the fire ladder" (ibid., p. 62).

> Here a cognitive operation of **magnification**, or **adoption of a proximal perspective**, would seem to have taken place. By this operation, a perspective point is established from which the existence of any exterior bounds falls outside of view or attention. (Ibid., p. 62)

According to Talmy, unboundedness creates proximity—whereas making an event punctual, i.e., through reduction (e.g., she climbed the ladder *at exactly midday*), creates a distal spatial perspective. So just like in Ingarden, there is a relation between unboundedness and proximity. Talmy's category of 'state of boundedness' includes: point, boundedness, and unboundedness, which correspond to static localized 'one,' static localized 'many-in-one,' and dynamic localized 'one-by-one,' respectively—but his is defined as a *spatial* category which alters the *spatial* perspective. Besides, his description cannot account for the effect of the unboundedness in the first example from Conrad ("He saw himself saving people from sinking ships, cutting away masts in a hurricane, swimming through a surf with a line"), which, according to Ingarden, creates a distal perspective.[7] Talmy does not consider the temporal unbounding of an event because he only studies spatial boundedness. For example, 'She *always* climbed the ladder at exactly midday' enhances the *temporal distance* to the event and makes the temporal perspective more distal. This is a different operation in that it concerns temporal boundedness, not spatial boundedness. Apart from the correspondence between spatial organization in perception and language, my hypothesis is that when we concretize a literary work in acts of reading, we can *actually temporally perceive* the represented events.

In narratology, Genette has three categories relating to the temporal relation between story time and discourse time (cf. defined according to the 'fiction' of Erzählzeit): order, duration, and frequency. Order concerns tense; the latter two concern aspect and are more similar to Ingarden's temporal perspective. Duration concerns speed and thus the relation between summing-up (many-in-one) and succession (one-by-one). Frequency concerns the relation between punctual events

[7]This is due to the iterative. Talmy (2000) refers the iterative to a completely different operation called 'pattern of distribution,' where the iterative is defined as having a "multiplex" pattern of distribution, which is unrelated to perspective (p. 63f). Traditional grammatical aspect is explained by his two *spatial* categories of boundedness and distribution.

(one) and iterative events (one-in-many). But Genette only focuses on the *logic* of narratives and, thus, disregards the effect on the reader's (temporal) perspective, which means that incongruent temporal relations between story and discourse are considered as merely logical inconsistencies. Given my hypothesis of temporal perception, logical inconsistencies can be described as having an aesthetic effect in the presentation—similar to how 'logical inconsistencies' in paintings (when there is no clear distinction between foreground and background) can have aesthetic effects. One such inconsistency is what he calls the *pseudo-iterative*. As a test case for the relevance of my hypothesis.

5 Temporal Conflict in the Reading Experience: The Example of the Pseudo-Iterative

Genette mainly uses examples from Marcel Proust. But one thing he cannot account for with his narratological system is Proust's use of the iterative aspect. Iterativity belongs to Genette's category of 'frequency.' There are four possible types of frequency relations

1. *Narrating once what happened once*
2. *Narrating n times what happened n times*
3. *Narrating n times what happened once*
4. *Narrating one time (*at one time*) what happened n times*

The iterative corresponds to No. 4, an example could be: 'For a long time, I went to bed early," which sums up many repetitive occurrences in one. The iterative is not to be understood as a singular event representing similar events by way of example, but as several similar events summed up into one, i.e., a general description. In classical narratives, Genette says:

> Iterative sections are almost always functionally subordinate to singulative scenes, for which the iterative sections provide a sort of informative frame or *background* (Genette 1983, p. 116f, my italics)

Genette's use of the term 'background' is here to be understood in an informational sense—that the iterative functions as a sort of description. Nonetheless, the equivalence between phenomenological background and semiotic background is, while not surprising, worth noticing. But along came Modernism, e.g., Flaubert. In French, the imperfect tense is, among other things, used for repeated action, and Marcel Proust especially admired Flaubert's use of *imparfait*, what Proust calls Flaubert's "éternel imparfait" (Proust 1920, p. 8). The *éternel imparfait* not only renders the speech of his characters (often in free indirect discourse), but their whole life (ibid.). What touches Proust the most about Flaubert's style is that it gives a *masterful impression of time* (ibid., p. 17). Proust finds in Flaubert a solution to his own 'modest attempts' (*j'y retrouve l'aboutissement des modestes recherches que j'ai faites*). The new aspect on things and bodies is literally a new *temporal* aspect,

which creates a (temporal) distance to the objects portrayed.[8] Proust himself uses the iterative aspect even more extensively and rigorously. Proust narrates what *used to happen*, regularly and ritually. According to Genette, Proust is intoxicated with the iterative (Genette 1983, p. 123). Proust, like Flaubert, uses the iterative in a way that "liberates the iterative from its functional dependence," it no longer serves as an informative background; instead, the iterative passages take on "a wholly unusual fullness and autonomy" (ibid., p. 117). Proust's portrayal of scenes is marked by a special *pseudo-iterative* aspect:

> the very characteristic presence of what I will call the *pseudo-iterative*—that is, scenes presented, particularly by their wording in the imperfect, as iterative, whereas their richness and precision of detail ensure that no reader can seriously believe they occur and reoccur in that manner, several times, without any variation. (Ibid., p. 121)

The aspect is iterative, but the content of the scenes, the detailedness, makes it implausible that they reoccur exactly like that; it is logically inconsistent that any real repeated occurrence would have no variation, hence Genette calls it a pseudo-iterative.[9] Genette's definition is based on the logic, or lack thereof, of the represented world, the story. In view of the representation, the insistence on the *identical* re-occurrence becomes almost comical—like when we are told after a long monologue in Cervantes' "The Jealous Extremaduran" that it was spoken "not once but a hundred times" (ibid., p. 122). But in view of the presentation, the use of the pseudo-iterative has a very interesting aesthetic effect. And since

[8] Let us have Proust express it with images: "[. . .] donc cet imparfait, si nouveau dans la littérature, change entièrement l'aspect des choses et des êtres, come font une lampe qu'on a déplacée, l'arrivée dans une maison nouvelle, l'ancienne si elle est presque vide et qu'on est en plein déménagement." (Proust 1920, p. 8) Flaubert's new use of the *imparfait* entirely changes the aspect of things and beings, like a lamp that has been replaced, arriving at a new home or being in the middle of moving out of the old. Familiar things suddenly seem strange; they are *defamiliarized*.

[9] An example would be the long conversation between Aunt Léonie and Françoise *every* Sunday at Combray, here is an extract:

> —Francoise, imaginez-vous que Mme Goupil est passée plus d'un quart d'heure en retard pour aller chercher sa soeur; pour peu qu'elle s'attarde sur son chemin cela ne me surprendrait point qu'elle arrive apres I'élévation.
> —Hé il n'y aurait rien d'étonnant, répondait Francoise.
> —Francoise, vous seriez venue cinq minutes plus tot, vous auriez vu passer Mme Imbert qui tenait des asperges deux fois grosses comme celles de la mere Callot . . .
> —Il n'y aurait rien d'étonnant qu'elles viennent de chez M. le Cure, disait Francoise.
> —Ah! je vous crois bien, ma pauvre Francoise, répondait ma tante en haussant les epaules.

(Quoted from Houston 1962, p. 39). Houston was the first to point out the existence of the pseudo-iterative—or rather, the strange temporal patterns in Proust.

the pseudo-iterative aspect was first used by Flaubert that is where I will turn to find some interesting literary examples of the pseudo-iterative, or what I will call, instead, examples of temporal conflict.

5.1 Flaubert's Éternel Imparfait

Prominent examples of the pseudo-iterative in Flaubert are, according to Genette, the narration of Emma's life in the convent, her life at Tostes before and after the ball, and her Thursdays at Rouen with Léon (I: ch. 6, 7, 9; III: ch. 5). Here is how her Thursday meetings with her lover Léon are described:

> C'était le jeudi. Elle se levait, et elle s'habillait silencieusement pour ne point réveiller Charles [. . .] Par peur d'être vue, elle ne prenait pas ordinairement le chemin le plus court. Elle s'engouffrait dans les ruelles sombres, et elle arrivait tout en sueur vers le bas de la rue Nationale, près de la fontaine qui est là. C'est le quartier du théâtre, des estaminets et des filles. Souvent une charrette passait près d'elle, portant quelque décor qui tremblait. Des garçons en tablier versaient du sable sur les dalles, entre des arbustes verts. On sentait l'absinthe, le cigare et les huîtres. Elle tournait une rue; elle le reconnaissait à sa chevelure frisée qui s'échappait de son chapeau. Léon, sur le trottoir, continuait à marcher. Elle le suivait jusqu'à l'hôtel; il montait, il ouvrait la porte, il entrait . . . Quelle étreinte!
>
> (Flaubert 2011: Loc 4819 of 6588) [She went on Thursdays. She got up and dressed silently, in order not to awaken Charles [. . .] For fear of being seen, she did not usually take the most direct road. She plunged into dark alleys, and, all perspiring, reached the bottom of the Rue Nationale, near the fountain that stands there. It is the quarter for theatres, public-houses, and whores. Often a cart would pass near her, bearing some shaking scenery. Waiters in aprons were sprinkling sand on the flagstones between green shrubs. It all smelt of absinthe, cigars, and oysters. She turned down a street; she recognized him by his curling hair that escaped from beneath his hat. Léon walked along the pavement. She followed him to the hotel. He went up, opened the door, entered . . . What an embrace!]

Despite the iterative, specified by the use of imparfait, the meticulous description of every part of her tour with a wealth of details, like the specific sights and smells, makes the description tend toward the foreground, especially the last sentence, where all of the subparts of going up to the hotel room are described, yet still in the iterative: "il mont*ait*, il ouvr*ait* la porte, il entr*ait* . . . Quelle étreinte!" (go up, open door, enter). The event is both iterative (one-in-many) and dynamic (one-by-one). The iterative temporally unbounds the events, which creates a distal perspective. But the detailed description of all the dependent parts makes the event dynamic and thereby temporally unbounds the point of view—which creates a proximal perspective. There are actually two possibilities for creating a simultaneous foreground-background structure: by bounding both event and point of view (summing-up or punctual) or *by unbounding both event and point of view*. The pseudo-iterative, which seems somewhat logically inconsistent in terms of the representation (the story), makes the presentation stand out more clearly—the *distance* to the represented event is enhanced, we are not just immersed in the dynamic action.

This type of description continues almost throughout the chapter (i.e., for many pages). Here is how they spend their time in the hotel room:

> Comme ils aimaient cette bonne chambre pleine de gaieté, malgré sa splendeur un peu fanée! Ils retrouvaient toujours les meubles à leur place, et parfois des épingles à cheveux qu'elle avait oubliées, l'autre jeudi, sous le socle de la pendule. Ils déjeunaient au coin du feu, sur un petit guéridon incrusté de palissandre. Emma découpait, lui mettait les morceaux dans son assiette en débitant toutes sortes de chatteries; et elle riait d'un rire sonore et libertin quand la mousse du vin de Champagne débordait du verre léger sur les bagues de ses doigts. Ils étaient si complètement perdus en la possession d'eux-mêmes, qu'ils se croyaient là dans leur maison particulière, et devant y vivre jusqu'à la mort, comme deux éternels jeunes époux. Ils disaient notre chambre, notre tapis, nos fauteuils, même elle disait mes pantoufles, un cadeau de Léon, une fantaisie qu'elle avait eue. C'étaient des pantoufles en satin rose, bordées de cygne. Quand elle s'asseyait sur ses genoux, sa jambe, alors trop courte, pendait en l'air; et la mignarde chaussure, qui n'avait pas de quartier, tenait seulement par les orteils à son pied nu.
>
> (Flaubert 2011: 4877 of 6588) [How they loved that dear room, so full of gaiety, despite its rather faded splendor! They always found the furniture in the same place, and sometimes hairpins, that she had forgotten the Thursday before, under the pedestal of the clock. They lunched by the fireside on a little round table, inlaid with rosewood. Emma carved, put bits on his plate with all sorts of coquettish ways, and she laughed with a sonorous and libertine laugh when the froth of the champagne ran over from the glass to the rings on her fingers. They were so completely lost in the possession of each other that they thought themselves in their own house, and that they would live there till death, like two spouses eternally young. They said 'our room,' 'our carpet,' she even said 'my slippers,' a gift of Leon's, a whim she had had. They were pink satin, bordered with swansdown. When she sat on his knees, her leg, then too short, hung in the air, and the dainty shoe, that had no back to it, was held only by the toes to her bare foot.]

In this scene, the iterative almost makes the dynamic events static. They play together like "two spouses eternally young," the room becomes a state; Flaubert's *éternel imparfait* becomes very literal here. Yet, the distance created by the iterative is not simply, like so often in Proust, an aesthetic distance—it also augments the Flaubertian irony. Emma's coquettish ways, the little game of 'our room' and 'our carpet,' the dream of living there till death: all are easily recognizable clichés. The distal temporal perspective prevents the reader from becoming completely absorbed in their doings. It creates an ironic distance—similar to the ironic distance in the famous bed scene (cf. part one), where Charles is gazing at Emma's eyes—eternally at a distance.

In the next chapter, however, things change. One Thursday, as Léon is on his way to meet Emma, he is held up by the apothecary Homais. Emma waits in vain for him at the hotel. She is devastated by his absence. At a late hour, Léon manages to escape from Homais and runs up and explains the situation to Emma. She is first passionately angry, then offended, and then tears fill her eyes. Léon promises to come back "immediately" after he has said goodbye to Homais, waiting downstairs (ignorant of the situation upstairs). But, alas, Léon does not manage to escape from the apothecary—when he finally returns to the room, Emma is gone. They have missed a Thursday. The iterative pattern is broken. But as they resume their meeting, the iterative is also resumed—yet a radical change has happened:

> Ils en vinrent à parler plus souvent de choses indifférentes à leur amour; et dans les lettres qu'Emma lui envoyait, il était question de fleurs, de vers, de la lune et des étoiles, ressources naïves d'une passion affaiblie, qui essayait de s'aviver à tous les secours extérieurs. Elle se promettait continuellement, pour son prochain voyage, une félicité profonde; puis elle s'avouait ne rien sentir d'extraordinaire. Cette déception s'effaçait vite sous un espoir nouveau, et Emma revenait à lui plus enflammée, plus avide. *Elle se déshabillait brutalement, arrachant le lacet mince de son corset qui sifflait autour de ses hanches comme une couleuvre qui glisse. Elle allait sur la pointe de ses pieds nus regarder encore une fois si la porte était fermée, puis elle faisait d'un seul geste tomber ensemble tous ses vêtements; et pâle, sans parler, sérieuse, elle s'abattait contre sa poitrine, avec un long frisson.*
>
> Cependant il y avait sur ce front couvert de gouttes froides, sur ces lèvres balbutiantes, dans ces prunelles égarées, dans l'étreinte de ces bras, quelque chose d'extrême, de vague et de lugubre, qui semblait à Léon se glisser entre eux subtilement, comme pour les séparer. (my emphasis)
>
> (Flaubert 2011: 5228 of 6588) [They gradually came to talking more frequently of matters outside their love, and in the letters that Emma wrote him she spoke of flowers, verses, the moon and the stars, naïve resources of a waning passion striving to keep itself alive by all external aids. She was constantly promising herself a profound happiness on her next trip; then she confessed to herself that she felt nothing extraordinary. This disappointment quickly gave way to a new hope, and Emma returned to him more inflamed, more avid. *She undressed brutally, tearing off the thin laces of her corset that they would whistle round her hips like a gliding snake. She went on tiptoe, barefooted, to see once more that the door was closed, then with one movement, she would let all her clothes fall at once; and pale, without speaking, serious, she would throw herself against his breast with a long shudder.*
>
> Yet there was upon that brow covered with cold drops, on those quivering lips, in those wild eyes, in the strain of those arms, something vague and dreary that seemed to Leon to glide between them subtly as if to separate them.] (my emphasis)

I have emphasized the strip scene because it is dense with action: the parts of the action are described one-by-one; the action verbs naturally correspond to the successive structure, like Lessing would have it; and the fictive motion of the thin laces whistling (*sifflait*) round her hips like a snake, the telic lexical aspect of undressing (*se déshabillait*).[10] Even if part of a striptease is prolonging the end, the specification "brutally" removes the teasing—the adverbial markers of punctual aspect like "one movement" and "at once" enhance the dynamics of the event. From a logical point of view, if she strips like this every time they are together—brutally tearing off the thin laces of the corset—she must be spending a lot of money on buying new corsets. In other words, the precise re-occurrence of this event seems implausible.

From a phenomenological perspective, on the other hand, the temporal point of view is here unbounded and moves along with the depicted events. It creates a proximal temporal perspective. But the constant use of the iterative temporally unbounds the event, creating a distance. The *temporal conflict* between the represented events and the present perspective is enhanced, but because both event and point of view are temporally unbounded, the perspective is very unstable—even more so

[10]I am grateful to Peer Bundgaard for pointing this out to me.

than when a foreground-background structures is established by boundedness. The configuration is *rare* as it regards memory—if we cannot locate an event, we cannot go back in time and move along with its dependent parts. We must first grasp the events as bounded, independent wholes. But here, the figure-ground structure is created through unboundedness, which is especially salient in this example, where the dynamics of the events threaten the discontinuous organization. The eternal striptease elicits a *non-generic* temporal perspective (in the sense of, e.g., Jean Petitot 2004). It is difficult to stay with this unstable presentation because of the non-genericity of the temporal perspective: the result is a temporal conflict in the reading experience.

The dynamic proximity makes the schematized aspects appear very clearly and vividly—it is hard to refrain from filling-out. But only by staying with the concretized *presentation* can the "something vague and dreary" that seems "to glide between them subtly as if to separate them" be *perceived*. The aesthetic distance crucially depends upon the filling-out being held back—because, as Julian Barnes has said of the Flaubertian aesthetics: *who needs to burst into fulfillment's desolate attic?*

5.2 Kafka's Eternal Present

So far, it might seem as if the pseudo-iterative is something particular to the French language, where the iterative aspect is marked by the imperfect tense. Therefore, I will give a comparable example from German. The examples are from one of Franz Kafka's last unfinished short stories "The Burrow" (*Der Bau*). The text has been the object of much discussion due to its deviant use of aspect (e.g., Henel 1972; Cohn 1978; Coetzee 1981). The story is written in first-person present tense. In German, temporal aspect is not specified morphologically but only through the use of adverbs. The present tense oscillates between the general and the particular, i.e., between generic present and progressive present. It is not stabilized as the *imparfait*, but the aspectual ambiguity of the present tense makes it suitable for temporal experimentation. Kafka has often experimented with the present tense, e.g., in "The Country Doctor," which has led to the title of Dorrit Cohn's famous essay "Kafka's Eternal Present" (1968). In connection to "The Burrow," Cohn quotes from one of Kafka's aphorisms: "The decisive moment of human development is everlasting" (Cohn 1978, p. 197). J. M. Coetzee (1981) cites the same aphorism, and describes the awareness of time presented therein as eschatological, not historical; it recognizes no continuity:

> There is only the present, which is always present, separated from Ingarden's 'dead past' by a moment of rupture, the *entscheidende Augenblick*. Hence the paradox that history is over in 'a second' while the present moment is 'everlasting.' (p. 578)

How Kafka depicts the eternal present in "The Burrow" Cohn and Coetzee disagree upon. The discussion revolves around whether or not there occurs a change in temporal aspect midway through the narrative.

An undefined mole-like creature at work constructing a huge labyrinthine burrow tells the story. The narrative moves continuously along, but midway through, there is a gap in narrative time (discourse): "I must have slept for a long time," it says. When the creature awakens, there is a change: a whistling sound can be heard. The sound is low at first, but, at least in the creature's consciousness, it becomes louder. The creature is convinced it is some enemy coming for him—another creature in a rivaling burrow, trying to dig his way through. The creature's paranoia more and more consumes him as he tries to take precaution against the unknown enemy (i.e., the whistling sound) by endlessly reconstructing the burrow. The story ends unresolved midsentence. According to Cohn, the first part before the whistling sound is narrated in a durative-iterative present, while the part after the arrival of the sound is in a punctual present. Coetzee disagrees, and I side with Coetzee. Here is an example from after the sound—the creature is working at moving his provisions to the inner circles:

> Die erste Arbeit ist sehr mühselig und nimmt mich ganz in Anspruch: die Beute nämlich durch die engen und schwachwandigen Gänge des Labyrinths zu bringen. Ich drücke vorwärts mit allen Kräften und es geht auch, aber mir viel zu langsam; um es zu beschleunigen, reiße ich einen Teil der Fleischmassen zurück und dränge mich über sie hinweg, durch sie hindurch, nun habe ich bloß einen Teil vor mir, nun ist es leichter, ihn vorwärts zu bringen, *aber ich bin derart mitten darin in der Fülle des Fleisches hier in den engen Gängen, durch die es mir, selbst wenn ich allein bin, nicht immer leicht wird durchzukommen, daß ich recht gut in meinen eigenen Vorräten ersticken könnte, manchmal kann ich mich schon nur durch Fressen und Trinken vor ihrem Andrang bewahren.*
>
> [The first part of the work is very laborious and requires all my energy: that is, bringing my catch through the labyrinth's narrow passages with their thin walls. I push forward with all my might, and this works, but much too slowly for me; to speed things up, I tear back a piece of this mass of meat and push my way over the top, right through it, now I have only some of it in front of me, now it is easier to advance, *but I am so deep in the midst of this profusion of meat here, in these narrow passages, through which it is not always easy to pass even by myself, that I could easily suffocate in my own provisions, there are times when I can save myself from the crush of plenty only by feeding and drinking*.] (p. 176, my emphasis)

At first, it seems like a punctual present, but I have emphasized when a change begins to happen. As the creature is caught in the midst of the meat, an iterative aspect begins to take over. The event is clearly temporally unbounded in the final sentence, through the "manchmal" (there are times, often), yet the telic actions of feeding and drinking, which the fear of suffocation implies are performed in a rather desperate fashion, pulls the description back towards the punctual. Since the aspect is not clearly marked in German, the presentation oscillates rapidly between a proximal and a distal perspective. Caught in the midst of the profusion of meat in a narrow underground passage, trying to avoid suffocation by repeatedly eating and drinking a way through—at least that presents a good image of a state of eternal desperation.

But in some of the passages from before the sound, a punctual aspect breaks into the iterative passages. The creature is, as always in the story, restructuring

the burrow; here it is that his sleeping quarters are moved toward the inner circles (where, at this particular point in the story, his provisions are also located):

> Dann pflegen besonders friedliche Zeiten zu kommen, in denen ich meine Schlafplätze langsam, allmählich von den äußeren Kreisen nach innen verlege, immer tiefer in die Gerüche tauche, *bis ich es nicht mehr ertrage und eines Nachts auf den Burgplatz stürze, mächtig unter den Vorräten aufräume und bis zur vollständigen Selbstbetäubung mit dem Besten, was ich liebe, mich fülle*. Glückliche, aber gefährliche Zeiten; wer sie auszunützen verstünde, könnte mich leicht, ohne sich zu gefährden, vernichten.
>
> [Then, especially peaceful times tend to follow, when I slowly and gradually shift my sleeping quarters from the outer circles toward the inner, diving ever more deeply into the smells, *until I can't stand it any longer and on a given night, storm into the castle court and wreck havoc among the provisions, gorging myself to the point of total torpor on the greatest delicacies I have*. Happy but perilous times; anyone who knew how to take advantage of them could easily annihilate me at no danger to himself.] (p. 167, my emphasis)

I have emphasized the punctual 'interruption' of the iterative present. Again, it is the telicity of the 'storming into,' 'wrecking havoc,' 'gorging to the point of total torpor,' that elicits the punctual, but the framing of the event as first 'peaceful times,' then 'happy but perilous times' marks the event as iterative, reoccurring within a given period of time. In contrast to the French examples, the shifting aspects do not create a structured foreground—background; rather, the temporal perspective is constantly oscillating between foreground and background. The temporal location of both events and point of view is ever-changingly unbounded, and the reader is lost in the labyrinth. Where the example from Flaubert created a non-generic temporal perspective, the examples from Kafka create a bi-stable temporal perspective. If Flaubert (and Proust) elicits a perspective comparable to the perfect symmetry of this view on the Necker cube—which is very non-generic in memory—Kafka's text, instead, elicits a temporal perspective comparable to the bi-stable Necker cube (Fig. 2).

The square is ambiguous. Either it is seen 'from above' (focus on the base of the cube) or 'from below' (focus on the left side of the cube). In Kafka's text,

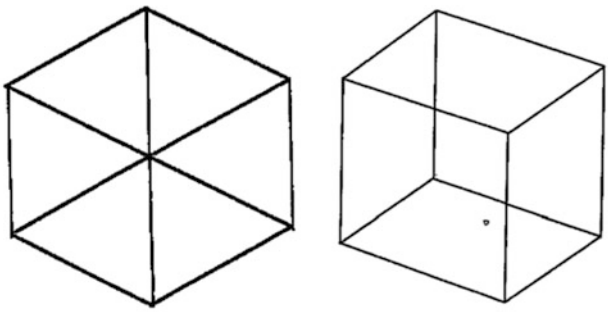

Fig. 2 The non-generic, symmetrical Necker cube (*left*); the bi-stable Necker cube (*right*)

the temporal perspective is similarly ambiguous. There is a constant (or at least a potential constant) shift in perspective. Thus, the everlasting decisive moment is *present* to the reader—as an eternal Kafkaesque catastrophe.

6 Conclusion

In this article, I have discussed the specificities of the presentation of *literary* artworks, which I argued were to be compared with acts of remembering—in that memory re-presents events in time that are no longer present in space. I also, rather gently, suggested that both reading and remembering depend on temporal perception, in that both processes entail the perception of a *temporal distance* to the re- or represented events. I thus discussed the phenomenon of temporal perspective—first in relation to memory, then in relation to literature. In literature, the reader's temporal perspective creates a foreground-background structure, which gives a certain three-dimensionality to the experience of literary artworks. I briefly mentioned the similarities to and differences from linguistic and narrative theories of perspective and foreground-background (and figure-ground). I then went on to discuss the phenomenon that Genette has dubbed the pseudo-iterative. I wanted to show how the idea of the reader's temporal perspective could better account for the phenomenological and, hence, also aesthetic effects of the pseudo-iterative—something Genette's logical handling of the phenomenon could not. I argued that in Flaubert's case (especially in the last example), the pseudo-iterative elicited a non-generic perspective; in Kafka's case, a bi-stable perspective. In both cases, these perspectives enhanced the temporal conflict between presentation and representation in reading.

By way of conclusion on my analysis of the pseudo-iterative in terms of temporal perspective, I will venture the claim that, like spatial perspective in pictorial art was discovered in the Renaissance, perhaps temporal perspective in literature was 'discovered' in Modernism. And like spatial perspective was played with for interesting effects (e.g., Piero della Francesca and Nicolas Poussin, cf. Petitot 2009), so can temporal perspective be played with for presentational effects.

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The Aesthetic Experience with Visual Art "At First Glance"

Paul J. Locher

Abstract The aesthetic experience with visual art has been shown to occur in two stages. Upon initial exposure to a painting, a viewer spontaneously generates a global impression, or gist, of the work. One's first impression of a painting includes a sense of its pictorial content, overall structural organization and style, meaningfulness, and an affective reaction to it. When gist information in a painting is deemed to have sufficient interest to an observer, the second stage of aesthetic processing ensues. This consists of directed focal exploration of the image to expand knowledge concerning the work's compositional features and organization to satisfy cognitive curiosity and to develop aesthetic appreciation of a composition. This chapter presents an overview of research findings that have identified the types of visual properties and semantically related information that collectively lead to the activation of what is labeled a "painting gist" by this author. In addition, the influence of the painting gist response on the focal exploration of paintings is discussed.

Keywords Painting gist • Tachistoscopic presentation • Perceptual processing • Eye-tracking • Masking technique • Pictorial content • Pictorial style

The casual visitor in a museum gallery typically glances at a painting and based on a first impression, or gist, of it either almost immediately moves on to another work or stops to spend some time with it. The gist of a painting generated by individuals unsophisticated in the visual arts is the product of the pictorial content of a work interacting with the viewer's personal context that reflects his or her cognitive structures (see Locher 2012). Art professionals initially respond to paintings in a similar fashion. For example, Batinic (2005) asked a large sample of specialist visitors at the international art fair *Art de Cologne* to rate the individual factors that influence their decision to buy a work of art. They gave most weight to their first impression of a work, followed closely by its style and price. Similarly, Grasset

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(1998) claims that the process of evaluating the authenticity of a painting suspected of being a fake or forgery by museum and art professionals frequently begins with the emotional experience given by their first visual encounter with it. This reaction leaves an unforgettable impression that leads to a good part of further investigation. In the case of art professionals, this "gut feeling" is inspired by a frequent and repeated acquaintance with truly authentic works of the same period, region, and the artist to whom the work is attributed.

1 The Painting Gist

Unsophisticated and art-trained individuals' initial aesthetic reaction to an artwork, just as with many types of non-aesthetic everyday stimuli, constitutes the first stage of a broad two-stage processing framework of aesthetic experience with visual art proposed by this author and his colleagues (e.g., Locher et al. 2007; Locher 2012; Nodine et al. 1993).[1] According to this framework, which is based on early psychological theories of aesthetics (see Eysenck 1942), a viewer spontaneously generates a global impression, or gist, of a painting with the first glance at it. As described in detail below, one's first impression includes a sense of a work's pictorial content, its global structural organization, its semantic meaning, and an initial affective response to it. These pictorial qualities and meanings simply "happen" in immediate awareness of the retinal image of an artwork and, as such, the gist is pre-cognitive in nature. Its content appears as a single, indivisible entity (Koenderink 2011, p. 320). When gist information in a painting is deemed by a viewer to have sufficient interest, the second phase of aesthetic processing ensues. This consists of directed focal exploration of the image to build up knowledge about interesting pictorial features and their structural organization to satisfy cognitive curiosity and to develop aesthetic appreciation of the painting. The purpose of this chapter is to provide an overview of experimental investigations conducted from early to recent times that describe the types of visual properties and semantically related information that collectively contribute to the activation of what I call the "painting gist." To limit the content of the chapter and to maximize credibility and persuasiveness of the findings to scholars and professionals in the field of aesthetics, only studies that used reproductions of paintings as stimuli are reported to the exclusion of stimuli used in investigations of other forms of gist responses such as scene gist (e.g., Castelhano and Henderson 2008; Grossberg and Huang 2009).

The methodology used to investigate the painting gist is common to all of the experiments described in this review. First, each study utilized flash (tachistoscopic) presentations of paintings with at least one duration less than approximately 250 ms.

[1] More detailed multicomponent information processing models of an aesthetic experience with art have been proposed by Leder et al. (2004) and Tinio (2013) and with design objects (Locher et al. 2010).

This duration reflects the perceptually relevant average pause time of single eye fixations for adults performing a search-type task. Thus, its use ensures that subjects generated a gist response based on the emergence of information available in just the initial fixation on a painting. In addition, a masking pattern presented after (or before and after) the stimulus is typically utilized with tachistoscopic presentations to terminate the visual image at the offset of the physical stimulus. This is done so that the time available for extracting information from a given glimpse is carefully controlled and a viewer's performance reflects perceptual processing efficiency during specific intervals of constant durations.[2] Whether masking was used or not is mentioned for each study described throughout the review.

As stated, the purpose of the studies described in this chapter was to identify the various types of compositional elements that can be discriminated by a viewer in a snapshot of time. Locher (2014) points out that the composition of a painting is built up of three types or levels of image content and organization. At the lowest level of stimulation are the individual first-order pictorial elements of painting such as line, color, texture, and shape. Although the influence of primary features on the perception and aesthetic evaluation of paintings has received considerable experimental scrutiny (see Locher [2014] for a review of this literature), researchers have not studied the contribution of first-order properties to the emergence of the painting gist. This is likely due in part to the assumption that a gist response occurs in response to the overall structural organization of a painting. The findings of a study conducted by Locher et al. (2007) (described later in detail) revealed that, in fact, less than 2 % of viewers' verbal reactions to paintings seen for just 100 ms were of the first-order type (e.g., reference made to the line orientations or colors in a composition). Holistic second-order pictorial features such as complexity, symmetry, balance, perspective, and depicted motion are created by structural coupling of first-order pictorial elements. At the next highest level of organization, pictorial attributes are arranged by the artist into a composition that conveys through its content and artistic style the conceptual and semantic meaning of a work. All of the studies included in this review have utilized second and third levels of compositional components to investigate the activation of painting gist.

2 Early Investigations of the Nature of the Painting Gist

We turn now to a review of the research designed to provide information concerning the nature of the painting gist response. One of the earliest experimental studies in this field was performed by Brighouse in 1939. His art stimuli were 10 paintings

[2]For a detailed description of the mechanisms underlying visual masking, the reader is directed to Bachmann et al.'s (2007) overview of the contents of a collection of articles (published as a Special Edition of the journal *Psychological Research*) that shed light on the mechanisms of visual masking models and how our perceptions are created in a snapshot of time.

representing a variety of subject matter and styles (e.g., paintings by Braque, El Greco, Renoir, Hokusai) and his participants included children from 8 to 14 years of age, adults with no training in the visual arts, and graduate students and faculty in a Department of Graphics and Plastic arts. Participants were shown each painting tachistoscopically for 260 ms without masking and when the image disappeared they told the experimenter everything that went through their minds based on the snapshot view of the painting. This procedure was repeated until a participant felt that he/she had acquired all the information and hedonic value the picture had to offer and that nothing new would occur with further exposures. Additionally, participants were instructed to tell the experimenter as soon as they knew they liked or disliked the picture. After viewing each painting tachistoscopically, it was projected normally and participants had unlimited time to rate how much they liked it now that they could examine it carefully.

Brighouse (1939) reported that 78 % of all children and untrained adults gave verbal expressions of pleasure, indifference or dislike following the first exposure of a painting and they made practically no corrections to their initial expressions of affect after viewing paintings for a median number of 7.2 and 11.4 exposures per stimulus, respectively. Taken together, these findings provide evidence for the existence of a painting gist. Not surprisingly, trained viewers were more hesitant to express an affective reaction and only 55 % did so by the fifth exposure. They also exhibited a greater tendency to modify their expressed feelings about a work following unlimited viewing than did children and untrained adults. According to Brighouse, this observation suggests that the immediate hedonic tone of the paintings was minimized in importance by the trained individuals in favor of a much more carefully weighed judgment based on careful examination of an artwork. An interesting and very forward thinking aspect of this research is that Brighouse used the contents of participants' verbal reports following each flash presentation to suggest the temporal course of the perceptual processes underlying viewing of the artworks, much in the same way as a viewer's fixations pattern is used in later eye-movement studies to infer the same type of information (e.g., Locher et al. 2007).

Eysenck (1942) repeated Brighouse's (1939) study with three subjects chosen for their "aesthetic abilities." They were shown 50 uncolored paintings by a variety of artists for 40 ms followed by "a way to eliminate after-images" (p. 350). Subjects indicated their liking for each artwork following its brief presentation and again after a second unlimited viewing time exposure. The correlations between the two sets of ratings for the three participants were .82, .80, and .76 resulting in Eysenck's conclusion that "*the appreciation of the aesthetic worth of a picture may be as instantaneous as the perception of the picture itself*" (p. 351, italics in the original).

In another early study also published in 1939, Kellett (Procedure 1) used reproductions of 14 paintings representing different artistic styles as stimuli (e.g., works by Marin, Rousseau, Vermeer, van Gogh). Each painting was paired with a photograph either taken at the actual scene of an artist's work or a studio set-up photograph that attempted to simulate an artist's painting. According to Kellett, this procedure resulted in pairs of relatively well unified (the photographs) and less successfully unified (the paintings) stimulus objects. Participants were high school

students classified as either "untrained" or "trained" in the arts, the later defined as having had at least two semesters of high school art training. Participants saw a painting and its paired photograph each randomly displayed one after the other for 240 ms unmasked after which they indicated the version they preferred. This procedure was repeated with presentation time set at 30 s. The key finding for the present discussion was that preferences for images given in the short time condition were highly stable, with stability being 72 % or higher for 11 of the 14 stimulus pairs. There was a negligible difference in preferences expressed by the untrained and trained groups.

The studies described in this section were "devised to throw light upon the functioning of the aesthetic elements and principles in a painting" (Brighouse 1939, p. 1). These investigations were conducted before the notion of a gist response was introduced in the literature. Nevertheless, as will become apparent throughout this review, the research questions addressed in these early studies as well as their findings are fundamentally the same as those of more recent investigations designed to clarify which components of aesthetic stimuli contribute to the painting gist.

3 Pre-attentive Detection of the Collative Properties of Paintings

Cupchik and Berlyne (1979) conducted two tachistoscopic experiments to determine how soon during the processing of an aesthetic stimulus one could discern collative properties. According to Berlyne (1971), a collative stimulus property is created by spontaneous organization of stimulus elements into a perceptual configuration. They require an observer to note, put together, and sum up characteristics of several elements that are present simultaneously in a painting (p. 69) (i.e., structural properties at the second- and highest-order organization levels). Cupchik and Berlyne note that, prior to the publication of their study, almost all investigations on aesthetic perception permitted participants multiple glances at the stimulus. Their study was designed to address this limitation in the field. In a first experiment, they presented university students untrained in the visual arts with 12 color reproductions of paintings by such artists as Rubens, Renoir, Poussin, and Pissarro. (Twelve patterns consisting of black and white squares were also used as stimuli but these are not discussed here.) The paintings represented high and low levels of the collative properties uncertainty, arousal, and hedonic tone. Factor analytic and multidimensional scaling techniques were applied to a large collection of artworks in a previous study by the researchers to generate these classes of stimulus materials. For example, high and low levels of the uncertainty factor consisted of paintings' ratings on a number of scales such as disorderly-orderly and simple-complex.

Each stimulus was evaluated following one of three exposure durations—50, 500, and 5,000 ms—that were preceded and followed by a blank white exposure field. Following each stimulus presentation, the painting was rated on five scales: simple-

complex; disorderly-orderly; displeasing-pleasing; drowsy-alert and relaxed-tense. Results revealed that participants were able to discriminate complexity levels after only a single fixation. They also rated high arousal paintings less pleasing and more tension producing after a single glance. In addition, the 50 ms exposure condition evoked greater alertness and attention than did the 500 ms and 5,000 ms duration conditions.

In a second experiment, Cupchik and Berlyne (1979) investigated the motivational implications of the existence of a gist response on the second-stage of perceptual processing using a binary preference method. The same 12 art stimuli used in Experiment 1 (and also the patterns) were presented in pairs at one of the three presentation durations utilized in the first experiment, with each pair including one painting that was high and the other low on the uncertainty, arousal, and hedonic tone properties. Participants were instructed to choose which painting of the pair they would like to see again for an additional 5 s (a pseudo-task not performed) and to rate how much they preferred it over the painting not selected (this measure did not prove fruitful and no results were presented). The findings revealed that for exploratory choice, participants were particularly sensitive to the paintings' order or unity after only a single 50 ms glance at the pairs. On the other hand, participants chose high uncertainty paintings for a second look in the multiple fixation conditions (500 and 5,000 ms), but no clear preference was observed following the 50 ms presentation despite the findings that participants were able to discriminate between low and high uncertainty images in Experiment 1. Cupchik and Berlyne suggest that this finding supports the principle of "perceptual curiosity" (Berlyne 1963), a motive to reduce stimulus uncertainty through expanded exploration of stimulus details (i.e., stage 2 processing of an aesthetic experience).

As mentioned, Cupchik and Berlyne's (1979) study addressed an important limitation of almost all investigations on the nature of aesthetic perception prior to theirs, namely, that participants were permitted multiple glances at the art stimuli. The researchers demonstrated viewers' ability to discriminate certain collative properties of artworks such as complexity and order after a single initial glance at it. Their findings provide early support for the view that the initial phase of perception of an aesthetic stimulus begins with the holistic processing of a painting's structural and organizational properties.

4 Pictorial Balance—A Perceptual Primitive

It is a widely held belief among artists and art theoreticians from ancient times to the present that balance is the primary design principle for unifying the structural elements of a painting into a cohesive narrative statement (see Arnheim 1988). Furthermore, it is believed in the art world that the induced organizational structure resulting from the balanced configuration of a painting is established spontaneously by vision and that it determines how the elements of a composition are visually scanned, interpreted, and evaluated (Locher 2003). Moreover, this view suggests

that the global percept is a "structural primitive" that can be detected rapidly and effortlessly in a painting by all viewers regardless of their background in the visual arts. A tachistoscopic study by Locher and Nagy (1996) support these assertions. Their stimuli consisted of black-and-white more- and less-balanced version(s) of the same painting taken from plates of the *Maitland Graves Design Judgment Test* and the *Meier Art Tests I and II* measures. The images were balanced about either the horizontal or vertical axis. In addition, color reproductions of highly perceptually balanced paintings by renowned artists (e.g., Kandinsky, Sargent, Vuillard) and an experimentally altered less balanced version of each original were employed. The full set of images included a range of stylistic characteristics along the dimensions linear-painterly and abstract-representational. Participants, who either held a Bachelor's degree in Art History or had no formal training in the visual arts, rated for balance each of the 40 stimuli following a 100 ms presentation (pre- and post-exposure mask employed) and then again following a 5,000 ms exposure.

Results revealed that both art naïve and sophisticated individuals discriminated the less balanced from the more balanced versions of the black-and-white paintings with a single 100 ms glance at each. They were also able to discern the large differences in balance among the original paintings in the single fixation condition, but were not able to reliably detect the subtle differences in balance between the balanced and slightly less balanced versions of each painting. Locher and Nagy's (1996) findings provide empirical support for the view held by artists and art theoreticians that pictorial balance is an holistic second-order pictorial feature that simply "happens" in the immediate awareness of an artwork.

5 Meaningfulness Is Detectable in Painting Gist Perception

Meaning, according to Martindale's (1991) theory of cognitive hedonics, is a prime determinant of aesthetic appreciation that overshadows other properties. Meaningfulness is a function of the following variables: the personal relevance of a painting's components to a viewer, the prototypicality of its components, and how clear and naturalistic they are. Moore et al. (2006) conducted a study demonstrating the influence of meaning over other determinants of preference at the pre-attentive stage of processing. They showed artistically-naïve university students 32 paintings ranging in style and period that were previously rated for perceived unity, meaningfulness, and preference. Participants saw each artwork for 10, 100, or 1,000 ms (without backward masking), after which they rated them for preference, unity, and variety.

With respect to participants' preference ratings, eight paintings were consistently among the most preferred at any exposure duration and these had been previously rated very high on meaningfulness. These works consist of many everyday naturalistic scenes with clear details, such as Seurat's *Bathers in the Seine*. Similarly, eight paintings were consistently among the least preferred regardless of exposure duration. These paintings are composed of unfamiliar or unnatural scenes

lacking much meaning to the participants, such as David's *Oath of Horatic*. Two other classes of paintings were observed with respect to preference, works whose ratings increased and those whose ratings decreased across presentation conditions (examples are Turner's *Venice, The Piazetta from the Water* and Kneller's *Triumph of Marlborough*, respectively). In the first case, the researchers speculate that the increase in preference was due to the fact that the content of the paintings became more vivid and clear as details became more visible with increased processing time. Preference ratings decreased across the second group of paintings because their details, which seem simple and orderly when the structure was shown briefly, appeared unfamiliar and/or incongruous (i.e., less meaningful) with longer visual access to the image. Moore et al.'s (2006) findings demonstrate that, consistent with Martindale's theory of cognitive hedonics, meaningfulness is a prime determinate of a painting's composition and its effect is already evident at the pre-attentive stage of an aesthetic experience.

6 Categorization of a Painting's Content and Style at First Glance

At the highest level of compositional organization, there are content and structural properties of paintings that contribute to an aesthetic experience that differentiate artworks from every day visual displays (see Locher 2014; Tinio 2013). Compositional content (or subject matter) and artistic style are two such art-related properties of a painting that contribute to an observer's interpretation, aesthetic judgment, and emotions regarding it. With respect to content, schools of art tend to differ in their choice of motifs such as those found in landscapes, still-life, and portraits. In addition to affectively neutral subject matter, the contents of some artworks depict positive or negative themes designed to evoke positive or negative emotions (see, e.g., Silvia 2012). And viewers' appraisals of comprehensibility and novelty of the contents of a painting along the realism and abstractionism continuum also contribute to their interest in it. Artistic style of a painting refers to the visual appearance of a painting as it relates to other artworks produced in a certain period of time and place by a certain group of artists (i.e., schools of art). Finally, it must be mentioned that a viewer's level of aesthetic fluency, defined by Smith and Smith (2006) as the knowledge base that one has about art and aspects of life closely related to art, will determine the extent to which a painting's style and content influence one's aesthetic experience with it.

Bachmann and Vipper (1983) conducted a study to compare the dynamics of perceiving paintings belonging to different well-known schools of art during the initial stage of processing. They sought to determine which pictorial dimensions were best able to differentiate paintings from among the various schools of art and also the dimensions best able to differentiate the perception of one painting from others. University students with no special education in art rated slides of paintings belong-

ing to six different schools of art—Expressionism, Naivism, Realism, Surrealism, Abstractionism, and Impressionism—on six semantic differential scales: simple-complex, involved-indifferent, regular-chaotic, passive-active, vigorous-impotent, and precise-vague. Four different exposure durations were employed—1, 20, 100, or 500 ms (no mention is made that a mask was used). Bachmann and Vipper found that even at the shortest exposure times (1 ms and 20 ms), participants were able to significantly differentiate between schools of art on the scales simple-complex, involved-indifferent, regular-chaotic and precise-vague, with the most divergent schools being Realism versus Abstractionism. Additionally, they observed that, with increased exposure durations, the ratings pooled across schools became increasingly "simple," "regular," "precise," "involved," "vigorous," and "passive." The researchers interpreted these findings as demonstrating a gradual reduction of visual uncertainty over time concerning the pictorial information available in the painting gist.

Findings reported thus far demonstrate that people are able to detect the content and style properties of a painting on the basis of information contained in the gist. Augustin and her colleagues (Augustin et al. 2008, 2011) conducted a series of experiments designed to investigate the time course and interrelations between content- and style-related processing and to determine when and how these characteristics of paintings play a role during the initial perception of an artwork. Stimuli in their first investigation (Augustin et al. 2008) consisted of 48 reproductions of paintings representing four contents, or motifs, (house, flowers, tree/trees, and a male person) fully crossed with four individual artist styles (works by the artists Cézanne, Chagall, Kirchner, and van Gogh). Art-naïve university students gave similarity ratings for pairs of pictures seen for 10, 50, 200, 3,000 ms or for unlimited viewing time. A delayed masking procedure followed the 10 ms and 50 ms presentations.

Findings revealed that the effects of content were already present at 10 ms and remained relatively stable over all presentation durations whereas the influence of style on perception was only apparent at 50 ms and gained in relevance with increasing presentation times. Augustin et al. (2008) argue that this difference likely reflects the fact that processing of a painting's content is related to general processes of everyday object perception which is presumed to rely on rapid, automatic feed-forward mechanisms. Style on the other hand constitutes a complex combination of different feature aspects of an artwork learned through experience that are art-specific and therefore exert some top-down influence on processing. Related to this explanation is the important finding that participants who were untrained in the visual arts differentiated between different artist styles on the basis of information available in the initial fixation on an artwork. Augustin et al. suggest that this sensitivity to artistic styles may reflect the fact that judgments of similarity of the pairs of artworks did not require explicit classification of styles but could be accomplished using lower-level compositional features such as the use of color, brush strokes, etc.

Following up on their earlier findings, Augustin et al. (2011) investigated the temporal relation between style- and content-related processing of representational

art to identify when sufficient information is available to allow accurate classification of paintings. The two levels of artistic style employed consisted of paintings by two artists with very distinctive individual styles, the German Expressionist Ernst-Ludwig Kirchner and the Post-Impressionist Paul Cézanne. The content dimension was defined by the two motifs person(s) and landscapes. Participants were university students with no background in the visual arts. (See Augustin et al. for details concerning the EEG data acquisition procedures and the two dependent measures employed viz., the N200 effect and the Lateralized Readiness Potential.) Consistent with their previous findings, results of this study demonstrate that the processing of a painting's artistic style follows processing of its content, with style-related information becoming available to an observer at approximately 40–94 ms later than its content-related information.

7 Perceptual Processing of Paintings Across the Time-Course of an Aesthetic Experience

This review concludes with results of two experiments the author conducted with colleagues (Locher et al. 2007) that were designed to examine the relationship between the pictorial content of paintings and the way individuals visually grasp, explore and think about this information across the time course of an aesthetic experience. Their first experiment investigated the types of perceptual and cognitive content that constitutes a gist reaction to paintings. Stimuli consisted of reproductions of eight paintings by renowned artists representing a variety of artistic styles (e.g., Klee's *Temple Gardens*; Giotto's *The Epiphany*; Vermeer's *Young Woman with a Water Pitcher*). In Experiment 1, university students who reported no formal education or studio training in the visual arts saw a 100 ms presentation (with masking) of each artwork after which they wrote five impressions and/or descriptions of the painting they would tell someone who had never seen the artwork in order to describe it to him or her. Following this task, the paintings were presented randomly a second time for 100 ms (masked) and participants rated the pleasingness of each artwork.

Subjects' written reactions to each painting were categorized on a qualitative continuum of response ranging from the perception of a painting's individual physical characteristics and single pictorial elements, to holistic second-order pictorial features or two or more elements described as a perceptual unit, to more holistic properties of the compositions including their realism, beauty, expressiveness, style and form. Locher et al. (2007) found that almost all (98 %) first reactions to the paintings reflected attention to a group of pictorial elements perceived as a compositional unit (e.g., There is a large wave with breaking foam) to the expressiveness of the whole composition (e.g., The colors are dreary and dull and make me feel sad) or to its artistic style (e.g., The painting is very abstract) and

form (e.g., It has geometrical shapes arranged together into three panels). The same distribution of response types was observed for the four additional reactions reported by participants for each artwork.

In Locher et al.'s (2007) second experiment, art naïve participants had unlimited viewing time to look at each artwork before assigning it a pleasingness rating. Their eye fixation patterns (or scanpaths) were recorded across the time course of viewing and a concurrent verbalization procedure was employed simultaneously requiring participants to talk out loud about their reactions to and thoughts about each painting. For purposes of analyses of the eye-movement and verbal response data collected, the aesthetic episode was divided into three time periods: the first 3 s of exploration, from 3 to 7 s, to the end of exploration which lasted 30 s on average. These time periods reflect the observation that participants began to speak about a composition between 2 and 3 s after it appeared on the screen and within 7 s of viewing all initial verbal statements were completed. As was found for limited viewing time in Experiment 1, the vast majority (88 %) of participants' initial verbal reactions to the artworks after the first 2 s of viewing were of the holistic types described above and their frequency rose to 98 % by the time all initial verbalizations were complete. The fact that the average fixation duration in this study was approximately 300 ms indicates that first impressions of the artworks were based on the information obtained with at most the first few glances at a painting. Furthermore, evidence that a global impression of an artwork was in fact achieved at first glance in this study is provided by the finding that the pleasingness ratings for the limited and unlimited viewing time experiments correlated .73. This similarity also suggests that the evaluation of an artwork's pleasingness can be made rapidly as is typically observed in the viewing behaviors of museum goers and art professionals mentioned above. Not surprisingly, however, the average pleasingness ratings for Experiments 2 were higher than those obtained in the first experiment—6.17 versus 4.59, respectively (on a 10-point scale)—demonstrating that pictorial information acquired by scanning the images added significantly to the paintings' pleasingness.

To study the continuity of processing across the two stages of the aesthetic experience, the percent coverage of the pictorial field (the area of the useful visual field based on a viewer's scanpath) and the fixation pattern for each participant for each painting were "quantified" separately for each time period (see Locher et al. 2007 for a detailed description of these analyses and findings). It was observed that by the start of participants' initial verbal reaction to a painting at 2 s, they had already explored approximately one-fourth of the pictorial field (27 % on average across the stimulus set). This coverage included direct foveal attention on 67 % of all trials to at least two of the three key pictorial elements identified by art experts to be the principal contributors to the structural organization and semantic meaning of a painting. This suggests that major pictorial qualities of the paintings were flagged in the activated painting gist and likely contributed to the initial holistic impressions of the artwork. Moreover, they are consistent with Rasche and Koch's (2002) explanation of the nature of a gist response and the neural mechanisms responsible for it. According to them, gist recognition is based only on a subset

of an image's information. They argue that a gist response to an image is generated from the visual input that is concurrently spread across many cortical areas that then communicate with each other rapidly in a distributive manner, quite likely with the help of "interpretation."

Participants significantly increased coverage of the paintings to an average of 38 % by the time they had completed their first comments about an artwork and their attention to key structural features increased to 85 % for the stimulus set. Coverage, on the other hand, increased to only 46 % at the time participants gave their pleasingness rating and stopped looking at a painting; this is a non-significant increase over coverage at 8 s. Furthermore, the specific area of coverage and pictorial elements of a given painting which drew attention remained basically unchanged after the initial processing stage during which a global impression of a work was established. It is important to note, however, that once scanning is in progress, it is difficult to separate pictorial features that were targeted with the initial gaze for later attention from properties newly identified for checking with focal search. Global analysis occurs simultaneously with focal analysis during each fixation directed at an image. It discovers new elements, now in a bottom-up top-down processing fashion, that require analysis (Võ and Henderson 2010). This is reflected in Locher et al.'s (2007) finding that participants given unlimited time to examine the paintings in the second experiment assigned them significantly higher pleasingness ratings on average than did viewers restricted to a single 100 ms gaze at each work in the first experiment.

8 Conclusions

This review described the types of pictorial information in paintings that collectively contribute to the rapid activation of a painting gist and the changes in its perception as more and different types of pictorial information become available during the initial fixation on a painting. It has been found that one's first impression of a painting includes a sense of its pictorial content, overall structural organization and style, meaningfulness, and an affective reaction to it. Much additional research of the types described herein is needed to identify other painting-based global properties that lead to the activation of painting gist. In addition, the extensive literature that has identified stimulus information leading to activation of scene gist is relevant to the study of painting gist because scenes (natural and man-made) and representational and abstract art share many perceptual properties that adhere to the same basic statistical regularities (e.g., Graham and Field 2007). Not only can scene gist literature provide insights into the activation of painting gist, but many such investigations could also be readily adapted for future research into the nature of painting gist. For example, researchers have investigated the influence of color on the perception of scene gist (Castelhano and Henderson 2008), scene coherence based on its content, actors, and objects (Dobel et al. 2007), and the contribution of the surrounding scene on the recognition of facial expressions

(Righart and de Gelder 2008). To reiterate, much additional research is needed before a scientifically comprehensive model of how an impression of a painting simply happens in immediate awareness and how and to what extent a painting gist influences perceptual processing during an aesthetic experience with art.

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What Is a Surface? In the Real World? And Pictures?

John M. Kennedy and Marta Wnuczko

Abstract Pictures are surfaces. Pictures show surfaces. But what is a theory of perception of surfaces? Surface perception was first mentioned in experimental psychology by Metzger in Ganzfeld experiments in the 1930s. However, it was first offered as a serious concept in perception theory by Alhazen in his *Book of Optics* (1039). Remarkably, almost no contemporary theory of perception uses the term. To rectify this omission, a theory of surfaces is presented here, suggesting that surface perception occurs in all 8 of vision's modes. Optical information for the shapes of surfaces is given by the ratio of azimuth to elevation. Flat surfaces such as the ground have a linear to quadratic ratio. Increase the ratio and hills are seen. Decrease it and the surrounds are a bowl. Sudden changes in the ratio indicate changes in slant. Sudden changes in density without changes in the ratio indicate a drop-off. The theory is applied to outline drawing and to the fact that pictures provide two surfaces (the real surface of the picture and the depicted surface). The two surfaces create illusions. Features on the picture surface cannot be seen correctly. The importance of surface perception is its breadth of application. The theory of surface perception shows why pictures taken on the Moon or Mars are as intelligible as terrestrial pictures. Surfaces allow control of action even for creatures that fly in 3D without touching surfaces during flight, such as bats and birds.

Keywords Picture • Surface • Perception • Perspective • Outline

Often, artworks are representational pictures, surfaces that we experience as showing other surfaces. They give us twofold experiences—two things simultaneously in one space: firstly, surfaces standing before us, and, secondly, represented surfaces (Wollheim 2003). To understand the double experience, we need to understand perception of surfaces, both the real ones and the represented ones. Here, we argue linear perspective, characterized by foreshortening, allows us to experience real surfaces (in touch as well as in vision), and representational pictures use perspective

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to depict surfaces with great fidelity. Surfaces and perspective are the key to an argument for realism. We show that there is plenty of information around us in the natural world for surfaces and the cornucopia allows us to experience our earthly environment accurately. Far afield, the same goes even for the Moon and Mars—anywhere we are not immersed in fog! The experience we get from representational pictures is based on this abundant information for surfaces. However, we confess, our principled defense of realism is highly circumscribed. We need to get around two issues. We will acknowledge here that, in practice, our experience of highly-foreshortened real surfaces has niggling errors. Further, we will admit here that the crosstalk behind the twofold experiences given by representational artwork is the source of illusions.

1 Real Surfaces

We begin our introduction to the experience of surface perception with a definition of a surface, a list of the shapes of surfaces, and their possible and impossible combinations.

Physically, a real surface is a continuous, polarized plane. About continuous surfaces, Gauss (1825/1827) wrote: "A curved surface is said to possess continuous curvature at one of its points A, if the directions of all the straight lines drawn from A to points of the surface at an infinitely small distance from A are deflected infinitely little from one and the same plane passing through A" (point 3, p. 6). Basically, a surface is two volumes meeting. The change from one volume to the other occurs at the surface. For vision, the volumes are usually filled by a solid or liquid and air. The surface is the boundary of the solid or liquid, which reflects light to the observer's vantage point. The surface is polarized, that is, different on its two sides, and usually only the solid or liquid reflects light, not the boundary of the air. The exception is a mirage, in which air layers reflect light. Another kind of surface is that of a cloud, defined by the boundary between air with many drops of water (a vapor) reflecting light, and air with few drops. In a sense, vision is rather superficial, since when we look around, almost always what we see is just the surfaces of opaque things of the world and little more. Skin. Clothes. Bedding. Rugs. Curtains. Furniture coverings. The floor. In the open air, the ground. Brick fronts. Bark. Plumage. Fur. Stone. Roadways. Mountainsides. Evidently, to explain how see the world veridically (Runeson 1988; Pizlo 2008), accounts of accurate perception need a theory of surfaces (Pomerantz 2013).

Color, brightness, and texture appear to cover broad continuous expanses of surfaces. In nature, the expanses are rarely uniform. In marbling, reflectance varies continuously but within a distinct range. Gibson (1979) called this stochastic variation—continuously changing values within limits. Marbling's streaks, skeins, and knots are like a rope's strands, since few if any extend over the full expanse of the surface. Overlaps of the strands support stable perception of the surface's continuity.

A cautionary note should be sounded about the sky. It has many of the color, brightness, and texture properties of a surface, without actually being one. The sky is air thinning. It appears to be behind anything else we see above the horizon, but otherwise its depth is indefinite. There is apparent space between us and the sky's color, by day, and its blackness, at night (Sachs 2010).

Immersed in mist—perhaps atop Elsinore in a Hamlet movie—there might be no surface whatsoever that we see or feel. In swimming underwater, we can feel suspended in a place with no surfaces to see other than our body's. At night, we see stars as dots and we cannot tell that they have flaming surfaces—but here on Earth, flames have visible surfaces.

Light gives vision lots of information about surfaces. Falling on a surface, a cast shadow tells us about bumps and hollows, especially if it moves across them. Sweeping across the ground, the direction of its boundary's curves elevates with every bump and declines with every hollow, changing the shapes of curves the shadow projects to the eye. Attached shadows are just as useful, curving on the far side of hills from the apparent direction of illumination, and the near side of hollows. What looked like bumps can switch to hollows if the apparent direction of illumination reverses.

Highlights are bright optic images, appearing as if behind the surfaces bearing them. They can make the surfaces look like mirrors, transparent, or matte and grainy. Highlights are evidence for a bright surface, reflected by another surface. Like transparency, a highlight allows us to see more than one surface in a given direction. Like shadows, as highlights move they reveal the surface's bumps and hollows (Norman et al. 2004). A bump's highlight moves with us if we move to one side, and a bowl's highlight moves in the opposite direction. Shadows stretched over a surface and highlights tracking over a surface are particularly good at showing that a surface is continuous, rather than a net. A spider's web covered in dew sparkles along its threads and the brightness stays on the strands as we move—revealing there is nothing between them.

Information useful for perception of the shape of smooth surfaces follows from the simple fact that at any point on a surface, there are always two curves. Unlike an edge, which has one well-defined curve, a surface slants away from any point on it with at least two values of slant. An edge is a limit to a surface. It end-stops the surface. The edge can be represented by a single equation, but a surface needs at least two. Choose any direction and it will have a specific tangent—and the orthogonal direction will, too.

From any point on a surface, there is a curve in each direction. A ball has two convex curves at any point; the inside of a sphere, two concave curves (Alberti 1436). At the top of a steep slope, a wide ski-run may fall away steeply—a convex curve—but in the orthogonal direction the terrain may be a flat, mogul-free, broad, smooth hill all the way down to the lodge. Conversely, a runner at the bottom of a path may see it as a concave curve, gently slanted directly ahead and yet flat, wide, and with good footing in the opposite orientation. At the top of a saddle or mountain pass, the downhill slope is a convex curve, and the hills on either side are concave. Convex and convex, concave and concave, and convex and concave are the possible

curves of surfaces at a point, wrote Gauss (1825/1827, p. 14). A channel or rut is flat in one direction and concave in the other, and a ridge is flat in one direction and convex in the other (Wagemans et al. 2013). In these terms, a plain is flat and flat.

Flat, convex, and concave are parts of a single mathematic function. So we can imagine that what vision considers a smooth surface fits a formula for a curve in all possible directions from a point. The possible curves have different rates of change of slant—linear, quadratic, or exponential functions, for example. Two directions that provide the most different rates of change suffice for describing many smooth surfaces. The surface between the two different rates can be taken as gradually changing from one to the other.

The slant of a surface can be specified optically by the surface's texture. The texture on the surface projects optic texture to the observer's vantage point; the units of texture foreshorten their optic projections the more they slant away from the vantage point. To the extent that vision experiences the optic texture gradient due to foreshortening as due to surface slant, it detects surface shape. In practice, failure to grasp the exact relationship between foreshortening and surface shape results in underestimation of a stretch of ground far off on a ground plain. We can check our impression by walking over to it. Underestimation also results in pictured scenes with highly foreshortened surfaces looking shallower than they should. We can correct this error by walking into a real scene matching the pictured one, of course!

Bumpy hills and potatoes do not offer monotonic, gradual changes in surface relief. To see each bump requires detection of its distinctive optic texture gradient. For gnarly surfaces such as clumpy roots, vision may take individual clumps as texture elements forming an ensemble (Cant and Xu 2012) in addition to being a continuous surface. To detect the overall shape of the ensemble, vision may take high spots on the clumps, where the gradients of optic change at the vantage point fall to zero, corresponding to one side of a hill giving way to the other, and fit them with two orthogonal curves. Like a root ball, the result would perhaps be generally convex and at times even equally curved in orthogonal directions like a sphere.

Taken as a group, separate elements can trigger perceived curves. Grouping the elements of a surface in a texture detection task occurs at different scales, tiny and large (Diggiss and Kingdom 2013). For example, a circle is seen if 8 dots on a flat surface are evenly spaced around a common center. At a tiny scale, the individual dots are seen and, at a large scale, their grouping is seen. Curiously, eight dots can form an octagon, but they generally group as a circle, enjoying what Gestalt theory called good continuation (Wertheimer 1922). Perhaps the key fact is that perception can fit a function, octagon or circle, but favors one.

Besides tiny dots, the texture on a surface is often mottled or spotty, much like ink-blots or amoeba. To see the shape of the mottled surface, vision can fit shape functions to centers of blots and clumps. The distribution of the centers can be detected even if the eccentricities of the spots make for an "anisotropic" texture (Knill 2003), meaning the spots protrude in a biased way, i.e., generally longer in some direction, as if smeared horizontally or diagonally. However, Knill (2003) finds some anisotropy affects the apparent slant of surfaces. Hence, we can make

flat surfaces look other than they are. The result is a picture, a surface deliberately and artificially modified to present an optic pattern reserved by nature for another.

Using centers of spots and ignoring biases or smears, vision can fit shape formulae to tiny and large anisotropic elements, including ensembles of ants, leaves, bushes, or hills, since shape functions are independent of the scale of a target. The shape taken by a flock of birds or a school of fish can be seen in this fashion. Each element can be taken as a dot in an ensemble, and the dots can trigger a function in the visual brain that makes us see the convex shape of the flock or school.

It is worth stressing that the reason dots of a group can be discrete but a continuous shape is implied is because the dots trigger a shape function. A function such as $y = ax^2 + bx + c$ is continuous. This is useful in nature, since an extended object such as a log is often partly hidden by branches, and the curve fitting to samples of the log allows occluded parts to be implied. An equation for a curve is continuous even if the samples that triggered it in perception are not. Likewise, the shape function triggered by the curved front of an object implies how the curvature continues onto the back.

A circle made of dots is seen as having invisible joins between the visible dots because curve fitting provides continuous *perceptual Gestalts*, in Koffka (1935) terms. Wertheimer (1922) described Gestalts as having unity and simplicity, but they might best be described as results of curve fitting. Gestalt theory noted that a set of dots could be grouped by vision as a line. To understand representational art, it should be noted that the dotted line could also be taken as depicting the continuous edge of a surface. The equation for a line, triggered by dots, allows the perceiver to have an experience of the edge of a continuous surface. Also, regions on either side of the dotted line can be experienced as surfaces limited by the edge. Both regions depict surfaces if the edge is seen as a convex or concave corner. Only one region depicts a surface if the line is an occluding edge of, say, a flat knife blade against an empty background, or the occluding boundary at the rounded brow of a hill set against the sky.

2 Information and Surfaces

If only two tangents and curves are needed for vision to get information about large, smooth, continuous surfaces, this is not a difficult task in principle. Consider a vantage point above a ground plain stretching to the horizon, pictured in linear perspective (Fig. 1). Square tiles stretch from underfoot to the horizon. Above the horizon, the sky is depicted as empty; apart from being further than the horizon, there is no information for its depth. Below the horizon, there are many features providing information for distance in linear perspective. For a given task, skill in perception largely comes down to picking out the key information in reliefs such as the one depicted in Fig. 1 (Ooi et al. 2006).

Information is present if A only occurs when B occurs. A specifies B. For an optic pattern A such as the one generated by Fig. 1 to be informative about a

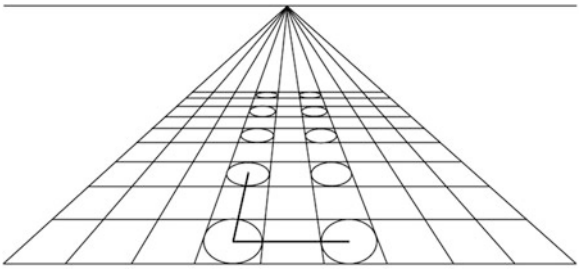

Fig. 1 Target circles on square tiles on the ground. The L joining the centers of three targets has an azimuth line joining two targets horizontally and a near-vertical line governed by the elevations of two targets

terrain B, it must occur within a set of constraints. For vision, the constraints are given mostly by the ecological environment in which sight evolved. The constraints make the problem of induction (Goodman 1968; Vickers 2012) irrelevant because, within the constraints, key light patterns can only occur when a particular distal source is present: a giraffe optic pattern only arising when a real giraffe is present. A fingerprint, say, or a DNA sample has this kind of specificity. The giraffe, the fingerprint, and the DNA sample are distinctive. Each picks out an individual. Besides being distinctive, for an optic pattern to be useful in practice, it must lie within the bounds of visual sensitivity. Underfoot, tiles on a ground are highly distinguishable, but ones farther away are highly foreshortened, with the result that their differences are hard to make out.

The accuracy of perception of the ground depends on what features are available and selected (Ooi and He 2006, 2007). Miss or omit the key information and observers can, of course only guess and infer using past experience (Berkeley 1709/1732) and biases (Wu et al. 2007). For example, to avoid guesswork, observers should zero in on information for distance in Fig. 1 present in the elevation of the tiles, that is, their proximity to the horizon. The further tiles are higher in elevation and closer to the horizon.

The visual angles subtended by far-off tiles in Fig. 1 are tiny. For a 2 m tall adult observer, standing and looking at a piazza like that depicted in Fig. 1, after 40 m, any 1 m square tile on the ground subtends less than .1° and it becomes difficult to tell the differences between angles subtended by the tile that starts at 41 m, the one at 42 m, etc. In shorter distances, the angular differences are much larger and more useful to perception. The 1 m tile starting at 5 m subtends 3.4°, and the one starting at 6 m subtends 2.5°. The difference of .9° is plainly visible—the moon subtends .5°.

Consider the angles 3.4° and 2.5° subtended by sides of tiles running into depth to be "elevation-extent" angles. They diminish with distance along the ground. The orthogonal dimension to elevation provides "azimuth angles," also diminishing with distance. Elevation is measured from vertically below the observer to a point on a target, such as a corner of a square tile depicted in Fig. 1 (as in Juricevic et al. 2009) or the center of a circular target in Fig. 1 (as in Wnuczko and Kennedy 2014). Sometimes called "altitude," elevation with respect to the horizon is 90° and zero is "straight down." More generally, zero is the direction from the vantage point to

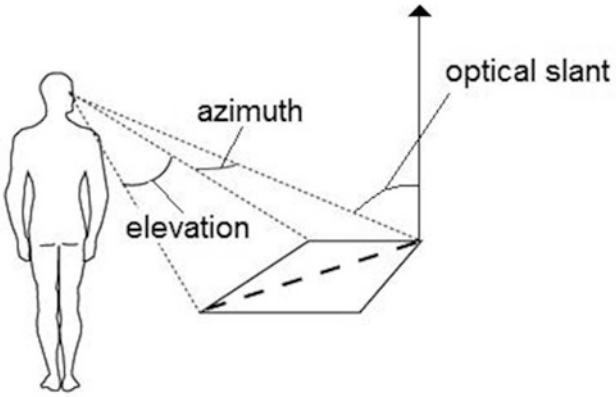

Fig. 2 In the elevation dimension, the angle subtended by the side of an object is governed by the extent of the tile in the z dimension. In the azimuth, angles are subtended by the width of an object—its extent in the x dimension. The optical slant of a surface is the angle between the line from the observer's vantage point and the surface normal. An optical slant of 90° means 0° angular subtense. At an optical slant of 0°, sides and widths of squares subtend equal angles

the foot of the normal on a surface of interest. Alberti (1436) called this direction "centric." The surface of interest can be the ground, a wall, or a surface at a slant to the ground. Each surface has its own horizon. The everyday ground and our familiar horizon is only a special case. For targets on any surface, the further from the foot of the normal, the higher the target's elevation. It will approach the surface's horizon if it moves further away from the foot. This has implications for vision. Raising the apparent horizon results in smaller elevations and smaller apparent distances to the objects (Rand et al. 2011). Lowering the apparent horizon has the opposite effect. If the near ends of parallel lines on walls are at eye-height and the lines are tilted downwards, observers underestimate their true eye-height. If elevation is decreased by viewing through base-up prisms, observers underestimate distance (Ooi et al. 2001) (Fig. 2).

Azimuths are orthogonal to elevations. Let the near side of a square tile on the ground run left-to-right, that is, let it be in the frontoparallel plane. At the observer's vantage point, the azimuth angle subtended by the near side is the angle between the directions to the side's left and right corners. As distance along the ground to the tile increases, the azimuth angle compresses and its elevation rises. The projection of a square tile on the ground onto a vertical picture surface becomes a trapezium with converging sides (Fig. 3). A flat circular target lying on the ground and near to the horizon in Fig. 1 is highly foreshortened and shows as a highly eccentric ellipse in the figure. The target is at an extreme optical slant, a slant defined by the angle between the normal of the surface at a point on the target and a line joining the point to the observer's vantage point. As optical slant increases, projections to the observer's vantage point become compressed and the circles on the ground depicted

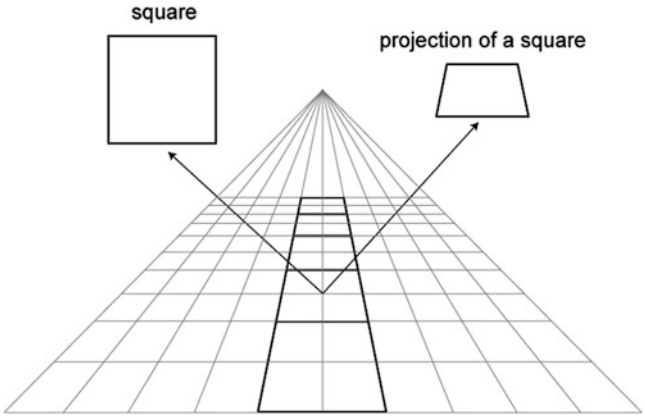

Fig. 3 A square projecting a trapezium, *top* and *bottom* sides parallel, symmetrical about the vertical, with two converging sides

in Fig. 1 project ellipses—the more distant the circle, the more extreme the aspect ratios. The aspect ratios given by their minor axes divided by their major axes shrink towards zero.

The vertical axes of the ellipses in Fig. 1, the extents in elevation, would shrink especially quickly up the page if the figure is redrawn to show targets placed on a convex curved surface—a hill. They would decrease particularly slowly for targets on a concave surface—a bowl. Convex and concave surfaces can also be revealed by target azimuth angles changing more quickly or slowly than is true for a flat plain.

The optic projections from an object's surrounds on the ground help show its location, distance, size, and shape. If a target lying on Fig. 1's piazza projects an ellipse in the proximal optic array with a specific aspect ratio and elevation, it is a circle. Any ellipse can be projected by any other ellipse (Pizlo 2008), but information for it resting on a ground plane, its elevation, and its aspect ratio, taken together, specify the target's true shape.

3 The Surface in the History of Perception Science

A surface was clearly and thoughtfully offered as an essential concept in perception theory by Alhazen (1039) in his *Book of Optics*. Alhazen noted that if we were looking through a peephole at a scene in which a pole poked up above a wall it would be very difficult to tell the distance to the pole. But, he wrote, if the wall was removed, and now a ground plain stretched towards the pole, it would be obvious how far the pole stood back from us. The pole's base would be at a determinate spot on the ground. The amount of ground towards the pole's base is a measure of its distance. Convert "amount of ground" to angle of elevation with respect to a horizon and Alhazen would be modern.

Surface perception was first mentioned in experimental psychology in the 1930s (Koffka 1935; Metzger 1936). Metzger found that we see a space-filling fog if we are inside a dimly-illuminated sphere—a Ganzfeld (half of a ping pong ball over an eye is an easy way to produce a Ganzfeld, Hochberg (1964) pointed out). Metzger's Ganzfeld was a large sphere, into which the observer could put his head and shoulders. Metzger observed that if the concave Ganzfeld surrounding the eye is the right distance away and is lit with enough intensity, the apparent fog lifts and observer can see the microstructure of the surface. In essence, a surface at a determinate distance appears. The hollow clear space between the surface and the observer's vantage point becomes evident (Sachs 2010). One interpretation of this demonstration is that vision of most anything precise requires a visible texture. Most natural surfaces are textured, so visible texture is a major basis for perception of shapes of surfaces. Texture is more important than shadows and highlights if lighting on the surface is fairly even. In seeing combinations of surfaces and surface shapes, it is a major partner with edges of surfaces (Pizlo 2008; Diggiss and Kingdom 2013). Being elementary in perception of the world, texture should have dedicated resources in the visual brain. Besides marbling, textures are often ensembles of objects that stick up from surfaces like grass or trees, or that rest on surfaces like leaves, cows in a field, or masses of downhill skiers careering down a slope. Cant and Xu (2012) find that anterior and medial aspects of the ventral visual stream are involved in processing large ensembles of multiple objects lying on a surface (e.g. cherries on a plate). In fMRI studies, Cant et al. (2009) and Cant and Goodale (2007) found texture inputs engage specific regions of occipital-temporal cortex different, say, from those engaged by expanses of color.

Following Metzger, the next important step in theory of surfaces in perception was taken by Gibson (1950, 1979) in his ground theory of perception. Wu et al. (2007) wrote that "studies have shown that the ground surface substantially influences object localization in the intermediate distance range (2–25 m), supporting the ground theory of space perception advocated by J. J. Gibson" (p. 654). Rand et al. (2011) wrote, "Gibson suggested that [. . .] judged distance is consistent with the assumption that the target is on the ground plane, [which] has been shown to play a large role in both relative and absolute distance perception" (p. 426). Gibson discussed Fig. 4, lines converging up the page and then bending, decreasing their rate of convergence. In the bottom half of the figure, converging lines depict a ground surface, while the upper half, where the lines converge up the page at a slower rate, suggests the ground has turned into a hill. The lower lines depict the ground as if planks were laid on it. Wu et al. (2007) drew converging lines on a ground surface and observers overestimated the distance to objects on the ground, presumably taking the rapid convergence to suggest parallels going into the far distance. In the Renaissance, this architecture trick was used to increase the apparent size of corridors. Rand et al. (2011) put targets on stands, raising them in elevation. If the stands were visible, observers were accurate about the target's distance. On invisible stands, observers overestimated the distance, presumably only taking the target elevation into account.

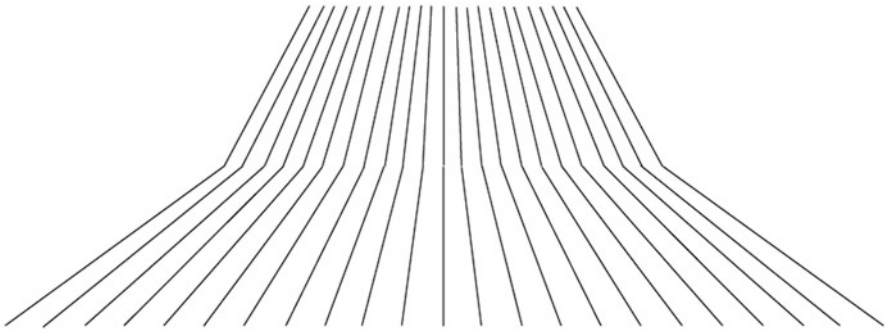

Fig. 4 Ground meets hill slope

Gibson (1950, p. 83) wrote about the "Law of the Visual Angle." According to this law, the azimuth angle "is the reciprocal of the distance (*D*)" to a stretch of ground at a distance. However, in addition, the elevation-extent angle of the stretch of ground "is proportional to $1/D^2$." To study the law for azimuths and its ally elevation, let us introduce an observer of height H standing on a ground, their feet at distance D from the near edge of a square tile. How does distance D to a tile affect the foreshortening evident in Fig. 3? Consider azimuth projections, and then elevation. The edges of the tile have width W. The angle subtended by W depends on D and H, the height of the observer's vantage point. The middle of W is directly in front of the observer and the normal from the observer hits the middle of W. Hence tan A = 2 (.5 W / $\sqrt{}$(H^2 + D^2)), or simply tan A = 1 / $\sqrt{}$(H^2 + D^2), where "H" is the height of the observer. Because height is a constant, the denominator is changed by the square root of D squared, so we can further simplify the expression to tan A ≈ 1/D. Hence, in the distance A gets smaller as an inverse function of D—a linear function.

The angle subtended by the elevation dimension of the tile, "E," is a difference between two subtended angles. The first is subtended by the elevation of the near edge of the tile, "An." The second is subtended by the elevation of the far edge of the tile, "Af." For a distance "D" of the near edge of the tile and a distance "D + W" for the far edge of the square tile of width "W," tan E = tan (Af – An), which can be simplified using the difference formula for tangent to tan E = WH / (H^2 + D^2 + DW). Because width and height are constant, we can further simplify the expression to tan E ≈ 1 / D^2 if D is larger than H and W. Hence, the angle subtended by the elevation dimension is an inverse function of distance squared.

Figure 4 has two rates of diminution of azimuth with elevation. If, instead, the diminution rate increases monotonically and steadily with elevation, Fig. 5 appears—a hill.

If the azimuth diminution rate decreases with elevation, the result is Fig. 6—a concave surface.

Sudden changes in density of the lines in the figure with elevation are sudden diminutions of azimuth angles. These indicate a drop-off (Fig. 7).

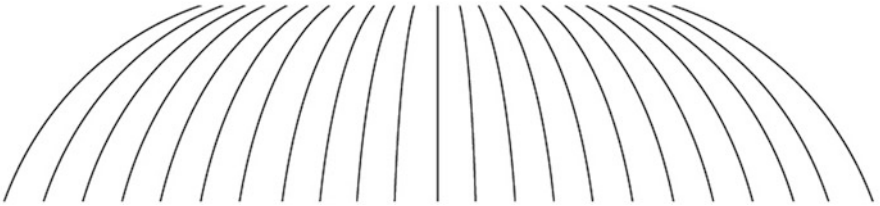

Fig. 5 A hill

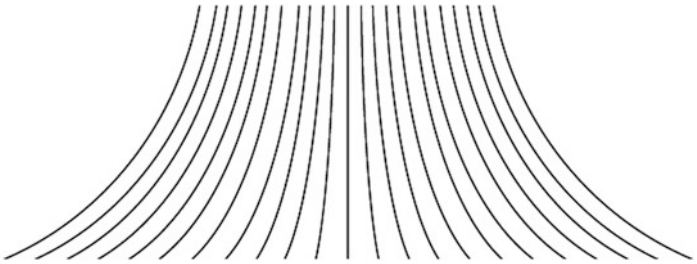

Fig. 6 A concave surface

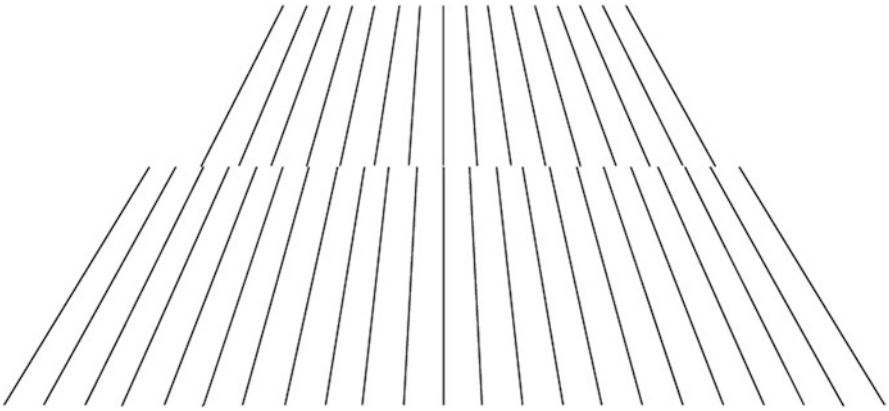

Fig. 7 A drop-off, as if at an edge of a stage with a floor beyond the edge

Diminution of azimuth and elevation compresses the quadrilaterals projected by squares on the ground in Fig. 8a, b, and c. The result is that diagonals in the squares project as obliques closer and closer to horizontal in Fig. 8a as elevation increases. The set of obliques in Fig. 8b are shown explicitly converging to a point on the horizon, showing that they are depicting parallels in the world. A line showing the receding side of a square tile converges towards the central vanishing point and its angle of convergence on the picture surface is labeled in the figure.

4 Perception and Elevation and Azimuth

Perspective is not just a convention. Nor is it purely visual. Elevation and azimuth are to do with the direction of targets. Direction matters to vision, but it also matters to touch. Besides *looking out* for targets, we *reach out* to targets to pick them up. Hence, linear perspective is as relevant to touch as it is to vision (Loomis and Philbeck 2008). It allows blind people to draw pictures showing objects in depth (Kennedy 2008).

To test the claim that both vision and touch are sensitive to perspective and the diminution of azimuth and elevation with distance, we arranged a path of targets, 0.5 m to 6.5 m from underfoot, made observers familiar with the targets, blindfolded them and asked them to point to the targets (Wnuczko and Kennedy 2014). We measured azimuth and elevation of their pointing arm. The targets were circles, in two parallel rows, each successive pair 1 m apart. All the participants were adults. One group viewed the circles before being blindfolded. Another group were blindfolded and then walked between the targets, touching them with a meter-long stick while walking past. Then they returned to one end of the path and pointed, still blindfolded. A third group were blind from early in life. They too explored the targets with the meter rod. Another rod was attached to the participant's arm before pointing, and its position in space was measured as observers pointed to the targets. For all three groups, as distance to the circles increased, pointing azimuths shrank and elevations increased. Pointing azimuth shrank more linearly and pointing

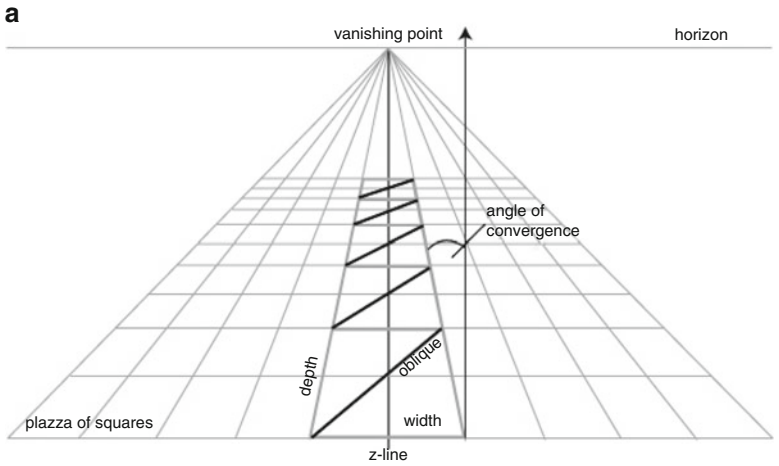

Fig. 8 (**a**) The short obliques are at different angles to the horizontal. However, they converge and come to a single point on the horizon line. Hence, they are parallels on the ground. (**b**) On the picture surface, the obliques are shown converging to a point on the horizon line, explicit information that they depict parallels on the depicted terrain. (**c**) On the picture surface, the erstwhile obliques are depicted by horizontals. The sides of the quadrilaterals converge to points on the horizon line, revealing that they are parallel on the depicted terrain

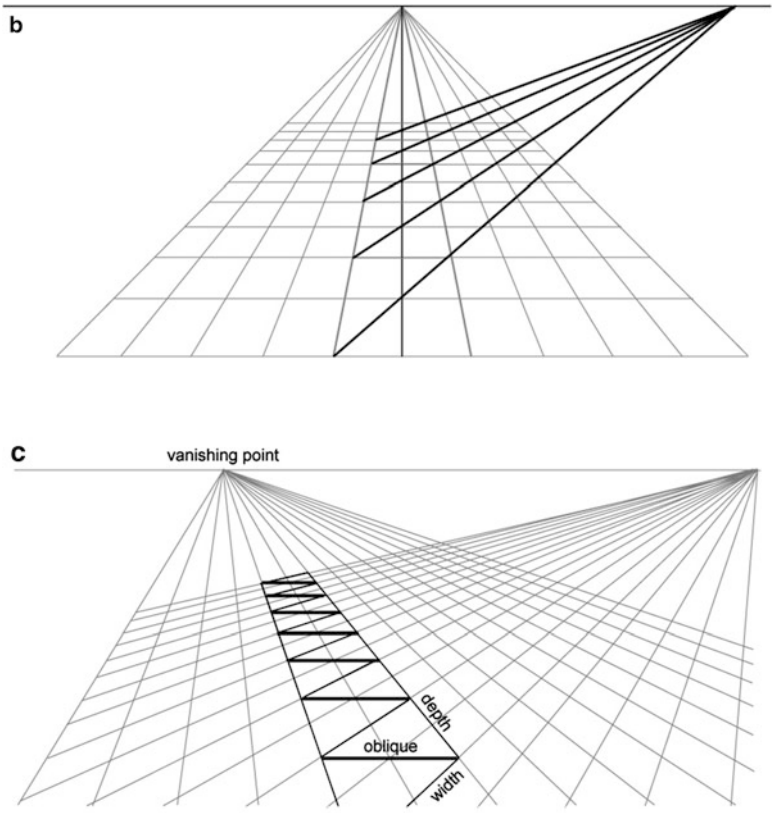

Fig. 8 (continued)

elevation more quadratically. Of interest, there were no significant differences between the sighted blindfolded-after-viewing, the sighted blindfolded-throughout-the-procedure, and the blind. Indeed, the blind increased their pointing elevation from the nearest targets to the further ones by an amount (about 38°) in-between those of the blindfolded-during-touching (about 35°) and the blindfolded-after-viewing (about 40°). Changes in azimuth and elevation specify a surface and vision and touch work along (Loomis and Philbeck 2008).

5 Perception's Biases and Far Surfaces

Vision is a biological device and can only reflect mathematic certainty rather approximately. The result is minor biases in the use of the perfect azimuth and elevation geometry defining optic information. The biases affect nearby ground very

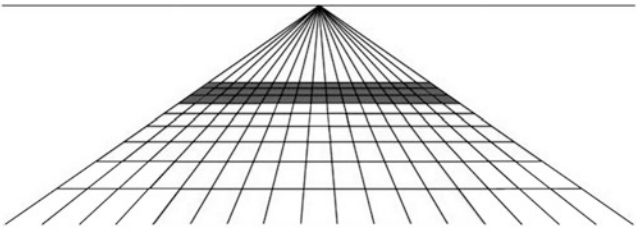

Fig. 9 Piazza with far tiles shown foreshortened

little, but they grow with distance, as shown by the literature on visual impressions of depth and size (Bian and Andersen 2011). Let us examine the consequences.

The central dashed line on a motorway is good visual information for the road's flatness. The stripes, and the distances between them, are uniform. But a driver may be forgiven for having an impression that the very distant stripes on the road, highly foreshortened, look a lot smaller than those nearby. The bicycles painted at the sides of highways are highly elongated. But a cyclist viewing them from far off sees them compressed and squat, it is likely, due to their foreshortening. The arrows on superhighways pointing like > to exits, viewed a kilometer ahead, seem to have sharp arrowheads, thin points, like highly acute angles, perhaps 5°. Come close and the arrowhead, it become obvious, is blunt, its edges forming a very obtuse angle, perhaps 170°.

Figure 9 shows a piazza with distant tiles darkened. Often viewers experience the higher-elevation and apparently-further square tiles as eccentric or brick-shaped (long axis horizontal). A 1 m square may look to be 1 m by .3 m. But further, asked to judge the proportions of the higher-elevation Fig. 9 quadrilaterals, the shapes on the page, which may be about 1 by .1 on the page, observers report them fatter than they truly are. Observers may say they are 1 by .2, as if biased towards the 1 by .3 forms they appear to depict. The distant tiles look slimmer than true, and the forms depicting them look fatter. First, let us consider the false eccentricity of the distant piazza tiles—then, secondly, the forms on the picture surface.

6 Theories of Biases

It may be that the quadratic rate of change of elevation extents is underestimated, compared to the linear change of azimuth (Bian and Andersen 2011). The rate of change at extreme optical slant is underestimated. If so, far distances on the ground (high elevations in Fig. 10) are underestimated. Squares appear as rectangles, long axis in the azimuth. The result is that distant angles appear in error. In Fig. 8a, the diagonals of the distant squares, those at higher elevations, should not seem parallel to the nearby ones at low elevations.

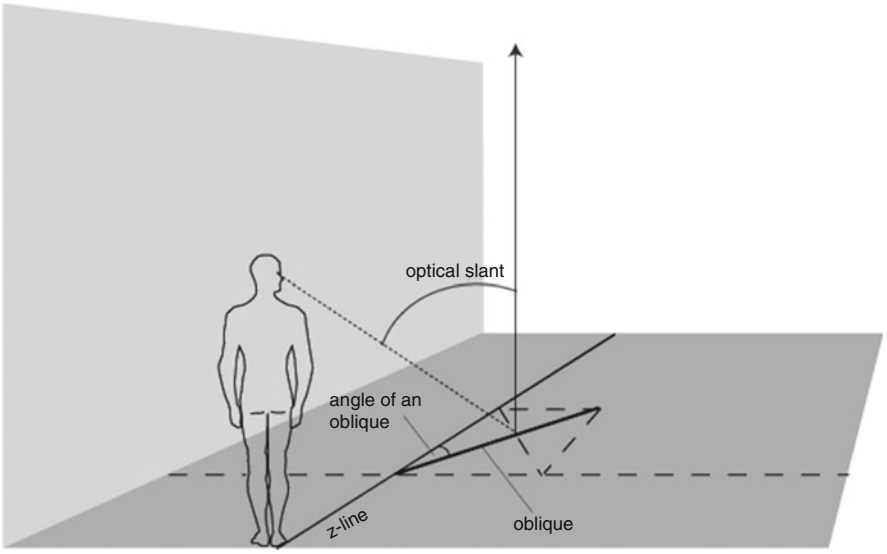

Fig. 10 Observer standing on a z-line with an oblique

Figure 10 shows a person viewing an oblique line, with its near end touching a line running directly away from underfoot, a z-line. Wnuczko et al. (2013) asked viewers to judge the angle formed by the oblique and the z-line. The oblique was set at different angles to the z-line, and its contact with the z-line was at different distances from the observer. Wnuczko, the chief investigator, also varied the distance from the z-line to the observer's vantage point—the "eye-height." If distance is underestimated, the z-line's length is underestimated. The region of surface bearing both the z-line and the oblique is compressed. That compression pushes the oblique towards the azimuth, and the angle between the oblique and the z-line should be overestimated. Imagine the oblique is the diagonal of a 1 m square. The side of the square running in depth is compressed. The oblique of 45° might be seen as 60°. An oblique at 80° to the z-line might be seen as 85°. At a further distance, which suffers more apparent compression, the 45° oblique might look like 80°, and the 80° like 89°.

The results of Wnuczko's experiments were indeed that judged angle was increasingly overestimated as optical slant increased. This was true for ground and wall surfaces, and low and high eye-heights.

Would the same error occur if more information was added? Experiments could be run with several obliques present, all parallel, all at different distances. To detect that all the obliques form the same angle with the z-line, perception can use the information that all the obliques converge to a single spot on the horizon. The bias evident if only one oblique is present can be skirted. That is, distance and angle information—spatial information—comes in many forms. The major task of a theorist and investigator is to find it and to establish what observers can readily use.

7 Bias on a Picture Surface

Pictures were invented in the ice age, roughly 40,000 years ago. Cave artists discovered that pictures can use two surfaces: the real one bearing the daubs put there by the artists and the depicted one—the flanks of, say, a mammoth. The presence of two surfaces in one direction from the viewer offered an unusual task, so new it was not an influence Charles Darwin would have found pressuring homo sapiens during evolution. One could look at the mammoth, or at the daubs. Since the task was new, and not part of our evolutionary history, it may come as no surprise that it is riddled with biases. Notably, perception of the 2D marks on the picture surface is mixed up with what the marks depict in 3D (Koenderink and van Doorn 2003), in the sense that perception of the 2D daubs is biased towards the properties of the 3D pictured surfaces, creating illusions, as Fig. 11 illustrates.

In Fig. 11, on the left, a 2D ellipse depicts a circular surface tilted in depth at 68° to the picture surface. The figure creates an illusion. Using line drawings like Fig. 11, Hammad et al. (2008) depicted circular tops of cylinders with tilts from 5° to 85°. Observers judged the aspect ratio of the 2D ellipses in the cylinder picture as less eccentric than similar ellipses viewed on their own, with no extra lines indicating cylinders, like the ellipses on the right of Fig. 11. That is, perception of the 2D form on the picture surface was biased towards the form of the depicted surface tilted in 3D. Presumably, an illusory bias resulted from cross-talk between two kinds of information presented simultaneously—information for 2D flat features on the picture surface and information for 3D surfaces in a space behind the picture plane (Sedgwick and Nicholls 1993; Koenderink and Van Doorn 2003).

If the 2D form made of lines is seen as being on the picture surface and the 3D form is a surface appearing behind it, they appear at different distances. If two shapes subtend the same angle at the observer, and vision uses linear perspective, the further one should be seen as larger. Axes of the 2D form seen as depicting cords of a circle tilted back in 3D from the picture plane should seem larger than true. The

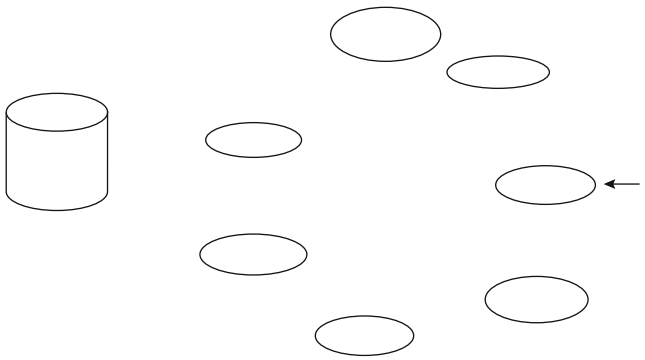

Fig. 11 A line drawing of a cylinder with a circular top and seven ellipses. One matches the line form at the top of the line drawing of the cylinder

illusory effect on the minor axis should be large, since it is highly foreshortened. The effect on the major axis of the 2D ellipse on the picture surface should be small, for two reasons. It is hardly foreshortened, and the contribution from the extra distance of the pictorial depth is minimal, since the pictorial depth is likely slight. The depicted circle could have its near edge at the picture surface and the size of the depicted circle, stretching back from the picture surface, is only about the same size as the major axis.

Figure 11 shows a cylinder and seven ellipses. The ellipse on the far right physically matches the one depicting the top of the cylinder, but observers experience it is too small (Mastandrea et al. 2014), its minor axis not tall enough and its major axis almost but not quite wide enough.

In a study on this illusion (Mastandrea et al. 2014), observers adjusted the size of an ellipse to make it match the one depicting the cylinder's top. The adjusted ellipses were taller than the true size by about 40 % on the minor axis and wider by 5 % on the major axis. The conclusion to be drawn is that observers cannot tell the true size of features on picture surfaces. It seems that ellipses, like other 2D features depicting shapes tilted in depth, are seen biased towards the shapes they depict. Linear perspective creates biases in viewing shapes on picture surfaces.

Untroubled, a Realist can accept that pictures involve many, many illusions. Pictures are artificial and break free from natural-world constraints within which optical information is to be defined. Also, 2D features of picture surfaces only fool us if we restrict ourselves to viewing on the normal to the picture surface. Turn the picture close to 90° and view it at a glancing angle, as if it was an anamorphic. Any 2D dimension of the ellipse can be seen in this fashion perfectly accurately, untroubled by the crosstalk from 3D information. Like walking into a scene, turning an object is a natural way for observers to inspect objects. The result is accurate impressions, a Realist concludes with satisfaction, despite illusions present in relatively immobile and needlessly restricted viewing.

8 Conclusion

In this short introduction to the experience of artworks as representational pictures, which are those that allow the perception of represented surfaces, the key point has been that smooth surfaces are polarized planes that reveal themselves by means of orthogonal optical variations, organized by linear perspective. For extended flat surfaces, angles subtended by elevation extents diminish at quadratic rates with increasing distance and corresponding increases in optical slant, and azimuths at linear rates. Observers use these rates imperfectly, with distance being underestimated, under high optical slants and severe foreshortening. Angles subtended by far-off stretches of ground are compressed and hard to distinguish, and angles inscribed in the stretches of ground appear large, in error, more so with distance. The arrival of pictorial art generated another error. Shapes on picture surfaces are seen as if biased

towards the surfaces they depict. Despite these errors, there is a case to be made that Realism holds for our experiences in the normal world and the experiences we get from representational artworks.

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The Idiosyncrasy of Beauty: Aesthetic Universals and the Diversity of Taste

Patrick Colm Hogan

Abstract There are different senses of the word "beauty." It may refer to a broad social norm or to an individual psychological experience, what we might call "aesthetic response." The main contention of this chapter is that common or universal principles need not mandate nor even entail that everyone has the same experience of beauty. To the contrary, research indicates that the factors underlying aesthetic response predict considerable individual diversity. It initially seems that the search for universals of beauty is both hegemonic and falsely homogenizing. However, it is not hegemonic if we are concerned with aesthetic response, rather than social norms. Moreover, a clear understanding of universals does not preclude idiosyncrasy. In fact, when properly formulated, such universals predict and explain individual diversity.

Keywords Attachment • Beauty • Prototypes • Taste • Aesthetic universals

1 Aesthetic Universals: Some Initial Issues

It seems that we have two choices in speaking about beauty. We can either find universal principles that define and explain what beauty is or we must set it aside as a coherent object of study. However, as soon as one mentions "universals" of beauty, one is faced with an obvious problem—the variability of taste. Professors and students of literature today are likely to phrase the problem in terms of culture, saying that cultures develop radically different conceptions of beauty. This presumption of internal cultural uniformity and external cultural difference is widespread today, but highly problematic on many grounds. (For a discussion of some of these problems, focusing on literature, see Hogan 2003; for a treatment of political problems with the culturalist view, see Eriksen and Stjernfelt 2012.) But one does not need to accept culturalist presuppositions to accept the main point.

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Simply put, tastes differ. Even those of us who share the same general tastes do not always favor precisely the same works of art—and many of us do not share the same general tastes. To some extent, this is a matter of the ambiguous usage of such terms as "beautiful." But not all cases can be explained away so easily.

For example, confining ourselves to facial beauty—one of the areas where universality seems best established—*Maxim Magazine* recently proclaimed Miley Cyrus the most beautiful woman (http://news.yahoo.com/miley-cyrus-hottest-woman-world-photo-153229449.html). For me, she is perfectly fine, but nothing exceptional. In contrast, I recently saw an old film staring the Indian actress Tanuja, whom I found very lovely. But Tanuja has no particular reputation as a great beauty. The same point holds for men. One magazine proclaimed Josh Hartnett the world's most beautiful man (http://acidcow.com/pics/7706-top-100-most-beautiful-men-100-pics.html). When I think of a good-looking man, someone like Raj Kapoor occurs to me, at least at a certain period. However, Kapoor is not renowned for his beauty.

In short, despite research indicating that test subjects judge attractiveness similarly across races (see Zebrowitz et al. 1993), it seems incontrovertible that individually we differ in our tastes. For many of my colleagues, this itself is definitive proof that there are no aesthetic universals. If beauty were a "universal value," then should we not all like Miley Cyrus (or Tanuja) and Josh Hartnett (or Raj Kapoor)? To make matters worse still, when I discuss aesthetic universals (e.g., in talks), I may be faced with the criticism that any universals are necessarily an imposition of oppressive standards—European, male, heterosexual, and so on.

The political objection is important. It is undoubtedly the case that people unself-consciously generalize their own idiosyncratic aesthetic and other preferences. It is important to recognize and respond to this. In a political context, this may have an ideological function. Judgments of beauty may function to denigrate the artistic achievements of other cultures. In a political context, it is important to respond to that denigration practically, in terms of policies and social action. Moreover, in a scientific context, it is important to recognize the full range of aesthetic experience. In other words, the key scientific issue is the importance of non-dominant views as data. It is simply bad science to take, say, European male preferences—or rather the preference of European male professors of aesthetics—into account while ignoring everyone else. But this simply returns us to the issue of idiosyncrasy.

2 Three Meanings of "Beauty"

As a preliminary step in clarifying what is at stake in discussing principles of beauty, we may distinguish three different ways in which the term "beauty" is used. The first and simplest usage is what might be called "essential." This is the use of the term "beauty" whereby it refers to some property intrinsic to the object. A Platonist might say, for example, that there is a form or idea of beauty and all beautiful objects participate in that idea, even if the idea or, for that matter, the objects are unobserved. By this account, there is a fact as to whether Josh Hartnett is or is not beautiful,

just as there is a fact as to whether the stuff in my cup is or is not water (i.e., H_2O). Not being a Platonist, I must admit that this conception of beauty—like other conceptions of objective essences—has no appeal for me. In fact, it seems ultimately a rather bizarre idea since it is not evident that we can relate this "objective" beauty to our subjective sense of beauty in any clear or systematic way. If the essential beauty is not linked with our subjective sense of beauty, it is not clear that we are speaking of the same thing in the two cases. However, if we are speaking of the same thing, then it is difficult to see how we could solve the problem of the diversity of taste. That diversity would seem to suggest that there is no essence or that, when tastes conflict, one person is right and another is wrong. In principle, the latter is possible. However, that leaves us with the problem of how to learn just what the objective essence is. That would seem to lead us into mysticism, which is (to say the least) scientifically problematic.

Another use of the word "beauty" is social and normative. This refers to what is accepted as beautiful in a given group. Knowing the cultural norms of beauty is part of social competence for participation in any group. (I use "cultural" very broadly to refer to the practices of any group—whether a large society or a small clique.) Thus, if I am among American English professors, I can assume that *To the Lighthouse* has high normative status. Personally, I vastly prefer *Mrs. Dalloway* (in fact, I prefer *The Waves* and *Jacob's Room*). Indeed, I do not actually care much for *To the Lighthouse* (I find Mr. Ramsay to be more of a cartoon than a character), while I find *Mrs. Dalloway* to be one of the greatest novels ever. Nonetheless, it is part of my social competence to know that, socially, *To the Lighthouse* has higher aesthetic status. To take a simpler example, extreme slenderness is part of the social norm for female beauty, while muscularity is a social norm for male beauty (see the discussion of body ideals in chapter three of Giles 2010). Since the word "beautiful" is commonly used to refer to the social norm, it makes sense to say, "She has a beautiful body, but I don't care for skinny women" or "He has a beautiful body, but I don't care for muscle-bound men." In contrast, it would be odd to say (of a plump woman), "She has a beautiful body, but I'd prefer her if she were slender" or (of a slender man), "He has a beautiful body, but I'd prefer if he had some muscle."

Colleagues who make political objections to aesthetic universals (e.g., "those on the political left for whom the aesthetic is simply 'bourgeois ideology'" [Eagleton 1990, p. 8]) probably have this socially normative view of beauty in mind. This is the area where political objections to "universalism" have their greatest force. For example, reflecting one segment of European norms, Thomas Babington Macaulay (1835) made a famous statement that "a single shelf of a good European library was worth the whole native literature of India and Arabia." This is the sort of statement that involves a specifically "hegemonic universalization" (as Lalita Pandit might put it [see Pandit 1995, p. 207]), an extension of one set of social norms to other societies. The same thing happens not only with nations, but also with classes and other groups. This is clearly problematic and an apt topic for political analysis and response.

On the other hand, none of this means that social norms are wholly outside the realm of universality. The issue is the level at which universality enters. Most

obviously, social norms may differ in their particulars while remaining open to explanation in terms of universal principles. For example, there is a commonplace that the dominant views in a society are the views of the dominant class (e.g., this is implied by most uses of "hegemony" [see, for example, Williams 1985, p. 145 on the generality of hegemony]). Thus, bourgeois aesthetic norms are often seen as becoming dominant with the rise of capitalism; English aesthetic norms become dominant in English colonies, and so on. In some cases, the production of aesthetic norms may be understood as more complex and indirect, but still a matter of historical variations on dominant social conditions. For example, Watt argues that "The novel's serious concern with the daily lives of ordinary people" depends on "general conditions." The first of these is that "the society must value every individual highly enough to consider him the proper subject of its serious literature." This condition arises with "individualism," which is itself contingent on "the rise of modern industrial capitalism and the spread of Protestantism" (Watt 1957, p. 60). Other writers stress a different sort of complexity with resistant norms always playing a role, often in relation to politics. For example, having emphasized dominant discourse in *Orientalism* (Said 1978), Edward Said developed the topic of "cultural resistance" (Said 1993, p. xii) in *Culture and Imperialism* (see in particular chapter three). Susan Faludi has argued that social norms of female beauty, such as extreme thinness, have a role in sustaining patriarchy—and those norms change "during periods when the culture is more receptive to women's quest for independence" (1991, p. 204). In all these cases, we see general principles linking social norms of aesthetics to social domination and, for some, resistance to such domination. In each case, this is a form of universalism.

In the remainder of this essay, we will only give passing attention to social norms of beauty. Our focus will be on the third, the *psychological* sense of "beauty," what we might equally call "aesthetic response"—what one finds beautiful. Problems of idiosyncrasy arise most obviously for this psychological sense. If our psychological responses to beauty are different, how can there possibly be (psychological) aesthetic universals? However, our brief sketch of social norms in beauty has already indicated that variability need not be incompatible with universal principles, since the principles and the variability will occur at different levels—just as the law of universal gravitation and specific trajectories of gravitational motion occur at different levels in physics. We would not say that there is no universal gravitation because, in ordinary atmosphere, it takes longer for a feather to fall than a bowling ball. Here, as elsewhere, divergence in manifestation in no way contradicts universality in principles.

Indeed, one could go further in the case of psychological principles. When dealing with psychological response, we are almost necessarily dealing with a wide range of factors bearing on perception, memory, inference, emotion, and other systems and processes that are sometimes highly divergent from person to person. These all involve possible variability and their interaction only multiplies that variability. For instance, it seems to be the case that emotional response involves at least three factors: innate propensities, formative critical period experiences, and specific emotional memories (see chapter two of Hogan 2011b). The first

will vary somewhat across individuals. The second will vary more significantly (e.g., there will be differences between secure and insecure attachment). Finally, specific emotional memories, though perhaps the least consequential, may vary considerably. Our experience of an artwork (e.g., a novel) clearly involves complex interactions of all components of emotional response, not to mention other variable cognitive processes. Indeed, the same point seems to hold even for our response to facial beauty.

Given the preceding points, it would be very surprising if universal principles predicted uniformity of aesthetic response. In fact, the nature of psychological processes predicts that universals of aesthetic response will lead to diversity in individual feeling. Put differently, given the complexity of the human mind, uniformity of response would seem to entail difference in principles, not uniformity of principles. To take a simple example from outside aesthetics, imagine that there is some life-threatening crisis. There are two mothers, Jane and Sally, each with her own child, baby Jane and baby Sally. Faced with the crisis, Jane tries to save baby Jane. If Sally tries to save baby Sally, then she is doing something different from Jane, but following the same general principle (roughly "Save your own child first"). In contrast, if she tries to save baby Jane, then she is engaging in the same manifest behavior as Jane (saving baby Jane), but it seems clear that she is not following the same principle. In short, far from being inconsistent with variability in taste, a cognitively based set of universal principles of taste would seem to predict such variability. In the following sections, we will consider just what variability it predicts.

3 Aesthetic Response and Idiosyncrasy (I): Pattern Recognition and Endogenous Reward

In earlier work, I have argued that empirical research on beauty suggests that aesthetic response involves a complex integration of cognitive and emotional factors (see 2013 and 2014). Specifically, there seem to be two key cognitive processes in aesthetic response and two key emotional systems. As to the first cognitive process, some research points to non-habituated pattern recognition as central to some aesthetic response, most obviously in music (see Vuust and Kringelbach 2010; this is presumably the principle operative in a range of other aesthetic experiences as well, ranging from decorative art to mathematics). Non-habituated means that we have not come to fully anticipate the pattern, but must discern it in the course of our experience. Or, rather, it may be that we do anticipate the pattern for background phenomena (e.g., a drum or bass sequence); however, we come to discern the pattern in foreground elements or phenomena that are the object of attentional focus (e.g., melodic variations) in the course of experience.

This cognitive aspect of aesthetic response appears to be connected with activation of the endogenous reward system (see Vuust and Kringelbach 2010, p. 266).

The reward system governs seeking behavior and is related to our experience of pleasure (on reward "wanting" and reward "liking," see Fareri and Delgado 2013, p. 446). Like other emotional responses, the intensity of reward system activation is presumably connected with the gradient of change in the "eliciting conditions" for the emotion. In general, the intensity of a final emotion is affected by the change from a prior emotion. If, on being called to the Department Head's office, I anticipate being told that I won an award, I will respond differently to the announcement of the award than if I anticipated chastisement (cf. Ortony et al. 1988, p. 72 on disappointment and relief in relation to effort; the point seems generalizable to more passive conditions of anticipation). If, in aesthetic response, reward system activation is produced by pattern recognition, then one would expect the intensity of the response to be in part a function of the rapidity and extent of the change from disorientation to pattern recognition (as well as the effort involved, as Ortony et al. [1988] suggest). By "rapidity," I mean the timing. Intuitively, it seems that there is a certain temporal window in which pattern recognition has the right effect. A comparable case might be the understanding of a joke; it is only funny if one understands it immediately after the punch line, but usually not if one understands the pattern only after reflection on the joke. By "extent," I mean the degree of change from incomprehension to comprehension. Recurring to the example of a joke, it seems clear that our enjoyment of a witticism is diminished to the degree that we anticipate the punch line or anticipate features of that punch line.

We have here a very complex universal principle, or candidate for a universal principle, of aesthetic response. By this principle, aesthetic pleasure involves the following components (slightly elaborated beyond the foregoing): (1) a focal object and (often) a background object; (2) consistent pattern recognition for the background object; (3) non-habituation to the pattern in the focal object; (4) a shift from some degree of disorientation to fuller recognition of a pattern in the focal object within a certain temporal window; (5) reward system activation. There are undoubtedly other factors as well, for example, (6) limitation of the aversive quality of disorientation (as severe disorientation may lead to such aversive response that it inhibits subsequent pleasure at pattern recognition). The list here is not meant to be complete, but to indicate some of the complexity at issue. The key point for our present analysis is the following. This complex principle, with its multiple components, is a plausible, empirically supported candidate for a universal aesthetic principle. One may reasonably argue that an experience satisfying this principle gives rise to aesthetic enjoyment across cultures and historical periods. But it is clear that there will be a great deal of "output variation" in the application of these principles in particular circumstances. In other words, there will be considerable individual variation in aesthetic response.

We may consider the components in turn. First, there is the difference between a focal object and a background object. This would seem to be relatively uniform across individuals. However, it is not. Consider Hindustani classical music. A typical performance will include a drone playing the main notes of the piece, a drum, and a solo instrument or a vocalist. Even listeners unfamiliar with Hindustani music are likely to focus their attention on the solo instrument, allowing the drone

and drum to provide a patterned frame that aids in discerning motivic variations from the main instrument. For most of a performance, this makes sense. However, at a certain point, the instrumentalist may cede the floor to the drummer. At this point, the instrumentalist is likely to repeat the same motif over and over, allowing the drum to engage in variations. Listeners familiar with Hindustani music will shift their attention to the drum, relegating the instrumentalist to the background, where his or her repetitions will help to frame the variations in the drum. However, other listeners will often fail to do this, thus producing a different response.

Even when listeners have the same foreground and background object, they may not have the same degree or kind of pattern recognition. For example, when I teach Hindustani music, I generally find that most students are sensitive to the pulse of the drumming without instruction. However, few if any are sensitive to its cyclic quality, the repetition of the drumming pattern after a fixed number of beats. Put differently, a few students could not even tap their foot to the beat of the music. Most could do this; however, they could not say when a rhythmic cycle began or how long it extended (seven beats? eight beats? twelve beats?). This is important because part of the aesthetic pleasure one experiences in listening to Hindustani classical music involves ways in which the rhythmic cycle creates, frustrates, and fulfills expectations for the resolution of melodic improvisations on the main instrument. One misses this entirely if one responds only to the pulse and not to the cycle.

Technically, this is a matter of "encoding." Encoding is the process whereby our mind *selects* elements of experience, *segments* them into units, and *structures* them into relations with one another. Encoding is a process that recurs at various levels of processing. For example, visual neurons are sensitive to only certain aspects of the environment. They fire only in the presence of certain phenomena—for instance, a line with a particular orientation in a particular area of the visual field (see Wurtz and Kandel 2000a, p. 534). Thus they select only that information. Through "lateral inhibition" (reducing the likelihood that neighboring neurons will fire [see Tessier-Lavigne 2000, p. 521]), they enhance the salience of that line, thus making an object's edge clearer to perception. This is a form of structuring. At subsequent levels of processing, some configurations of lines are selected and further structured, producing object perception (see Wurtz and Kandel 2000b, pp. 564–565). In the case of Hindustani drumming, my students were not encoding the rhythmic cycles; their encoding stopped with the rhythmic pulse and did not extend to the cycle.

Encoding affects one's response to focal phenomena as well. First and most obviously, degree of encoding will affect one's pattern recognition. A simple case is variation on a theme. In Hindustani classical music, as in most if not all other traditions of music, a great deal of the aesthetic pleasure results from ornamentations, juxtapositions, and/or transformations of motifs. When the scales overlap with those used in Western music and the instrument is familiar (e.g., a flute), my students seem to find it easier to hear at least some of the motifs in the instrumental performance. However, if the scale is very different and/or the instrument is unfamiliar, this becomes more difficult. For example, perhaps disoriented by the strangeness of the scale (roughly, F, G♭, A, B, C, D♭, E), they may be unable to discern the main motifs of rāga Lalit. In consequence, the only

pattern they hear is very general—a single instrument playing with a drum and a drone—and is therefore likely to give rise to habituation (and boredom) swiftly. A related problem may occur when the scale is more accessible, but the instrument is unfamiliar (e.g., a vīṇā) or the soloist uses unfamiliar techniques (such as ongoing oscillation around scale tones in vocal performance). In connection with this, my impression is that, at least initially, students find it difficult to encode the difference between part of a motif played by plucking different strings and the same notes played by gliding from one note to the next by stretching a single string. What strikes them as mere repetition (thus a potential source of habituation, thus boredom), strikes me as a variation.

Finally, it seems clear that we have not only different degrees of pattern recognition and disorientation, but also different degrees of sensitivity to enjoyment of pattern recognition (i.e., different degrees of reward system reactivity) and different degrees of aversion to disorientation. Moreover, there are variations in the precise timing of our pattern recognition, even in cases when that recognition is shared. Even very small differences in timing could make a great difference in the degree of pleasure or aversion. I may get the joke only a fraction of a second after you do, but that fraction of a second may be enough to make the joke not terribly funny for me and hilariously successful for you. Moreover, there is undoubtedly some difference in the degree to which aversive emotional responses linger. Perhaps my irritation at disorientation lasts longer than yours, inhibiting my subsequent pleasure at pattern recognition, thus dampening or even overcoming my enjoyment.

In short, it seems clear that the apparently universal aesthetic principle of non-habituated pattern recognition entailing reward system involvement is not merely compatible with variety in aesthetic response. It actually predicts such variety. The same point holds for the second main cognitive process and the second emotion system that seem to produce aesthetic response.

4 Aesthetic Response and Idiosyncrasy (II): Prototype Approximation and Attachment

While some research points toward non-habitual pattern recognition as definitive of aesthetic pleasure, another set of studies points toward prototype approximation. The difference may be a matter of single versus distributed targets (e.g., faces versus decorative art, such as calligraphic ornamentation), with music counting as a paradigmatic distributed target. Another possibility is that it is a matter of differences in processing streams, where the prototype-approximation condition applies to the ventral or "what" pathway while the pattern-recognition condition applies to the dorsal or "where" and "how" pathway (on the pathways, see Wurtz and Kandel 2000b, p. 548; for a different account of the possible relevance of these pathways in aesthetics, see chapter eight of Ramachandran 2011). In any case, we seem to respond to different targets as aesthetically pleasing depending on their conformity to one of these criteria.

Prototype approximation is the degree to which a given target is or is not similar to one's prototype of the relevant kind of object. A prototype is roughly an average case and it is often discussed as an average case (for a concise account of prototypes, see Rosch 2011; on prototypes and averaging, see Mcleod et al. 1998, p. 63). However, it seems clear that the "averaging" process here is complex. For example, diet foods would include a range of items, from low-fat chicken to butterless vegetables. Clearly, an actual average of these foods would have a certain number of calories. However, for many people, the most prototypical diet food is zero-calorie lettuce (see Kahneman and Miller 1986, p. 143). This suggests that there is not simply an averaging process, but some sort of weighted averaging. Thus our minds do not count all instances of a given kind equally. Rather, we seem to give greater weight to some instances over others. A number of factors may contribute to this weighting. In *Understanding Nationalism* (Hogan 2009), I isolated five factors that seem to govern the degree to which one identity category is more important than another. These were saliency, functionality, contrast, emotional force, and durability (the list is not intended to be complete). The same factors are likely to be operative here, given that both are a matter of categorization, with each factor having an effect on prototyping. For example, the function of a diet food is to reduce caloric intake. Thus the most highly functional diet food would be the one with the least calories. Emotional force seems particularly important. If one has wretched memories of choosing to snack on lettuce leaves rather than one's favorite dish of crispy, deep-fried pork fat, that will likely have more force in defining the prototype than memories of choosing chicken over beef for one's main course. Prototypes also differ from actual averages in that they may vary with context. As Kahneman and Miller point out, in the context "Manhattan apartment," the prototypical dog will be rather different from that in the context "a farm in Maine" (1986, p. 140). In keeping with this, in the context of "dessert," the prototypical diet food is not lettuce, but perhaps non-fat frozen yoghurt.

There also seems to be a difference between continuous and discrete domains for prototypes. In discrete domains, the prototype may be readjusted from a weighted average to a particular sub-category. That may be the case with lettuce, clearly a discrete sub-category of diet foods. In contrast, categories that govern relatively continuous domains may be closer to actual averages. For instance, at least on certain dimensions, a prototypical cup would probably be about average height and width, rather than a particular sub-category of cup.

Returning to aesthetics, we find considerable research linking prototypes—or, in some cases, averages—with beauty (see Hansen and Topolinski 2011, p. 710 and citations). The results are very robust, ranging from faces (Langlois and Roggman 1990) to colors (Martindale and Moore 1988, p. 670) to cars (Halberstadt and Rhodes 2003) to performances of sonatas (Repp 1997). There are two problems with some of this research, however. The first is that it often does not distinguish averages from prototypes. Thus the research on facial beauty by Langlois and Roggman (1990) stresses averages. However, Russell's (2003) work indicates that enhancing facial luminance differences between men and women enhances aesthetic appeal (see also Rhodes 2006). In other words, making the women's faces more

"feminine" in facial luminance makes them more appealing, whereas the opposite is the case for men's faces. This points toward prototypes, with their weighting of contrasting features by category, rather than strict averages. The point is related to Ramachandran's observations on beauty. His example of Tamil statuary (2004, p. 42) provides a case in point, as does classical Greek sculpture. We may instance, for example, a Standing Parvati (from Tamil Nadu, India, during the Chola Period of the ninth to twelfth century C.E. [see http://commons.wikimedia.org/wiki/File:MET_Standing_Parvati.jpg]) and Polykleitos's Spear Bearer (from Greece, fifth century BCE). Anyone who has visited a beach or a locker room should recognize that these are not strict averages, but enhance distinctive female and male properties respectively.

In sum, we have good reason to posit prototype approximation as a universal principle guiding aesthetic response (i.e., a feeling of beauty; response to art is clearly much broader than a response to beauty). What does this tell us about variability in taste? That variability is not likely to be random or unconstrained, since our prototypes are unlikely to diverge too massively. They will be constrained by averaging (which, again, enters into prototypes) and by certain broad tendencies, such as enhancement of difference from contrasting categories, such as *male* or *female*. (On the last point, in addition to the works cited earlier, see also Chatterjee's discussion of Ramachandran on "peak shift" or the enhancement of response to distinguishing properties [Chatterjee 2014, pp. 45–47.]) Nonetheless, as with non-habitual pattern isolation, the principle predicts considerable difference in particular aesthetic responses. Here, too, the nature of the universal is such that it in effect requires at least some diversity in its particularization.

It may seem that the result of tacit averaging processes should be the same across individuals. But our averaging processes are not self-conscious, statistically strict procedures. They are, rather, implicit, heuristic processes. Crucially, they do not begin with a random sample, but with individual memories. Even if all individual memories counted equally (which they do not), there would be significant differences across individuals' sets of memories. Consider the case of facial prototypes (the same points hold for all relevant prototypes—for example, prototypes relating to stories). First, we see different people (read or hear different stories, and so on). Second, and perhaps more importantly, we see people with different frequencies. It is possible that we average our observations across individuals. However, it seems more likely that we average our observations across instances—or, at least, that frequency and duration of experience affect the average. Suppose I see Jones ten times every day, Monday through Friday, sometimes meeting for long conversations on weekends. In contrast, I briefly passed Smith in the hallway. It is possible that Jones's face and Smith's face will each count equally in my implicit facial averaging and in the formation of a facial prototype, since each is one individual face. However, it seems far more likely that my implicit averaging will be an ongoing process, affected to some extent by each reappearance of Jones, but only by the single appearance of Smith—thus counting Jones much more than Smith. In short, the sets across which we are averaging are very different.

Second, it is at least possible that there are critical period experiences in prototype formation. Critical periods are developmental stages when cognitive or affective systems are subject to particularly formative experiences. For example, experiences during the critical period for language acquisition largely determine the languages in which we will have native speaker fluency. We may learn other languages at later ages, but with much more effort and usually far less success. It is at least possible that something like this occurs in childhood with beauty—not that our beauty-defining prototypes are fixed forever in the first few years of life, but that early experiences may form an initial prototype or set of prototypes that have a great degree of influence on later prototype formations. In other words, early prototype formations may bias later averaging processes. This is particularly consequential as it seems likely that infantile experiences are, if anything, more idiosyncratic than adult experiences, given that infantile experiences tend to be more limited.

Third, writers in situated cognition have shown that, in actual practice, our interactions with the world do not simply involve fixed cognitive structures applied uniformly to experiences with the external world. Rather, our cognition is constantly changing and reforming itself in ongoing interaction with the world (see Robbins and Aydede 2009). Cognitive processing could hardly be different in aesthetic response. Thus our formation of prototypes does not occur once and for all. Each new experience alters our prototypes. Indeed, following Barsalou (2009, p. 244), we might infer that, to a great extent, our prototypes are formed ad hoc and in specific contexts, more strongly influenced by recent cases than would be the case if this were a matter of simple averaging. In terms of facial prototypes, this means that the context of faces we have recently seen is likely to alter our prototypes and thus our sense of just what approximates the relevant prototype. Here, as elsewhere, the point holds for a range of cases, not just facial beauty. Moreover, perhaps in contrast with Barsalou, I suspect that the effects of context may not only be short-term, but medium-term as well. For example, a student or teacher's response to a particular literary work is in part dependent on what other works are being read in the class. Such effects would probably be a matter of what works are given particular activation in reading the new work. The extended context of the class as a whole would tend to make other works from the class more salient, thus more significant for averaging.

The mention of salience brings us to another set of output differences, those connected with weighting variables—again, beyond salience, these include durability, function, contrast, and emotional force. Durability is the most equivocal. The idea here is that objects involve properties and conditions. Our minds abstract from the changeable conditions, isolating what is durable. To take a simple example, different directions and sources of light will affect a face—for example, what parts are illuminated and what are shadowed. In forming an image of the face, our minds in some degree subtract the lighting effects (if they did not, we would find it difficult to recognize someone in different lighting conditions). This process should repeat itself across faces, leading to prototypes that bear on enduring features of faces rather than ephemera. As far as I can tell, people generally abstract from circumstances in much the same way, so this is largely irrelevant to the issue of diversity in output. Indeed,

the most interesting issues here concern why we find certain sorts of lighting or other ephemera more aesthetically pleasing. This could be because the situations are more prototypical or, what is perhaps more likely, that they make the target appear more prototypical.

Function is of somewhat limited value here as well. Responses to functionality appear, in general, fairly uniform. Perhaps the main differences involve professional or related specialization. Literary critics will view some features of a work as functional in that they will contribute to teaching or research; authors will encode some aspects as functional in inspiring their own creativity, or inhibiting it. These functional emphases are likely to lead to certain features of works and certain types of work entering significantly into the prototype formation of professionals in a way that they do not enter into the prototype formation of non-professionals. This is important because it suggests one reason why it is likely that there will be a difference between professional and non-professional tastes. (Other reasons include different sorts of habituation and different skills at encoding and pattern recognition in a particular area. Some of the complexity of the issue is brought out by Nodine et al. (1993). Though they formulate their findings in different terms, their research may suggest that there are differences in preferred type of aesthetic process, with art-trained viewers of paintings stressing pattern-recognition across figures rather than prototype-approximation of figures.)

The point bears most obviously on complex works of art. However, it extends well beyond that. An amusing example concerns a lab technician's observation, after a colonoscopy, that a relative had a "cute colon." She showed me the photograph, to which I actually had a mild disgust reaction, and certainly did not experience aesthetic pleasure. Presumably what was going on was that the lab technician had seen so many colon pictures that she had formed a prototype. In addition, the lab technician's assessment of the aesthetics of internal organs was also in part a matter of contrast. She not only had experience of colons generally, she had experience of healthy and unhealthy colons. Indeed, her categorization here was presumably not simply "colon," but "healthy colon" versus "unhealthy colon." The features of a healthy colon were weighted due to their contrast with unhealthy colon features. The reader will no doubt be delighted (if also moderately repulsed) to learn that the relative in question had a very healthy colon indeed. This contributed to the laboratory technician's aesthetic evaluation. When profession-related differences occur, they may be highly significant, as in this case. However, they remain a somewhat limited case.

As this example suggests, contrast is inseparable from categorization. The point holds outside medicine, as indicated by Russell's research on male and female faces (Russell 2003). Indeed, categorization and contrast are among the most important variables in aesthetic response. If one's aesthetic response to a target is in part a matter of prototype approximation, then clearly categorization is crucial even independent of contrast, because categorization determines just what prototype is activated. If you and I categorize a target differently, we are likely to have different aesthetic responses. The point is suggested by a popular Hans Christian Andersen story, "The Ugly Duckling" ("Den grimme Ælling" [Andersen 1949]). In that story,

a poor, orphaned waterfowl is thought to be quite unaesthetic, until he is recognized as a swan, rather than a duck. One way of understanding the story is in terms of categorization and prototype approximation. "Duck" and "swan" activate different prototypes. While the "ugly duckling" did not closely approximate a prototypical duck, he did closely approximate a prototypical swan.

The point is not confined to commonly shared categories, such as *duck* and *swan*. Indeed, it applies perhaps most significantly to more or less fine-grained subcategories, including professional subcategories. Research on emotion categorization has shown that the more or less fine-grained quality of our emotion categorizations affects the experience and course of those emotions (see Lindquist and Barrett 2008). We may expect the same sort of consequences for categorization and subcategorization elsewhere. For example, when Northern Europeans first saw sub-Saharan Africans, they had no option but to categorize their faces in the same way that they categorized their own faces. Since there were highly salient ways in which Africans deviated from the statistical average for Europeans, they were very likely to find Africans ugly, at least in those respects. The same point holds for sub-Saharan Africans seeing Europeans. This would change either when the unusual group (whether Africans or Europeans) began to affect prototype formation on the part of the home society or when members of the home society formed subcategories with associated prototypes, such that they began implicitly or explicitly to judge a "beautiful European face," a "beautiful African face," and so on. In keeping with this, research indicates that "ratings of facial attractiveness" are consistent "across ethnicities and cultures" (Chatterjee 2014, p. 7) when the groups involved are not isolated from one another. In contrast, the limited contemporary research on the topic indicates that, when the groups are isolated and there are differences in appearance, then aesthetic response differs (see Chatterjee 2014, pp. 7–8 and citations). This contemporary research is of course supported by historical materials related to colonialism and other early contact (e.g., the association of black skin with ugliness in Shakespeare's *Othello*, as in the characterization of Othello as a "sooty [. . .] thing" who gives rise "to fear, not to delight" [Shakespeare 1986, I.ii.69–70]).

The importance of categorization and contrast extends beyond faces, encompassing for example artistic movements and literary genres. Categorizing a particular work as "a painting" or even "a painting of the Madonna and child" may produce a very different effect than categorizing it as "early Mannerist," since the relevant prototypes would differ, as would the ways we encode the features of the work itself (the importance of categorization is stressed particularly by Carroll [2009], in a different theoretical context). Indeed, categorization generally affects both prototypes and the encoding of the target. Consider an example from narrative. The Indian film *Fanaa* concerns a Kashmiri revolutionary and a young, blind Kashmiri woman. They meet, apparently fall in love, and culminate their relationship. The revolutionary then leaves the woman and rejoins the revolution (after securing medical care to restore her sight). The ending of the film reunites them briefly, before the woman has to kill the revolutionary to prevent a possible terrorist attack. Though the film has many serious flaws, I probably find it much more aesthetically successful than would many other viewers, largely because I categorize it as a seduction plot. (The seduction plot

is a cross-cultural genre wherein a man seduces and abandons a woman, who often pursues him, with one or both often dying. On this genre, see Hogan 2011a, pp. 210–220.) Without this categorization and associated prototype, viewers are more likely to see the film simply as a loosely romantic melodrama. (I should perhaps note that, in this case, my response is complex. It combines prototype approximation and non-habituated pattern recognition, which is probably common in our response to works of art.)

The last variable that affects averaging is affective force. We would expect prototype formation to be disproportionately guided by strongly emotional instances, as opposed to neutral instances. It is well established that emotionally consequential instances tend to overwhelm statistical information in judgment tasks (see Nisbett and Ross 1980, p. 15). The formation of prototypes would seem to involve processes of the same general sort. In the case of aesthetic response, we may expect another emotional factor as well. The research we have been considering often treats prototype approximation alone. But presumably prototype approximation fosters a feeling of beauty only when it is connected with the right sorts of emotion. For example, prototypes related to disgust-provoking objects should not produce aesthetic delight. This may seem contradicted by the laboratory technician's comment about the colon picture. However, once again, she presumably subcategorized colons into "healthy" and "diseased." It seems highly unlikely that she would have found beauty (or "cuteness") in a picture of a colon showing a high degree of disease prototypicality.

In the case of the colon photograph, the emotions at issue are presumably joy and relief. The context of such an evaluation is rather like that of a story where a possible tragedy is reversed in a comic conclusion. The difference is that the fate of the protagonist in the technician's story is real and not merely simulated. This example suggests that aesthetic pleasure may arise with prototype approximation involving positive emotions generally, perhaps due simply to reward involvement.

However, there is some evidence that one sort of positive emotion is perhaps particularly significant for aesthetic feeling. That emotion is attachment, the sort of bonding one feels in parent/child relations, companionate love, and as one component of romantic love. (On the evidence here, see Hogan 2014a, b and Koelsch 2013, pp. 293–295.) If indeed attachment is especially important in fostering a feeling of beauty, then we would expect prototypes with a strong attachment component to be particularly germane to aesthetic response. More exactly, we would expect to find that the relevant prototypes stress attachment-based memories in averaging. These memories may concern literary works to which we feel attachment, places or characters to which we feel attachment, or real people to whom we feel attachment. In the case of facial beauty, for example, it would seem that our prototypes bearing on aesthetic feeling should stress the faces of attachment figures. Here we have another source of individual output variability, since our attachment figures differ greatly.

In my view, the attachment variable is likely to be the most important. Some authors appear to agree. I have argued elsewhere that in *Mrs. Dalloway*, Woolf presents an implicit account of beauty as largely attachment based (Hogan 2013).

Sappho wrote that people say many different things are beautiful, but her claim is for "whatever one loves" (Barnard 1958, p. 41). Shakespeare suggests the point in sonnet 130—"My mistress' eyes are nothing like the sun [. . .] And yet, by heaven, I think my love as rare/As any she belied with false compare" (in Bevington 1992, p. 1643). Taking up a broader, cultural source, Khan recounts that, when the legendary Arabic lover, Majnu, was asked about how he could be entranced by Layla's beauty since, in fact, she was "rather plain," he responded, "My Layla must be seen with my eyes" (1997, p. xxi). In each case, the point seems to be that a sense of beauty is bound up with attachment, at least in particular cases. The present analysis adds to this observation the idea that a history of attachment bonds might actually affect the prototypes through which one responds to targets as beautiful or not beautiful.

When I first began formulating these ideas, I was struck by the degree to which they explained my judgments about faces. Beyond faces, my sense of literary beauty seems to be affected by books that I "love"; cinematic beauty, by films that I "love," and so on. Sticking to the case of faces for the moment, it seems clear that my aesthetic response to Tanuja is in part the result of my attachment relations to my wife over the course of the past three decades. Lalita (see http://www.koausa.org/Books/Sukeshi/index.html) is clearly more similar to Tanuja than to Miley Cyrus. Indeed, the effect of my attachment relation here is made even clearer if I contrast Tanuja with a woman that I considered strikingly beautiful when I was 15, Joey Heatherton. In looking at these faces, I am struck by the degree to which the young Heatherton resembles Cyrus, suggesting that my aesthetic response at 15 was much closer to that of *Maxim Magazine* than after 30 years of attachment bonding.

The case of my wife indicates that prototypes for aesthetic response may be altered in adulthood. However, the case with my male prototype may be different. Here, the obvious connection is with my father (see Fig. 1), my primary attachment object in childhood.

(Though not shown in this photograph, for many years my father even had pencil moustache, making his appearance even more similar to that of Raj Kapoor. I should note that I picked Tanuja and Raj Kapoor as good examples of my aesthetic response before I thought of explaining my aesthetic preferences in terms of attachment bonds.) This may point to the importance of critical period experiences. Indeed,

Fig. 1 The author (age 23 months) and his father

as my primary attachment figure, my father may have contributed to my larger prototype of a beautiful face. It is striking to me that the putatively most beautiful man and woman, Josh Hartnett and Miley Cyrus, actually look somewhat alike. In contrast, my own choices for aesthetic preference—Tanuja and Raj Kapoor—are somewhat similar as well. This suggests that people may have a broader, non-gendered facial prototype that is to some extent particularized and differentiated into gender-specific prototypes in contrastive sub-categorization. If so, then it may be that my critical period experiences facilitated the adult change in my aesthetic prototype. Put simply, my wife's face exerted a greater effect on my facial averaging in part because its effects were not entirely dissimilar to those of my father's face—a striking case of complex, variant responses developing through universal principles.

Of course, it is difficult to say just how critical period experiences bear on works of art, as opposed to faces. It is possible that such experiences affect some domains of aesthetic response and not others. However, critical period experiences are clearly central to attachment. In consequence, if attachment is indeed crucial for a feeling of beauty, it seems likely that critical period experiences are important for our aesthetic response to works of art, at least in this respect. To take, once again, a personal example—some of my most intense aesthetic experiences bear on mystical literature, such as the poems of Rumi. Moreover, I seem to have a particular preference for mystical poetry relating to female divinity, prominently including many Bengali Goddess poems (see McDermott et al. 2001), which stand (perhaps with Rumi) as a paradigm of aesthetic excellence for me. This is to some degree surprising, since I am not religious. However, my earliest aesthetic experiences were bound up with Catholicism, and particularly to my family's Marianism, with its specific devotion to Our Lady of Częstochowa, or the "Black Madonna." It seems likely that these critical period experiences are affecting my current aesthetic preferences in literature and art.

5 Conclusion

In sum, it may seem at first that any assertion of aesthetic universals is undermined by the diversity of taste. However, this apparent contradiction dissolves when we examine the issue more carefully. First, we must distinguish between objective or essential beauty, social norms for beauty, and the psychology of aesthetic response. We set aside the first usage, since it is difficult to make sense of the idea of essential beauty as something parallel to, say, the chemical composition of water. The second and third meanings require us to make a further distinction, that between principles and the output of principles. In physics, the laws of nature produce different results when applied in different conditions. The same point holds for social norms of beauty and principles of the psychology of beauty. In both cases, we might give universal accounts of beauty without thereby requiring that the observable outcomes of the universals be uniform.

There is evidence pointing toward two important cognitive contributors to aesthetic response: non-habituated pattern recognition and prototype approximation. There also appear to be two particularly important motivational systems: endogenous reward and attachment. If the principles governing aesthetic response are indeed governed largely by these four factors, our universals actually predict that there will be considerable diversity in outputs, which is to say in feelings of beauty. Among other things, our encoding of targets thus our ability to isolate patterns will vary, as will our proneness to habituation and our reward system sensitivity. Our categorizations will differ, often in terms of specificity, thus changing what prototypes are activated for a particular target. Our actual prototypes will be different due to individual variety of experience, context, emotional variables, and other factors. In short, the currently most plausible universals of beauty not only do not require uniformity of output; they are not even compatible with uniformity of output.

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Why We Are Not All Novelists

Shaun Gallagher

Abstract In this chapter I consider one of the necessary conditions for being a novelist, the ability to open up and sustain a fictional world. My approach will draw from psychopathology, phenomenology and neuroscience. Using the phenomenological concept of "multiple realities," I argue that the novelist is in some ways like and in some ways unlike someone who experiences delusions insofar as the novelist can enter into a sustained engagement with an alternative reality. I suggest, however, that, compared with the delusional subject, the novelist has better control of the mechanisms that allow for this sustained engagement.

Keywords Multiple realities • Delusions • Capgras • Creativity • Novelist

The title of this paper derives from a *Times Literary Supplement* essay by Daniel Dennett (1988).[1] This was the original essay in which Dennett outlined his concept of narrative self as abstract center of narrative gravity. According to Dennett, we cannot help but spin narratives about ourselves—some of them fictional. Quite obviously, however, in another sense, we are not all *novelists* in the way that Henry James, Jane Austen, or Franz Kafka are novelists. These novelists have a talent for

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[1]The published title of Dennett's essay is "Why everyone is a novelist." The essay is cited by many authors as "Why we are all novelists," including Dennett himself (e.g., Dennett 1989). The essay also appears as "The self as the center of narrative gravity" (Dennett 1991).

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spinning stories that seemingly involves an ability to imagine a sustained scenario and to portray characters in an invented world. In this paper, I consider one of the necessary but not sufficient conditions for being a novelist (and possibly other kinds of creative artists), connected with an idea of creativity that involves the ability to open up and sustain a fictional world. My approach will draw from psychology, phenomenology and neuroscience. It will also involve an extended detour through psychopathology.

1 Two Experiments from Stanford

Let me start by considering a now classic experiment—the Stanford Prison Experiment (Zimbardo 1973). In this experiment, 24 male students played the roles of prisoners and guards in a mock prison at Stanford University to study the psychology of imprisonment. The planned 2-week experiment was cancelled after 6 days because an external visiting researcher was shocked at the behavior of the "guards" who were brutalizing and degrading the "prisoners." She insisted it be stopped for ethical reasons. Indeed, five of the previously healthy student "prisoners" were suffering from extreme stress and pathological behavior; the others were in a "zombie-like" attitude entirely submissive to domineering guards. Despite their treatment, the participants stayed in the game and forgot they were free to leave. Even the research staff and experimenters (who went home in the evenings) went along with the guards' behavior when at the experiment site.

A more recent experiment from Stanford is Natalie Phillips' Jane Austen experiment (Thompson and Vedantam 2012). This is an ongoing cross-disciplinary fMRI study at Stanford. Subjects read a chapter of one of Austen's novels employing one of two styles of attention: close reading (literary analysis) or pleasure reading. The results have shown that brain activity goes far beyond differences in "executive function" or attentional mechanisms. Absorbed or immersed reading of Jane Austen showed activation of areas across the entire brain—not just language areas and attention areas, but also "areas associated with physical activity and movement, parts of the brain we use to place ourselves spatially in the world, as though the readers were actually physically present in the story" (Natalie Phillips, cited in Thompson and Vedantam 2012). It seems that it's not just the whole brain that is involved, but that changes in experiences of self and environment are involved.

In both of these Stanford University experiments, for better or for worse, the participants found themselves immersed in scenarios that are not commensurable with their everyday reality. In the case of reading a novel, one gets immersed in a world that opens up on the page. In the prison experiment, the participants seemed to get immersed in a reality that went beyond what they were really trying to do—they lost track of the fact that it was a psychology experiment and that they were doing science. How should we explain this?

2 The Phenomenology of Multiple Realities

What happens in these experiments is not merely cognitive; one way we might think about this is to refer to what the phenomenologist Alfred Schutz (1974) called "multiple realities" or "finite provinces of meaning," following a suggestion made by William James (1890, II, pp. 291–306) about sub-universes or sub-worlds. Schutz described *paramount reality* as the reality of shared everyday meanings and practices that we normally engage in. This is the default everyday world where we work, earn our salary, socialize, enjoy family life, and so forth. But there are also multiple other, alternative "realities" that take us away from everyday or paramount reality. We find them by reading a novel, attending a theatrical play or the cinema, playing a videogame. In such cases, we escape into a different sort of reality that opens up on the page, on the stage, or on the screen.

Entering into such alternative realities involves not just an intellectual transition; the status of the self changes. The participants in the Stanford prison experiment were surprised by a complete change in their own behavior that was atypical and contrary to how they normally thought of themselves. In reading a novel, I may not have a role to play as myself; or I may modulate my self-narrative to fit an appropriate role within the alternative reality. I may identify with one or more of the characters presented in these different media. In dreams—or even daydreams or various fantasies—I may more actively play a part as myself, or as a modified variation of myself, but not one that I usually play in my everyday reality.

Pretend play in childhood may be a forerunner of what we experience in the transition to an alternative reality. Pretend play has traditionally been defined as "symbolic play" involving linguistic capabilities (Huttenlocher and Higgins 1978) and internal representational and intellectualist meta-representational capacities (Leslie 1987). It's possible, however, to take a less intellectualistic or cognitivist and a more enactivist approach to pretend play.

Following a more enactive view, for example, Zuzanna Rucinska (2014) suggests that the ability to see playful affordances *in* objects (Currie 2004), combined with embodied actions, is sufficient for constituting some basic types of pretend play. Sensorimotor skills take over the role of *off-line* imaginative capacities; they provide support for *on-line* perceptual-imaginative capacities based on direct perception, where the seeing of affordances motivates action. For example, 18-month old infants, with presumably limited linguistic and conceptual capacities relative to adult cognition, are capable of basic object-substitution pretense, as in the example of pretending that a banana is a phone (e.g., Sainsbury 2009). It seems unlikely, however, that the infant is engaging in a manipulation of propositions, symbols, or offline representations in order to effect the pretense. In such pretend play, the infant literally manipulates the banana—grasps it and puts it to her ear. In doing so, specifically, *in the doing itself*, she treats the banana metaphorically. The metaphor at stake, however, is not sitting someplace in her head; it's in her hand and in the movement that she makes with the banana. She constitutes the metaphor by her action. She, in effect, enacts the metaphor. This can happen,

as Mitchell (2002, p. 8) puts it, "within any medium—including bodily actions, gestures and sounds [. . .] and has considerable consequence, in that it allows organisms to *experience* something *as* something else—a doll as a baby, a stick as a horse [. . .] which is essential for pretence."

Seeing or imagining an affordance is not a passive process; it involves a transformation—it involves *acting-as-if* or *seeing* something *as* something else. On the overly-intellectualist view, imaginative transformation is simply to "substitute one thought content for another," thus, "accessing and controlling inputs (beliefs and desires) to the acts of imaginative projection that underpin pretence" (Currie and Ravenscroft 2002, p. 140). This interpretation relies heavily on belief-like states and thinking processes to underpin such abilities. "In pretence one acts under a supposition, for example, that the box I am sitting in is a car; in suppositional mode one can also consider an idea, draw consequences from it, consider the evidence for it, and compare it with other ideas" (Currie 2004, p. 233). It's not clear, however, that the infant is doing any of this when she literally grasps the banana as a phone or drives the box as a car.

The point is that entering an alternative reality is not just a matter of an intellectual change; and it is not just a matter of sensory-motor contingencies either. As Rucinska points out with respect to pretend play, affective and intersubjective dimensions are also involved. My actions or virtual actions are often different in these different realities than they are in everyday existence. I may experience existential changes involving a transformation of background familiarity, different involvements, feelings, and saliencies, all adding up to different senses of reality (see Ratcliffe 2008).

The "realities" and the rules that apply within them are not necessarily commensurable with each other. From the perspective of everyday reality, "I didn't really slay a dragon; rather, I was playing a game." There are normally clear transitions as I move from one reality to another. The theater, for example, is a kind of doorway into a different reality. At some level, when I enter into a virtual world, I keep track of that fact from the perspective of everyday reality. I know at some level, for example, that I am playing a game. I can distance myself from the various roles that I might play or fantasize about. In this respect, immersion in the alternative reality may be by degree—typically, it's relatively easy for me to enter or leave it. One possible exception to this ease of transition from one reality to another can be found in cases of delusion.

3 Delusions

In working out how we transition from one reality to another, the case of delusion offers some important clues. Here I need to make a long detour through a discussion of delusion before I can get back to the issue of why it is that we are not all novelists.

The understanding of delusions in fields of psychiatry, psychology, and philosophy of mind has been formed by orthodox conceptions of cognition; in this

regard, delusions are understood in terms of various things going wrong inside the head of the subject. Many theorists explain delusions in terms of representational/computational conceptions of the mind and brain, and they are clinically characterized in terms of belief-desire (folk) psychology. In the influential DSM 4, delusion is defined as: "a false belief based on incorrect inference about external reality that is firmly sustained despite what almost everyone else believes and despite what constitutes incontrovertible and obvious proof or evidence to the contrary. The belief is not one ordinarily accepted by other members of the person's culture or subculture."[2]

Some accounts of delusions are top-down or rationalist (Campbell 2001); such approaches retain an overly-intellectualized view of delusions as problems with self-referential theory of mind or self-narrative (e.g., Graham and Stephens 1994; Stephens and Graham 2000). In discussing delusions of control and thought insertion, for example, Graham and Stephens, following Dennett and Flanagan, refer to "our proclivity for constructing self-referential narratives." The fact that we are all novelists, in Dennett's sense, allows us to explain our behavior retrospectively. "Such explanations amount to a sort of theory of the person's agency or intentional psychology" (1994, p. 101). Subjects typically make sense of their actions retrospectively in the context of a set of consistent beliefs and desires.

> [Normally] the subject's sense of agency regarding her thoughts [. . .] depends on her belief that these mental episodes are expressions of her intentional states. That is, whether the subject regards an episode of thinking occurring in her psychological history as something she does, as her mental action, depends on whether she finds its occurrence explicable in terms of her theory or story of her own underlying intentional states. (Graham and Stephens 1994, p. 102).

Delusions, in this view, involve *inferential mistakes* that first show up at the attributional level where we make judgments about agency. "On our account, what is critical is that the subject find her thoughts inexplicable in terms of beliefs about her intentional states" (Graham and Stephens 1994, p. 105).

Other accounts of delusions are bottom-up or empiricist (Hohwy and Rosenberg 2005; Gallagher 2004). On this view, problems with the sense of agency in regard to delusions of control would show up initially at the level of first-order experience, that is, in our pre-reflective experience or feeling rather than judgment of agency. Such anomalous experience would likely be due to disruptions in neuronal processes that correlate with the pre-reflective sense of agency for action, and have been

[2]There is some improvement in defining delusion in DSM-5, insofar as there is no mention of "false belief," but it is still cast in terms of belief and the notion of veracity is still present: "Delusions are fixed beliefs that are not amenable to change in light of conflicting evidence. [. . .] Delusions are deemed bizarre if they are clearly implausible and not understandable to same-culture peers and do not derive from ordinary life experiences. [. . .] The distinction between a delusion and a strongly held idea is sometimes difficult to make and depends in part on the degree of conviction with which the belief is held despite clear or reasonable contradictory evidence regarding its veracity."

explained in terms of sensory-motor comparator (Frith 1992) or filtering (Langland-Hassan 2008) models. Retrospective *attributions* or judgments of agency, rather than originating the problem, would be reports (possibly veridical reports) of this first-order *experience*.

Neither top-down accounts nor bottom-up accounts, however, on their own, are able to explain all aspects of delusions. *Top-down/rationalist accounts* refer to problems with framework beliefs or propositions (Campbell 2001) or, as we've seen, faulty introspective attribution (Graham and Stephens 1994). Some aspects of delusions remain puzzling, however. (1) The mechanism problem: top-down accounts fail to give a good explanation of how or why things go wrong on the neuronal level—if they did, the explanation would become bottom-up or hybrid. (2) The consistency problem: not all of the subject's beliefs (even those governed by a problematic framework belief) are delusional. Why are attributions or judgments so selective? For example, one finds inconsistencies in the case of Capgras delusion where a subject may claim that his wife is an imposter but fail to wonder what happened to his "real" wife. (3) The double bookkeeping problem: patients don't always act on their delusional beliefs. If delusions are beliefs (albeit false and fixed), folk psychology predicts that they will be acted upon.

Likewise, *bottom-up/empiricist accounts*, where delusions are not considered false beliefs but primarily anomalous experiences, are unable to explain a number of problems. These accounts fail to solve: (1) The poverty of experience problem: anomalous or alien experiences are not sufficient to explain the floridly complex and extravagant delusions that are sometimes found in advanced schizophrenia. (2) The specificity problem: despite the putative neural dysfunction (a broken mechanism of some kind), not all of the subject's experiences are delusional, and there is some commonality of theme among the delusional ones. For example, some actions are experienced as controlled, but not all actions; and some familiar people seem to be imposters while others do not. If neural dysfunction is only occasional, however, then delusions should be arbitrary, but they're more consistent than that.

Still other accounts are hybrid, combining elements of top-down and bottom-up explanations (e.g., Garety et al. 2001; Kapur 2003). These may be two-factor accounts where a first factor (some neuronal problem) causes an anomalous experience, and a second factor, e.g., retrospective attribution confounds the experience and takes it to the more extravagant extremes. This may get around the poverty of experience problem. But two factor approaches tend to be either more top-down (the delusion originates in the retrospective attribution) or more bottom-up (the experience itself is delusional), and they respectively run into one or more of the leftover problems mentioned above.

Notice, however, that on all of these accounts, delusions are still "in the head"—delusions are either the result of something going wrong at a cognitive or metacognitive, or introspective level—*in the mind*—or something going wrong at a neuronal or neurotransmitter level—*in the brain*—generating aberrant experience—*in the mind.* Of course, it seems right to say that delusions are "in the head" since they do not reflect the world as it objectively exists and they clearly involve some brain dysfunction. But the fact that not all problems can be resolved by these

explanations suggests that something important may be missing in these approaches. Here's one way of putting it: rationalist and empiricist models feature "a bodiless subject with no incarnated *habitus* in its phylogenetic past, with no roots in the social community in which it has grown [and in which the] emotional component is relegated to a secondary place, a mere accompaniment, without a constitutional role" (Varela and Depraz 2004, p. 156; 2005, p. 64).

The orthodox approaches to cognition that inform our understanding of delusion have been challenged by embodied, enactive, externalist theories, with roots in the phenomenological tradition. On these alternative conceptions, the experiencing subject is *in-the-world* (Heidegger and Merleau-Ponty)—the subject is not, first and foremost, an intellectual creature who perceives the world objectively and then formulates her beliefs about this and accordingly acts upon those beliefs. Rather, the experiencing subject is primarily an embodied pragmatic agent who finds herself already physically, affectively, and socially situated in a world that is defined as a set of practical involvements. This phenomenological approach is reflected in Karl Jaspers' view of delusion.

> To say simply that a delusion is a mistaken idea [or belief] which is firmly held by the patient and which cannot be corrected gives only a superficial and incorrect answer to the problem [. . .] All experience of reality [. . .] has a root in the practice of living [. . .] Delusion proper [. . .] implies a transformation in our total awareness of reality (Jaspers 1913/1963, pp. 93–94).

On this view, the "world" (or reality) is not an objectively defined physical place, but consists of, in some respects, a set of affordances (Gibson) and emotional saliencies that we relate to. What would an account of delusion look like on approaches that suggest that delusions are generated in a system that includes brain, body, and (physical, social and cultural) environment—the idea that a delusional subject is existentially *in-the-world*—in a world with specific kinds of affordances, and emotional saliencies? Could such an account solve some of the leftover problems that remained unresolved in the standard approaches?

4 Delusion as an Alternative Reality

I've argued (2009) that the concept of multiple realities, as found in Schutz (1974), may give us a better account of delusions. I've proposed this not as a causal explanation of delusions but as a more adequate characterization that would provide a framework for any such explanation. The idea is that one might enter into a *delusional* reality just as one might enter into a dream reality, a fictional reality, or a virtual reality. Like other multiple realities, some delusional realities are *more or less* cut off from one's everyday reality; they may be incommensurable with the normal rules of reason that govern one's everyday normal lifeworld, and they may offer a different set of affordances and saliencies.

Consider a description offered by Renee in *Autobiography of a Schizophrenic Girl* (Sechehaye 1968).

> [A jug appeared] not as something to hold water and milk, a chair not as something to sit in—but as having lost their names, their functions and meanings; they became 'things' and began to take on life, to exist. (cited by Sass 1992, p. 118).

This signals a change in affordances offered by things in her environment. If I am truly engaged in an alternative reality (even a delusional reality), it is not simply or primarily that I adopt an alternative set of beliefs or values. Rather, I may enter into it *body and soul*, or to some varying lesser degree. Objects may have different affordances—jugs, chairs, bananas, cardboard boxes—offer different possibilities in pretend or delusional realities. The delusional world has a certain "presence" and salience that makes it more than a belief or a product of an intellectual exercise. I am *in-the-world* of the play, the film, the game, etc., *to some degree*, perhaps maintaining some anchor or some free-floating or vague awareness that this is just a play, or film, or game; and perhaps to a higher degree (and sometimes fully), I am *in-the-world* of delusion.

Unlike other multiple realities, the delusional reality may be "firmly sustained [and] is not one ordinarily accepted by other members of the person's culture or subculture" (DSM-4). Even if it is firmly sustained, this may vary in degree—more or less comprehensive or pervasive, more or less "firmly sustained"—so in some cases the subject may interact with others or objects in everyday reality in a close to normal way. For example, in some rare cases of Capgras Delusion, there is sometimes a rare doubling of objects. A person may complain that the tools in his tool chest are not his, but replacements. But this may have no practical effect—he will still work with the tools as if they were his (Ellis 1996; Dreyfus 1987; Kafka 1989). Likewise, a Capgras patient may complain that his wife is an imposter when he sees her, but has no problem talking with her on the phone. In some cases of delusion, then, the deluded subject may live according to this double bookkeeping—one foot in the delusional world, one foot in everyday, paramount reality. In extreme cases, however, the delusional reality rather than everyday reality becomes paramount.

In these two regards—that is, in offering alternative affordances and in being a matter of degree—delusional realities may be similar to other alternative realities. In other regards, they may be different. Realities created in theater, film, novels, and games are socially constructed realities, they are *for others*, and by definition are understandable to many people. In contrast, delusions are more like dreams; they are in some regards idiosyncratic, or as Louis Sass (1994, 2004) puts it, "quasi-solipsistic." The delusional subject "inhabits a world radically alien to that of common sense" (Sass 1992). Alternative realities, including delusions, however, may share certain themes. Feeling controlled by others or seeing others as imposters, and so forth, are themes that may have their origin in a particular culture or e.g. in literary works.

If delusion involves entering into a delusional reality, this has implications for the notion of veridicality as well. To think of delusion as a mistaken belief, for example,

is not just to remain too cognitive; it may also target the wrong world. The delusion may not be about "external" or everyday reality, but may be tied to an alternative reality, in the same way that events that take place in a play are tied to a fictional reality. If I believe that Hamlet killed Polonius, this is clearly not a false belief about the objective world, but a true belief about the fictional world. The delusional subject is not intellectually mistaken (deluded) about the everyday world; he's living in a delusional world.

5 Welcome to the Hotel California

My aim here has not been to offer a causal explanation of delusion; rather, I've intended to adjust the framework in which we might be able to find a proper explanatory account that could address some of the leftover problems that the overly cognitive, "in-the-head" explanations have been unable to solve. The multiple reality framework is nonetheless consistent with something like a hybrid account—it can integrate both top-down and bottom-up explanations, since it does not rule out explanatory contributions in terms of brain dysfunction or higher-order cognition. But this framework importantly includes other contributories—including embodied, affective, environmental, social and cultural factors. The concept of a delusional reality on this account is defined across all of these factors. Elsewhere, I've tried to show how this framework has sufficient resources to address the various leftover problems outlined above (Gallagher 2009). Here, however, I will focus on only one of these problems—the mechanism problem—and show how solving this problem may get us closer to an account of why we are not all novelists.

One might easily raise an objection against the alternative multiple realities framework: As a broad, phenomenologically inspired framing hypothesis, this proposal has not identified any particular causal mechanisms that would explain how delusions come about. Even if one could resort to a bottom-up account to explain the strange or alien aspects of anomalous experience as due to neural dysfunctions, this doesn't give us a specific mechanism to account for the transition into a delusional reality. Here, I want to give a twofold reply. First, if being in a delusional reality is more than being in a particular belief state and is more than simply experiencing an anomalous perception, the full mechanism may not be reducible to just neural dysfunction—brain states will be linked to broader changes in embodied comportment and emotional experience within a physical, social, and culturally contextualized environment. This actually suggests a *multiple-factor* account of delusions (where factors are spread across behavior, brain, body, experience, and physical, social, cultural environments). Second, having said that, as one part of the explanation, there is in fact a more specific brain mechanism that can help to account for transitions into delusional realities.

Let's consider, for example, a multiple factor account of Capgras Delusion. In Capgras, as we noted, a subject takes some familiar person or persons (or more rarely, a set of objects) to be imposters (or replacements). For example, a patient

may think his wife (but not his children or other people) is an imposter, or a robot, or somehow taken over by alien invaders (Coltheart and Davies 2000; Passer and Warnock 1991; Young 2000). What we know is that in Capgras, there is an anomalous experience in face recognition caused by a neural dysfunction that slows processing in the face recognition area of the brain. The wife's face is recognized, but, for the subject, something doesn't feel right. To explain why this happens in regard to the person's wife but not in regard to other familiar people, one may need to appeal to personal circumstances that involve intersubjective affect or emotion, and the effects such affects can have on brain processes, leading to disruptions in the dynamics of intersubjectivity and of familiar social affordances. But why should this lead to a sense that the other is an imposter? Why imposter? Or robot? Or body snatcher? These are concepts that we easily have from pretend play, film or literature, or more general cultural sources (Wise 2012). In different cultures and at different times, Capgras may manifest differently. Such cultural resources, however, provide a kind of support for the delusion. Normally, when there is no support for an alternative reality, the conflict, discrepancy, or difference between everyday reality and the alternative reality is resolved in favor of paramount, default, everyday reality. This makes the following question critical. Why does the subject stay with or in the delusional reality—why does that reality sustain itself?

Here we can offer a causal model (in functional terms) that has to be taken as part of the multiple factors account. Two functions in our cognitive system normally work together: (1) The first has to do with maintaining coherence (or reducing conflict). We may think of this sometimes as a reality testing. To be immersed in a game, for example, we may need to suspend disbelief about the reality of the avatars we encounter in the game environment and, at the same time, suspend belief about being nowhere other than our living room. (2) The second is a form of executive control that reverts the system to everyday reality. At the end of the game, we end up back in our living room. It turns out that there are neural mechanisms in a fronto-parietal network that correlate with these functions (Egner and Raz 2008). Conflict monitoring involves activation in dorsal anterior cingulate cortex (dACC); executive control involves the lateral pre-frontal cortex (lPFC).

The dACC "functions, in part, to signal the occurrence of conflicts in information processing, thereby triggering complementary adjustments in cognitive control" (Botnivich et al. 2004, p. 539; see van Veen and Carter 2002). fMRI studies of highly susceptible subjects under hypnosis, for example, show that there is a decoupling between dACC activation (conflict monitoring) and activation in lPFC (executive control) (Egner et al. 2005; Oakley and Halligan 2009).

These mechanisms, and their proper functioning, provide part of a causal explanation of why we are able to transition from one reality to another. Specifically, a transition into an alternative reality involves a temporary decoupling of conflict monitoring and executive control (which may involve reduced activation in dACC or lPFC). This would be a normal function that allows us to enter and exit alternative realities (from pretend play to immersion in a novel). In the case of delusion, however, the decoupling mechanism dysfunctions—it gets stuck in the *on* position—or the dynamic connection between these two brain areas fail. This failure

of conflict monitoring or of controlled return to default reality constitutes the broken mechanism that can explain the persistence of delusion. In the extreme, this could be called the "Hotel California" (HC) dysfunction—making a slight adjustment to the lyrics of the famous Eagles song: "you can check *in* any time you like, but you can never leave."

The HC dysfunction works as part of a multiple factor explanation of delusion. For example, Capgras Delusion involves a particular *pattern* of dysfunction and normal function.

(1) Some personal affective circumstance triggers a dysfunction in the face recognition area and leads to an anomalous experience in regard to a specific person (bottom up).
(2) A (normal) importation from cultural/literary sources of concepts of imposter, robot, alien kidnapping, etc. (in different culture, we would likely see different manifestations).
(3) The HC dysfunction: a decoupling of conflict monitoring and executive control leading to (some degree of) immersion in the alternative reality.

A similar scheme of factors can explain other delusions.[3]

6 Why Everyone Is Not a Novelist

A novelist like Jane Austen, Franz Kafka, or Henry James (and possibly other kinds of creative artists) must have an ability to create, enter into, and sustain an alternative world, and this ability may involve a higher degree of immersion than we experience in just reading a novel, enjoying the theater, or engaging in pretend play, and so on. All of these things require a decoupling of conflict monitoring and executive control functions—an ability to transition into an alternative reality and stay there for some time—but also an ability to re-connect and use executive control to come back to the default, everyday reality. Novelists and artists are not necessarily delusional, but it seems likely that one necessary condition that allows for creativity in such cases is the ability for sustained immersion in an alternative reality. This capacity builds on a normal functioning that allows for a voluntarily decoupling of executive control from conflict monitoring, providing an ability to imagine an alternative reality and to stay in it for a while. This may also be a matter of degree.

[3]For example, thought insertion may involve (1) a neurological dysfunction (in the insula) leading to loss of sense of agency; (2) a cultural concept of telepathy or parapsychology or religious communication, suggesting that someone else is inserting the thought; (3) the HC dysfunction. Cotard delusion: (1) limbic system dysfunction generating a feeling of body alienation; (2) cultural concepts of zombies or afterlife; (3) the HC dysfunction. Even non-schizophrenic delusions such as Somatoparaphrenia (delusional misidentification of body parts) may involve multiple factors: (1) stroke damage to parietal cortex and/or orbital frontal area; (2) possibly a regressive narrative that would explain why the limb seemingly belongs to someone else; (3) the HC dysfunction.

In the case of the novelist, as in the very clear case of the child engaged in pretend play, I want to suggest that this immersion is not just an intellectual accomplishment. To the extent that the proper functioning of the frontal executive control is involved, we can note that this is connected with automatic, unconscious processes that inhibit motor activation across all aspects of cognition (McBride et al. 2012). When we willingly enter into an alternative reality, however, we do not want to be continually distracted by constant reminders from the conflict-monitoring alarm system telling us that the fictional world we are enjoying is not real (Wise 2012). So we should expect ongoing activation in lPFC doing inhibitory work for all of the other areas and not so much in the conflict monitoring area—dACC. If activation in the dACC area for conflict monitoring is in some sense allowing entry into an alternative reality, it may also be allowing various affective, motor, and embodied processes to be activated and then, to various degrees, inhibited by the lPFC. Accordingly, it is no surprise that in studies like Natalie Phillips's Jane Austen experiments at Stanford, readers immersed in the alternative reality of the novel will show activation in sensory, motor, and emotion areas (and not just language or attention areas). In an alternative reality, I can get excited and emotional, or remain cool under pressure; I may adopt a certain physical posture, in some cases I may act virtually (inhibiting physical movement of my body). I may engage in such action explicitly as in pretend play or theatrical acting. Sometimes, as I come back out of such realities, everyday reality can seem oddly unreal in relation to what I have been doing. Full existential engagement in a fictional world requires the ability to temporarily suspend disbelief—and to some degree, to decouple the executive control processes from the conflict monitoring processes.

Both the Stanford prison experiment and the Jane Austen experiment suggest that this decoupling process is more complex than just the functioning of a brain mechanism. To differentiate between the immersed reader, the Stanford prison participants, the novelist and the delusional subject, two things, which we have already discussed, are critical. First, there are differences of degree, where we may expect the immersed reader to be more easily called back to everyday reality, in contrast to the delusional subject, the Stanford prison participant, or perhaps the novelist. Second, that these differences in degree are not reducible to the mere function or dysfunction of brain mechanisms is clear because these differences can be modulated by the amount of support that the alternative reality gets from culture, social practices, and, importantly, other people. The Stanford prison experiment developed into something close to a mass delusion, not because of some initial dysfunction in each individual's brain, but precisely because of the ongoing support for the alternative reality provided by the other participants. The readers of Jane Austen, as they are immersed in their reading, have only Jane Austen and her characters to support the alternative reality of the novel. Although the novelist may find intersubjective support for her writing, understood as a particular social practice, and although she usually intends the fiction to be for others (her readers), and may take her audience into consideration, the actual creation of the fictional reality may involve something closer to a quasi-solipsistic process. In this regard,

the novelist is somewhere between the immersed reader and the delusional subject as she enters into the alternative reality without intersubjective support.[4]

I conclude by mentioning one other study. Nelson and Rawlings (2010) have shown that there is a strong overlap of schizotypal experience and the phenomenology of the creative process in a significant sample of creative artists. Schizotypal experience does not involve schizophrenic delusion, but Nelson and Rawlings do suggest that their findings are consistent with the idea that

> schizotypy is associated with central features of "flow"-type experience, including distinct shift in phenomenological experience, deep absorption, focus on present experience, and sense of pleasure. The neurologically based construct of latent inhibition may be a mechanism that facilitates entry into flow-type states for schizotypal individuals. This may occur by reduced latent inhibition providing a "fresh" awareness and therefore a greater absorption in present experience, thus leading to flow-type states (2010, p. 388).

Latent inhibition, which is also a characteristic of the schizophrenia spectrum, involves attenuated attention to stimuli upon repeated exposure and an openness to seeing things anew, or to experiencing stimuli with a fresh awareness. The subject may be less anchored to the default experience of reality, a less intense pull-back to default reality and the possibility of higher absorption in seeing things anew, allowing for ease in transitioning into and sustaining alternative realities.

To the question of why we are not all novelists, then, I propose a testable hypothesis: one *necessary (but not sufficient)* condition for being a novelist or a creative artist, compared with non-novelists/artists, is an enhanced ability for creating/entering into multiple realities and staying there longer and more consistently, and without intersubjective support—an ability, however, that remains short of dysfunction or delusion. Certainly there are other necessary conditions involved. One might think of someone with an extraordinary talent for description or for psychological character development. If that person did not have the ability to persist in the world of the novel, however, they might have to settle for writing short stories.

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[4]Some novelists seek out intersubjective support for the process of creating the world of the novel. They do a lot of research and may consult others in constructing elements of that world. In some cases, this, and not just their lonely efforts may help to sustain the alternative reality they are creating.

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Aesthetic Relationship, Cognition, and the Pleasures of Art

Jean-Marie Schaeffer

Abstract The paper tries to clarify the relationship between aesthetic experience and artworks, as well as between cognition and the pleasures of art. Starting with an analytical distinction between aesthetics and art-theory, I propose a psychologically and phylogenetically grounded description of the mental resources on which aesthetic experience draws. After tracing a tentative phylogeny of the cognitive and affective resources defining aesthetic experience, I distinguish three structural components: (a) a marked inflection towards a costly use of mental resources (characterized by costly signaling, attention-driven cognitive dynamics, perceptual learning, attentional overload and divergent cognitive style); (b) a real-time hedonic calculus evaluating the properties of the attentional processing; (c) a bi-directional feedback between attention and hedonic calculus. Finally, the paper discusses the relationship between cognitive fluency and positive aesthetic experiences, arguing that fluency can explain the aesthetic pleasures of art only in conjunction with a second and opposite source of pleasure: curiosity.

Keywords Aesthetic experience • Attention • Hedonic calculus • Fluency • Curiosity

1 Aesthetic Experience: A Preliminary Definition

I am assuming that the term "aesthetic" can be construed notionally in a way that allows us to identify a specific type of mental relationship: a specific attitude toward the world. This was already Kant's hypothesis and the idea has resurfaced again and again in philosophical aesthetics. Of course it has also been much criticized. Most of the critics think that the very idea of aesthetic experience prevents us from getting a true understanding of art. This criticism has been formulated by

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continental philosophy as well as by analytical philosophy. According to Hans Georg Gadamer (1990), the idea of aesthetic experience misrepresents the *ontology* of the artwork; according to George Dickie (1964), a famous analytical philosopher, it misrepresents our *relationship* with art. In fact, Gadamer and Dickie disqualified the notion of "aesthetic experience" on different grounds. Dickie argued against the existence of a specific mental attitude—the "aesthetic attitude"—seen as a type of attitude distinguishing the attention paid to artworks from the attention paid to other objects, or distinguishing the "proper" attention to artworks from improper ones. Gadamer only objected to a specific understanding of the notion of "experience:" experience as a "subjectivist feel" ("Erlebnis"). But at the same time, he thought that paying attention to a (valuable) artwork *is* an outstanding experience ("Erfahrung"): an interpretative encounter with something that changes one's existential outlook.

These criticisms are partly valid. "Aesthetic experience" does not refer to a specific mental attitude or to a specific type of attention (disinterested, distanced, and so on). And it is true also that you cannot adequately understand the ontology of artworks in terms of aesthetic experience and that you cannot understand the complexity of our relationship with art if you reduce it to a subjectivist feel of qualia. But this does not disqualify the notion of "aesthetic experience." My aim here is to show not only that the notion of "aesthetic experience" is not vacuous, but also that it is central for understanding our relationship with artworks.

Admittedly, the expression "aesthetic relationship"—or any semantically equivalent paraphrase in some other language or some other culture—will probably activate different representations in different individuals at different times and in different groups or cultures. But I think it reasonable to assume that all situations we commonly describe as "aesthetic," or would accept to describe this way, share two characteristics. Taken together they identify a specific intentional relationship:

- All aesthetic experiences are attentional activities. Being engaged in an aesthetic relationship is paying attention to this or that: reading a poem, listening to Thelonious Monk, contemplating the garden of Ryoan-ji, and so on. I take this to imply that to engage in an aesthetic relationship means to engage in a cognitive relationship. I use the term "cognitive" here in a very broad sense, encompassing all perceptive, conceptual, and imaginative activities we engage in, in order to understand the world, ourselves, and other humans. But of course nobody would like to say that all cognitive acts are aesthetic acts. How can we distinguish aesthetically oriented attention from other types of attention? Is there a specific *type* of attention that would be aesthetic attention? Or is the cognitive dimension only a necessary condition but not a sufficient one for something to be called an "aesthetic experience?" Following Kant and some others, I opt for the second branch of the alternative, although I will try to argue later that when cognition is activated in an aesthetic setting it has a very specific profile.
- So what is the second element that, taken together with attention, will yield a definition of "aesthetic experience" that meets our intuitions? Well, it seems to me that in all experiences that we would accept to describe as aesthetic, the attentional activity is regulated by the satisfaction or dissatisfaction it

> causes. This hedonic component has been recognized by almost everybody taking a serious look at the question, even if many would be unhappy with the words "pleasure" or "satisfaction:" they would prefer to talk of "appreciation," "evaluation," "grading," and so on. On my level of analysis, all this boils down to satisfaction (or dissatisfaction), which boils down to hedonic valence. But not every satisfaction or dissatisfaction will do. I shall try to show, following Kant and cognitive psychology, that the hedonic component must be derived from the unfolding attentional activity itself and not from its object. And, of course, satisfaction or hedonic valence is *not* the last word about aesthetic experience: it only explains the dynamics of ongoing attention.

As it stands, this definition, I agree, doesn't take us very far. And it is not new: it is largely a reformulation of what Kant had to say in the famous § 1 of the "Analytik des Schönen" in the *Kritik der Urteilskraft* (*The Critique of Judgment*). But I don't think that it is vacuous: it catches nicely the array of phenomena that we want to take into account when we are looking for something which could reasonably be called "aesthetic experience." That said, we must of course be able to give more content to the two aspects of our tentative definition: the attentional aspect and the hedonic aspect.

I'll begin with the question of attention. As George Dickie rightly contended already some 30 years ago, there seems to be no empirical backing for the idea of the existence of a specific type of attention—which would be aesthetic attention. But I want to defend the idea that when attention functions in an aesthetic context, it acquires a very specific profile. It is this profile that will interest me now.

2 The Artist and the Connoisseur

"Bowerbirds" is the name given to a group of twenty or so species of passerines living in the Pacific, notably in Australia and New Guinea. They owe their reputation among ornithologists to the fact that males build complex and highly decorated architectures called "bowers." The construction is made out of shrub branches interwoven in a remarkable way and skillfully decorated. The decorative design consists of items of all types collected and recycled: flowers, feathers, ribbons, bottle caps, broken glass or crockery, plastic utensils stolen from neighboring campsites, and so on. Often, the inside wall of the bower is "painted" with a mixture of berries, bark, charcoal, saliva, and dirt. The male bowerbird is busy with the architecture for several months every year, building it, upgrading it, repairing it, and "refreshing it," for example by replacing wilted flowers.[1]

Why does the male invest such a huge amount of energy in a construction that seemingly has no utilitarian function? Well, in fact it has a function: the bower is a

[1]For what follows, I draw from: Diamond (1983, 1986); Borgia (1986); Uy and Borgia (2000).

central element in the male seduction strategy and in the selection process through which the female picks out her preferred one among the would-be lovers. During the courtship ritual, the bower fulfills successively three different roles. In the first place it works as a visual trap: it attracts the attention of the female who then thoroughly inspects it visually. At this stage, it functions as a signal of fitness compared to other bowers the female has already inspected. If the result of the inspection is positive from the point of view of the female, the bower takes on a different function: the female moves inside to watch the second part of the seductive strategy of the male: the parade. Once the female is inside the theater building, the male places himself in front of it and engages in a ritualized dance and sound performance. While dancing, he emits all sorts of sounds, partly mimetic (for example, he mimics other birds) and partly self-mimetic (he imitates his own cries of threat). Once he has gone through his show, he tries of course to mate with the female. At this point the bower takes on a third function: it becomes a device which prevents forced mating (copulation): to get at the female, the male must circle around the bower, which gives the lady the opportunity to fly away if she prefers to do so.

As is evidenced by my talk about architecture, dance, theatre, show, and so on, I want to suggest that the situation I am describing has important points in common with what in humans we would call artistic creation and aesthetic experience—sculptural and choreographic creativity on one hand, expression of preferences grounded in experienced qualities of an attentional activity on the other. In fact, I want to suggest that the activities of the bowerbirds are very illuminating for a better understanding of the structure of artistic activity and aesthetic attention. My specific target in this paper is aesthetic attention, but a short look at the artistic side may be useful. There are two reasons for this. The first is that the productive side is easier to access: it gives rise to artifactual and bodily incarnations which can be analyzed directly, whereas the activity of reception is mostly perceptual and evaluative, which means that it consists in internal processes that are more difficult to access and assess. The second reason is that the productive activity and the receptive activity are coordinated, co-adapted: so if we can pin down a specificity of the relevant phenomena on the side of the male compared to other, unmarked activities of this same male, we can tentatively assume that on the side of the female there must also be some specificity compared to non-marked attentional activities. If this was not so, the whole interactive process would break down (or would never have existed on the level of phylogeny). So a better understanding of the productions of the male can help us to describe what is going on in the black box of the female brain. And the two taken together can help us to better understand aesthetic attention.

Of course I do not ignore that the whole questioning I just entered into may be judged to be completely flawed. It seems to imply a form of biological reductionism ignorant of the specificity of human cultural facts. We all know what the function of the bowers, the parade, and the attentional activity is: it is all about sexual selection. Which, clearly, is not the case of artistic creation and aesthetic experience. So, how could sexual selection in animals be helpful for a better understanding of artistic creation and aesthetic experience in humans? Well, I am not saying that *sexual selection* can be helpful to understand artistic creation and aesthetic experience. I

am only saying that the type of activities and processes that are activated in the process of sexual selection in bowerbirds throw some light on the activities and processes of artistic creation and aesthetic experience. What I want to say is that what I address here, and find interesting, are the *structural homologies* of mental processes and not the *functional identity* of behaviors. The idea is that there is a homology on the level of the poïetic and attentional processes or, to be more precise, a homology in the way they diverge from other unmarked productive and attentional processes. It seems to me that such a type of questioning implies no reductionist move, because structural homology does argue neither for nor against functional equivalence. This is a common lesson taught as well by evolutionary biology as by structural anthropology or system-theoretical sociology: one and the same structure can be co-opted by different functions, and the same function can be performed by different structures. The two-way relationship between structure and function is not a "one to one" but a "one to many and many to one" relationship. Of course the existence of such a structural relationship calls ultimately for an explanation. The default explanation would be in terms of a predecessor-relationship linking sexual selection to aesthetic attention, although I concede that in the context of our present state of knowledge such an explanation would remain largely speculative.

But is there really a structural *homology* between our two sets of facts? Am I not simply playing with vague *analogies* and surreptitiously anthropomorphizing animal behavior? To neutralize this objection we must rephrase our question: if a human being (male or female) was building the type of construction built by the male bowerbird and if she or he was engaging in the organized sequence of movements the male is engaging in, and if another human being (male or female) was relating to this construction and this organized sequence of movements the way the female bowerbird is relating to the bower and the parade of the male, wouldn't we say, and rightly so, that we are dealing with an artwork and with aesthetic experience?

To answer this question, we need to take a closer look at the behaviors just described. For the reasons already given, I'll begin with the male. In what sense can we defend the hypothesis of a structural homology with human artistic practices?

A first answer is that we are dealing with two sets of activities that seem to be based on the same mental resources and the same modalities of externalizing them. Thus the construction of the bower mobilizes the same type of procedural competences as human art-making: the capacity of internal modeling; the ability to translate this model into a physical three-dimensional reality; a sequential planning of a global script split up into subroutines—construction and decoration; the capacity to make preferential decisions when confronted with alternative solutions; the access to a synthetic evaluation of the structure closing the whole sequence, and so on. The same holds for the parade when compared to human dance: bodily movements forming organized sequences not related to a transitive action-goal; a capacity to produce rhythmic sounds forming non-random sequences not related to first-order communication, and so on. Maybe the bird's repertoire is largely innate (but there must still be individual differences, because if there were no individual differences sexual selection would break down). Maybe the behavior of the bird is

not "intentional" in the sense human cultural activities are. Maybe the bird has no "conscious" phenomenal experience in the way humans have. As far as I know, all these are hotly disputed questions, but in any event, the hypothesis of a homology of "poïetic" and attentional processes does not require a homology as far as the levels of treatment are concerned. Of course, having or not having a phenomenal experience of these processes makes a difference, notably in terms of feedback, but this difference concerns the richness and plasticity of the processes and not their nature.

One could still formulate another objection: perhaps there exists some homology, but it certainly is not operating on the level of artistic production and on the level of aesthetic attention, but on a more generic level, that of production of artifacts as such and of attention as such. If this were the case, the bowerbirds would teach us nothing interesting for artistic creation or aesthetic attention.

Well, let's once again reflect on the bower. Its foremost characteristic is the fact that it is a marked construction. To understand what I mean by a "marked construction," we must compare the bower to the nest constructed by the female. The nest is a purely practical construction, used to breed and raise the small ones. It can therefore be regarded as homologous to shelters constructed by humans. The bower has no such practical function (if we except its function against forced mating). Its central function is to be part of a display: it exhibits the value of the male. So it is "marked" compared to the nest because it has a special status compared to the nest—although its construction is the result of the same motor and planning capacities. The same can be said about the parade. Its time structure is a marked sequence: it is not the time of common interactions. It is ritualized time. Specifically, the movements and vocalizations of the male lose their pragmatic significance. For example, the typical cry of threat emitted by the male loses its pragmatic significance on two levels. First, the sound is not a response to an external stimulus: it is endogenous. Second, it is not emitted to threat the female or some other living being: it is emitted as a display of the male's capacity to threat.

In fact, the parade possesses several other quite remarkable characteristics. First, behaviors which outside of the ritual have no semiotic status are transformed into signs when they take place inside the ritualized time of the parade: body movements and building capacities transform into signs of the male's fitness. Second, behaviors that have already a semiotic function outside of the ritual are transformed into meta-signals: when the male produces the threat-signal "SKRA," the sound does not have the semiotic function to threat—but its phenomenological qualities (loudness and so on) become signs of the male's fitness. What is interesting here is the way in which the ritual moves all activities one level up compared to their "normal" status: non-sign becomes sign, sign becomes meta-sign.

Third, the whole process functions as a self-referential device: the bower, the dance, and the sounds refer to themselves as an embodiment of the value of the male. This may seem an unwarranted assertion: if, as I said, these processes are signals or signs of the male's fitness, doesn't this imply that they function quite normally in a hetero-referential way? Well, we'll soon see that they function in a very peculiar way, which warrants the thesis of self-referentiality.

But before that, we must take a closer look at the partner of the male. As I said, the behavior of the female is exclusively attentional. But this attention is very peculiar compared to standard attention. The first point is that, like the "artistic" activity of the male, it is embedded in a ritual time frame that is internally structured. As we have already seen, it is sequentially organized into three phases. It starts with the visual inspection of the bower. The second phase, initiated by the female if and when she moves into the bower, is the phase of the parade. It is the most intriguing part of the whole sequence as it implies a strong decoupling of the female's attention from the larger environment and its stimuli. The third phase is the concluding appreciation, followed by the consent or refusal to engage in sexual intercourse. The sexual intercourse itself does no more belong to the ritual time: it is pragmatic business as usual. Notice that the ritual time frame can be broken off prematurely if the female's reaction to her inspection of the bower is negative and that the whole ritual sequence is retrospectively disqualified if the final decision of the female is negative.

The second point, at which I alluded already, is that, like the production of artifacts and the bodily movements of the male, the attentional sequence of the female is cut off from its normal pragmatic function. The ritual time of the parade is a shared time not only because the time of the male and the time of the female are synchronized but also because both are cut off from pragmatically oriented interactions and from normal attentional feedback with the real life environment. The second function of the bower we encountered, that of a theater-house for the female, can be read as the expression of this absence of pragmatic functionality: it provides a shelter against predators and so allows the exclusive focusing on the ritual. But the absence of any direct pragmatic function is also characteristic of the interaction with the male partner. For the ritual to work, the female must be able to handle the whole situation as one not of direct interaction, but of "display." She must process the signals emitted by the male as self-referential signals, that is to say, as signals whose content is not their standard one, for example a threat, but their exemplifying function: they denote what they are the result of, a certain degree of male fitness. Processing signs in this way is a very complex undertaking. The female must be able to neutralize all direct feedback loops, that is, all loops where a stimulus is paired with the direct behavioral response it normally produces. Thus she must not look at the berries decorating the bower as fruits to peck at and eventually to eat, but as objects to be processed only attentionally. The same holds true for the sounds emitted by the male: she must not react to their standard function—for example, by flying away when he emits threatening cries—but she must attend to and appreciate their internal phenomenal qualities. In short, she must be able to cut off her perceptual processes from the ecological context. The standard cycles of ecologically embedded perception are the cycle of perception-reaction-perception and the cycle of action-perception-action. During the mating ritual these cycles are replaced by the dynamics of an attentional flow regulated by an online evaluation of the phenomenal qualities of the perceived stimuli (intensity, color, rhythm, and so on). Of course, the non-pragmatically oriented interaction and, more specifically, the self-teleological dynamics of appreciative attention are imbedded in a larger sequence of actions—the process of sexual reproduction—which is of

utmost pragmatic importance in the life of the partners. This shows that auto-teleological processes can be, and most of the time are, instrumental for achieving pragmatic ends: auto-teleology is often hetero-teleologically motivated. This is also the case with aesthetic experience.

It follows from the preceding description that the actions of the male and the attention of the female share important characteristics. The most interesting one is the following: all these activities are costly in terms of energy expenditure and risk exposition. The architecture involves a huge investment of time, energy, and ingenuity, as does the parade, whether it be dancing or singing. The same holds for the attentional processes of the female bird: they are very intense, near to what in psychology is called attentional overload. And of course the whole ritual is handicapping in terms of maximization of survival: the male and the female are focusing all their energies and attention on the ritual, and they process the ecological real-life context only in a marginal way; most of their resources, notably their attentional resources, are being mobilized by the situation of the parade. This may appear to be somewhat of a mystery if seen in the context of natural selection processes.

In biology there is a theory which has been developed especially to account for such paradoxical situations. It is called the theory of costly or honest signaling. It arose in the context of evolutionary biology to account for situations of incomplete knowledge, that is to say, situations of communicative interaction about attributes varying in quality, intensity, or degree among subjects and which are difficult to assess directly—although it is very important for the individuals to assess them correctly.[2] In the case of bowerbirds, the issue is genetic fitness. For the female, it is important to correctly assess the fitness of the male; for the male, it is very important to signal his fitness. At the same time, fitness is very difficult to assess in a direct way, which means that we are in a typical situation of incomplete knowledge, which in turn opens up the possibility of cheating. The theory tries to explain how individuals who differ in terms of fitness and whose interests diverge may still obtain mutual benefit from reporting honestly their qualities instead of trying to cheat. But how can one prevent cheating? The theory of costly signaling answers that the only way to prevent cheating is to choose a signal that cannot be dishonest. This condition implies that the signal must be such that its very existence is the incarnation of the value it signals. Such a signal cannot be simulated: if you do not possess the qualities you want to signal you cannot signal them, because the signal operates through exemplification. The best known example is the peacock's tail: the tail is objectively disabling because it is a major handicap when the bird soars to escape a predator. How could evolution select a trait that handicaps its possessor? Well, the answer is: it has been selected precisely because it is a handicap.[3] Being a handicap makes it an honest signal: it depends directly on the qualities of the individual who exhibits it. If the male peacock has survived until the mating season although the tail is a disabling feature, then the tail is an honest signal of his fitness and the female

[2] See Smith and Harper (1995); Lachmann et al. (2001).

[3] See Zahavi (1975); Zahavi and Zahavi (1997).

can take it as direct proof of that. Now, the bigger and the more colorful the tail is, the more handicapping it is. This explains why females tend to choose always the longest and the most colorful tail. This dynamics can lead to what has been called "a runaway process", because every generation of females selects among the males the ones with the most colorful and longest tails; in the long run, the mean level of colorfulness and length of tail of the males will rise.[4] If this process would not come to a halt, it would open a very grim perspective for the male population and more generally for the species. Happily, the cost vs. benefice balance will at some moment halt this potentially self-destructive dynamic. The logical possibility of a runaway process illustrates very nicely the difference between costly signals and inexpensive signals. A costly signal has to be paid cash. This is not the case with inexpensive signaling. Take language for example: it is the prototype of an inexpensive signaling device and, as we all know, you generally don't have to pay cash for your utterances. That is the reason why language can so easily be used for simulating and cheating. It is easy to signal in a linguistic way qualities that you don't possess. And you might even wonder if I am not doing it now. Who knows?

The theory of costly signaling is heuristically very powerful: it is a tool which helps us to link together facts studied by many different disciplines: evolutionary biology, anthropology of religion, economic theory (the problem of conspicuous consumption), sociology (theories of symbolic capital), and so on. Bird and Smith (2005) have shown how the theory of costly signaling is able to bridge the gap between social anthropology (which emphasizes the intangible relationships, self-representations and symbolic representations, the question of status symbols, etc.) and "naturalistic" approaches seen in terms of selfish but socially immersed individuals. They note: "By paying attention to the problem of maintaining credibility when individuals are taking interdependent decisions (concerning joint alliances, conflicts, relations of trust, etc.) in situations of incomplete information, signaling theory gives us a new interpretation of symbolic activities such as the aesthetic development, initiation rites, the ethnic boundaries, the ceremonial festivities, the circulation of wealth, conspicuous consumption, monumental architecture, religious commitment and the supply of altruistic goods" (p. 222). As far as aesthetics is concerned, the heuristic function of the costly signaling model resides in the fact that it allows us to locate art and aesthetics in the broader context of other social facts to which they are associated in most societies, such as religion, ritual, politics, conspicuous consumption and so on. The fact that aesthetics is only one of the multiple domains of costly signaling in humans loosens somewhat its exclusive ties with sexual selection, although it remains important to stress that what marks their common specificity among the forms of costly signaling is the fact that in both cases the signaling is realized through a *display* which asks for a specific type of attention.

But as it stands, the theory, when applied directly to problems studied by social sciences, has several drawbacks.

[4] See Grafen (1990).

The first is that it is not sure that every costly signal is honest and that every honest signal is costly: cheating can sometimes be very costly and in non-competitive relationships, even inexpensive signaling can be honest. After all, acts of language are sometimes honest, aren't they? But these difficulties imply neither that costly signaling does not exist nor that it is not mostly honest.

The second problem is that it is not always clear whether the social facts which the theory is supposed to explain are really costly signals, the danger being that, contrary to what happens with signaling theory in evolutionary biology, its use in human sciences risks defining the notion of "cost" in a vague or metaphorical manner.

The third is that when it is used in human and social sciences, costly signaling is generally interpreted in terms of a vague functional equivalence and not of a structural homology. When using the concept, human sciences are generally looking for (supposedly) functional equivalents to sexual selection, like symbolic capital, agonistic power relations, prestige politics, and so on.[5] As far as art and aesthetics are concerned, these vague functional equivalences, although they are relevant to some extent, have no great explanatory power. They can explain why some people collect art, why some organize lavish performances and so on, but they seem unable to explain on a general level why people create art and why they are interested in it even when no prestige comes into play: enjoying a movie or a poem, inventing geometrical perspective or abstract art and so on, have not much in common with functional equivalents of some strategy of egoistic genes.

The fourth drawback is that, generally speaking, the theory of costly signaling is taking into account only the cost of issuing the signal: the signal is costly for the issuer (the male bird). But what about the female? She certainly is not emitting a costly signal, because she is emitting no signal at all. But to be illuminating for aesthetics, the theory must be able to say something about attention. As far as I know, very little attention has been paid to the question of the cost for the retriever of the signal: is the retrieval inexpensive or is it costly? Well, if we think about the behavior of the female, it appears that the costly signals emitted by the male command, on the side of the female, a type of attention that is itself costly and handicapping. We have seen that she has to synchronize her attentional behavior with that of the male: she has to tune in. This implies that her attentional profile must have the same characteristics as the "poïetic" profile of the male: loss of pragmatic significance, focalization, heavy investment in perceptual and neurological cost, capability of sustaining delay of decision making, risk of being attacked by a predator, and so on. We have seen that for the ritual to work, the female, cognitively as well as on the level of her emotional reactions, must look at the whole situation as one not of direct interaction but of "display." She must be able to read the signals as self-referential signals. And to do this, she must be able, as we have seen, to

[5]The equivalences remain vague because sexual selection, like natural selection, is a genetic process, which is not the case with symbolic capital, agonistic power relations, and prestige politics.

process all relevant stimuli—the bower structure, the decoration, the colors, the movements, and the vocalization of the male—by neutralizing direct feedback loops pairing a stimulus with an immediate behavioral response. Instead of the standard stimulus-driven behavior she must switch to a self-reinforcing, attention-driven, costly behavior. This is the price she has to pay if she wants to be able to assess if the signal is honest: as the male can only emit the signal if he possesses the qualities he advertises, so too can the female only get the assurance she is looking for if she is willing and capable of assessing the signals through an attentional process which is costly compared to standard attention. The most important point is that she can only get the information she is looking for if she processes the signals of the male in this costly way: it is not enough to identify them as being costly for the male, because you cannot identify them independently of the fact of experiencing them as costly which means experiencing them in a costly way. There is no shortcut because only the complete sequence of the ritual gives access to the needed information.

So my tentative conclusion at this point is that once we reframe the notion of costly signaling in a way which takes into account also the mode of attention demanded by the emission, it can have an illuminating capacity as far as the study of art and aesthetics is concerned.

3 Aesthetic Attention

With this in mind, it is time now to focus directly on the question of aesthetic attention. In what way does the setting called "aesthetic experience" affect the dynamics of attention? What are the inflections that characterize the attentional processes occurring in an aesthetic setting compared to those occurring in standard attentional processes? The notion of a standard attentional process is problematic, but for my purposes this is not very important because I will not say anything specific about it: I use it loosely as a contrasting element for the traits which I take to be specific of attention in an aesthetic context. What I have to say about this specificity draws heavily on cognitive psychology and I will be unable here to go into the specifics of the experimental settings or to discuss the legitimacy of extrapolating from these settings to the problem of aesthetically oriented attention. But in a general way, the extrapolation of the experimental results to the case of aesthetic attention can be justified on grounds of commonly accepted and commonsensically formulated characteristics of aesthetic experience. I would like to foreground three major specificities:

The aesthetic inflection of attention results in a reversal of the relative importance of bottom-up information processing compared to top-down processing. Standard pragmatic information processing puts emphasis on stimulus-driven, bottom-up, schematic, and automatic treatments. In aesthetic experience, information retrieval is more heavily attention-driven, top-down, concretizing and reflective. Now it is important not to construe this as a dichotomy. Every attentional process is partly stimulus-driven, bottom up, schematic, automatic, and partly attention-driven,

top-down, concretizing, and reflective. Looking at a picture in an aesthetic way doesn't neutralize the pre-attentional stages of visual organization, which are constitutively automatic, bottom-up, and so on. What happens is that aesthetic attention, contrary to standard attention, which is driven by the norm of perceptual and cognitive economy, does not maximize these processes but rather emphasizes, on the contrary, the attention-driven top down ones. I think this explains why we often consider aesthetic attention to be active and standard attention to be passive. Of course, literally speaking, this opposition does not make much sense because stimulus-driven, bottom-up perception is never passive, even at the pre-attentional level: as we know, the pre-attentional processing of a visual stimulus, for example, is made up of operations of selection, as one of the central functions of this pre-attentional stage of information processing is the reduction of the complexity of the proximal stimulus. But it is easy to understand why we can have the impression that standard perception and attention are "passive": we do not have conscious access to pre-attentional cognitive processes and at least in settings of ecological familiarity even the attentional levels are largely automatic because they are founded on an acquired expertise.

But of course, not all non-aesthetic attentional processes are operating this way: "hard-looking" processes do also exist in other contexts. We have only to think about the entomologist or the botanist looking for specimens of a hitherto unknown species, or less exotically, about a person looking for a displaced item. I think what is peculiar to the aesthetic inflection of attention is foremost the fact that it is not only attention-driven but has also a peculiar auto-teleology built into it: the aim of looking aesthetically at something is the process of looking itself. The entomologist looking for specimens of unknown species is hard-looking because he is aiming to identify the discrete differential characteristics which will allow him to identify the specimen as belonging to species A or B. So, his hard-looking is still a looking which strives for the most economical way to achieve this result, which means that his attentional processes are guided by the final result he wants to achieve: the correct identification of the specimen. This, it seems, is not the situation when attention is aesthetically inflected: if you adopt the aesthetic stance towards a flower, a sound, or a picture, your activity is not driven by the transitive aim of identifying it correctly as the flower A, the sound of K, or the representation of Z. This identification surely is often part of the aesthetic process—but once you have achieved this goal of identification, the process is not over. One could even say that it is now that it really begins. Take the example of a picture: you'll go on to look at it, descending attentionally beneath the level of representational identification, looking for the visual organization, the balance of colors, then perhaps ascending again, putting the colors in relation with the representational content, and so on. What this comes up to is that when attention is aesthetically inflected it is self-reinforcing: attention calls for further attention in an internal process of continuous feedback—a point already implicit in Kant's analysis of "aesthetic judgment." What could motivate such a costly process? As I suggested already in the opening statement the motivation is I believe hedonic reinforcement, a question I will try to expose at the end of this paper.

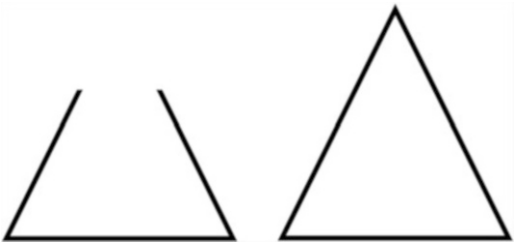
Attention-driven information retrieval, which is typical of aesthetically inflected attention, enhances our capacities of discrimination, be they perceptual, categorical, or emotional. Practicing this type of attention, even when it is not producing object-knowledge, is enhancing our cognitive abilities. Aesthetic attention is, among others, a way to achieve what psychologists call perceptual learning.[6] Perceptual learning is not acquisition of new object-knowledge but results in the lowering of the attentional threshold. Lowering of the attentional threshold is a typical outcome of top-down, attentionally driven processes. It has been studied notably in the area of videogames, but it is a general process corresponding to what the two psychologists Ahissar and Hochstein (2004) call the "reverse hierarchy theory." Their idea is that what limits performance in the field of simple visual discrimination is not that the relevant information is absent from neural representations, but that neophytes do not have access to it. In other words, the same visual stimulus gives rise to the same neural representations in all subjects, because their capacities in processing stimuli sub-personally in a bottom-up way are basically identical because they are biologically hardwired. The subjects differ only in terms of their ability or inability to attentionally *access* this information. So potentially the necessary information is there for everyone but people differ in their capacity to gain attentional access to it. As Ahissar and Hochstein showed, the training of top-down attention-driven information retrieval lowers the threshold of our attentional access and so enables us to reach further down in the hierarchy of information retrieval. The reverse hierarchy theory predicts more precisely that this development of attentional discrimination is due to a descending cascade of top-down transformations on a neural plane that enhances the relevant information and weakens the irrelevant one.

A well-known pictorial strategy to produce such "reverse hierarchy" processes is to create pictures that are difficult to treat in a coherent way by automatic, bottom-up processes. This is the case for example of post-impressionism: although post-impressionism is still figurative painting, it very often is on the borderline between figuration and design. Think of the later series of Monet's "Water Lilies:" at the first look, some of them seem to be pure design; it's the attention-driven descending processing caused by the title of the Work which will give it its figurative content, without at the same time neutralizing the all-over design effect, producing in this way a constitutively unstable attentional logic. Using very different techniques, Matisse and Bonnard produce the same instability, this time in the form of a tension between the principle of depth construction and the principle of surface scanning. To a naive eye, Bonnard's treatment of the relationship of depth-effect and surface-effect is disturbing and produces perceptual dissonance. Attention-driven, top-down perceptual processing is able to reduce this dissonance by producing a process of perceptual learning, developing in the spectator the capacity to adopt the so called "pictorial vision" stance and to switch between this stance and the canonical visual mode. Even if such learning is not explicit and does not give rise to propositional

[6] See for example Kellman (2002).

knowledge, at least not directly, it seems hardly deniable that an important part of the cognitive appeal of pictorial art is related to this dialectic between painterly vision and world vision.[7]

The dynamics of aesthetic exploration is characterized by a prevalence of horizontally distributed exploration over vertically integrated exploration. Standard cognitive processes use preferentially bottom-up automatic processing to produce efficient beliefs and evaluations in the least costly way. Specifically, when we encounter a perceptual stimulus, we try to associate it in the most economical way with a maximum of properties which do not belong to the perception itself but which allow us to integrate it into a larger context. This generalization operates through a process known as "schematizing:" this process "impoverishes" the potential complexity (and richness) of the stimulus by projecting upon it an internalized general pattern (or category) and by ascribing to the perceived event the categorical attributes of the scheme. A "cognitive pattern"[8] or "template" ("Sollmuster" or "Superzeichen" in German) of this type is a *short-cut* allowing us to minimize the cost of cognitive processing and to maximize its effectiveness (all other things equal). The cognitive patterns, or at least the perceptual ones, generally operate at the pre-attentional level. For example, when we look for a fraction of a second at a triangle lacking one summit, we see a complete triangle with three summits, because and anticipatory sub-personal mechanism has "filled in" the lacking third summit:



But of course, this mechanism operates not only at the level of perception. It also plays a central role in conceptual categorization where it has been studied under various names (such as "schema," "prototype," or "horizon of expectation") by many disciplines like, for example, cognitive psychology, social psychology, and sociology of knowledge along with descriptive phenomenology and hermeneutics. In all cases, the function of the anticipatory "simplification" is to reduce the amount of potential information contained in the ongoing experience of our "being-in-the-world" and so to ensure the quickest possible integration of the new stimulus in the stock of familiar stimuli. But in the case of attention in the context of an

[7]For a more precise and satisfactory account of these dynamics, see Peer F. Bundgaard's paper in this volume.

[8]d'Andrade (1992).

aesthetic experience, the quickest way to produce beliefs is no longer the goal of the process. We are looking on the contrary for "contextual complexity,"[9] which is characterized by the fact that the top-down and horizontal explorations outweigh one-way bottom-up processing. This does not necessarily mean that the field of perception is more important than intellectual discrimination. The difference is one of cognitive dynamics: instead of trying to reduce the complexity of information, the aim being to produce a stable belief in the most economical way that fits into a class of already existing beliefs or (more rarely) that reorders the prototype of that class, aesthetically oriented attention favors complexity of information, looks for multiple (top-down as well as bottom-up) relationships between the different levels of information-processing and accepts to linger on the same level to explore it horizontally in all its richness.

4 The Hedonic Component

But why would we engage in such a costly relationship? As I suggested earlier, in aesthetic experience the costly cognitive process is regulated by hedonic feedback. Of course, most if not all cognitive processes are tied to hedonic reactions. But whereas standard attention is regulated mostly by its final outcome and therefore is heavily hetero-teleological, aesthetically oriented attention is self-teleological because, in its case, the hedonic calculator is functioning online in a feedback-loop with the ongoing attention: in aesthetically oriented attention, the costly processing of the signal is driven by an internal reward.

The empirical existence of direct online feedback loops between attention and reward in aesthetic experience has been amply demonstrated, notably by the cognitive psychologists Rolf Reber, Norbert Schwarz and Piotr Winkielman (2003). Reber and his colleagues are working in the field of cognitive psychology and their empirical evidence is mostly behavioral, although Winkielman and Cacioppo (2001) used facial electromyography (EMG) as a way to measure participants' affective response. But their findings are corroborated by neuroscientific research by Ramachandran and Hirstein (1999) or by the team of Semir Zeki, who identified the area of the medial orbito-frontal cortex that mediates this feedback in the case of experiences of visual and musical "beauty" and "ugliness."[10]

One very important difference between the psychological model of Reber and his colleagues and most neuroscientific models is that Reber's experimental work is concerned with establishing a difference between hedonic value attributed to the processed object and hedonic value attributed to the processing itself. Reber's experiments highlight the fact that, in aesthetic contexts, pleasure/displeasure is a

[9] Hepburn (1963).

[10] Kawabata and Zeki (2004); Ishizu and Zeki (2011). For a general presentation of Zeki's theory of art, see Zeki (1998, 1999).

reaction to the process of attention, which implies that although the properties of the object of attention are a central part of the distal cause of aesthetic appreciation, its proximal cause is the ongoing attentional activity focused on the object. For Reber, what is rewarding during the process is neither the represented object as such nor the final cognitive outcome of the processing of the object (a "determining judgment," to speak with Kant), but the act of processing itself (the Kantian "harmony of the faculties"). Neuroscientists, it seems to me, tend (more classically) to relate the hedonic response to the properties of the attended object.[11]

Another important difference is that neuroscientists mostly address issues in visual art, and although Zeki extends his research to music, he too is interested mostly in arts where the level of perception is central, which excludes not only the whole domain of literature (the case of oral poetry is of course more complex) but also conceptual art and, more generally, many forms of contemporary art which minimize the perceptual level of attentional engagement. Although Reber's experiments are also exclusively studies of visual stimuli, his model explicitly claims validity for perceptual *and* conceptual levels of processing.

For multiple reasons, I think that we should look out for a generic model of aesthetic experience, valid for all modalities of aesthetically oriented attention, and for a model that foregrounds processing instead of object properties. Along these lines, aesthetic experience could be defined as a bidirectional feedback loop established between the attention paid to the object (artwork or whatever) and an online hedonic calculus evaluating the positive or negative valence of the attentional process as it unfolds in time. Several points must be stressed: it is the attentional process which is evaluated by the hedonic calculator and not directly the object (although the appreciation will generally be projected on the processed object); this implies that the processing is meta-cognitive and reflective in important ways; the feedback goes both directions; the hedonic evaluation is done online, which means that it regulates and is affected by the attentional processing.

Can we go further and try to find out if there are specific characteristics of the profile of the attentional process which are in a deterministic way linked to positive hedonic valence and therefore to positive aesthetic experience? As already indicated, contrary to objectivist theories of aesthetic evaluation, which place aesthetic value directly in the object's properties, a model based on the hypothesis that what is evaluated are not the qualities of the object *per se* but the quality of the way it is processed can of course not look for object-properties to find an answer to this question. The relevant characteristic must be a characteristic of the processing itself. What is this characteristic? The standard answer in cognitive psychology as to what causes positive feedback in the case of aesthetic experience has been for a long time been that it is fluency of processing which is the hedonic regulator. The more the processing is experienced as fluent, the more the aesthetic experience will be positive. This would imply that the only variable on which the hedonic calculator draws is fluency or easiness of processing. This has notably been the initial explanation given by Reber et al. (2004).

[11] See especially Ramachandran and Hirstein (1999).

This conclusion has been considered by many critics of Reber to be counter-intuitive. The first objection comes from art-history: if fluency is the end of the story, how can we explain that many works of art—and, more precisely, many highly successful ones—are designed intentionally in a way so as to limit fluency of processing: this is the case notably with important parts (but of course not all) poetry. It is also the case not only in modernist music but also in classical polyphony and so on. To answer this criticism, Reber has complexified his theory. In Reber and Bullot (2013), "disfluency" is introduced as an artistic strategy to "manipulate fluency." As the authors explicitly state, fluency remains the cause of the positive effect, which implies that disfluency is considered to be a source of negative affect. Why then should the artists be keen on introducing "disfluency?" Reber and Bullot state that its function is instrumental for manipulating the mode of engagement of the public: "[. . .] disfluency can elicit inferences about the artwork and a more analytical style of processing in appreciators who adopt the design stance and acquire art-historical understanding." Later on they state: "For instance, artists may aim to elicit processing disfluency in order to prevent automatic identification of the content of a work, or elicit thoughts about issues that are culturally significant in their art-historical context." As the use of the expression "automatic identification" suggests, disfluency seems simply to be a new word for the process called "defamiliarization" by the Russian formalists. But in fact, disfluency is *not* the same thing as "defamiliarization." Whereas the Russian formalists thought that defamiliarization was necessary to uphold satisfying aesthetic experiences, Reber and Bullot think its aim is to compel the public to go beyond the basic exposure stance (the stance of the naive spectator, so to say) and to take into account the design stance (personal and historical intentionality) and the artistic understanding stance. As Reber and Bullot state, this implies to adopt a more "analytical style of processing," which in fact culminates in a historical interpretation of the native signification of the artwork. But adopting the stance of historical analysis and interpretation is different from adopting the aesthetic stance. Of course, intentional and historical information may inform aesthetic experience: it can render it richer. But it is part of the input into the aesthetic experience and not part of the experience itself. The "analytical style of processing" is a standard cognitive approach to art, for example that of the art-historian. If the function of "disfluency" is of this kind, it cannot be the right answer to the problems encountered by the theory of fluency because it displaces the problem from an aesthetic plane to the plane of the background information for the experience. It also gives a biased image of standard aesthetic experience in many arts: in movies, narrative, theater, poetry, and many others, the standard experience is not historicist in this way. On an analytical plane, we should not conflate cognitive understanding of the native intentional identity of artworks with the aesthetic appreciation of artworks.

But there exists a second objection to the fluency theory, which could perhaps show us a way out of the problem. This second objection comes from inside psychology itself. Several studies have shown that the attractiveness of fluency has

a boundary condition: boredom.[12] When fluency is pushed too far, the hedonic valence is inverted and becomes negative. This fact indicates that fluency cannot be the whole story and suggests the existence of the second factor counterbalancing fluency. What could be this factor? Well, the most plausible candidate would be curiosity.[13] Artworks must not only be "beautiful," they must also be "interesting," that is, stimulate curiosity, and my tentative hypothesis would be that positive hedonic feedback is the result of fluency and curiosity counterbalancing each other. Curiosity is somewhat difficult to assess in psychological terms: although it is defined by a lack of information and by a drive to reduce the information gap, it is not, contrary to disfluency, experienced as dysphoric but rather is associated with positive feelings. This inherent positive hedonic valence of curiosity has perhaps been shaped by evolution, curiosity being a fitness-enhancing quality. But whatever the evolutionary cause, the reality of the positive hedonic valence of curiosity is well established.

In what way could curiosity go together with fluency to enhance positive hedonic value? I think it is important to notice that the two factors have not the same status. Fluency and disfluency are two opposing *experiences of processing dynamics*, disfluency being generally experienced simply as that which hinders fluency. Curiosity is not an experience in this sense. It is a *mental attitude* (or *disposition*) opposed to that of lack of interest (and lack of interest is provoked, among others, by boredom, which, as we have seen, is a limiting condition for experiencing fluency positively). Curiosity is an attitude of positive cognitive alertness for stimuli (objects, events) not yet processed or only partly processed. The positive valence depends not on the nature of the stimuli but is tied to the simple fact that the stimuli are as of yet not processed. This means that curiosity values the act of processing information as such. Loewenstein (1994), along with Lahroodi and Schmitt (2008), argue therefore that, in its purest forms, curiosity is characterized by an auto-teleological drive: when we are curious, we are valuing information in itself independently of any specific cognitive or pragmatic reward. This means that the reward of curiosity lies in the onset and the going on of processing itself.

If this tentative outline is correct, then artists are not obliged to construe traps of "disfluency" to maintain the positive interest of the art-lover: they have to get him to become, and then to stay, interested in processing the object (work of art). That is, the work must be rich in the sense of opening up the possibility of an intense and open processing. This means that it must be complex: as Reber, among others, noticed, if people value fluency in a positive way, they nevertheless prefer complexity over simplicity. If curiosity is a factor of the dynamics of positive aesthetic evaluation, this would be what we should await. All this does not mean that fluency is not important, but it certainly cannot explain positive aesthetic value

[12] See Bornstein et al. (1990).

[13] Ramachandran and Hirstein (1999) already hypothesized an interplay in artworks between fluency and curiosity-eliciting strategies.

on its own. It seems to me that a model based on the tensional interplay between fluency and curiosity is what we should look for.

I should, of course, add that this psychological description—if it helps to understand the internal dynamics of aesthetically oriented attention, its mechanics so to say—tells us nothing about the social and cultural factors that shape the attribution of hedonic valences and, of course, the attentional processes themselves. I was here only interested in the mechanics, even if it can be argued, and I would agree with this argument, that the most complex problems we have to face are those concerning the level of a correct understanding of the way social and cultural factors shape our attention and our allotment of positive or negative hedonic valence.

5 Some Concluding Remarks

I am not sure that the descriptive and explanatory outlines I have sketched above really fit together to draw an integrated portrait of aesthetic experience, but it seems to me that they constitute a possible starting-ground if we want to gain a better understanding of aesthetic experience. The difficulties that remain are numerous. One difficulty is the following: if aesthetic experience and artistic creation are phenomena of costly signaling, what about the second condition of costly signaling, the honesty condition? We saw that the decisive criterion explaining the existence of costly signals was their inbuilt honesty, due to the impossibility to simulate them. Is this condition valid for artistic creation and aesthetic relation? As of today, I am unable to give a satisfactory answer to this question. To explore the problem, one possible entry is the question of paraphrase and summary: although artworks can be paraphrased or summarized to convey information about them, they cannot be aesthetically experienced through a summary or a paraphrase. If this is the case, then one could perhaps develop an argument in favor of their constitutive "honesty:" they cannot be separated from their singular contingent identity, because the work of art is not the vehicle of the signal but its incarnation: the relation is one of self-exemplification. And I would argue that the idea of autonomy and of the artwork as a self-enclosed self-referential phenomenon, defended notably by Gadamer and Wittgenstein, should be studied in relation with this question. The impossibility of replacing an artwork by a summary or a paraphrase holds true not only for intermedial situations (for example, replacing a painting by its verbal description), but also for paraphrases or summaries in the same medium. To experience *Remembrance of Things Lost*, you have to read the whole novel: no summary will do. Of course, a summary or a paraphrase can give me substantive information about the representational content of Proust's work. But experiencing the work aesthetically is to experience it not only as representing a world but incarnating it verbally in precisely the "form" Proust gave it. To elicit the same experience, one would have to copy it. The same holds true for aesthetic experiences relating to natural phenomena: no description of a landscape can replace the real experience in its singularity as experienced by a singular individual. Of course, the

description of a landscape can itself be the object of an aesthetic experience, but in this case, the experience is tied to the description and not to the landscape. I am not sure that these hints are really conclusive but it could be interesting to push them further.

Another open question is that of the evolutionary aspect of the homologies between the processes of the bowerbirds on one hand artistic creation and aesthetic experience on the other. In fact, this question boils down to that of the functionality of costly signaling as evidenced by artworks and aesthetic experience. The hedonic feedback loop helps to explain how the process is possible on the level of the individual person but this does not tell us how and why it evolved and survived culturally, as a social fact present in a variety of forms in all human societies. Remember that costly signaling is characteristic of situations where the information that agents have access to is both incomplete and essential to them. This could perhaps help us to understand why art and aesthetic experience are so often present in risky communicative situations were inexpensive signaling does not seem to be appropiate: this is certainly the case when men or women want to seduce, when they want to impress a rival, when they want to show their power or their submission. But as I said, it would be simplistic to focus on these agonistic situations between individuals. Socially speaking, art and aesthetics are very often tied to existentially more elementary situations of risky communication: when we enter into a relationship with otherness, for example, with the spirits or the ancestors or the dead, or when we are faced with the conundrum of our own existential identity within the social, natural, and cosmic world—in short, in the countless lived situations in which our existential mood, our attunement, our "Gestimmtheit" (Heidegger) as individuals or as groups caught in a network of human and cosmic realities ceases to go without saying. In most human communities, these situations have given rise to a number of cross-culturally related phenomena and artifacts: dances, ornaments, sculptures, verbal productions, performances, and so on—what we here and today call art.

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More Seeing-in: Surface Seeing, Design Seeing, and Meaning Seeing in Pictures

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Abstract The paper considers the phenomenology of aesthetic experience as "twofold" in a sense akin to Wollheim's (Painting as an art. Princeton University Press, Princeton, 1987). However, as regards the perception of artworks proper, the notion of twofoldness needs further specification. In the wake of Wollheim, the philosophy of pictorial representation has addressed the second, 'configurational' aspect of twofoldness in rather vague terms without addressing the aesthetic or pictorial function of this correlate of aesthetic perception. I shall talk about such co-awareness as "design-seeing" and assign two decisive properties to pictorial design. First, I will point to a depicting property of design that is a distinctive property of pictures. Design in pictures is such that it can depict two (or, in rare cases, even more) fully consistent objects without the picture becoming ambiguous. Next, I'll show that the design structure of a painting is not simply a structure in virtue of which something is represented to the eye, but also in virtue of which meaning is conveyed to the eye. If I am right in considering the design level of pictures as a genuine platform for meaning making, then seeing-in doubled with design seeing occurs every time lines and shapes do not only depict, but also mean something

Keywords Seeing-in • Surface seeing • Design seeing • Twofoldness • Pictorial meaning

1 Preamble

Do pictorial works of art have inherent properties that inform our experience of them, i.e. qualify this experience to make it "aesthetic?" By "aesthetic," I do not mean pleasant, rewarding, or accompanied by an appreciative judgment of something that is considered beautiful or valuable in some respects. I simply understand it to mean the experience of a kind of object that differs from other

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objects in that its creator has intended it to be a work of art and designed it accordingly. And by "inform," I mean that such properties elicit this kind of experience and shape its phenomenology, causing it to be of a certain sort.

While I do think such properties exist and trigger aesthetic experience, I also consider it vain to establish a list of such essentially aesthetic properties that qualify a given object as a work of art. For two reasons: first, because a work of art need not display all of them; second, because very few, if any, can be found exclusively in pictorial works of art. Nevertheless, in this chapter I will point at two prototypical and essential properties of art that do inform people's experience of them.

The first is that they are stratified objects insofar as they simultaneously represent something and present the design in virtue of which they depict that thing. This makes the phenomenology of aesthetic perception "twofold," as Richard Wollheim (1987) famously put it: the visual experience of paintings consists of the recognition of an object represented on a surface (what he calls "seeing-in") accompanied by the awareness of that surface. This claim is far from evident with regard to picture seeing (it may not be twofold at all) and the exact nature of "surface seeing" (which ultimately is correlated to precisely what we or Wollheim mean by "surface"). The first section of this chapter is an investigation into what actually characterizes the "twofoldness" of aesthetic perception. To this effect, I shall propose a distinction that seems to have escaped Wollheim and most of his commentators: twofoldness is not simply simultaneous awareness of both the represented (or otherwise appearing) object and the matter (the canvas, the cloud, the frosty pane, and so on) in which it is represented or in which it appears. If this were the case, seeing faces in clouds and seeing them in canvases would be tokens of the same kind of experience. Twofoldness in the aesthetic domain concerns rather the simultaneous awareness of the represented object (the motif) and the surface, which (unlike clouds, walls, and frosty panes) has been designed to depict that object; that is, to enable a certain kind of visual experience. The distinction between material support (canvas) and depicting surface leads me to pinpoint an essential, close to unique property of paintings (including, as we shall see, artful photographs): they may have *multiply depicting surfaces*, that is, surfaces which enable two or more equally consistent visual experiences, without being bi-stable.

The next property I will focus attention on in the last section of this chapter is that paintings are *platforms for meaning-making* in ways that plain pictures are not. This is so not only because of what they represent (which may appear as culturally, religiously, historically, or biologically significant), but also, and first and foremost, by virtue of their depicting surface, i.e. by virtue of the way in which the depicting surface has been designed to produce certain meaning effects. There is a top-down constraint in seeing an object in a picture that does not exist when the same kind of object is seen face to face. I only see a given object in a picture because someone wanted to express himself by means of that object, and ultimately because he intended to present that object in that picture the way he did. In virtue of this intentional setting, picture seeing at large is obviously not simply about recognizing objects; it also, and importantly, means exploration. In virtue of this intentional condition, as it were, an important task for the philosophy, the psychology, and,

of course, the semiotics of art therefore consists in laying down those techniques and tools by means of which artists in general shape their meaning intentions, and in showing how these tools and techniques can take on various specific semiotic functions in different works of art.[1] As regards the phenomenology of aesthetic experience, and twofoldness, this has a major consequence: our perception of works of art is always twofold, even when the depicting surface does not display any obtrusive design properties, i.e. even when the style is perfectly naturalistic or neutral. In such cases it remains an inherent part of aesthetic perception, not because of its visual saliency, but because of its semiotic saliency: it expresses a meaning intention; it is the platform for the construction of meaning effects.

2 The Strata of Artwork and Their Perceptual Correlates

According to Husserl (1980), paintings are three-layered objects and each layer can be attended to as such; i.e. each layer can be the objective correlate of a perceptual act. (1) Paintings are plain material things endowed with surfaces on which colored marks of pigment or other materials can be observed. (2) They depict objects, enabling a certain visual experience. (3) They are pictorial objects with a certain content, a motif.[2] In this chapter, I will only discuss the first two aspects of paintings and the modes of perception through which we attend to them. I will do so along the lines suggested by Dominic Lopes in his investigation into the nature of picture seeing (Lopes 2005), with the ultimate goal of both refining the understanding of twofoldness in aesthetic perception and enriching the concept of depicting surface.

2.1 Surface and Surface Seeing

When it is regarded as a thing, a picture is an object with a surface covered with marks made of a certain matter and with certain qualitative properties. Essential to this global and straightforward characteristic of artwork is, as Lopes (2005) notes, that the surface and its marks are here considered independently of the visual experience they give rise to, what they depict, and their depicting function in general. Surface seeing, that is to say the phenomenological or perceptual correlate of the surface, is "a visual experience of a picture as a configuration of marks, colors,

[1] Cf. Hyman 2003, 2006, and the present volume for a view akin to what I propose here.

[2] Husserl states it the following way: "We have three objects: (1) the physical picture, the thing made out of canvas, marble, etc.; (2) the representing or depicting object; and (3) the represented or depicted object" (Husserl 1980, p. 19).

and textures on a two-dimensional surface" (Lopes 2005, p. 36). Thus, I may look at a picture and see cracks in the pigment or, as Lopes again remarks, notice that the canvas is old; I may be able to see a fine layer of dust covering it. I can approach it and perhaps see blotches of color or reflections and shades due to ambient light; or finally I can consider it as being oriented in this or that way (because it *is* oriented in this or that way relative to me). Now, all these elements—the quality of the pigment, the age of the canvas, the orientation of the surface, dust, and lighting conditions—may be very real parts of the aesthetic experience, but they are not genuine features of it, since none of them concern the artwork as a depicting object, endowed with a design in virtue of which something is represented to a viewer. Thus, surface seeing proper—i.e. awareness of the painting in its materiality—blocks picture seeing proper. As Lopes states: "not all visible properties of a picture surface are ones in virtue of which it depicts a scene" (Lopes 2005, pp. 35–36). It is also worth noting in passing that surface properties are not only and not strictly material properties of a painting; they are also correlates to perceptual intentionality (i.e. a specific manner of attending to the object). For instance, a conservator may be concerned by the physical state of a part of a picture and then take one step back and appreciate what that very part depicts and the way it does it. In the former case, he is attending to the canvas and its physical properties; in the latter case, he is attending to the depicting surface and the motif that the surface enables us to experience. This leads us to those properties which depict something and thus elicit what Wollheim called the experience of seeing-in: the experience of recognizing or seeing something represented in a picture.

2.2 Design and Design Seeing

According to Husserl, the second ontological layer of a picture (the *Bildobjekt*) is the picture qua depicting surface, i.e. an object endowed with a surface that has been designed to make certain represented objects appear in a certain way. The perceptual correlate to this stratum is well characterized by what Lopes (2005) calls "design perception." The design of a picture is a considerable subset of its surface properties. It is "a configuration, on a two-dimensional surface, of marks, colors, and textures in virtue of which the surface depicts a scene" (Lopes 2005, p. 28). Hence, design seeing is, correlatively, a visual experience of such a configuration of marks which have a genuine depicting function and as such—at least following this first definition—are genuine features of aesthetic perception. However, since the design is not the same as the content or the motif of the picture, design seeing proper "comprises the surface configurations that you see when you see the picture surface without seeing anything in it and that are responsible for your seeing something in it" (Lopes 2005, p. 25). In other words, what Lopes calls design seeing is not the trivial fact that when you see a picture, say the *Mona Lisa*, you see what you see in it in virtue of the pictorial design used by the painter to enable a certain kind of visual experience. If that were the case, there would be no conscious experience

of the design; it is not part of the phenomenology of the experience. Design seeing proper is thus seeing the design as design independently of what it actually depicts.[3]

Design seeing is perceptual awareness of the purely pictorial properties of the object, e.g. the characteristics of the contours (clear-cut, fuzzy, chiaroscuro, etc.), the chromatic properties, luminance, the degree of representational realism, perspective (simple, multiple, ambiguous), point of view (generic, non-generic), and so on and so forth up to our simple categorization of a picture as, say, a "Fontana," a "Millet," a "Pollock," or, on an even larger scale, "Cubist," "Post-Impressionist," independently of what the picture represents. To this extent, and by contrast with surface properties, design properties are genuine correlates of aesthetic perception: you do not just see the represented objects, you also see the way in which they are given, their manner of presence.

However, and as just mentioned, it is important to stress that considering design properties as genuine features of aesthetic perception or picture seeing does not explain how or to what extent design is a genuine part of aesthetic perception. There is indeed a difference between, on the one hand, asserting the truism that design informs aesthetic perception because it is thanks to the design that we see something in the painting, and, on the other, making the claim that we are genuinely co-aware of the design when we see an object in a picture, that is to say that our act of seeing the motif of the picture (the picture as *Bildsujet*) is fused with our perception of the design of the picture as a depicting surface (the picture as *Bildobjekt*). In the former case, seeing what is in the picture implies "seeing (in virtue of) design," but only in the latter case is the act of seeing what is in the picture accompanied by or doubled with design seeing proper.[4] As we shall see, it seems perfectly sensible to claim not only that we "see (in virtue of) design," but also that we can consciously focus our attention on pictorial design as design, without claiming that design perception is a genuine part of aesthetic perception or fused with seeing the motif.

In Sects. 2.3, 2.4 and 2.5, I will consider this issue in more detail with a view to clarifying Wollheim's notion of "twofoldness" and proposing a refined description of the depicting surface.

2.3 Seeing-in and Design, Seeing-in and Surface

Naturally, the role one assigns to surface seeing and design seeing in aesthetic perception has an effect on what one considers the phenomenology of such perception to be. Let us first take a look at the definitions of design and design

[3]Lopes puts it like this: "It is only in virtue of seeing the configuration of marks on its surface, and being sensitive to visible changes in them, that we see anything at all in the picture. However, seeing a pictorial design face to face does entail seeing the design as a design—it does not entail design-seeing" (Lopes 2005, p. 28).

[4]The distinction between "seeing design" and "design seeing" is developed by Nanay (2010).

seeing. Following Lopes's definition, to perceive design as design is to perceive it independently of what it depicts. One could then take a Gombrichian stance and assert that design perception is *not* a feature of aesthetic perception proper if we understand this to be the experience of the depicted object as the object seen face to face. So you are either immersed in seeing Dora Maar in Picasso's picture or you consider what design features enable this visual experience. You cannot have both at the same time. Gombrich says it like this:

> A master of introspection, Kenneth Clark, has recently described [...] how even he was defeated when he attempted to 'stalk' an illusion. Looking at a great Velázquez, he wanted to observe what went on when the brush-strokes and dabs of pigment on the canvas transformed themselves into visions of transfigured reality as he stepped back. But try as he might, stepping forward or backward, he could never hold both visions at the same time, and therefore, the answer to his problem of how it was done always seemed to elude him. (Gombrich 1960, p. 5; also quoted in Lopes 2005, p. 38)

Gombrich would clearly not subscribe to the strong interpretation of design seeing as a genuine, full-blown feature of aesthetic perception. Either you have design and surface perception or you have the immersed experience of the motif; just as you, in the famous drawing, have either duck or rabbit, but never both simultaneously (Gombrich 1960, p. 4).

Nevertheless, the definition also lends itself to the opposite, Wollheimian interpretation: since design is what makes us see whatever we see in a picture, design is immediately displayed in the picture. We see the object in the design in virtue of the physical marks on the physical surface. The phenomenology of aesthetic perception is thus, in essence, "twofold." It is characterized by the double, fused, simultaneous awareness of the objects we see in the picture and the surface on which, in which, through which or in virtue of which we see them.[5] This perceptual recognition of objects in surfaces is what Wollheim calls seeing-in. The correlate to "recognitional" seeing-in is awareness of the surface in which the object appears as well as of the "configurational" properties of the marks upon it (the quoted terms are borrowed from Wollheim). The conflated character of these aspects is what characterizes the visual experience of a depicting object.

> Seeing-in is a distinct kind of perception, and it is triggered off by the presence within the field of vision of a differentiated surface. [...] When the surface is right, then an experience with a certain phenomenology will occur, and it is this phenomenology that is distinctive about seeing-in. [...] The distinctive phenomenological feature I call 'twofoldness', because, when seeing-in occurs, two things happen: I am visually aware of the surface I look at, and I discern something standing out in front of [...], something else. [...] The two things that happen when I look at, for instance, [a] stained wall [and see a figure of a boy in it] are, it must be stressed, two aspects of a single experience that I have, and the two aspects are distinguishable, but also inseparable. They are two aspects of a single experience, they are not two experiences. (Wollheim 1987, p. 46)

[5] I do not multiply the phrases for rhetorical reasons. As we shall see, it is not a straightforward affair to define the relation between surface/design and depicted object, both in general and according to Wollheim in particular.

Fig. 1 Asger Jorn, *Le canard inquiétant*, 1959. © Donation Jorn, Silkeborg, billedkunst.dk

This is obviously the exact opposite of Gombrich's stance. To Wollheim, another duck, namely Asger Jorn's *Ominous Duck*, is likely to epitomize twofoldness (see Fig. 1).

In Jorn's *Ominous Duck*, both the structural design properties of the painting as a depicting surface (the evident fact that the duck has been painted on another painting) and the material properties of the duck itself (size, colors, brushstrokes) seem not only to be immediately picked up by perception, but also to be essential to understanding why the duck is ominous (and the painting humorous). Even though I do side with Wollheim in what we, for reasons of convenience, could call his debate with Gombrich, this is not the place to unravel all aspects of this discussion about the constituent elements of aesthetic perception. I only mention it here because the above quotations and the issues they address may indeed help us to better define what exactly twofoldness comprises, i.e. what the two aspects of the single aesthetic experience are, or rather what they are not. As will soon become clear, I do believe that the notion of twofoldness, also in Wollheim, remains unclear in one essential respect.

2.4 Seeing Something in Walls and Seeing Something in Paintings

So the question is how do surface (seeing) and design (seeing) combine with seeing-in (Wollheim) or with the immersed experience of the motif (Gombrich)?

We have just seen that even though Gombrich accepted the analytical distinction between surface and design, to him this would still not have any import on the phenomenology of aesthetic perception. When you want to find out how a given

artist has pulled off his stunt (say, succeeded in representing water lilies in a pond), you either get pigment on canvas (surface) or you get (sometimes incoherent) aggregates of shapes (design); that is, you either get the object (surface, design) or the motif. On the other hand, Wollheim's notion of twofoldness embraces *exactly* what Gombrich discards from aesthetic perception, and there is a good reason for this. This is what Wollheim says:

> So, for instance, I follow the famous advice of Leonardo da Vinci to an aspirant painter and I look at a stained wall, or I let my eyes wander over a frosty pane of glass, and at one and the same time I am visually aware of the wall, or of the glass, and I recognize a naked boy, or dancers in mysterious gauze dresses, in front of [. . .] a darker ground. In virtue of this experience I can be said to see the boy in the wall, the dancers in the frosty glass. (Wollheim 1987, p. 46)

Naturally, this makes sense. You see a stained wall and in that wall you recognize the shape of something; your experience of seeing the figure is pervaded with your experience of seeing the wall. What examples like this show is that the very material support (wall, frosty pane, cloud) is an integrated feature of the phenomenology of that perception. But here is the key issue: what happens if we transpose this state of affairs to the perception of works of art, for instance the visual experience of some dancers painted by Degas? In these circumstances we get the wrong description. We are *not* seeing the dancers "in front of" the canvas (which is the immediate counterpart to "wall" and "frosty pane" in the quotation above); and our experience of seeing the dancers is *not* pervaded with our awareness of the canvas as canvas. If figures, for example, appear on a dark background, then it is dark because the *wall* and frosty *panes* appear dark; but upon perceiving a figure in a painting we would not say that the *canvas* is gray or yellow, we would rather say that the "floor" is gray or the "wall" is yellow. The reason for this is that seeing figures in walls and frosty panes is a two-stratum business; it consists of material surfaces and figures. Paintings, on the other hand, are *three-strata affairs.* They consist of material surfaces that have been intentionally transformed into depicting surfaces in virtue of which we see figures. Qualities in paintings specify the depicting surface, not the material support.[6]

In other words, the twofoldness Wollheim mentions cannot be exhaustively assimilated to the co-awareness of the physical support for depiction, the material surface. This becomes obvious just one paragraph further on in Wollheim's text, where he tells more or less the same story as Gombrich with his Clark anecdote:

> The twofoldness of seeing-in does not, of course, preclude one aspect of the complex experience being emphasized at the expense of the other. In seeing a boy in a stained wall I may very well concentrate on the stains, and how they are formed, and the materials and colours they consist of, and how they encrust or obscure the original texture of the wall, and I might in consequence lose all but a shadowy awareness of the boy. [. . .] One aspect of the experience comes to the fore, the other recedes. And sometimes this

[6]This is also what Lopes notices with regard to the Clark anecdote in Gombrich: once you get too close to the canvas, you get the canvas qua pure surface without any design properties (Lopes 2005, p. 38).

> preference for one aspect of the experience gets carried to the point where the other aspect evaporates. Twofoldness is lost, and then seeing-in succumbs to an altogether different kind of experience. (Wollheim 1987, p. 47).

In Gombrich, there is no significant difference between the surface properties of a picture and its design relative to the aesthetic experience (you can look at the way Dora Maar's face has been designed or try to capture the exact hue of the pigment in virtue of which we see her lips, but in neither case can you perceive Dora Maar proper). Wollheim, in contrast, marshals some variant of this distinction, since, on the one hand, twofoldness requires awareness of the matter, the support in which the object is perceived; while he seems to follow Gombrich in saying that this awareness is not simply awareness of canvas, plain pigment, and so forth, because this would block seeing-in proper. In his twofold perception, the surface the viewer is supposed to integrate, along with the depicted object, is not simply the material support of the representation; it is rather the latter as it has been modified by the artist into a pictorial or depicting surface.

So here is the refinement of Wollheim's theory that I propose: seeing-in (i.e. the experience of seeing something in a painting) is doubled, not simply with awareness of the object in which we see it, but with the co-perception of the *depicting*, intentionally designed surface in virtue of which we see it. This distinction—between material support and depicting surface—has, to my knowledge, not been sufficiently brought to the fore, either by Wollheim himself or by his commentators.

2.4.1 Seeing-in and Awareness of the Depicting Surface

I shall return to what I mean by "awareness of object" compared to "co-perception of the depicting surface," but first I will give a simple example of what the latter may comprise.

Consider the *Annunciation* by Piero della Francesca (Fig. 2). As in some of his other paintings, the artist has chosen a non-generic vantage point[7] from which the represented space appears in a somewhat collapsed perspective, making the spatial layout ambiguous and, for that reason, the depicting surface obtrusive. On the left side of the painting, Gabriel clearly appears to be at the same level as the figure of God painted on the wall in the background, whereas if you consider the lower part of the picture, he is just as clearly placed in the foreground, at the same level as Mary.[8]

[7] A vantage point is non-generic when a remarkable constellation of figures (or lines) can be achieved only from that point of view. There is, for example, only one highly unstable point of view from which the Necker cube appears as a 2D hexagon (see Petitot 2009a, b and Bundgaard 2009, 2011).

[8] This is, of course, an elegant and powerful way of giving a purely pictorial representation of the mediating function of angels and of the continuous transition from the divine to the earthly domain which is taking place at that moment.

Fig. 2 Piero della Francesca, *Annunciation*, 1452–1458

Now, the conspicuous presence of the depicting surface (because of its relative ambiguity) is of course not a property of the represented scene. Nor is it a property of the canvas. It is not the material properties of the canvas, say, its two-dimensionality and its "canvasness" as such, that pervade the visual experience of the scene. The obtrusive presence of the surface is rather the result of an artful exploitation of the canvas that yields a specific visual experience, both of the represented scene and of the presentational design through which the scene appears with its characteristic phenomenal properties.

In short, there is a difference between being aware of a pictorial surface such as Piero della Francesca's and being aware of the canvas as material support. The former is a genuine element of the aesthetic perception of the picture. It is a constitutive part of its phenomenology, whereas the latter is not.

2.5 Surface Perception and Design Perception

In order to better capture the phenomenology of aesthetic perception proper (i.e. the perception of works of art independently of whether or not they are considered good), I will consider how the two kinds of perception identified by Lopes (surface or design perception) "double with" seeing-in, i.e. integrate the twofold character of such an experience. There are two issues to address here. (1) Even the most convinced Gombrichians would accept that nobody ever mistakes a picture for reality (and if they did, their experience would not be one of picture seeing, but a piece of illusory perception). So, from a Gombrichian perspective, picture seeing must also be doubled with something, namely awareness of the ontological nature of what one is looking at. What is this awareness and in what respect is this double character of picture seeing different from twofoldness in Wollheim's understanding? (2) Pictures come in different types; they are distributed on a continuum with, at one end, pictures with almost transparent design properties and, at the other end, pictures with obtrusive design properties, i.e. pictures where the viewer's conscious awareness of the design properties is an integrated feature of the phenomenology of that visual experience. How can the difference between the perceptions of these kinds of pictures be characterized?

Lopes (2005) addresses both these issues in one simple conceptual framework. To accommodate the diversity of picture types, he sets up a matrix with two sets of parameters. The first is whether seeing-in is illusionistic or non-illusionistic (where "illusionistic" means that seeing the object in the picture is indistinguishable from seeing it face to face[9]), and the second is whether seeing-in is doubled with or divided from design seeing. The point is then simply that each of these modes of seeing-in corresponds to certain types of pictures, and that there are pictures which could be considered "Gombrich paintings," as it were, in that they, allegedly, do not impose their design properties on the viewer's perception, whereas other paintings are more "Wollheimian" in that seeing-in here is clearly doubled with design seeing. In short, such paintings occupy different slots in the matrix below (here slightly simplified), the upper left being Gombrichian, and the bottom right slot being Wollheimian (Table 1).

Here I will concentrate only on the right column (non-illusionistic seeing-in divided from design seeing and non-illusionistic seeing-in doubled with design seeing). The upper right slot plays a key role in Lopes's complexification of the initial standard opposition because it constitutes some sort of articulatory

[9]The only type of picture which instantiates this category is allegedly the trompe l'oeil. This is fairly improbable—the category is in my view empty—but here is not the place to discuss this. "Actualism" comprises cases where the design of the picture or of the pictorial/plastic representation at large *is* what it represents. Lopes's main or rather sole example here is Jasper Johns's target pictures, since seeing the picture is an experience which is indistinguishable from seeing a target (and therefore illusionistic) and doubled with design seeing, because it is in virtue of its design that the picture is a target; the picture could hardly be said to be a representation of a target because it is exactly like targets out there.

Table 1 Types of seeing and corresponding kinds of paintings

Seeing-in	Illusionistic	Non-illusionistic
Divided from design seeing	Trompe l'oeil	Naturalism
Doubled with design seeing	"Actualism"	Twofoldedness

Adapted from Lopes (2005, p. 40)

domain between Gombrich's illusionism and Wollheim's twofoldness: it comprises paintings that divide seeing-in from design seeing but are not illusionistic as a result. So we are dealing with paintings where the phenomenology of seeing-in is clearly distinguishable from seeing the represented object face to face, but not because the design as design forces itself upon our perception. Lopes calls that category "naturalism," and I believe it covers a wide, not explicitly demarcated range of pictures that are "lifelike" or realistic in that the depicted object is readily recognizable. Examples could be a portrait by Jan van Eyck, a natural scene by John Constable, the annunciation by Antonello da Messina, or some interior by Vilhelm Hammershøi. Now—and here we are back at the question I asked above—if these paintings are not illusionistic, even though seeing-in does not double with design seeing, then seeing-in must double with something else (otherwise we would have the impression of seeing the depicted object face to face, as in *trompe l'oeil*). Lopes proposes that it is surface seeing:

> Naturalistic pictures are not illusionistic, since they always double with surface seeing and so are apprehended as pictures. At the same time, they defeat twofold seeing-in—seeing the depicted scene blocks seeing their designs (Lopes 2005, p. 40).

On the contrary, the kind of pictures dubbed "twofoldness" impose awareness of their design in that the objects we see in them do not in any way resemble the objects we see face to face (ibid.).

The perceptual correlate of the former kind of pictures is what has recently been called "uninflected" seeing-in: the perception of represented objects without awareness of the medium (design properties); whereas the perceptual correlate of the latter type of pictures is called "inflected" seeing-in: perception of objects in pictures accompanied by conscious awareness of their design properties, or perception which is hindered by spontaneous recognitional immersion in the represented scene.[10]

There are apparently good reasons to establish this distinction. First, apparently it captures a genuine ontological and phenomenological difference, i.e. the difference between, on the one hand, pictures with obtrusive designs and pictures with transparent designs and, on the other, the corresponding visual experiences. Second, as Nanay (2010, pp. 185–186) observes, it may serve to unravel an ambiguity in Wollheim's notion of twofoldness, which can either be understood as (1) a visual experience in which we are *consciously* aware of both the objects represented in

[10]This is not the place to develop the distinction between inflected and uninflected perception. Nanay (2010) provides an instructive discussion of this issue.

the surface and the surface (along with the design properties of the painting), or as (2) a visual experience in which both of these are *represented*, but not necessarily consciously attended to. Inflected seeing-in doubled with design seeing corresponds to the former, while uninflected seeing-in divided from design seeing corresponds to the latter.

However well it addresses the above concerns, this solution is nevertheless infelicitous: it indeed creates new, quite arduous problems. I will mention a couple of them here.

The matrix model and its combinatory logic seem to require that seeing-in divided from design seeing but doubled with surface seeing, on the one hand, and seeing-in doubled with design seeing, on the other, are two different categories and can therefore be easily distinguished. To my knowledge, however, there are no criteria for distinguishing naturalistic paintings from paintings that elicit design seeing; and what is more, to my knowledge no one has ever tried to define standards for establishing this categorial distinction. The present state of affairs thus begs the question: When is seeing-in divided from design seeing and when is it doubled with design seeing? The problem is not simply that there are no criteria for distinguishing between the two—after all, categories can easily exist even if it is impossible to consistently define the sufficient and necessary conditions for belonging to them. What is worse is that it is difficult (to say the least) to point to examples that would instantiate the categories in a clear-cut way.

Take Clark in the above-mentioned Gombrich anecdote. If at some point he felt the urge to figure out how Velázquez had pulled off his stunt, is that not because a specific design property had become obtrusive to him and thus a genuine part of his seeing-in (even though the picture is perfectly naturalistic)? Or the other way around: To Wollheim—for reasons which are proper to his notion of "naturalism"—Picasso's *Dora Maar* is as good an example of naturalism as any, and so are many of Monet's paintings, however obtrusive their design properties may be (Wollheim 1987, pp. 72–75).[11]

We can even consider this from the perspective of prototype theory (Rosch 1978), that is, place good examples of twofold paintings at one end of the continuum, epitomes of naturalistic paintings at the other, and accept intermediary types in-between. It will be difficult to maintain the distinction as long as we do not establish or suggest what pictorial properties elicit design seeing along with seeing-in. Imagine walking through the continuum from cubism, via expres-

[11]Wollheim's point in his discussion of naturalism is that the "lifelikeness" or "realism" one associates with naturalism is not a result of the "configurational" aspects of the painting (its surface properties) receding in our perception and leaving the scene to its "recognitional" aspects in order to trigger pure seeing-in. Instead, naturalism is a result of something he, with deliberate vagueness, calls the "reciprocity" of the two aspects of picture seeing. It may of course be considered disappointing that Wollheim assigns more or less ineffable properties to the relation of reciprocity between configurational and recognitional aspects, which trigger a naturalistic effect. Now, this is no less disappointing than the absence of firm criteria on which the distinction between naturalistic and twofold paintings could be based. At least the vagueness is endorsed in his case.

sionism, pointillism, impressionism—all fair examples of paintings which trigger twofold perception—and on to naturalistic paintings such as Caillebotte's *Baigneur s'apprêtant à plonger* or Ingres's portrait of *Princess Albert de Broglie*. Now consider the Caillebotte. It is a painting that (according to the intuitive definition proposed by Lopes, and endorsed by Nanay) should be considered a genuine piece of naturalism. But what are we to make of the fact that two of the three bathers are wearing exactly the same swimsuit? Would that not count as a remarkable or significant design property (granted that this coincidence is rather improbable)? And what about the fact that the three bathers occupy the three key stages of the depicted event: one is just about to dive, another is in the water, and the third is just getting out of the water? Is this not a remarkable or compositional design feature? And what about the framing? Is it not a remarkable design feature that the right side of the scene has been cut off? And if not, why not?

In short, each of these features—as well as, for example, the photorealistic presence of Princess Albert de Broglie in Ingres's portrait (cf. Livingstone 2002)—is considered to be an authentic design feature (which it obviously is), and so the proposed distinction is shallow. If the features are not considered design properties, then design in paintings rarely has something to do with the tools and techniques painters use to shape their meaning intentions and create specific visual experiences of the scenes they depict. Yet this is exactly the function one should assign to design.

Another reason why Lopes's distinction between surface and design seeing is unsatisfactory is phenomenological in nature and easy to explain. Following a strict definition of surface, surface comprises all the physical accidents on the painted surface, without regard for whether they have a depicting function or not. This is why I have said that surface properties, following this definition, are real parts of our experience of a picture—something has to be there for it to be seen—but they are not genuine features of the aesthetic experience. The orientation of the surface, the contingent lighting conditions in ambient space, the cracks in the pigment, and so on and so forth do affect my perception, but not picture seeing proper. However, if we consider that naturalistic paintings elicit seeing-in doubled with surface seeing, then surface seeing is an essential part or genuine feature of the phenomenology of that experience. If this is true, surface as defined here is not the same thing as Lopes's definition of surface; in fact, it is indistinguishable from Wollheim's definition of it and it is therefore part of twofoldness.

2.6 Surface as Material Support vs. Surface as a Depicting Plane

The above issues are relevant in the present context, because addressing them may help us better sort out Wollheim's ambiguous notion of surface, sometimes defined as (1) material support of depiction, at other times as (2) a depicting plane distinguishable from the physical canvas. The confusion I have just pointed to is

probably due to the fact that, according to Lopes (2005), when seeing-in is doubled with surface seeing, it is doubled with (2), whereas when he defines surface seeing, surface is understood in terms of (1). Here is another of Wollheim's definitions of surface, now as a depicting plane:

> The point that I must now clarify is that, in thinking of naturalism as lying in some kind of reciprocity or match between the two aspects of seeing-in, we must be careful not to equate awareness of the marked surface with attention to the brushwork. Attention to the brushwork is just one form that awareness of the marked surface can take, and it is not a form that, for historical reasons, it could have taken before 1500 or so, when the unit mark or stroke came to be thematized. But, long before the stroke became a required object of aesthetic scrutiny, there were plenty of other features of the marked surface that claimed attention: contour, modulation, punch mark, aerial perspective, fineness of detail, as well as, for that matter, smoothness of surface or invisibility of brushwork. (Wollheim 1987, p. 75)

Here surface is not simply canvas, that is, the material support of certain marks; it is (as already mentioned) a transformed support, a pictorial surface endowed with properties that material supports cannot have. Walls or canvases as such cannot be said to have an aerial perspective, fineness of detail, or be characterized by the invisible brushwork; but they can of course constitute the material support for the surface that displays such properties. This is why, still according to Wollheim, seeing naturalistic paintings, even the most naturalistic ones, is just another form of twofold perception.

So here is the distinction, which should be clearly marked within the Wollheimian approach, between seeing things in walls, clouds, or any other form of material support, and seeing things in paintings. In the former case, you recognize an object and you are aware of surface properties that specify *the objective support* (cloud, wall, frosty pane, etc.); in the latter case, you recognize an object and you co-perceive surface properties that specify *the depicting surface* (not the material support, of which you are only vaguely aware).

2.7 Object Awareness

I will now finally turn to what I referred to above as object awareness. As we have already seen, Lopes (2005) explains the non-illusionistic character of naturalistic pictures in terms of seeing-in doubled with surface seeing. However, according to this account, surface seeing cannot be restricted to naturalistic paintings alone, since no picture seeing is illusionistic in any relevant respect (*pace* trompe l'oeil). Wollheimian or design obtrusive pictures of course also elicit surface seeing, not simply because their design stands out, but also because we are aware of them as objects.

Thus, Lopes's use of surface seeing is infelicitous in two respects. First, surface seeing comprises elements that are not genuine features of aesthetic perception (seeing-in is doubled with the wrong kind of seeing); and second, this kind of seeing cannot be restricted to one type of picture. However, there is a good reason why

Lopes resorts to it, and that is the non-illusionistic character of picture seeing, as even the most immersed perceptual experience of a painting is accompanied by the awareness that this is a painting, not a window to some garden or a person seen face to face. So seeing-in must be doubled with something, and if, for the reasons advanced above, surface seeing is a bad candidate, something else must be recruited.

This something is what I call object awareness. It should be understood as passive awareness of the reality status of the thing(s) we are dealing with, not as a specific way of attending to an object. Object awareness is the general horizon within which the visual experience takes place, not some specific way of seeing. Consider, for instance, a museum: before I stand in front of a painting in order to have an appropriate experience of it, I have approached it, identified it as a thing pertaining to a certain category of things, and when I find myself standing in front of it and start attending to it as a specific kind of object (a depicting object), this initial awareness of its nature recedes, it is no longer the focus of my attention (as it was when I oriented my movements toward it). But it does not disappear; it continuously accompanies my visual experience. It is not something that seeing-in is doubled with—i.e. it is not something that informs the content of my visual experience (unlike the perspectival design properties of Piero della Francesca's *Annunciation*, for instance). Rather, it is something that serves as a general reality anchor for both seeing-in at large and visual experience in general.[12]

This was, then, my simplification of the matrix presented in Lopes (2005). It is a simplification that targets the phenomenology of aesthetic experience and is motivated by two observations. First, there are no criteria for distinguishing pictures that only elicit seeing-in doubled with surface seeing from pictures which also double with design seeing. Second, surface seeing, as it is defined in the case of "naturalistic" paintings, is the perception of a surface which has been designed to be pictorial or expressive and is therefore different only in degree and not in nature from design seeing proper, which is the awareness of the actual design through which something is shaped on the surface or in the picture. It thus makes sense to talk about degrees of twofoldness through all instances, from the most naturalistic to the most design obtrusive ones.

3 Multiply Depicting Design and Semiotic Design

Now I would like to proceed with the other sense, namely toward a "complexification" of our notion of design as an object. I intend to unfold this complexification along two lines. First, I will point to a depicting property of design which, in my view, is a distinctive property of pictures, that is to say, not something all pictures instantiate, but something pictures can do and other objects cannot do, or something

[12]Object awareness of this sort is of course also a vague form of attention that accompanies even the most immersed reading or movie experiences.

some pictures do and other objects do not. Design in pictures can depict two (or, in rare cases, more) fully consistent objects without the picture becoming ambiguous or bi-stable. Along the second line, I will pose a couple of questions about what counts as design. If I am right to consider the design level of a picture a genuine platform of meaning making, then seeing-in doubled with design seeing occurs every time lines and shapes do not only depict, but also mean something (in virtue of their morphology and qualitative properties and in virtue of the relations between them). This argument hinges, of course, on the possibility of bestowing meaning upon spatial phenomena.

3.1 Design That Depicts Multiple Objects

Consider the lithography below (from *11 Configurations*) by Jean Arp (Fig. 3). As Arnheim (1954, pp. 234–235) remarks, it is at least amenable to five consistent interpretations (of which the following three will suffice): (a) a small black patch on top of a larger white patch, which in turn rests on a large black patch; (b) a white patch with a hole resting on a large black patch; (c) a large ring-shaped black patch with a small black patch in the middle resting on a white background.

These interpretations are based on different perceptual grouping processes. In the pyramidal (a) interpretation, the white patch is believed to continue under the small black patch, while the large black patch is believed to continue under the white patch. This is a perfectly normal phenomenon; this is indeed the way perception constantly operates in everyday life. What is less normal is that the object also lends itself to interpretations (b) and (c), even though it is based on the very same

Fig. 3 Jean Arp, from *11 Configurations*, 1943. © VG Bild-Kunst, Bonn 2014

perceptual grouping mechanisms. In everyday perception, our visual brain may, on certain occasions, come up with two conflicting interpretations of an object; but one of them would be wrong. But this is not what we are seeing here. Here all the above interpretations are equally consistent.

So what kind of depicting object is this? It is tempting to consider it a duck-rabbit kind of object, in that it is impossible to ultimately determine what it depicts: all the above interpretations are equally possible. However, the duck-rabbit case has been designed to be ambiguous, i.e. to elicit bi-stable perception. This is not the case in Arp, where the picture has been designed to depict several objects without eliciting any bi-stability: the picture can be reconfigured at will as depicting this or that object.

I call this property of pictures "multiply depicting design." It is a pervasive phenomenon in art, richly instantiated and exploitable in countless ways. It is nevertheless a phenomenon that has by and large been neglected, if not simply ignored, in the philosophical discussions and debates on depiction or pictorial representation.[13] Note that multiply depicting design does not boil down to seeing-in doubled with awareness of design (or style or any other expressive property of the depicting surface); it is multiply depicting *stricto sensu*, and it is so in a manner which may be considered even more spectacular than Arp's configuration. Arp's depicting surface depicts many different objects, but they all appear in an (abstract) represented space. In contradistinction to this, most multiply depicting designs give access to objects represented in *different* spaces: recognizable objects in painted 3D space (e.g. ships, flowers, buildings, trees, and so on), and abstract shapes in pictorial 2D space. Epitomes of multiply depicting designs are Monet's late paintings, in which lines and colors, on the one hand, give access to, for example, branches and reflections of branches and leaves in the water and in a painted, represented space; but, on the other, can be regrouped in the pictorial, presenting space as abstract vertical green shapes on a blue background (see also Bundgaard 2002, 2004, 2009). Here is an example that (for purely aesthetic reasons) exploits the very same property of depicting surfaces:

In Frank's picture, it is relatively easy to identify the objects appearing in the represented space: a newspaper and magazine stand, a street lamp, a building in the background (however, due to vantage point and framing, it is actually difficult to capture the exact spatial layout of the scene: what is the distance between objects in the foreground and objects in the background? Is there a middle ground—say, the rectangular blocks below and behind the street lamp?). At the same time, a salient property of the picture is that it has been designed to make the visual brain group the represented objects in one, abstract vertical figure appearing as a configuration

[13] Arnheim is a remarkable exception. The present argument comes close to his (1954, pp. 127–129) acute double observation: (1) Based on its style, a picture occupies different positions between two extremes, namely the total 2D flatness of its plane and the full-blown three-dimensionality of the world it represents; (2) pictures can be composed in two ways: both with regards the arrangement of figures in the represented space and with regards the arrangement of shapes on the plane.

Fig. 4 Robert Frank, from *The Americans*, 1959, picture 62: 23rd Street, NYC

of rectangles on an abstract background. In other words, this picture epitomizes an essential property of a specific kind of depicting object: those which facilitate double seeing-in: a recognitional one, which picks up the represented objects, and a configurational one, which picks up the abstract structure of shapes (Fig. 4).

The depicting elements of such pictures have been designed (or possess a design) to *both* tap into the grouping automatisms of low-level perception and thereby present pure, organized shapes on a pictorial surface (across categorial differences) *and* provide the higher order top-down-oriented levels of the visuo-cognitive system with enough cues to allow it to recognize objects and natural sceneries in a represented space. In short, in virtue of certain types of design, marks on a depicting surface can both be configured as pure *Gestalts* standing out from a background and reconfigured into represented objects in sceneries, landscapes, interiors, and so on. Key to these kinds of design is that each depicted object level is consistent and structured, and that these object levels do not share the same part-whole structure

(the organization of the shapes as pure *Gestalts* runs counter to the organization of the represented space and the things in it. They do not share the same contours; what is separated in the representation of, say, a cityscape—buildings, magazine stand—may be fused at the pure *Gestalt* level).[14]

As I have already mentioned, this design property is rarely commented upon in the literature about depiction and seeing-in. This is probably because depiction has been construed in a narrow sense: as that which enables a visual *recognitional* experience of a represented object. It is nevertheless interesting, first and foremost because it *is* a case of double depiction. The homogeneous shape made of rectangular figures we may see in Frank's photograph is depicted in virtue of the design of the photograph. These figures, as well as the homogeneous shape, are not the design. In other words, when I see this kind of abstract shape, I do not see the design as design; I see a well-formed shape in virtue of the design. It is interesting because it does not immediately fit into the categories of seeing-in—even in Lopes's pluralistic matrix—since none of them accommodate this general phenomenon which we could dub "double seeing-in doubled with design seeing," that is, seeing a recognizable object in a picture *and* seeing a well-formed shape in virtue of the same design, which therefore becomes obtrusive in perception.

Artists often detach the automatisms of perception from their primary and only task in everyday perception, which is to further fast, smooth, and efficient object recognition. They do so not to hinder such recognition or delay it (or whatever our reward system, according to certain scholars, might find exciting; see Ramachandran and Hirstein 1999 for a defense of this claim, and Bundgaard 2014 for a critique of it), but simply to produce double organizations from one design: one for the eye (pure shapes) and one for the mind (recognizable forms).

3.2 Design as a Platform for Meaning-Making

I will now turn to the second line of complexification. I would suggest that a definition of design as the configuration of marks on a 2D surface in virtue of which something is depicted seems, at first glance, quite broad. It may, nevertheless, turn out to be too restrictive if we insist on describing design structure strictly as that which is responsible for what we *see*. Or in other words, I would suggest that design in pictures is also a part of what we *understand* in a picture, or the different kinds of meaning with which a picture has been bestowed. This is probably far from controversial; it may even seem trivial. It has consequences, however, because if this is true, then twofoldness in Lopes's strict sense of seeing-in doubled with design seeing may be at work when we perceive even very straightforwardly naturalistic paintings.

[14] See Bundgaard 2009 for a more detailed discussion of this.

Before I explain why this is so, the following should be made clear. The point we are dealing with here is different from the one I made when discussing the relation between surface seeing and design seeing (from a Wollheimian point of view, against Lopes as it were). From a Wollheimian point of view, picture seeing is twofold in nature, as is the visual experience of a naturalistic painting, of course. What I mean to say now is something else. Even in cases where the design of a painting is not visually obtrusive, seeing-in may be doubled with design seeing in Lopes's strong understanding: those are cases where the design, albeit visually unobtrusive, is *semiotically* salient, i.e. it enables a visual experience with a certain meaning.

Why is this the case? Simply because phenomena like composition, perspective, vantage point, or contrast are well-known tools for meaning making in art, and because artists arguably resort to them in order to produce certain meaning effects in their works—meaning effects that often depend not solely on the represented forms as such, but on the relation between these forms, their color, the value which their shape or orientation has been attributed locally, viewpoint, and so forth: things that can be read off the surface by (at least trained) viewers. In many cases, the use of such techniques and tools for meaning making is also visually salient (for instance in Piero della Francesca's *Annunciation*). In certain cases, however, this is less evident.

Let me illustrate what I mean. Consider Constable's *The Leaping Horse* (Fig. 5).

This might be regarded as belonging to the group of naturalistic paintings in that nothing conspicuous is going on in terms of brushstrokes, color, shape, or viewpoint. However, if we compare it to the studies that preceded it, we can observe a series of

Fig. 5 John Constable, *The Leaping Horse*, 1825

remarkable changes—not as regards the depicted objects and the scenery as such, which all remain the same, but as regards their arrangement, their orientation, and their shape or morphology. In these studies, the tree to the left of the leaping horse is placed to the right of it (on the depicting surface, of course); it was bending to the left; there were two boats to the left, both moving, one man was poling, and so on. Whatever the meaning effects of these changes are, we have good reasons to believe that they reflect the artist's intentions. If it is sensible to assimilate arrangement and shape of parts as an essential element of a picture's design, Constable has aimed at doubling seeing-in with seeing a design where the static verticality of the left side of the painting is enhanced as a global contrast to the leaping horse's dynamic horizontality. It is in this sense that the design may be visually unobtrusive, but semiotically salient. In such cases—and to use Lopes's terms—seeing-in is divided from visual design seeing, but doubled with semiotic design seeing. (The above comments on Caillebotte suggest exactly the same thing.)

As suggested, this is a common aspect of paintings—the fact that they articulate semantic values by means of composition or vantage point and perspective. I am not sure, however, that design as a platform for meaning making, that is, as a tool for shaping expressive meaning intentions, is considered just as primary as design construed as a platform for depiction *tout court*. My contention is that the semiotic function and the depicting function in painting are fused. The former is not simply supervenient on the latter and it is not something that needs to be decoded or inferred from the represented figures: in many cases meaning is right in the morphology of figures, in their resemblance, in their color, in their relative size, in their position on the surface or in the represented space. And in many cases, these phenomena tap into what is meaningful for our visual brain.

If this is so, aesthetic experience is twofold in essence. We see things in pictures, and we see them in a meaningful substrate, on a meaningful surface, that is to say, on an intentionally designed expressive surface.

4 Conclusion

The main claim in this article is that a distinction should be made between surface as the material support of a painting and surface as a depicting plane. The visual experience of paintings is twofold in that seeing-in is doubled with co-awareness of the depicting surface, either because its design is visually salient, or because the design is semiotically salient, or both. The transformation of a material support into a depicting surface upon which meaning has been bestowed (or which gives shape to a meaning intention) is an essential (albeit not exclusive) property of paintings. Correlatively, the perception of paintings is characterized by being an encounter with visual meaning at large articulated in shapes, colors, strokes, and lines. An important task still remains in determining what is meant by meaning in pictorial art, i.e. to chart its different types of manifestation. This, however, was not the aim of the present chapter.

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Depiction

John Hyman

Abstract In this article, I defend a qualified version of the so-called 'resemblance' theory of depiction: the theory that pictures differ from texts in resembling the objects that they represent. Two related mistakes led philosophers to abandon this theory. First, they mistakenly thought that resemblance is a relation. Second, they commonly confused or amalgamated theories about the sense of pictures and theories about their reference (e.g. Wollheim), or assumed that a theory of depiction is first and foremost a theory of reference (e.g. Goodman)—as it were, a theory of the portrait.

Keywords Depiction • Sense • Reference • Resemblance • Relation

Analytic philosophers interested in depiction have focused for the most part on two problems: first, explaining how pictures represent; second, describing the distinctive kinds of artistic value pictures can possess, or the distinctive ways in which they can embody artistic values that extend more broadly across the arts. I shall discuss the first problem here. The main concepts I shall be concerned with are depiction, resemblance, sense and reference.

My main aim is to reassess the traditional idea that representation in painting and sculpture depends on resemblances in form and color between works of art and the objects they represent. The philosophical literature about representation has been dominated for 50 years—to its detriment, I shall argue—by the view that the traditional idea is wrong. I reject the so-called resemblance theory of

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representation, the theory that representational works of art are iconic signs, which Nelson Goodman (1968) attacked with devastating effect in *Languages of Art*. But there are other ways of making the traditional idea precise.

The question I shall consider first is whether resemblance is a relation. This may seem remote from the interests of philosophers of art, especially since we cannot expect to be able to answer it without first clarifying the idea of a relation itself. But it is where I believe we must begin.

According to logicians, if two or more names in a true sentence are replaced by variables, the term that results will normally express a relation, which obtains between the bearers of the names. For example, if we start with the sentence 'Reggie and Ronnie are twins,' and replace the names with variables we get the predicate '*x* and *y* are twins,' which expresses a relation that can obtain between two siblings. Here are a couple more examples: 'Paris is west of Moscow' yields the predicate '*x* is west of *y*,' which expresses a spatial relation; 'Scott is the author of Waverley' yields '*x* is the author of *y*,' which expresses a causal relation.

However, the logical conception of a relation has two important limitations. First, it is too broad. For there are cases where—as logicians generally agree—following this procedure will not yield a predicate that expresses a relation. For example, 'Brutus killed Caesar' reports an act, but acts should not be assimilated to relations.[1] And there are other cases that are controversial. For example, it is controversial whether identity-statements, such as 'the morning star is the evening star' and 'Bronstein is Trotsky,' are about an especially intimate relation in which everything stands, and can only stand, to itself.

Second, the logical conception of a relation tells us where we can normally find a term expressing a relation in a sentence—it is the part we are left with when we delete the names—but it does not tell us anything more about what a relation is. This is rather like explaining that a father is the kind of thing Russians refer to with their middle names. If we want to know more than this, we need to refer to the traditional conception of a relation, which preceded the development of formal logic.

According to *this* conception, which modern formal logic complements, but does not supersede, a relation is *a way in which one thing can stand to another thing, or several things can stand to one another*. As a matter of fact, the last clause is untraditional, since the idea of a many-termed relation was only introduced in the second half of the nineteenth century (Prior 1976, p. 29). But the definition in italics captures a conception of a relation that stems originally from Aristotle's *Categories* and on which the logical conception I have described is based. Here, for example, is Locke's (1689) definition, which confines relations to two terms, and also precludes things from standing in a relation to themselves:

> The Nature of Relation consists in the referring or comparing two things one to another. (2.25.5)

And here is the definition in the current edition of the OED:

[1] Kenny 1963, ch. 7.

> An attribute denoting or concept expressing a connection, correspondence, or contrast between different things; a particular way in which one thing or idea is connected or associated with another or others. (2a)

Like the definition in italics, the definition in the OED includes many-termed relations, and it allows a man to stand in a relation to himself, for example, *being the one who shaves*, or *being the one who kills*. For these are both ways in which one thing can stand to another thing. But *being the same man as* is not a way in which one thing can stand to another thing. Nor is it a way in which one thing is connected or associated with another thing. So it is not a relation, according to these definitions, whereas it looks like a relation according to the logical conception we began with, as I pointed out earlier. I shall not attempt to adjudicate between these views.

In the relation-stating sentences I mentioned earlier, the verb phrase that expresses the relation is flanked by proper names referring to the objects it relates: 'Paris is west of Moscow,' 'Scott is the author of Waverley.' These names can be replaced by descriptive terms such as 'the capital of France' or 'the Laird of Abbotsford.' But, like proper names, these terms refer to particular places, people or things. Even the sentence 'John knows a fireman,' which does not purport to identify John's acquaintance, implies that there is a particular fireman John knows, since one cannot know a fireman, but not any fireman in particular.

What about statements of resemblance? Do the verb 'resembles' and the verb-phrases 'is like,' 'looks like,' 'sounds like,' etc., express relations? The answer, I suggest, is that sometimes they do and sometimes they do not. For example, in the sentence 'Darwin looks like Socrates' the verb-phrase expresses a relation, whereas in the sentence 'Socrates looks like a satyr' it does not.

Compare the verb 'to be.' It is an elementary fact about English grammar that 'to be' is used both to express identity, as in 'Bronstein is Trotsky' and 'Cicero is Tully,' and as a copular verb, as in 'Cicero is a statesman.' As I mentioned earlier, it is controversial whether identity is a relation: Wittgenstein says that it isn't in the *Tractatus*, whereas Kripke says that it is. But if we assume that Kripke is right, that identity *is* a relation, the verb 'is' expresses a relation in the sentence 'Cicero is Tully' and the sentence 'The morning star is the evening star,' whereas in the sentences 'Cicero is a statesman' and 'The morning star is a planet' it does not.

The verbs 'resembles,' 'is like' and 'looks like' evidently have a similar dual use, that is, they are used both to express relations and as copular verbs. '*x* is like *y*' is a regular two-place predicate, and if we replace the variables with names, the resulting sentence relates the individuals concerned: for example, 'SoHo is like Hampstead' relates part of New York and part of London. But the sentence 'SoHo is like a village' does not relate anything to anything. It is not comparable to 'The morning star is the evening star' or 'Cicero is Tully,' but to 'The morning star is a planet' or 'Cicero is a statesman,' the only difference being that it characterizes the place referred to by saying what it is like, rather than what it is. 'SoHo looks like a village' and 'SoHo resembles a village' are just the same.

It follows that although 'SoHo resembles a village' and 'John knows a fireman' are syntactically similar, they are logically different. If I tell you that John knows a fireman, you can ask me which fireman John knows, and if what I said is true, your question has an answer, even if I do not know what it is. In other words, we can add a namely-rider to the sentence 'John knows a fireman,' for example, '. . . namely, the fireman who lives on Church Lane,' or '. . . namely, Jim.'[2] By contrast, if I tell you that SoHo resemble a village, and you ask me 'Which village?', I can say that I did not mean to imply that it resembles any village in particular, and there does not have to be a namely-rider we can add to the sentence, in order to prove that what I said was true. 'SoHo resembles a village' normally means that SoHo has some of the salient characteristics of a village, without any village in particular being involved.

So, is resemblance a relation? If the idea is that the verb 'resembles' *sometimes* expresses a relation, then it is true. If it is that 'resembles' *always* expresses a relation, then it is false.

I shall turn now to the philosophy of art. According to Robert Hopkins (1998), one of the principal objections to the view that pictures invariably resemble the scenes or objects they depict is that resemblance is a relation between two particulars, whereas depiction is not.

> Resemblance is a relation between two particulars—one resembling the other. It is hard to make sense of resemblance between a particular thing and some, but no particular, item of a certain sort—a horse, say. [. . .] there can be no resemblance between a picture and such a horse, and thus no prospect for understanding the depiction of a (no particular) horse in terms of resemblance. (p. 10ff)

Hopkins's entry on depiction in the *Routledge Encyclopedia of Philosophy* contains a similar argument, but he adds the requirement that for two things to resemble one another both need to exist:

> For resemblance to hold, two things must exist—the thing resembling and the thing resembled. By contrast, depiction does not require there to be two things; one depicting, the other depicted. The picture alone suffices, since it may depict what does not exist. For example, it may depict a horse, but no horse in particular. (§1)

Catherine Abell (2009) follows Hopkins closely:

> For one thing to resemble another, both must exist. However many pictures depict things that do not exist. This is true of pictures [. . .] that depict objects of a certain type without depicting any specific particulars of that type. (p. 186)

Interestingly, Hopkins does not appear to notice that his claim that 'resemblance is a relation between two particulars' contradicts the familiar idea that resemblance is a reflexive relation, which implies that true statements of resemblance may compare an object with itself. Even if this familiar idea is wrong, a person or place at one time can certainly resemble the same person or place at another time, and a kind of stuff in one place can resemble the same kind of stuff in another place. For example, the British Foreign Secretary William Hague famously looked the same at

[2]The phrase 'namely-rider' was coined by Ryle (1971, pp. 250–257).

thirty-six as he looked at sixteen. Here we do not have two things, we have one thing at two different times. Again, Guinness in Tel-Aviv tastes the same as Guinness in Cork; and here we have one kind of stuff in two different places.

Neither Hopkins nor Abell says whether they believe that resemblances have to be between particular things that exist because this is true of relations generally, or whether they think it is something special about resemblance. Be that as it may, it is not self-evident that when a statement of resemblance *does* relate two things, both need to exist in order for the statement to be true. And besides, as we have seen, true statements of resemblance do not always mention two particular things, to which the existence requirement can apply. I shall enlarge on these two points in turn.

When a statement of resemblance relates two things, must they both exist in order for the statement to be true? On the face of it, the answer is no. Reggie looks like Ronnie, Levin is similar in various ways to Tolstoy, Widmerpool resembles Malvolio, and Thor is like Zeus. At least these are things that we find it quite natural to say. It appears that a statement of resemblance can be true whether both or one or neither of the individuals concerned exists.

Here is a simple theory that explains this. The mark of a fictional character, as the disclaimer that sometimes appears at the front of novels or at the end of movies attests, is that any resemblance to any actual person is coincidental (at the time of writing); it is not that none is possible or that none exists. (The qualification 'at the time of writing' is needed for the reason Oscar Wilde famously pointed out: life can imitate art.)

If this is right, we can still insist that someone who uses two names to make a true statement of resemblance refers to something with each of the two names, as long as we are prepared to acknowledge that it is possible to refer to things—such as fictional characters—that do not exist.[3] Arguably, what the referring use of a name requires is that the speaker be able to identify whom or what she is referring to, which is not ruled out where fictional characters are concerned. On the contrary, fictional characters can be identified quite easily. For instance, Widmerpool is the character in *A Dance to the Music of Time* who marries Pamela Flitton, and Malvolio is the character in *Twelfth Night* who wears yellow stockings with cross gartering.

If this simple theory is right, when a statement of resemblance compares two things, neither of them needs to exist in order for the statement to be true. Of course, this theory is not universally accepted and statements of resemblance involving fictional characters have been interpreted in various ways. But we should not assume that the simple theory is false.

The second point I said I would enlarge on is that statements of resemblance do not always mention two things, to which the existence requirement could apply. The reason I gave is that while there are many statements of resemblance in which two specific persons, places or things are mentioned, for example, 'SoHo is like Hampstead,' there are just as many in which only one is, for example, 'SoHo is like a village.' Equally, there are many in which none are, for example, 'A kibbutz is like a

[3] On this topic, see Rundle 1979; Sainsbury 2005, ch. 2 and 6.

village' and 'Margarine is like butter.' It is puzzling that philosophers writing about the resemblance theory of depiction uniformly ignore these kinds of statements, and repeat the canard that resemblances are necessarily between particulars, or specific things.

As we have seen, the supposed fact that resemblances are necessarily between pairs of specific things, both of which exist, is thought to pose a problem for resemblance theories of depiction, because a picture may depict a man or a horse without depicting any man or horse in particular. Here is the passage from the *Routledge Encyclopedia* again:

> For resemblance to hold, two things must exist—the thing resembling and the thing resembled. By contrast, depiction does not require there to be two things; one depicting, the other depicted. The picture alone suffices, since it may depict what does not exist. For example, it may depict a horse, but no horse in particular.

One thing that is puzzling about this remark is that if a picture depicts a horse, but no horse in particular, it surely does not depict something that does not exist. On the contrary, it depicts something, a kind of animal, that *does* exist, unlike a picture of a centaur, for example. A kind of animal is not a particular animal, of course. But the question whether the *particular* horse it depicts exists does not arise, since *ex hypothesi* it does not depict any horse in particular. Stubbs's portrait of Whistlejack depicts a horse that exists, or existed when he painted it; whereas Rubens's painting *Perseus and Andromeda* depicts Pegasus, a mythical horse, which never existed. But when a picture depicts a horse, but no horse in particular, there is no particular horse about whose existence we can enquire. Hopkins appears to confuse pictures with generic content and pictures with fictional content. I shall return to this confusion later.

The passages by Hopkins I have quoted seems therefore to combine two errors: first, the idea that resemblances are necessarily between pairs of specific things, both of which exist; and second, the idea that genre pictures—by which I mean pictures with generic content—invariably depict things that do not exist, that is, they depict things that do not exist whether they depict centaurs (which do not exist) or horses (which do). I have said more about the first error so far. But the second error is equally important, because it illustrates a failure to think clearly about the relationship between the concept of a picture with generic content and the concept of a picture that portrays an individual, which is of fundamental importance in the theory of art, as I shall argue in a moment.

Where does this leave the traditional idea that representation in the visual arts in general, and depiction in particular, depends on resemblances in form and color between works of art and the things they represent?

It is true that the verb 'depicts' is sometimes used to express a relation, and sometimes not. For example, 'It depicts a horse,' '. . . a bridge,' '. . . a river' can be read in either way. Read in the first, relation-involving way, the questions 'Which horse?', 'Which bridge?', 'Which river?' have answers, even if we do not know what they are, and the sentence can be continued with a namely-rider, '. . . namely, Whistlejack,' '. . . namely, the Rialto,' '. . . namely the Styx.' Read in the second,

non-relation-involving way, the question 'Which . . . ?' and the namely-rider are out of place. It is useful to mark this distinction clearly in the language we use to talk about pictures, and to a degree we do: the verb 'portray' is biased towards the relation, whereas 'depict' is not.

But as we have seen, the verb 'resembles' has exactly the same dual use. Hence, the statement that a picture (or part of one) resembles a horse does not imply that there is a particular horse that it resembles, and the statement that it resembles a satyr does not imply that satyrs exist. Satyrs have a distinctive appearance, which it is easy to describe, and if something has the same appearance as a satyr, then it resembles one. The fact that satyrs are mythical creatures does not prevent this from occurring. In Plato's *Symposium*, Alcibiades says that Socrates looks like a satyr. This may have been unkind, but it was not absurd.

I said that the relationship between the concept of a picture with generic content and the concept of a picture that portrays an individual is of fundamental importance in the theory of depiction, but neither the phrase 'picture with generic content' nor the word 'portrays' has exactly the right meaning. Perhaps the simplest way to capture what I have in mind is to take a picture of a specific person, place or object, whether fictional or real, and to consider what we can call, for want of a better pair of terms, its reference and its sense. The words 'reference' and 'sense' are the normal translations of the terms '*Bedeutung'* and '*Sinn*,' which Frege introduced to distinguish between the object that an expression stands for or designates, and the way in which the expression presents that object, the 'mode of presentation' as he called it.

Frege (1980) introduced the distinction between sense and reference to explain how identity statements can be informative, without being about words. Returning to the example I mentioned earlier, 'The morning star is the evening star' is not a statement about words, like the statement that phrases 'the morning star' and 'the evening star' refer to the same object, because the first statement *uses* these two phrases, whereas the second one *mentions* them. And it is not merely an instance of a law of logic either, like the statement that the morning star is the morning star. 'The morning star is the evening star' can state an astronomical discovery, Frege explained, because the phrases 'the morning star' and 'the evening star' have the same reference, but do not have the same sense. Here is another example. The expressions '2×3' and '$4 + 2$' both designate the number six, but the first expression presents it as the product of two and three, whereas the second presents it as the sum of four and two. So again these expressions have the same reference, but do not have the same sense.

Similarly, two portraits of the same individual may present him as dark-haired and seated, wearing a black smock (Kramskoy's 1873 portrait of Tolstoy), or as grey-bearded and standing, wearing a white smock (Repin's 1901 portrait). The analogy between expressions in a language and pictures is not exact. But it is helpful to think of one of these two portraits as designating, or standing for, the same individual as the other, while differing in its 'mode of presentation'—in other words, as having the same reference, but a different sense. And we can use the same distinction to think about two pictures of the same fictional person—for example,

Michelangelo's fresco of the creation of Adam on the Sistine Chapel ceiling and Piero della Francesca's fresco of the death of Adam in the church of San Francesco in Arezzo—or the same place.

I said earlier that the verb 'depicts' is sometimes used to express a relation, and sometimes not, and that sentences like 'It depicts a horse { . . . a bridge / . . . a river}' can be read in either way. We can see now that this distinction corresponds to the distinction between sense and reference. In the relation-involving use of the verb, the use where the sentence can be continued with a namely-rider, depiction corresponds to reference; whereas in the non-relation-involving use of the verb it corresponds to sense. We can also see that the kind of picture Hopkins and Abell are concerned about, a picture that depicts a horse, but no horse in particular, is a picture that has a sense—as any intelligible figurative picture must—but no reference, like the phrase 'the greatest integer' or 'the present King of France.' Henceforth, I shall use subscripts to distinguish between these two ways of using the verb 'depicts:' 'depicts$_r$' for the use that corresponds to reference and 'depicts$_s$' for the use that corresponds to sense.

Together with the muddle about resemblance, the most important mistake philosophers have made about depiction is to confuse or amalgamate theories about the sense of works of art and theories about their reference, or to assume that a theory of depiction is first and foremost a theory of reference—as it were, a theory of the portrait—and that a theory of sense can be developed from it, rather as Wittgenstein's theory of meaning in the *Tractatus* was developed from his conception of a name. Each of the two most influential theories of depiction during the last 50 years, Richard Wollheim's and Nelson Goodman's, makes one of these mistakes. Wollheim makes the first, while Goodman makes the second.

Wollheim (1990) argues that a picture is a marked surface, which is designed to cause a distinctive kind of visual experience, which he calls 'seeing-in.' Seeing-in, he explains, has two aspects or components:

> I am visually aware of the surface I look at, and I discern something standing out in front of, or (in certain cases) receding behind, something else. (p. 46)

But, he points out, this kind of experience is not caused by pictures alone. It can also occur, for example, when we look at a damp-stained wall. The element of intention or design, he claims, is what distinguishes pictures from other marked surfaces that have the same kind of effect. Representation occurs when a standard of correctness is imposed on the natural capacity of seeing-in, and the standard of correctness is set by the artist's intention. Thus a picture represents a specific person or place, or an object of a given kind, if, and only if, the artist successfully intends the view to see that person or place or that kind of object in its surface.

There are several well-known objections to this theory.[4] What concerns us here is that Wollheim ignores the distinction between the sense and reference of a picture. He talks indifferently about seeing Henry VIII or Charles Laughton or a generic

[4] See Budd 2008, pp. 185–215; Hyman 2006, ch. 7.

bison in a picture. But this is logically naïve. It is like failing to distinguish between the sense and reference of a phrase such as 'the morning star,' as if the philosophy of language could make do with a single idea of meaning or signification that includes both.

One result of Wollheim's failure to acknowledge this distinction is his claim that the standard of correctness, which determines whether the viewer has correctly perceived what a picture represents, is set by the intentions of the artist. This is normally true of a picture's reference, but not its sense. Thus, Wittgenstein (1969) was surely right when he said in the *Blue Book*: "An obvious, and correct, answer to the question 'What makes a portrait the portrait of so-and-so?' is that it is the intention." (p. 32) This is comparable to the question: What determines the reference of a proper name, in a particular instance of its use? For example, if I begin a letter with the phrase 'Dear George,' what determines which of the myriad Georges in the world I am addressing? The answer is surely my intention.

But we cannot answer the corresponding question about sense in the same way, for there may be a difference between what a word or phrase I write or utter means and what I meant to say. Similarly, a picture can depict$_s$ a man in the uniform of a midshipman when the artist intended to depict$_s$ a man in the uniform of an ensign, or it can depict$_s$ a spruce when the artist intended to depict$_s$ a larch. In both cases there are more general terms that apply to the depicted$_s$ object and conform to the artist's intentions, such as 'man' and 'tree.' But the divergence between intention and outcome remains, and this disproves the idea that an artist cannot produce a picture with unintended sense. As one might expect, inexpert artists are especially prone to do so. For example, most three-year-old children are just as capable of painting a picture that depicts$_r$ their mothers as Rembrandt or Whistler was, but drawings by three-year-olds tend to depict$_s$ arms growing out of heads.

Wollheim's error about the role of the intention is a result of his failure to distinguish between the sense and reference of a picture. He uses a single model to explain both what determines the reference of a portrait and what determines its sense or mode of presentation. But it is as elementary a mistake to overlook the difference between these questions as it would be to overlook the difference between the sense and reference of a descriptive phrase.

Goodman is a very different case. He does not overlook the distinction between sense and reference: he rejects it. The distinction he draws between a picture of a man and a man-picture is extensionally equivalent to the distinction between a picture that depicts$_r$ a man and one that depicts$_s$ a man, except that Goodman excludes the referring use of empty names. But the extreme form of nominalism he espouses reduces sense to reference, so we find the same failure to think about the sense of a picture, as opposed to reference, in his work. Thus his principal claim is that 'denotation is the core of representation'—denotation being a variety of reference—as if a portrait were the basic kind of picture.[5]

[5]Goodman op. cit., p. 5.

Both of these approaches are disastrous, because representation by pictures depends on a systematic relationship between the shapes and colors on the surface of a picture and its *sense* that does not exist between the shapes and colors on the surface of a picture and its *reference*. So if we amalgamate sense and reference, or if we regard the question of how pictures refer as fundamental, we are bound to miss the basic mechanism that explains how pictures represent.

Thus, it should be obvious that there isn't a systematic relationship between the shape and color of part of the surface of a portrait and the shape and color of the individual it portrays. If we imagine hanging Whistler's portrait of his mother (*Arrangement in Grey and Black No.1*, 1871) next to a child's portrait of its mother drawn at the age of three—admittedly different artists and different mothers—the point is clear. But if we turn from the reference of a picture to its sense, the situation is quite different. The case of a free-standing sculpture is simpler but similar to the case of a picture, so that is where I shall begin. (The qualification 'free-standing' will be omitted in the discussion that follows.)

Consider the part of Michelangelo's Bruges Madonna that represents Jesus's head. What is the reference of this part of the sculpture, and what is its sense? Its reference is Jesus's head, and it presents it as having various features: thick locks of hair, chubby cheeks, and so on. These features, we may say, comprise the sense or mode of presentation of this part of the sculpture. But the sense or mode of presentation of a sculpture expressed in the most general terms is simply an object or arrangement of objects with a specific shape. And except in the unusual case of an anamorphic sculpture, which is designed to be seen from an extremely eccentric point of view, this shape is evidently the shape of the part of the carved block itself. This applies to Michelangelo's Rome Pietà in exactly the same way. The Rome Pietà refers to the same two individuals as the Bruges Madonna, but the *sense*, or mode of presentation, of Jesus's head is different because the shape of the corresponding part of the sculpture is different, and Jesus's head is presented as an object with this shape.

It follows that if we want to define the fundamental difference between representation in sculpture and representation in words we need to think about sense, not reference. The simple rule about sculpture is that *what a sculpture represents has the same shape as the sculpture itself*. Another way of making the same point would be to say that there is an exact resemblance in shape between a sculpture and what it represents. But by the phrase 'what it represents,' I do not mean the sculpture's reference; I mean its sense. The rule does not relate two particulars, for example, the sculpture and the historical individual Jesus; it concerns a single particular, the sculpture, and its sense or mode of presentation. If resemblance were invariably a relation between two particulars, the rule would be incoherent; but as we have seen, this dogma about resemblance is a mistake.

The simple rule about sculpture should be obvious as soon as it is stated, so obvious that it seems trite. But notice that the rule is not conditional on the artist's intention; it does not involve a system of rules correlating symbols with the objects they refer to; it does not refer to any of the psychological states philosophers have postulated to explain how painting and sculpture represent; and it applies in exactly

the same way to a Greek bronze figure of a generic horse from the Geometric period as it does to the Bruges Madonna or the Rome Pietà. The same is true of the equivalent rule for pictures, as we shall see.

I shall add four further observations, before discussing the rule for pictures. First, although the simple rule for sculpture can be stated in terms of resemblance it need not be. It is not a restatement of the theory that paintings and sculptures are iconic signs. That theory failed to distinguish between sense and reference, treated resemblance as a relation and was not limited to shape.

Second, the simple rule does not imply that a sculpture that represents Jesus resembles Jesus, or that a bronze figure of a horse resembles a horse. It says nothing about the reference of a sculpture, and nothing about its sense beyond its shape. It therefore combines naturally with the idea that reference is normally determined by the artist's intention, and with the idea that a viewer's ability to identify the sense or mode of presentation of a sculpture as a child's head or as a horse depends on her ability to recognize these kinds of objects by their shapes.

Third, the fact that the simple rule is not conditional on the artist's intention does not prevent the artist's intention from playing any role in the theory of representation apart from determining the reference of a work of art. The analogy with linguistic meaning suggests that it does play such a role. For acknowledging that the meaning of an utterance need not be the same as what the speaker meant to say is consistent with the idea that an utterance means nothing unless the speaker means something by the words he utters; and it is also consistent with the idea that a meaningful utterances cannot occur except against a background that includes the custom of making utterances with the intention of saying something. Both of these ideas can be transferred to the case of painting and sculpture in a straightforward way; but neither implies that an artist cannot produce a representational work of art with unintended sense, as Wollheim's theory implies.

Fourth, as I have indicated, the simple rule that what a sculpture represents has the same shape as the sculpture itself combines naturally with various ideas philosophers interested in representation have proposed. It combines easily with John Kulvicki's (2010) recent defence of the role of bare-bones content in the theory of representation as well as claims about the role of recognition in explaining how works of art represent, such as those advanced by Flint Schier (1986) in his book *Deeper into Pictures* and Dominic Lopes (1996) in *Understanding Pictures*; it is consistent with various ideas about the relationship between the concept of representation and the concept of intention or design; and as we shall see, it suggests that the concept of occlusion shape (outline shape) plays a central role in the theory of depiction, as Robert Hopkins and the author of this article have both proposed.

The equivalent rule for pictures is less straightforward than the rule for sculpture, because sculptures represent objects with the same number of dimensions as they have themselves, whereas pictures normally represent three-dimensional objects on a two-dimensional (i.e. flat) surface, or on a surface whose curvature is slight enough to be ignored. But it is not difficult to see what the rule for pictures is, if we think about how their two-dimensionality affects their sense.

The principal point is that we cannot discover different aspects of an object represented in a picture by moving around it and studying it from different angles, as we can in the case of a free-standing sculpture. That is why Van Dyke sent Bernini a triple portrait of Charles I: one referent, three modes of presentation. So whereas the sense or mode of presentation of a sculpture, expressed in the most general terms, is an object or arrangement of objects with a specific shape, the sense or mode of presentation of a picture is an aspect or view of an object or arrangement of objects—or several aspects or views, in unusual cases such as this one—relative to a line (or lines) of sight.

Now if we want to formulate a shape-rule for pictures analogous to the simple rule for sculpture discussed above, we shall need to identify a two-dimensional shape-property that an aspect or view of an object represented in a picture invariably includes, whether it is a shadow, a rainbow, part of the sea or sky, or a medium-sized specimen of dry goods. It is not difficult to identify this property if we think about an object with a simple shape, such as a coin. Consider a circular coin viewed along an oblique line of sight. The coin will look circular to a viewer as long as she can see its orientation. But the two-dimensional cross-section of the cone of light the coin subtends to the viewer's eye will be elliptical, and this is also a visible property of the coin. It is especially salient when an object is backlit, and appears in silhouette. It has been called a perspectival shape or outline shape or occlusion shape, it is two-dimensional, and of course it is relative to a line of sight. It changes as the line of sight changes. But relative does not mean subjective. The shape of a cross-section of the cone of light an object subtends to the viewer's eye is not merely a feature of the viewer's experience. It belongs to optics, not psychology.

I said a moment ago that the sense or mode of presentation of a picture is an aspect or view of an object or arrangement of objects, relative to a line of sight. This means that a picture invariably depicts$_s$ the occlusion shapes of objects. So suppose a picture depicts$_s$ a circular coin with an elliptical occlusion shape. What shape would the corresponding region of the picture's surface have to be? With the same exception as we noted in the case of sculpture—that is, an anamorphic picture, designed to be seen from an extremely eccentric point of view—the answer of course is that it would have to be elliptical, and the surface of the coin would be foreshortened.

But it would be a mistake to think that the occlusion shape is only represented when an object is foreshortened. For example, the shield in a painting on a kylix attributed to the Foundry Painter (Munich 2640, ca. 490 BC) is among the earliest examples of foreshortening in Greek art; whereas the hoop in a painting on a krater attributed to the Berlin Painter (Louvre G175, ca. 500 BC) is not foreshortened. This is not because the Berlin painter did not represent the hoop's occlusion shape. It is just that the line of sight in this case is perpendicular to the hoop, and the hoop's occlusion shape is therefore a circle. So whereas the simple rule for sculpture is that what a sculpture represents has the same shape as the sculpture itself, the shape-rule for pictures is that the shape of a region on a picture's surface is the same as the occlusion shape of the object it represents. In other words, there is an exact

resemblance between these shapes. This applies to pictures of objects such as shields and hoops, but it applies equally to pictures that represent a rainbow, the sea or the sky.

It is reasonable to suppose that the simple rule for sculpture has always been understood by sculptors and their public, even if it is too obvious to be stated or written down. By contrast, the shape-rule for pictures has always been implicit in artistic practice, but the concepts used to state it precisely and to explain the idea of occlusion shape were first developed in Greek geometry and widely disseminated—in Europe—only in the Renaissance.

I have defended the claim that the idea of occlusion shape plays a central role in the theory of depiction and stated the shape rule for pictures in several earlier publications, most fully in my book *The Objective Eye*. The approach I took there contrasted subjectivist theories of depiction, which seek to explain how pictures represent by defining the kind of experience they are designed to produce in viewers, with objectivist theories, which proceed without attempting to define the experience. (Objectivist theories stem from Plato, subjectivist theories from Descartes.) The simple rule for sculpture and the shape-rule for pictures belong in the objectivist camp.

The principal justification for subjectivism has always been the evident dissimilarity between a picture or sculpture and the objects it represents. This is the point Descartes (1985) seizes on. He writes:

> Although they make us think of countless different qualities in [the objects they represent], it is only in respect of shape that there is any real resemblance. And even this resemblance is very imperfect, since engravings represent to us bodies of varying relief and depth on a surface which is entirely flat. Moreover, in accordance with the rules of perspective they often represent circles by ovals better than by other circles, squares by rhombuses better than by other squares, and similarly for other shapes. Thus it often happens that in order to be more perfect as an image and to represent an object better, an engraving ought not to resemble it. (p. 165)

The shape-rule for pictures addresses both of the arguments in this passage. The first is that 'engravings represent to us bodies of varying relief and depth on a surface which is entirely flat.' But the only shape properties the shape-rule refers to are the occlusion shapes depicted$_s$ in a picture, and occlusion shapes are two-dimensional. The second argument is that the rules of perspective may, for example, require an artist to represent a circle by means of an oval. But as we have seen the circular profile of a coin has an elliptical occlusion shape relative to an oblique line of sight. The dissimilarity between the physical shape of a circular coin and shape of the region on the surface of a picture that depicts$_s$ a coin is consistent with the rule.

Another justification that is sometimes offered for subjectivism is that the objectivist emphasis on resemblance embodies a bias in favor of realistic, literal or accurate representation and a narrow and stultifying program for artistic work.[6] But this is confused. One might as well argue that regarding a language as a system of

[6]Podro 2010.

semantic and syntactic conventions or rules embodies a bias in favor of conventional literature, or literature that follows rules—a bias, say, in favor of Rupert Brooke over T.S. Eliot or Arthur Conan Doyle over James Joyce. It should be obvious that this would be a gross misunderstanding. The rule that the gerund in English ends in '-ing' does not limit the inventiveness of English writers, and it applies to Donne or Milton in exactly the same way as it does to lesser poets. Similarly, the simple rule for sculpture applies in exactly the same way to a geometric bronze figure of a horse, Donatello's *Gattamelata* and Marino Marini's *L'angelo della Città*, and the shape-rule for pictures applies to pictures irrespective of the style or tradition they belong to, their originality, or the artistic values they express. Both of these rules identify basic mechanisms of representation in the visual arts; they do not dictate or limit the forms artists create, the models they follow or the values they embody in their work.

However, the subjectivist position is not entirely without merit. For although the simple rule for sculpture and the shape-rule for pictures do not refer to viewers' experiences, their competence is limited in two ways. First, as we have noted more than once, the rules only provide an objective correlation—a correlation that is independent of the viewer's experience—between the shape of a sculpture or the shapes on the surface of a picture and the shape or occlusion shape of each object included in the sculpture's or the picture's sense. No specification of the sense or mode of presentation of a work of art beyond this can be 'read off' its non-representational properties in this way. Second, the parts of a picture that represent discrete objects or parts of a scene need to be distinguished from each other, and of course the rules cannot explain how this is done. Both of these limitations indicate ways in which psychological factors are essentially involved in defining the relationship between representational and non-representational properties of works of art.

As we have seen, there is a third limitation on the competence of the two rules, but in this case it does not provide a gap that subjectivist ideas can fill. It is that they do not correlate the shape of a sculpture or the shapes on the surface of a picture with its reference. Here, as in the case of language, intentions and contextual factors are involved in complex ways that are difficult to summarize or survey. I shall not attempt that task here.

I said earlier that it is sometimes alleged that philosophers who analyze the concept of depiction in terms of resemblance or occlusion (outline) shape express a bias in favor of realistic or literal representation and offer a stultifying program for artistic work. Michael Podro makes this charge in his article 'Literalism and Truthfulness in Painting.' These philosophers, he says, 'treat depiction as a matter of mere visual representation,' they pursue 'the project of approximating depiction to an abbreviated equivalence of ordinary environmental perception,' and ignore the ways in which pictures can 'transform our experience of the subject.' 'We need,' he adds, 'to see how painting elaborates upon its underlying conditions as poetry elaborates on those of language.'[7]

[7] Ibid., pp. 457 ff.

This is partly right and partly wrong. It is right to point out that defining the 'underlying conditions' is only part of the theory of art. The foundations are part of the structure, not the whole of it. Artists exploit *the communicative possibilities inherent in the medium as such* (i.e. its 'underlying conditions') with specific *materials, tools and techniques*, to communicate *thoughts, feelings and perceptions* in a work of art. Understanding art means understanding all three aspects of artistic activity, both in themselves and in relation to each other. But it is wrong to think that philosophical theories of depiction treat all pictures 'as a mere matter of visual representation,' just as it would be wrong to think that linguistics treats literature as a mere litany of facts. In fact it is doubly wrong. It is wrong because philosophers need not mistake the part for the whole—and to my knowledge they have not done so. And it is also wrong because we cannot expect to understand how painting 'elaborates upon its underlying conditions' unless we know what these 'underlying conditions' are.

For example, I said earlier that expressed in the most general terms, the sense or mode of presentation of a picture is an aspect or view of an object or arrangement of objects, relative to a line (or lines) of sight. Several significant developments in the history of painting 'elaborate upon this underlying condition' in ingenious ways. First, novel views of objects—views associated with novel lines of sight—can be introduced by combining views along established lines of sight. For example, quasi-frontal views were composed at different times in the history of painting by combining two profiles or oblique views, so that the composite image divides along a vertical axis. This is how the Andokides Painter produced a frontal view of a wrestler's face around 515 BC (Berlin F2159), with his oddly pointed head, projecting ears and thick neck; and it is how Giotto produced a frontal view of a mourner in his *Dormition of the Virgin* (ca. 1310, Staatliche Museen zuBerlin, Gemaldegalerie), with his broad shoulders (Figs. 1 and 2).

Fig. 1 Andokides Painter, Amphora, ca. 515 BC, detail

Fig. 2 Giotto, Dormition of the Virgin, ca. 1310, detail

Second, the lines of sight associated with distinct parts of a depicted scene can be coordinated or played off against each other. Thus, in an orthodox use of Renaissance perspective, the lines of sight associated with each part of the depicted scene are made to intersect, so that the entire scene is coordinated in relation to this implicit point of view. By contrast, in Masaccio's fresco of *The Trinity* (1425, S. Maria Novella, Florence), the architecture and the supporting figures are depicted as if seen from below, but the figures of the Father and the Son are depicted frontally, without any foreshortening at all.[8]

Third, the implicit line of sight can be associated with an implicit spectator. The idea of an implicit spectator was first used as a theoretical tool by Alois Riegl, in his analysis of Rembrandt's *The Staalmeesters* (1662, Rijksmuseum, Amsterdam). (Riegl [1999] credits the idea to Thoré-Bürger, who 'correctly presumed the presence of an unseen party in the space of the viewer, with whom the syndics are negotiating.' [p. 285]) But the earliest examples are self-portraits, because here an implicit spectator can be introduced by accident, without being intended as a narrative device. For example, Dürer's drawing known as *Self-Portrait with a Cushion* (1493, Robert Lehman collection, Metropolitan Museum of Art, New York) shows the artist absorbed in the act of drawing himself, and so the view of the young man it depicts is necessarily represented as his own.

Of course other equally significant developments in the history of painting depend on other factors, and failing to understand in general terms how pictures represent is unlikely to impede the work of art historians interested in the impact of the Council of Trent or the supply of paint in tubes. But the inventions I have mentioned involve more abstract concepts, and cost of misunderstanding them can be high. The theoretical debates about Renaissance perspective in the

[8]There is a good discussion of the use of single and multiple vanishing-points as organizing principles in fifteenth-century painting in White 1967, pp. 196 ff.

twentieth century are an embarrassing episode in art history for precisely this reason. Everyone understood that perspective is a geometrical system that enables artists to control the occlusion (outline) shapes and relative occlusion sizes of the objects represented in a picture, but misunderstandings about these properties inherited from philosophy and optics led art historians from Panofsky onwards into pointless controversy and needless confusion.[9]

In summary, the simple rule for sculpture and the shape-rule for pictures define part of the basic mechanism on which representation in the visual arts relies. (I have not discussed color here. In *The Objective Eye*, I argue that analogous rules for color can also be defined without referring to the experiences sculptures and paintings cause in viewers.) Alongside these rules, a comprehensive theory of representation in art will also refer to psychological factors, to the artist's intentions, to customs and conventions, and to other factors. But if we wish to adjudicate between the traditional view that representation in the visual arts depends on resemblances between works of art and the objects they represent and the theories of representation defended by Goodman and Wollheim and their followers, who reject this view, we are, I believe, bound to conclude that the traditional view is right. It was not eclipsed for 50 years because it is philosophically naïve or artistically stultifying, but because some exceedingly simple and well understood ideas in logic have been misunderstood or routinely ignored: first, resemblance is not invariably a relation between particulars; second, we need to unpack the general idea of representation and distinguish between sense and reference in order to understand how pictures represent.

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[9] On this topic, see Hyman (2006, ch. 10).

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Green War Banners in Central Copenhagen: A Recent Political Struggle Over Interpretation—And Some Implications for Art Interpretation as Such

Frederik Stjernfelt

Abstract This paper addresses the issue of the role of Quasi-Urteile—Quasi-Propositions—in the arts. Stemming from Ingarden's Aesthetics, the notion of Quasi-Propositions addresses the idea that artworks employ proposition-like structures even if their reference deviates—to larger or lesser degrees—from that of propositions in non-arts contexts. Here, the Peircean doctrine of Dicisigns—propositions—is introduced, with a much wider range of sign vehicle types able to instantiate propositional content, such as signs involving pictures, diagrams, gestures, etc. Taking a particular Danish controversy—that of a military "cartouche" at a Copenhagen barracks—as an analytical example, the chapter argues that filling-in is constrained by context, genre as well as aspects of the work itself, making it possible to categorize certain filling-ins as wrong, going against the potentialities of the work. The case, simultaneously, makes necessary a softening up of Ingarden's rigid distinction between fictions and non-fictions.

Keywords Semiotics • Art • Indeterminacy • Quasi-propositions • Filling-out • Cartouche

A classic stance in the philosophy of art and fiction is that fictional artworks take the character of quasi-propositions. That terminology is due to Roman Ingarden's influential *Das literarische Kunstwerk* (1931)—his notion of "Quasi-Urteile."[1]

[1]Peirce also uses the term "quasi-proposition," albeit for quite another purpose also relevant for this paper. In him, quasi-propositions are propositions simpler than full, symbolic propositions; his examples include fossils, weathercocks, and paintings with legends, and many cross-over propositions mixing different means of expression. The upshot is that the range of signs able to

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Being a philosophical realist (cf. Ingarden 1955–1974), he took a strong interest in distinguishing real objects from fictive objects, and, consequently, real propositions from quasi-propositions. The work of fiction includes seeming propositions that, however, only have the status of make-believe as both author and reader realize they do not directly refer to the real world nor to facts in any more restricted universe of discourse subset of that world. This does not imply, however, that fictions may not involve real propositions as well, referring, e.g. to established knowledge about the topography, period, persons of the universe of discourse etc. where the fictional narrative takes place. It also does not imply, moreover, that artworks in general are fictions; many artworks, poetry, essays, paintings, photographs, movies, etc. involve propositions in the literal, non-quasi sense of the word, and need not involve any fictional propositions at all.

An orthogonal, independent issue in Ingarden's aesthetics and linguistics is that of filling-out, of concretization. Propositions, in art as elsewhere, are schematic and involve ideal elements—in Ingarden's terminology: "Unbestimmtkeitsstellen," loci of indeterminacy. That implies that art—as human representations at large—consists of schematic, general (that is, underdetermined) expressions to various degrees. In consuming an artwork, however, the observer to some degree fills in these gaps, as it were, with the result that his or her experience may approach that of real-world perception. Not any old filling-out is appropriate, however; some may go against the genre, against real-world information, against information or hints already given by the artwork, while others are free for the reader to specify while still others filling-outs are motivated or supported in more or less explicit ways by the genre or artwork itself—realizing "schematized aspects" which are contained, as potentialities, in the work itself. Beginning his investigation with the literary work of art in his eponymous classic of 1931, Ingarden continued to generalize these insights to arts as such, and, late in life, concisely summed up these groundbreaking ideas as follows:

> Every work of art of whatever kind has the distinguishing feature that it is not the sort of thing which is completely determined in every respect by the primary level varieties of its qualities, in other words it contains within itself characteristic lacunae in definition, areas of indeterminateness: it is a schematic creation. Furthermore not all its determinants, components or qualities are in a state of actuality, but some of them are potential only. In consequence of this a work of art requires an agent existing outside itself, that is an observer, in order—as I express it—to render it concrete. Through his co-creative activity in appreciation the observer sets himself as is commonly said to 'interpret' the work or, as I prefer to say, to reconstruct it in its effective characteristics, and in doing this as it were under the influence of suggestions coming from the work itself he fills out its schematic structure, plenishing at least in part the areas of indeterminacy and actualizing various elements which are as yet only in a state of potentiality. In this way there comes about what I have called a 'concretion' of the work of art. (Ingarden 1964, p. 199)

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express truth—definitory for Peircean propositions, called Dicisigns—is much broader than the mainstream idea that the expression of proposition is confined to human language (see Peirce 1998, Chap. 20; Stjernfelt 2014). With its mixed-media combination of sculpture and symbols (monogram, dates), the cartouche forms a quasi-proposition in this sense.

In this paper, I shall discuss central issues in this field indicated by (quasi-) propositions, real propositions, filling-out, and work potentialities with outset in a small case-study of a particular work of art and an interpretation feud evolving around it. In 2008, a minor political and aesthetic media fuss broke out in Denmark, prompted by the public presentation of a classic, standard piece of military art in Copenhagen. It concerned the unveiling on June 30th, 2008 of a bronze monument at a barracks in Rosenborg Gardens, located in central Copenhagen as part of the architectural complex around the 1606 royal castle of Rosenborg, during the celebration events of the 350th anniversary of the Danish queen's household regiment—The Royal Life Guard; in Danish: "Dronningens Livregiment." The artwork presented to the public was a so-called "cartouche" in cast bronze, created by Sven Erik Sjøtlow and gilded by Evelyn Iversen, donated to the barracks for the occasion by the Association of Guardsmen, and presented, at the celebration event, by the queen herself (Figs. 1 and 2).

Already before the unveiling ceremony, however, a protracted game of protest had been taking place over years. In March 2008, a retired officer, Peter Horsten of the Royal Life Guard, filed a protest against the donation and the mounting of the cartouche on the barracks roof. Horsten claimed that the cartouche "celebrated Islam" and thus constituted an "insult" to Danish troops at the time serving in Iraq and Afghanistan.[2] This was not Horsten's first appearance with this claim. Horsten, in fact, had protested to a variegated range of authorities ever since the first airings of the plans pertaining to the cartouche—as early as 5 years before, in 2003. He claimed that the bronze flags of the monument would, over the years, turn green with age and thus come to represent the standards of victorious Islamist armies rather than flags associated with the Royal Life Guard. His protests, however, had not gained much support, despite being aimed at several Danish Ministers of Defense and even sent to the queen herself. Only now, in 2008, his protests finally gained momentum. Horsten explained that "All of the time I have found that it looked hideous. But the worst thing is that I discovered, with horror, that the casting has the green color of Islam."[3] Then the Danish MP Søren Krarup of the right-wing "Danish People's Party" entered the picture. Krarup is a local celebrity, a nationalist right-wing Lutheran theologian, clergyman, and author, a leading proponent of a Barthist theological movement known as "Tidehverv" (meaning roughly "Epoch"). Krarup took up the protest of Horsten and filed, in Parliament, an official inquiry to the Minister of Defence Søren Gade of the governing Danish liberal party Venstre. His analysis of the cartouche was as follows: "It would rouse disgust in me. It is ugly, and it could not avoid appearing as an Islamic symbol with the green color of

[2] http://www.avisen.dk/pensioneret-garder-anklager-livgarden-hylder-islam_8694.aspx

[3] "Jeg har hele tiden syntes, at den så hæslig ud. Men det værste er, at jeg til min store rædsel opdagede, at støbningen har islams grønne farve," (my translation to English; Malacinski 2008), http://www.avisen.dk/pensioneret-garder-anklager-livgarden-hylder-islam_8694.aspx, 7 April 2008.

Figs. 1 and 2 The cartouche on the roof of the Rosenborg barracks, in two different stages of patination (Fig. 1 copyright Evelyn Iversen)

the banners,"[4] he told the press. Instead, Krarup claimed, the traditional red-white colors of the Danish national flag ought to dominate the cartouche. The Minister of Defence, however, evaded the question in the Danish Parliament, but Krarup's intervention proved important in terms of media coverage. Thus, the interpretation of an artwork became an official parliamentary issue and turned into a minor press scandal covered in many Danish media.

[4]"Det ville vække afsky hos mig. Den er grim, og den kan ikke undgå at fremstå som et islamisk symbol med de der grønne farver på fanerne" (my translation to English; Ritzau 2008), http://politiken.dk/indland/politik/ECE487301/df-til-kamp-mod-groenne-faner/, 26 March 2008.

Fig. 3 Cartouche of Thutmosis III, from a glazed steatite scarab (between 1479 and 1425 BC) (http:// commons.wikimedia.org/wiki/File:Egyptian_Scarab_with_the_Cartouche_of_Thutmose_III_-_Walters_4245_-_Impression_Detail.jpg)

Semiotics also entered the picture. As a newly appointed professor at the Center for Semiotics at the University of Aarhus, I was summoned to the national radio network "Danmarks Radio" in order to analyze the cartouche. I said, of course, that in bronze sculpture, metal color is generally not a carrier of meaning and, consequently, the protesting officer and, with him, his political supporter, were in the wrong. They argued against the potentialities indicated by the work itself (the monogram of the Danish Queen) as well as by its context (a centrally located, historical Danish barracks)—both of them pointing to the banners of the cartouche representing, in fact, Danish national flags. The protests, so I claimed, formed an example of overinterpretation on the part of the enraged officer, as it were. Or perhaps a "creative" interpretation; a "strong" interpretation as Nietzscheans used to say? In any case, his claim formed a filling-out going against the potentialities indicated by the schematic artwork itself. Of course, I only had few minutes to explain myself on the radio, so let me elaborate my argument a bit.

What is a cartouche, in the first place? Actually, its history goes back to Ancient Egypt where hieroglyphic practice was to indicate divine or royal names by inscribing them in an ovaline figurine closed by a tangent line at the bottom or at the side (Fig. 3).

In hieroglyphic writing, thus, the cartouche depicts a rope encircling the names elevated. The rope is said, in turn, to represent the circle of eternity, the so-called "shen ring." The use of the cartouche to highlight divine or royal names proved important for Champollion's famous interpretation of the hieroglyphs based on the three-language Rosetta stone, making it possible for him to locate the same names in the stone's parallel texts in Hieroglyphic, Greek, and Demotic writing. Thus, a long western tradition of a more or less ornamented frame used to sacralize or celebrate a set of symbols, stylized icons, or letters took its beginning in Egyptian Antiquity.

From the Egyptian cartouche use, thus, a carved or cast ornamental tablet or panel in the form of a scroll or frame enclosing an inscription or symbol came to indicate the deification or holding in solemnity the reference objects of those signs. In ancient

Rome or Greece, the Egyptian custom of adorning graves and coffins with names of the deceased in a cartouche, so as to eternalize the deceased, was inherited and developed, now often in the shape of rectangular cartouches, losing their original motivation of depicting a sacred rope. Instead, the cutout, framed field came rather to be interpreted as a military shield. Already in the Roman army, the decoration of shields functioned as cartouches identifying the military unit wearing that shield. Later, in medieval Europe, shield cartouches were generalized to celebrate nobility and royal dynasties (in the European tradition of heraldry, originating in the time of Charlemagne and strongly developing after the tenth century), buildings, churches, etc. The heraldry of royal and noble families on the one side and military insignia on the other thus share a common point of origin in the attempts of medieval knights to distinguish themselves visually in the battle field—and, more peacefully, in tournaments. The military use of cartouches developed into formal insignia for military units on different levels, thus serving as visual predicates identifying them. The use of the word "cartouche" for such signs may have originated with Napoleon's troops in Egypt where the visual similarity of the shape of hieroglyphic sign with that of paper cartridges (French: cartouches) may have prompted the name, first in French, later in English. The appearance of a cartouche on a soldier thus identifies him (or a weapon, a barracks, a vehicle, etc.) as belonging to a particular military unit, in effect serving as a proposition—a Peircean Dicisign—expressing a claim, e.g.: "This is a soldier of Edward VII's Indian Army, Supply & Transport Regiment:"[5]

Correspondingly, cartouche insignia often appear on signs of military honor such as medals, decorations, etc. This long and complicated history of the cartouche, however, is not our main concern here; suffice it to say that the cartouche is an old genre with certain stable characteristics. It aims at *identifying* some person, group of persons, item, building, etc. as having a certain proper name or belonging to

[5] http://www.victorianwars.com/viewtopic.php?f=19&t=1896. A cartouche pouch in itself contains cartridges, that is, cartouches. Peirce's broad notion of propositions is functionally defined and thus transgresses linguistically expressed propositions, involving signs which make truth claims using pictures, diagrams, gestures, etc.—like the cartouche serving as a predicate in a proposition involving as its subject the soldier wearing it, cf. Stjernfelt (2014).

a certain unit, stock, or institution, often additionally describing the entity defined and granting the relevant entity some authority, sacrality, or other elevated status. As such, the cartouche is intrinsically propositional (or quasi-propositional in Peirce's sense of the word)—it forms a syntactical unit whose function is to claim that the entity to which it is attached is, in fact, the one indicated by the name indicated, given by a linguistic or pictorial index presented inside the framework of the cartouche.[6] Simultaneously, the cartouche celebrates the entity given that name—the very application of the cartouche serves to ennoble the bearer of the name of the cartouche, supported by the artful, aesthetic elaboration of the cartouche and in many cases by the use of expensive materials. Thus, the cartouche is explicitly propositional rather than quasi-propositional in the Ingardenian sense of the word—of course, fictional cartouches can be made and have indeed been made but the prototypical, traditional cartouche actually does function as an artwork that is simultaneously a proposition with a real reference—it refers to, identifies, and to some degree celebrates its bearer.

To return to the particular Danish Rosenborg Barracks cartouche, it thus functions as piece of applied art claiming a proposition. The structure of the cartouche as a whole contains three elements: a basic plinth with the time indication of "1658–2008;" the central cartouche shield endowed with the queen's monogram, headed by the iconic crown of the Danish royal house[7]; surrounded by ten standards protruding from behind the shield, five pointing obliquely fan-like upwards to each side. This is a common structure for military cartouches—and not far from some of the heraldic traditions also possessing a central shield with various codified support structures around, behind and over it. The overall appearance of the cartouche is bronze; three partial components of the cartouche, however, are emphasized, gilded with gold leaf: the queen's monogram, the crown over the shield, and the detailed, individual tips of the ten banners identifying them as referring to the ten standards which the Guard has received as gifts from different Danish monarchs during its existence.[8]

The proposition held forward by the cartouche thus refers to several entities, explicitly and implicitly. It explicitly makes reference (1) to the present Danish queen Margrethe II whose monogram appears centrally in the cartouche, just like (2) the timespan 1658–2008 is explicitly presented on the cartouche, and (3) ten existing flags in the ownership of the Guard, indicated by means of the individual banner tips, identifying which regent donated the single flag.

[6]The proposition involving the cartouche and the object or person to which it is attached is thus not a proposition primarily *describing* that entity, but rather one *naming* it. To that extent the proposition is of the type that Peirce called "Dicent Indexical Legisign" to distinguish it from proper propositions with a general, descriptive predicate; see Stjernfelt (2014, ch. 3).

[7]This crown, in turn, is a stylized version of a real, Danish crown: that of Christian V, forged 1670–1671 and subsequently used by absolutist Danish monarchs—currently on display in the Rosenborg Castle close to the barracks.

[8]Thanks to Svend Erik Sjøtlow for information as to the banner tips.

Implicitly, moreover, the cartouche refers to (1) the building upon which it is placed—he Rosenborg barracks—and (2) by metonymy, to the institution housed in that building: the queen's household troops (regularly marching the streets of Copenhagen, a sight sought by some tourists). It may surprise that the military entity celebrated by the cartouche—the queen's life guard—is not itself named and only indirectly referred to in the cartouche by means of the banner tips which are scarcely identifiable from below; it is primarily contextually indicated by the placement of the cartouche on the building (a barracks, however, that is widely known to be the base of exactly this military unit). All of these references are not quasi-propositions in Ingarden's sense—they refer to real entities. So, the cartouche as a whole is a complex proposition which might be linguistically paraphrased as follows: "These are the barracks of the Danish Royal Life Guard which came into being 1658, received royal celebration at ten occasions over centuries in the shape of particular flags and was celebrated in the year 2008 in the reign of Margrethe 2nd." This is not to say there are no Ingardenian quasi-propositions involved—the shield itself does not refer to any existing entity, but rather has a general, fictive status. The same goes for the arrangement as a whole—it does not refer to an existing shield behind which the ten flags have actually been so positioned. The flags thus involve both real reference—to the ten standards in the ownership of the Guard, several of them still in daily use—and quasi-reference, namely to their arrangement. Thus, the reference to those flags is made in a general way, involving spots of indeterminacy. The tips of the banners are gilded, thus actually depicting the color of the real tips while the flags themselves are left in bronze without such explicit reference. It was exactly the closer interpretation of some of these *Unbestimmtkeitsstellen*—those presented by the flags—which became the focus of the bitter strife over the monument.

The public conflict over the cartouche addresses the content of these slots of indeterminacy. The protesting officer and his parliamentary support claimed that the (supposedly) increasingly green color of those flags due to the corrosion of bronze constituted an emerging meaning, running counter to the intended, patriotic celebration of the Royal Guard in the monument. The green color, so they argued, would appear, over time, as that of Islamic flags, celebrating victorious Muslim armies—thus implicitly attacking Danish troops at the time serving in Afghanistan and Iraq by giving the victory to their enemies, stabbing the Danish army in the back, even at a central and symbolic location in Copenhagen. This interpretation builds, it is true, on potentialities implicit in the genre of the artwork: the cartouche as a celebration of particular military units. In the absence of any direct reference to the Danish royal guard—so it seems—the empty slot of reference would instead by occupied by Islamist forces via the green color sometimes displayed in the banners of such forces (black being another color often used by Islamic armies).

Why, however, is such an interpretation wrong? It has several reasons, one of which is very general, going beyond genre rules of cartouches, pertaining to conventions for interpreting bronze sculpture as such. The greenish or light turquoise colors of bronze or copper statues, sculptures, figurines, artwork, jewelry, etc. are generally *not* interpreted as referring to the colors of the objects depicted by those artworks. This, of course, is conspicuously evident in many bronze statues

depicting persons, real or imagined. Take as an example the iconic Statue of Liberty, originally French and mostly known for the large copy in the harbor of New York, presented to the US by France at the centenary celebration of the American Revolution in 1876[9]:

Here, it would seem pretty strange to assume that the light green-bluish color of the exposed body parts of this female deity should be taken to depict her actual skin color. If we should not assume she was a Martian, that she suffered from a severe hangover or indulged in body paint, we have no reason to assume that her complexion is green, and she is generally not interpreted in such a way. This holds, in general, for bronze artworks. The gradual green verdigris (literally: "green-gray") corrosion color assumed by bronze objects exposed to changing weather, covering the bronze surface by a thin layer of copper carbonates and other copper salts,[10] does not pertain to the color of the object portrayed. This is an example of the very general regularity that certain parts or aspects of the artwork as a material object may enter into the (quasi-)propositions that it claims to hold about certain indicated and depicted objects—while other parts or aspects of the art object do not so participate. As noted, this distinction, in the single case, has several sources—one is the very genre of the artwork, another is indications provided by the particular artwork itself.

[9]Originally titled *La Liberté éclairant le monde*, designed by Frédéric Auguste Bartholdi who also made a smaller copy at the Pont de Quenelle in Paris 1875. The large New York version was inaugurated in 1886.

[10]Pure water supposedly results in copper carbonate making up the main part of the chemical substance of patination; dependent upon the character and pollution of rain, copper sulfides, chlorides, etc. may add to the corrosion, sulphur giving a more brownish hue while chlorides will result in a more green hue.

As to the former source, we already indicated how bronze sculpture is not generally supposed to refer to green or greenish objects. This, however, is not a law but rather a rule-of-thumb convention of tradition. Bronze artworks do exist which make special use of the green corrosion color for (quasi-)proposition aims. Take, e.g., a set of earrings such as those below, the accompanying sales text making this proposal to the potential customer: "Let your inner and outer beauty blossom by adding these fetching Apple Green Patinated Lily Pad Earrings to your look."[11]

The leaf-shaped trinkets evidently, in a general way refer to foliage (the text proposes lily pad, other internet texts propose geranium), the green color here assuming part of the work's quasi-proposition, contrary to the general interpretation of bronzes and supported by the organic-looking shape of the objects.[12] The anti-cartouche protesters, however, did not go into such arguments—they simply assumed that green in the artwork immediately refers to green in the world.

There are, however, further constraints on the filling-out interpretation of artworks, those of indications given in the work itself or its immediate context, that which Ingarden calls "schematic aspects held-in-readiness." The sources of such schematic aspects are several. Let us take such potentialities of the work one by one. A first observation here is that the green shade assumed over the years by bronze exposed to weather conditions is a very light, slightly bluish green—rather

[11]Earrings by John S. Brana, http://www.handcrafted-earrings.com/apple-green-patinated-lily-pad-handmade-earrings-small.

[12]The character of the patination in the earrings is not indicated. The darker green seems to indicate patination may have involved ferric salts sometimes used for such effects.

far from the heraldic focal green used by some Muslim flags (e.g. the Saudi Arabian national flag depicting the prophet's sword and the Islamic declaration in white on green). So even in the case that the color of the bronze flags of the cartouche *were* in fact taken to form part of the artwork's proposition, it is by no means evident that these banners would resemble nor represent Islamic standards. This is connected to the cartouche forming a subgenre of heraldry. All of the world's official flags, in fact, use a rather small, selected amount of focal colors evolved out of the European heraldic tradition,[13] and both the green and the blue allowed by that system lie far from the corrosion colors of copper and bronze. So the formal, heraldic character of the cartouche forms a genre constraint implying, as potentialities inherent in the artwork, only that small palette of focal colors, effectively ruling out the interpretation of the bronze verdigris hue as an actual flag coloring. This potentiality of the work, then, originates from its genre as a piece of heraldry.

Another potentiality stems from the fact that, in the work itself, clear indications are given of the Danish, patriotic character of the work—most conspicuously, of course, by the monogram of the Danish queen which firmly anchors the reference as the Danish royal dynasty and, by metonymy, its associated military units. This potentiality thus stems from the work read as involving a real proposition referring to the Danish queen. Such an object reference, then, involves the potentiality of the flags being filled-in as Danish national flags. For the militarily knowledgeable observer, furthermore, the individual tips of the ten banners form references to the ten royal banners owned by the Guard, in an even stronger way indicating the potentiality of them being Danish banners to be filled in with red and white.[14]

In the immediate context, finally, the very mounting of the cartouche on the roof of a centrally located and historically significant Danish barracks involves a potentiality pointing in the same direction: this artwork celebrates a specific Danish military regiment housed in that building, closely connected to the royal dynasty of Denmark.

All these aspects of the work thus perform the role of "aspects held-in-readiness" indicated by Ingarden. Moreover, all three point in the same direction: they clearly lead the observer in the direction of making a filling-out interpretation of the standards in the cartouche as Danish flags rather than Muslim war banners.

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[13]The standard colors of European heraldry fall in two groups, so-called *metals*, named *or* and *argent* (yellow and white) and *colours*, comprising *azure, gules, purpure, sable*, and *vert* (blue, red, purple, black, and green), sometimes adding *tawny* (orange). The particular value of those colors are close to the focal colors (as prototypical or best examples of each linguistic color category) and have a large degree of universality, cf. Berlin and Kay (1969). Most world, state, regional, military, etc. flags obey variants of this color code, effectively ruling out the hue of verdigris as a possible flag shade.

[14]For the average observer standing on the ground, however, the detail of the ten banner tips is hardly visible to the degree that they can be individually identified as referring to really existing flags—despite the fact that the gilt of the tips draws attention to them. Furthermore, the expert knowledge of the banner tips is not immediately available to most average observers. Still, the other potentialities of the work should more than suffice to prevent the interpretation of them as islamist war banners.

Of course, expression is free, and nobody should be in a position to prevent the protesting officer and his political aide from freely associating the greenish-gray banners with whatever they may fancy. But simultaneously, structures both of the general genre character of the work, the particular qualities of it and references made by it, and its very contextual placement allow us to argue for an interpretation that is simply correct because in conformity with both conventions about bronzes, genre regularities—and in conformity with central aspects of the work itself. There is little doubt, however, that the claims of the enraged guardsman and his political supporter correspond to real psychological experiences with the artwork. This case then also goes to show the relativist dangers of psychologistic theories of art.[15] For how could we argue against their—or any other—interpretation if psychology was really the last key to interpretation?

This particular case thus served to display the less than sensational lack of elementary aesthetic capability and sensibility in an ex-life guard officer and a prominent parliamentarian—but apart from that, the struggle also served to make publicly known an artwork that would, in all probability, have remained in comparative oblivion in the world outside particular military circles without the protest. Probably few if any would have wondered, at all, what were the more precise meanings of this pretty traditional piece of art.

This is exactly the reason why it may throw some light upon the interpretation of artworks also on a broader scale. The very traditional and non-spectacular character of the cartouche makes it clear what an elementary thing it is for an artwork to perform not only quasi-propositional but also ordinary propositional tasks proper, in a very unproblematic, even trivial way. The funny thing is that this seems to lie beyond—or below—the grasp of much contemporary theory of art to which it may seem to be decidedly below the dignity of art to perform simple, propositional acts of reference. But the cartouche case may make it obvious that for large parts of art history—and in most other sectors of society besides modern art, institutionally speaking—the combination of aesthetic elaboration and propositional reference is the rule rather than the exception.

It certainly seems to be a very basic issue in the filling-out in artworks that the saturation of fictive quasi-propositions goes hand in hand with that of real propositions. In Paul Auster's *New York Trilogy*, the frequent references to actual existing New York landmarks, structures, and streets afford the filling-out with actual or mediated impressions of those cityscapes, and they form, in turn, the frame for the filling-out of quasi-propositions pertaining to the fictive characters of the work. In Peirce's theory of propositions, much emphasis is placed on what he calls collateral information or collateral observation. This concept refers to the fact that, in order to understand any proposition, the interpreter must have an already established source of reference to the object referred to by the proposition—for the Kantian reason that no description suffices to identify an object definitely. The

[15] I argue against the current renaissance of psychologism in ch. 2 of Stjernfelt (2014). Already in 1937, (Ingarden 1974) eloquently did the same thing with reference to aesthetics in particular.

subject term of a proposition refers to some object, but in order to identify that object, the interpreter must be able to refer that object to an already-known frame of reference independent of the proposition. If that were not the case, the proposition would not refer and hence degenerate to a mere predicate. Peirce:

> Two men meet on a country road. One says to the other, "that house is on fire." "What house?" "Why, the house about a mile to my right." Let this speech be taken down and shown to anybody in the neighboring village, and it will appear that the language by itself does not fix the house. But the person addressed sees where the speaker is standing, recognises his right hand side (a word having a most singular mode of signification) estimates a mile (a length having no geometrical properties different from other lengths), and looking there, sees a house. It is not the language alone, with its mere associations of similarity, but the language taken in connection with the auditor's own experiential associations of contiguity, which determines for him what house is meant. It is requisite then, in order to show what we are talking or writing about, to put the hearer's or reader's mind into real, active connection with the concatenation of experience or of fiction with which we are dealing, and, further, to draw his attention to, and identify, a certain number of particular points in such concatenation. ("The Critic of Arguments," 1892, 3.418)

So, in understanding an Ingardenian quasi-proposition, we must be able to identify the fictive object to which it refers by the reference to some ordinary proposition given by the work, ultimately locating the fictive events in some connection to reality. It may be, indeed, in very general or vague terms ("Once upon a time in a land far away . . . "), or it may be in very particular, precise terms, indicating precise real world time and place-coordinates in relation to which the fictive object is located. This might not be so surprising; more important is it that those real propositions simultaneously and importantly contribute to the aspects-held-in-readiness which permit the interpreter, in many cases very easily, even automatically, to perform the filling-out of the spots of indeterminacy of the work, be they presented in quasi- or real propositions. As when the real propositions in the cartouche example pertaining to the Danish queen and Copenhagen barracks allows us to abduct that the standards involved are indeed Danish flags rather than Islamist war banners.

This, however, does not seem to lie in Ingarden's original theory. Just like his theory suffers from a too sharp, dualist distinction between fully determinate perceptions and partially indeterminate artworks,[16] his very sharp distinction between works consisting of quasi-propositions and those of real propositions must be softened up by a more continuous relation between the realms of the quasi and the real. Ingarden, when dealing with the literary work, actually did take a step in that direction by distinguishing between degrees of quasi-propositions. Thus, in *The Literary Work of Art*, he distinguished between three levels of quasi-propositions: (1) "in works which in *no* sense claim to be historical" (pp. 167–168), characterized by the "total absence of the intention of an exact matching" (p. 168); (2) works in

[16] In Stjernfelt (2007), I argued that perception is more schematic than assumed in Ingarden—making it more understandable how schematic filling-out of indeterminacy spots may achieve quasi-experience effects.

which "the represented objectivities refer in a totally different, and at the same time, if one may put it so, narrower manner to the real world" (p. 170) where the beginning "of the matching is already present" (ibid.), but aimed only towards "a general *type* of states of affairs and objects that would be 'possible' in a given time and milieu" (ibid.); and finally (3) works where the matching intention extends to "the strictly individual" as opposed to the general type, taken to be closest to genuine judicative propositions (Ingarden's term for ordinary propositions with full truth claims). So: fictions involving no reality reference, general such reference, and individual such reference, respectively. Even in the latter case, however, propositions identical to real propositions will assume a different character as "simulating" or "duplicating" the real objectivities, which would be referred to by the very same proposition occurring in a scientific work, Ingarden maintains.[17] The plastic ladder of quasi-propositions developed here suffers, from our point of view, from being based on the reference to the character of whole artworks such that it is taken to be the genre definition of the work that determines the reference of each of its sentences through and through. In an era of docu-drama and autofiction, such an insistence on the absolute generic difference between fiction and non-fiction appears as quite too rigid.[18] This rigidity probably comes from the empirical bases of Ingarden's theory being literature in the classic sense of belles-lettres, at the time safely conceived to be worlds apart from factual and non-fiction prose. In artworks like paintings and sculpture, however, very often used to celebrate and refer to real-life characters or objectivities, freely mixing or adorning these with fictitious figures and motifs, the general artistic possibility of blending propositions and quasi-propositions appears as a much more obvious possibility.

Moreover, this gives us another central source of aspect potentialities kept-in-readiness—those indicated by real propositions partaking in the work, as the example of the direct reference to the Danish queen in the Rosenborg cartouche. It is that very same reference that appears as one of the main potentialities of the

[17]This issue must be kept apart, again, from two different possible attitudes to the same work of art, the aesthetic and the extra-aesthetic:

> There are two possible ways in which a work of art may be perceived. The act of perception may occur within the context of the aesthetic attitude in the pursuit of aesthetic experience or it may be performed in the service of some extraaesthetic preoccupation such as that of scientific research or a simple consumer's concern, either with the object of obtaining the maximum of pleasure from commerce with the work or—as frequently happens in the reading of literature—with the object of informing oneself about the vicissitudes of the characters depicted in the work or some other matter of extra-literary fact about which a reader can obtain information on the basis of the work of art (as for example by reading Homer classical scholars seek to inform themselves about the life of the ancient Greeks, their customs, dress, etc.). (Ingarden 1964, p. 200)

Our focus here is how ordinary, real propositions, part of the artwork, may participate in yielding potentialities directing the filling-out concretizing the artwork into an aesthetic object.

[18]This is probably the reason why such potentialities are not considered in Ingarden's account of the aesthetic cognition process (Ingarden 1968/1973a).

work, granting that the banners behind the royal monogram should not be interpreted after their metal surface—and that victorious Islamist standards do not wave over Copenhagen.

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The Appropriation of the Work of Art as a Semiotic Act

Francis Édeline and Jean-Marie Klinkenberg

Abstract A work of art can be defined as a section of space (visual, auditory, tactile, etc.) that has been assigned a particular status. It is not our intention to define this status—philosophical aesthetics has been addressing this issue for centuries. Rather, we aim to pinpoint the mechanisms in virtue of which this section of space is isolated and bestowed with the status in question. Such a move requires the action of a certain instance—hence the emphasis we put on the interactive character of the process. We shall pay particular attention to the type of sign called 'index,' which plays a pivotal role in this affair.

Keywords Index • Visual perception • Expectations pragmatics • Catasemiosis

1 Two Methodological (or Epistemological) Preconditions

1.1 The Appropriation of Statements as a Semiotic Practice

With undeniable methodological relevance, the structuralist thought affirmed to raise a true wall dividing on one side, semiotic systems and, on the other side, the world with its performing actors. This is the principle of immanence. It was a purely methodological and temporary separation: its purpose was to eliminate ontological presuppositions, common psychologism, and reckon on elements that, since they are closed in on themselves, are controllable. The profitability of that separation turned out to be spectacular and allowed the development of highly sophisticated descriptive instruments. However, semiotics does not have the vocation to indefinitely put off the moment to question the relation between the world and meaning (cf. Groupe μ 2011, 2015).

Unfortunately, recent developments in semiotics have hardly broken up with the immanentist doctrine and keep setting aside the question of the contact point

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between the world and the languages, regarding both the origin of these languages and the active part they play within society.

We will note that, for instance, "the semiotics of practices," which emerged recently, is still full of a glossocentrism already defended by Barthes. As Fontanille explains, "If practices can be described as semiotic, it must be possible to assimilate them to a language" (2010, p. 10). However, he also says that the units of the expression plan of practices are not accessible but through diverse episemiotic manifestations (first and foremost verbal—but also gestural and physiognomic . . .). Indeed, these units could not be "deduced retrospectively from a transformation observed in the end" for the reason that a practice would be "an open process, both as regards its starting and its end point, which therefore would not provide a basis for a confrontation between an initial and a final situation" (ibid.), "*unlike a textualized action*" (Fontanille 2011, p. 132). Hence the decision not to study the practices in action but instead to seize them from the statements that describe them. But the argument is debatable: linguistic statements are as open as factual processes. And their closure is not given from the outset but instead is the product of the methodological decision made by the linguistic discipline. Now, such a decision can also be made in the case of processes.

Visual semiotics—to which we will give priority here, in the wake of our previous contributions (Groupe μ 1992)—still suffers from these orientations and, until recent years, has largely neglected the stock of rules that preside over the social, pragmatic use of visual statements. Traditionally, it gives priority to an immanent point of view: the observation of phenomena is done in such a way that, in order to describe them, it is not necessary to resort to elements outside the system. The most important thing is that the description of the system can make do with its own internal consistency, which makes the description appropriate for its object.

We intend to break up with this point of view: the problem of the appropriation of the work of art will be here considered as a practice.

If semioticians such as O. Le Guern (e.g. 2005, 2009, 2011) and A. Beyaert "have studied images or art installations taking into account the types of showrooms inside of which there is a painting or a series of paintings [. . .] the purpose of those studies was never to study the way the museum institution approves and valorizes the images by making them, precisely, artistic" (Maria-Giulia Dondero, unpublished quotation). Since we are keen to describe this validation and practice—which we already started to do in a previous work (Groupe μ 2002)—that appropriation will be described:

(a) in terms of actualization: every user mobilizes a semiotics in an individual act, and within that semiotics, every unit undergoes a concrete actualization performed by the user at a given time and in a given place;
(b) in cultural terms: any semiotics is a collective, intersubjective reality that can be defined as a set of rules in effect within a community of users;

(c) in terms of pluricodical utterances (cf. Klinkenberg 2000): the appropriation of the work involves not only the modalities of reading of that work,[1] but also the rules regarding the use of the space it is part of;
(d) in terms of action: the appropriation is a dynamic act, unfolding in time and causing multiple effects.[2]

Of course, such a program could not be entirely covered in the following paper. We will content ourselves with the outline of some of these various issues.

1.2 Genetic Aesthetics and Instituted Aesthetics

The presentation that follows could be unfolded in two ways:

– According to a both logical and physiognomic scheme. Logical because of a growing complexity: going, for instance, from the description of the perceptual contrasts underpinning the bestowal of meaning upon the world to the aesthetic judgment that results from this. As its complexity increases, the artistic specificity of this schema will increase accordingly. Indeed, at the bottom of this scale, the described phenomena (contrasts, to keep our example) have no artistic specificity.
– According to a chronological scheme that would follow the steps of the appropriation of the work. If, for example, I decide to go in a museum, I consider the existence of truly artistic artifacts and look for them. Here, expectation comes first, which orients and assigns a goal to perception. It is, for instance, directed toward what we will call hereinafter the indexes designating the work, such as the frame; it leads one to give priority to the content of the frame, the other objects of perception being set aside as irrelevant (the electric plug of the showroom, its custodian); scrutiny and meaning attribution come afterwards.

None of the branches of that alternative can be favored. If the question of artistic specificity may be more easily addressed within the second scheme, the latter bypasses some of the non-specifically artistic phenomena described in the first; yet these phenomena cannot be eliminated from the presentation because their role is crucial for the perception of the work. Moreover, the second scheme leads to consider the artistic world as an already established world: we appropriate a work of art that is already there, with its institutionalized status. In contradistinction to this, the first scheme has a generative character: the artistic appropriation took place when we decided to direct our gaze toward certain sectors of the perceptive field and, during the anasemiotic process (cf. Groupe μ 2011), to assign a specific status

[1] That might be very open, as we know. For the cases of extreme openness, those Eco calls *ratio difficilis*, the principle can be formulated as follows: the work creates its own code.

[2] This is what we call catasemiosis (Groupe μ 2013, in press A).

Table 1 Aesthetic semiogenesis

Operations	Results of the operations
Selection and discretization	Contrasts and closure
Scrutiny	Barysemiotization
Mobilization of expectations	Semiotization 1
Attribution of status and interpretation	Semiotization 2

to them—thus constituting a segment of reality as a work of art. In the present case, it consists in identifying a domain in which the utterances can be categorized. This decision can be described as a conquest and part of aesthetic pleasure may be linked to that expansion of the semiotic field. It suggests that there must be a genetic aesthetics, just as there is a genetic epistemology for Piaget.

Therefore, we will reconcile both approaches, while focusing our attention on the first one and saving the second one for later works, according to the following table (Table 1):

2 The Functional Space of the Work

The process of appropriation of the work is based on two significant phenomena: (a) a section of the global visible space captures the viewer's attention and is thus both assigned salience and semiotic prominence (this is what we will term 'barysemy'), and (b) the demarcated section is attributed a specific cultural status.

Capturing the attention is a phenomenon that occurs several times in the global process, therefore the above scheme can decidedly not be chronological.

2.1 Focusing the Attention

2.1.1 Sensory Contrasts and Barysemy

The process of selection is based on a fundamental property of all visual utterances that derives from the very mechanisms of perception: a division in both the perceptual and the intelligible field that produces the paradigms of the units of both the expression plane and the content plane (cf. Groupe μ 1992, 1998). This division goes hand-in-hand with a differentiation. In terms of space, this differentiation designates a central space and a peripheral space separated by a boundary (which may be fictional), i.e., it established an opposition between inside and outside. We have already showed in other works (Édeline 1991; Groupe μ 1992, 2011) that this selection was equivalent to what we called "elementary visual knowledge," that is

to say, the possibility to distinguish within a field between two different translocal qualities, separated by a discontinuity.[3]

That opposition can of course be semanticized in a host of ways by specific norms (as it is showed by the examples of family space or national space). Besides, the manifestation of the separation might have various degrees.

Naturally, a work of art will not only present one but a plurality of translocal qualities. But this mere word (translocal) immediately designates a certain rate of homogeneity of the considered sub-space. The discontinuity—which René Thom calls a catastrophe, and which is enhanced by the perceptual system—divides the field into two entities and itself displays a shape. The functioning of perception is such that this shape is not considered to have an independent existence but is assigned either to one of the entities or the other—or, exceptionally, to both.

Here, the important thing is that the perceived areas are organized into a hierarchy: we are dealing with the classical dialectics of figure and ground. Now, this organization into a hierarchical structure is not self-evident. Why is privilege given to the inside? In a museum, why do we not focus our attention on the thermostats as much as on the statues? The phenomenon is complex, and can only be clarified by the use of our concept of index, which will be developed further on (cf. Sect. 2.2). At this place, let us simply underline the physiological basis of the mechanism. Faithful to our assumption of naturalization, we will suggest (cf. Groupe μ 1989, 1992) that the reason is the reproduction of the organization of the retina: the fovea, the only area with a lot of cones where vision is clear, is located in its center. Here we are dealing with the production of a barysemy, or semiotic densification of the central area.

The fact that meaning results from grouping information (cf. Groupe μ 2011) suggests that the level of concentration of that meaning may vary in time or space. Goodman had already noticed it, talking about the "semantically dense" and "syntactically dense" character of the work of art (1968). However, it is possible to give a rigorous content to what was only a *concetto* for Goodman[4] and, particularly, provide a good explanation for it.

The variation of density of meaning is indeed determined by two series of phenomena, some of which are natural while others are cultural. The latter—in the forefront of which stands the index—will be analyzed in Sect. 2.2.1. But, as we are about to see in a moment, the distinction between natural and cultural phenomena is not always so clear.

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[3]One may imagine counterexamples to this. Take a Diego Rivera-like mural fresco in the middle of which a window opens allowing an inside to be seen. Such examples do not disprove the rule, however: either the inside is considered as a noise, and does not take part in the appropriation of the work, or it is semanticized and takes part, and is therefore interpreted as an inside within an inside.

[4]Goodman does not give any definition of the notion of density, which remains a metaphor here; he generalizes the phenomenon so that it embraces the whole work even though the density areas vary (sometimes they are central, sometimes they are peripheral); moreover he seems to impart an intrinsic aesthetic value to density.

Here, let us concentrate on the first type of factors, which are not mentioned by Goodman. The areas where meaning gets denser are constructions where two sub-factors take action: the properties of the organs of perception and those of the object of that perception.

(a) First sub-factor: the properties of the organs of perception.

Once again, we will use human vision to illustrate the first sub-factor. We know that vision does not uniformly grasp the characteristics of the field it is applied to. The resolving power of the eye, or the solid angle corresponding to the light rays hitting only one receptor cell of the retina, is worth 200 s of arc in the fovea (that is to say 1 m seen at 1 km); the resolution is better in the center of the retina but the *beam of attention* is approximately 1° of angle and determines the central area of the visual field, the only sector in which maximum details are perceived. Thus, we cannot talk about a barysemiotizing area.[5] However, in fact, that zone goes beyond 5° of angle thanks to a very efficient double process which consists in endlessly moving the point of scrutiny over the surface to explore. That mechanism has two variants. In the first one, the numerous rapid movements performed by the eye (the so-called REM, *rapid eye movements)* scan the area randomly. But in the other one, the eye is guided by voluntary movements in a chosen direction.[6] These decisions made possible thanks to the mobility of the organ are passed on by other decisions. They are enabled by the mobility of the whole body and can take place within strategies of barysemiotization (for example, getting closer to the work of art or stepping away from it). As can be seen, we have gradually moved from physiological to cultural phenomena.

(b) Second sub-factor: the properties of the objects of perception.

The second natural sub-factor is the structure of the perceived field: we are entitled to surmise that meaning concentrates around catastrophes, i.e., around discontinuities which themselves are opposed to areas of continuity, according to the fundamental dipole principle (cf. Groupe μ 2015). In our *Traité du signe visuel* (1992), we highlighted that in a line drawing, the area of barysemy is the contour, a place that separates two areas less rich in information; that is to say, once again, separated into dipoles. We can represent the correspondence between two visual segments (for example, an impressionist painting and its corresponding line drawing) by means of a transformation that can be modeled as a double differentiation: instead of being diluted on all the perceived surface, the meaning concentrates at the exact point where the value of the signal changes. What we have described in the visual field can similarly be found in the

[5] As to the vast peripheral area, it is specialized in the perception of the global environment and movement. This area has rarely been exploited by artists (for an example of such an exploitation, cf. Klinkenberg 2004).

[6] When it comes to neural wiring, the nerve cells are interconnected laterally in order to create receptive fields that contain a center and a periphery with antagonistic responses.

linguistic field, where the signal engineers clearly showed that a barysemiotical core is to be found at the initials of words.

It is important to highlight that none of these factors can found barysemy on their own: in compliance with our basic thesis (cf. Groupe μ 2011, 2015), meaning—and thus the density of that meaning—is the product of the interaction of these two factors.[7]

In the case of the perception of a work of art, the hedge effect is one of focusing one's attention whose immediate corollary is, once again, the production of a barysemy. The viewer is obliged to produce meaning on the spot: museum, gallery, private wall covered with drafts, public wall with graffiti. In return, the delimitation ensures or enhances a perceptual, intellectual, and psychological "comfort." Importantly, the perturbing interferences with the environment outside the index are inhibited.

As we will discuss below (Sects. 2.4 and 5), part of the artistic techniques developed by human beings will precisely consist in playing with the closure effects.

2.1.2 Expectations and Semiotization

Expectation has indissolubly linked rational and emotional aspects.

It is misleading to present the viewer (and his/her organs of perception) as a blank photographic plate. As first, Gestalt psychology and then cognitive psychology and semiotics have showed that the act of looking is a dialectic in which pre-existing codes are confronted with external stimuli. Therefore, there is an interaction between the stimuli and the patterns. This suggests a double movement, going from the world to a semiotic subject and vice versa. In one direction, the stimuli are assessed in the light of a model available to us. Along the other direction, the model is modified by the data provided by perception and observation. This double movement, of course, reminds us of the assimilation-accommodation couple in genetic psychology, and it is crucial to understand the attribution of meaning. When inspecting a painting, the viewer takes interest in the manner of expression adopted by the painter. For example, the viewer may try to capture information about the painter and his personality instead of information about the motif (what distinguishes a woman painted by, say, Botticelli from one painted by Raphael, Klimt, Modigliani, or Schiele).

When they take pragmatic decisions, the viewers are driven by their idiosyncrasy. Besides, they already are so at the mere level of perception (perception has different

[7] All of this indicates that barysemy is measurable: in the visual field, the density of meaning is the number of dipoles perceptible for a surface unit. Of course, we can also measure the variation of density in time, taking into account the evolution of the number of dipoles or that of the surface. We can symmetrically consider barysemy as the opposite of repetition, which brings it also into the scope of the calculable (at least theoretically).

styles). But they are also driven by the knowledge they have about the environment and the indexical codes valid in this environment, as we will discuss in Sect. 2.2.2.

2.2 Artifacts

Some artifacts enhance the specificities of both areas: center and periphery. This is especially the case for the indexes, on which we will elaborate below, and which will eventually allow us to address the specificity of artistic receiving.

2.2.1 A General Theory of the Index[8]

The Peircian terminology has only one term for two very different phenomena that should be carefully distinguished. We will note them $index_a$ (arbitrary) and $index_m$ (motivated) respectively. The $index_m$ is based on a "natural" contiguity relation not provoked by man, whereas the $index_a$ is a cultural and conventional sign. In the following, we are only concerned with $indexes_a$.

The $index_a$ is a semiotic device with a double property. (i) It focuses the attention of the receiver of the indexical act on a determined portion of space (and, more particularly, it detaches an object within that space) that therefore becomes the *indexed*. (ii) It attributes a certain status to that *indexed*. A familiar example: a pointed finger; but the label, the cover page, the stage, the pulpit, etc. exert the same effect.

That device mostly unfolds in the longest semioses and is subject to a significant cultural investment: the type of reference it elicits is eminently conventional.

Focusing the attention on a determined portion of space is nothing but contributing to the discontinuity that segments the perceptive field, or establishing that segmentation. In any event, the index takes part in shaping the segmentation we discussed in Sect. 2.1.1. In the case of works of art, that form assumes a true but limited importance, that of "formats:" portrait, landscape, marine, tondo, lockets . . . [9]

The index only works in the presence of the designated portion of space, in such a way that its definition activates the idea of contiguity, or rather of neighborhood, a word borrowed from topology, which therefore is neutral as to the actual physical

[8]Cf. Groupe μ in press B.

[9]The format is the product of two determinations: that of the organs of perception (binocularity explains the relative universality of the horizontal format and that of the shapes of the theme and thus of the indexed (a standing subject will be treated according to the vertical axis).

Table 2 Structure of the index

	Indexation	
Indexing	→	Indexed
pointed finger	a) focalization	object
pointer	b) attribution of status (ex.: work of art, social function . . .)	exit door
label		sculpture
badge		individual
cover . . .		book . . .

distance between what will be defined hereinafter as the *indexer* and the *indexed.*[10] The nature of the objects destined to become indexes is very variable. They may be linguistic, for example, with shifters and connectors.[11] The writing, the spatial manifestation of language, frequently has an indexical function too.[12] There are other explicit indexes, such as the /dash/, indicating the equivalence of the linguistic portion of a statement and of its iconic portion, the /tail of the speech balloon/, or the frame. However, the index may not be manifested through a specialized sign: the indexical function is thus assumed simply by spatial proximity.

Founded on contiguity, the index always mobilizes three elements: (i) the actual indexical sign (/pointed finger/, /label/ . . .) or *indexer*, (ii) the designated portion of space, or *indexed*, and (iii) the relation to the latter that the former institutes (by designating it, giving it such and such status, etc.) or *indexation*. The index therefore presupposes a semiotics of space: in order for the indexer to designate a portion of space, that indexed space must be perceived as a homogeneous unity, distinct from its surroundings: for example, a building or object, even a fuzzy set of trees or clouds (Table 2).

This semantics of the indexed is determined by three series of factors.

(i) The above-mentioned perceptual factors.

[10]That explains why indexes_a often get mixed up with indexes_m (cf. Klinkenberg 2000), especially for the followers of the Peircian tradition. But the space neighborhood that is applied here is not the same as in the indication, where it is causal.

[11]The referent of the shifters varies according to three series of variables: (1) the couple enunciator/enunciatee, (2) the time of the enunciation, (3) the place of the enunciation. The term "connector," which has been controversial, globally designates linguistic tools expressing syntactic, logical, semantic links between two portions of statements. One of the linguistic properties of the connectors is that some of them may sometimes link portions of statement, sometimes a statement and its enunciation (external connection).

[12]Cf. Klinkenberg 2008; Groupe μ 1995. Examples: /store fronts/, /titles/ of books or pictorial works, /names/ of museum halls, of classrooms, or of congress, /badges/ of staff or participants of these congresses, /names/ of a television presenter appearing at the bottom of the screen, /labels/ of cans, /names/ of deceased people on graves . . . If we find the mention /"museum"/ on an edifice, the index connects the linguistic signified "museum" and the whole structured space volume located in the background where figures the expression and designates the quality ("museum") attributed to that portion of space.

(ii) Different types of sectorial semantics but still founded on the semiotization of space (architectural semantics, landscape semantics, etc.). We mentioned that the designated space had to be perceived as homogeneous; yet the knowledge of that homogeneity is itself provided by cultural rules: delimited aspect of volumes or surfaces, etc. That semiotics of space is still insufficient right now in spite of Édeline's suggestions (2013). We can claim that there are two categories of places:

  (a) strictly delimited places: either they are enclosed—the museum, the gallery, the performance hall, but also the library, the classroom, the church—or they are open but resting on strict semantics (the pedestal, the stage);
  (b) vaguely delimited places: in this way, without the need to enclose, Finlay sanctifies the whole space around which is its *Great Turf*; the space surrounding a museum is vague, but it itself makes a living statue close to its entrance count as a piece of body art.

(iii) Social praxes: reading a book, visiting a museum, visiting a sacred place.

2.2.2 Index and Appropriation

When it comes to praxes, one should take this into account:

- The index, which creates (or triggers) an utterance, is an utterance itself. And as an utterance, it has an enunciatee and an enunciator. While being a device producing enunciation, it has itself been enunciated.
- The index is a performative utterance; it has an illocutionary force. It has been defined as follows: it is "an order to focus one's attention to a given space sector."
- The enunciator has therefore a performative purpose, the enunciatee has his expectancies, and one or the other might be a person (or people) or an institution (the artistic institution, for instance).

Without that being a general rule, indexation often has the effect of giving a status of sign to the indexed. This is why it is so important for the problem we are addressing here. In that specific case, its role consists in triggering the semiotic decision. To do so, it disqualifies the indexed object as an object and re-qualifies it as an utterance belonging to a certain type of speech. For instance, some indexing objects such as the label, the pedestal, or the beam of a lamp in a museum can turn any indexed object into a work of art; the same lamp at the theatre, the stage, the circle constituted by the audience in the street arts make a show out of what attention is focused on; the store front disqualifies the exposed object—for example, the bottle of perfume in a store front is disqualified as a bottle whose content can be used—to re-qualify it as a sample of a category of commercial goods. In each case, the indexed has been given the status of icon: the item in the store front is there for all the items that can be found in the store which it may validly represent as an icon. Globally, all the indexed objects that are awarded the status of sign are subjected

to a disqualification-requalification process.[13] The precise direction taken by the requalification movement depends on grids governing indexation—the store front of an art museum imparts the status of unique object at a piece of work; the store front of the Natural History Museum imparts the status of sample; the store front of a shop imparts the status of commercial sample or of unique precious object—in compliance with rules that may be flexible and complex.[14]

It is easily observed that the indexes, in their first function consisting in centering, simply parallel the perceptive factors: they create an effect of closure and barysemy, both at an overarching level (the space through which the viewer moves) and at a subordinate level (the space the viewer has visually access to). The separation of space that they produce reinforces the aspects of the two areas: on the one hand, centrality, and peripherality on the other. We have thus been able to demonstrate that a specific type of index—the frame (cf. Groupe μ 1989, 1992)—functions as a counterpart to visual perception whose mechanism was described above (Sect. 2.1.1.), playing, as the latter, on the division between the central vision area and peripheral areas. And that also applies to any other indexicalized space.

The viewer is driven, as we described in Sect. 2.1.2., by his/her knowledge about the environment and the prevailing indexical codes in vigor, a knowledge that is clearly socially stratified. Knowing that we are in the house of an art lover or in a museum triggers evidently specific attitudes, for instance, a very precise direction for the semiotic decision. These reactions may be actions (as we will see it hereinafter). In that quest for meaning, the viewer is equipped with pre-existing types that he/she projects on the stimuli.

It is the factor of social praxis that implies that if we take a walk in a non-strictly delimited space, we can still identify a work of art, even though there is no index as strictly socialized as a label or a frame. This is the case with Finlay (where the only index is not the presence of a label but a simple stone carrying Dürer's monogram), or Giuseppe Penone's Vowel Tree in the Tuileries Garden. All of this clearly shows the relevance of cultural and social competences, which determine the expectations.

2.3 Contextualization

If the index can mobilize motivated signs, as in the evoked examples of icons, the fact remains that it is in itself an arbitrary sign: the type of reference it arouses is purely conventional, presupposing the semiotics of space.

[13]Here, Duchamp's ready-made can satisfy our need for example.

[14]The /green XL-sweater of a certain design/ in a storefront can mean that, within the store, we will find "green sweaters of that particular design in all sizes," "sweaters with that design and size but in other colors," "some sweaters," even "some clothes." Of course, these codes can be badly implemented, ignored, or even suspended. In the latter cases, disqualification ends: that's the example of the storekeeper who sells his/her item in storefront dispossessing it of its iconic status.

Needless to say that these spaces can be articulated both in a centripetal and centrifugal way: let us think about the museum sequence, wing or floor, hall, wall, frame… Relations of subordination, superordination, and coordination between these spaces are established. They are the three syntactic relations that we can distinguish in visual semiotics:

– Subordination: the museum hall, subordinated to museum-building;
– Superordination: the museum-building, superordinated to the hall;
– Coordination: the halls, coordinated between one another.

The articulation of the homogeneous spaces (i.e., experienced as homogeneous) and thus the working as so many units within vaster complexes follows cultural rules, too. This is the reason why the indexical inscription /museum/ can appear not only on the building but also on a flagpole located several meters from the building.

The relation between this semiotics of space and its functionalization through indexes also meets another cultural code: it is one thing to identify a space as homogeneous, and possibly articulate it in sub-spaces; it is another to give, thanks to calculation, a specific value to both that space and the indexical sign itself.

That sign can have a synecdochic value, and can therefore be an ostensive sign[15]: this is the case for a frame making up the logo of a gallery or a museum, a painting by a particular painter, or a sample of his/her stylistic specificities (for example, a drawing taken from Miro's work to announce an exhibition about him).

The articulations and relations we have just discussed give every element of the spatial utterance, indexical or not, some specific signified. In the case of indexical signs, consider the widely different examples of a poster announcing an exhibition and the entrance of the hall where it takes place. In the spatial articulations mentioned above, every stage can have its own signified. The /museum/ refers to the general signified "works of art," the /wing/ or /floor/ may invoke the "century" or "school" of the considered type of art, the /hall/ may invoke the "individuality" of that century or school, the /wall/ a "production period" of that individuality, the /frame/ the particular utterance made by that "production period." Thus we are clearly dealing with pluricodical utterances, where the purpose of the pluricodical aspect is to ventilate the identified elements between different semiotic categories.[16]

[15] As its name suggests, the ostensive sign "shows." But not in the way the index does, which is in a relation of neighborhood with the showed object: here, the signifier is the shown object itself (or its icon). The ostensive sign is therefore an element highlighted to synecdochically represent one or several members of the category to which it belongs. In simple terms, it is a sample.

[16] In that complex, one empirical object can be included in the composition of many signs as stimulus, and can therefore be sometimes an object to be emphasized, sometimes an indexical sign—only when it does not share both status at the same time. Let us consider the frame, which often has an indexical status, but which may sometimes be seen as a fraction of the work itself, even as a work of art in its own right (see the numerous examples studied in our rhetoric of frame: Groupe μ 1989, 1992).

2.4 Stylistic and Rhetoric of the Indexation

In Sect. 2.1.1, we saw that the index produced a barysemy and a perceptive comfort which is nothing but a saturation of the enunciatee's expectations.

Yet part of the artistic techniques developed by humanity consists in playing with these norms. Those techniques can sometimes head towards the extreme reinforcement of the closure effect produced by the index and sometimes towards its annihilation. An example of the first case is given by the Druidic Triple Precinct studied by Guénon, and an example of the second one is given by Finlay and his *Great Turf*.[17]

The observations that have been made concerning the perceptive comfort of the viewer are illustrated *a contrario* by certain approaches. Mondrian wanted to use the painting simply as an "element of division of the wall" (Pleynet 1977, p. 138), that is to say that instead of isolating it in its frame, he wanted to take it out from it. One may also remember the memorable example from the Documenta of Kassel in 2002, where a huge empty frame was erected outside, facing the landscape. We can also think about the confusion caused by the apparition of the circle theatre, which modified and diminished the separation between the actors and the audience.

3 Strategies of Positioning: Four Configurations

Another step of the appropriation process consists, for a viewer, in looking for the optimal place to examine the selected piece of work and move on to the anasemiosis that he/she judges appropriate. Centering, which was discussed above, is already a positioning. But here, we are considering more precisely the strategies that result from the evoked social praxes.

For a start, it is interesting to notice that the optimal place has mostly been predetermined by the enunciator in an extremely precise way. Some famous frescoes painted on church domes have such anamorphoses that only one location allows a satisfying view (example: *Trionfo del nome di Gesù*, on the ceiling of the Gesù Church, by Il Baciccio); and the geometric perspective of Brunelleschi and Alberti requires a unique viewpoint, although the perceptual mechanisms of compensation and constancy allow, to a certain extent, some distancing from that optocenter. Conversely, Byzantine mosaics played on a shimmer, a scintillation of the golden tesserae, in such a way that the appropriate view suggested a moving viewer.

[17] "Environmental art is another form of protest which inserts the piece of work within the environment by deleting the frame surrounding it (thus, its separation) and, consequently, makes it unlimited. Dürer's *Great Piece of Turf* is encircled by a frame which delimits its influence to its immediate surroundings. However, it is impossible to precise where the reconstitution of that Great Turf in Ian Hamilton Finlay's garden ends" (Édeline 2005, p. 33).

Beside the *Fixity vs. Movement* dichotomy, there is another fundamental structure: *Frontality vs. Laterality*. The front view seems more or less to be the general rule, but it also has specific modalities. El Greco's elongated figures, that some assign to the "ecstatic lens" (Eisenstein 1980), may also be interpreted simply as taking into account how things appear when you perceive them from below.

The distance between the eye and the piece of work is a third critical factor, in such a way that a third axis must be taken into account: *Remoteness vs. Closeness*. That distance of perception does not correspond at all with the positioning of the painter during his/her work, the painter having to either move or imagine the effect of a remote contemplation. Pissaro is credited with the rule that places the optimal position at three times the diagonal of the work. However, such rigidity is not appropriate for all utterances. For example, Rothko's huge paintings require the construction of halls of adequate height and perspective (cf. Groupe μ 1994).

That alleged norm is particularly irrelevant in the case of bistable utterances, which require *both* proximal *and* distal vision *at the same time*, a technique epitomized by the Impressionists. We can certainly examine their stains or dotted lines very closely, but such proximal vision generally does not elicit any iconic content: that content is exclusively plastic. But a recomposed vision is obtained when the viewing distance becomes such that the solid angle that subtends two or several adjacent stains is inferior to the minimum angle of discrimination. The latter is the function of the eye optics and of the dimension of the colored receptors: it measures 0.017°. Then, we can calculate that if the stains of the painter have a 2 mm diameter (such as in Signac's *Breakfast*), one has to place oneself at at least 1.8 m to obtain the effects of luster or recomposition by additive color sought by the artist, while Pissaro's rule would require 4.4 m. An appropriate distancing allows for the perception of two levels, a plastic one and an iconic one, fully permitting the exploitation of the icono-plastic interaction (cf. Groupe μ 1992; Parret 2008).[18] Thus the *Remoteness vs. Closeness* axis determines three segments: the plastic zone, the icono-plastic zone and the iconic zone.

A fourth and less evident structure also plays a role: the *Tandem vs. Mirror* opposition. The spatial relations between a viewer and the objects of the world are indeed influenced by the intrinsic orientation of these objects (cf. Vandeloise 1986). An object with such an orientation presents a front and a back in such a way that we have the feeling we are in front of it or at its back, depending on which face it presents. We will say that we have either a mirror or a tandem perception. The intrinsic orientation of objects informs their representations. Besides, a painting—unlike a window, for instance—is also an oriented object which faces us: we

[18]It is a different story for some quite marginal pieces of work, where two iconic readings are possible and without any immediate relation between one another. Apart from the famous case of anomorphosis in Holbein's *Ambassadors*, which suggests two viewpoints laterally isolated, there are also Arcimboldo's Baroque compositions, where fruits, fishes, vegetables, etc. are put together to compose a head when you take a global view. Between 1937 and 1939, Dali painted many paintings of that type, among which we can name *Face of Mae West Which May Be Used as an Apartment*.

stand in front of it as in front of a mirror. In some cases, the painter struggles against that orientation by representing a character from behind (i.e., Caspar David Friedrich's famous *Rückenfigur*), which elicits in us a tandem attitude. Landscapes are ambiguous as regards this parameter.

These examples show that the viewer's positioning is important, and that the artist implicitly expects the viewer to be placed in the expected location. This is a true power of the utterance because it triggers a complex motor activity, cybernetically regulated by vision. Now, we must look deeper into that power.

4 Appropriation and Catasemiosis

Saussure also defined semiotics as the "discipline that studies the life of signs within social life." But if the sign is a condition for communication, it is not sufficient to place it upstream from that communication. One must also remark that it extends its action beyond the communicative act itself. Signs do have a use. They further action. In this way, if meaning emerges from experience, it also leads to experience. This is its double corporeality. Taking this corporeality and the processes of enunciation that reflect this property seriously implies that one ceases to consider utterances as pure meanings.

The piece of work does not escape the rule: whether it is an utterance or piece of discourse, it certainly manifests an ethos, aptly laid bare by the analysis of styles (cf. Groupe μ 1995), but it is also a means to act upon the world and others. We therefore cannot study the appropriation of the work without adding a pragmatic aspect to that study, pragmatics being the part of semiotics that considers the sign as an act. This is what we call catasemiosis, a counterpart to anasemiosis (cf. Groupe μ in press A, 2015).

By presenting signs not only as the product of fixed relations between signifiers and signified within a closed system, but also as the product of constantly revived relations between objects, utterances, and enunciative instances, and by admitting the actions and habits within these interpretants, the pragmatic approach acknowledges the interpreter and his/her action on the world, just like the action of the sign on the interpreter.

It would take too long to discuss the necessary condition of both these actions here, namely interpretation. That approach can be formalized in a tripartite diagram which accommodates the structure of the interpreted utterance, the grid of interpretation, and the interpreting instance, a schema that we have exposed at the Paris colloquium on *The Adventures of interpretation* (Groupe μ 2008). To conclude here, we will place ourselves after the interpretation. Like any semiotic utterance, the artwork has an illocutionary function, and it tends to cash out in an action. While talking about the functional space of the artwork in terms of an obligation to produce meaning, we were indeed insisting on such an illocutionary force.

We would like to make clear that the codes implemented here are stratified. For one social group, the identification of a /museum door/ will represent an "invitation

to come in," even a "moral imperative;" for others, it will represent an "interdiction to come in." There are many other catasemiotic examples: purchase or resale of works, purchase of reproductions, by-products or catalogues; laceration of works or other manifestations of bad mood; writing articles of artistic criticism, scholarly studies or treaties on visual semiotics; copies, attempts to imitate or improve previous works; reveries, ecstasies, nervous breakdowns, depressions or altered states of mind; excitement, militancy and conversation; religious conversion and other drastic changes of life . . .

Among all these effects, studied typically by sociology but which can also be approached by semiotics, we may detach the following one: the artwork, just like any other utterance, is a means to modify its partakers' representations and modes of action. In its rhetorical aspect, it proceeds to a reorganization of categories coming from experience by suggesting new ways of carving up what is conceivable; it makes the system evolve through the production of new relations between units and therefore through the production of new units. As an utterance that modifies the rules of the grids on which it is based, it serves a powerful heuristic function (cf. Groupe μ 1994; Klinkenberg 2000).

5 Conclusion: From Semiotics to Aesthetics?

We are aware that our remarks, even though they were formulated within the context of a largely conceived semiotics, do not go into the heart of the matter: the specificity of the work of art. We only touch upon very general conditions of the appropriation of that piece of art.

Have we reached the limits of our discipline? Semiotics as it exists for now seems quite unable to grasp the aesthetic specificity. It allows one to reach a certain point; a point much farther than classic semiotics allowed, which essentially developed descriptive devices. The essential part of it is still to be finished. By the way, it is a problem we already encountered with literature and that we discussed in our *Rhétorique de la poésie* (Groupe μ 1977): rhetorics, that was born in the wake of structuralism was, without question, a significant contribution to poetics, insofar as it could describe some of the required conditions for a given text to be considered as literary; but it still could not manage to lay down the sufficient conditions for this, in other words it was incapable of grasping the literary specificity. Our answer to this was the Triadic Model. The latter was certainly a semiotic device, just as the cardinal notion of mediation, which implies that we have somewhat re-incorporated the artistic into semiotics. Decisive achievements in that discipline must be sought somewhere else.

On the other hand, the legitimacy of a project consisting in developing a phenomenology of the work of art could be called into question. And, as a consequence, the very concept of "artwork" could itself be rejected: why should there be an artwork? It cannot be denied that the work of art has a status and a function: its purpose is to arouse feelings, impressions, produce knowledge, create

communion, guide the action or be an action. Its identification, however, still rests upon an autonomisation process (to which semiotic processes such as indexation contribute), and that autonomisation deserves to be questioned for it is a product and is not self-evident.

Indeed, there is an aesthetic apprehension of the world, or a beauty of nature. The latter must certainly be correlated to the aesthetic apprehension of the work of art in the context of a general aesthetic apprehension. From an evolutionary perspective, what we call beautiful today might have been caused by the immemorial habit of looking at a world where the sky is blue and blood is red, by the urge that we have to counter the effects of time, and many other such determinants, constituting in the end an intersubjective framework of apprehension. Our feeling of beauty could reflect our adaptation to these universal constraints and be tuned to them. A whole research program in semioaesthetics is therefore launched, which applies not only to works of art but to the world as well. In the context of the present research, the problem is to track down the specificity of the work; in other words, it is to trace the limit between plain anasemiosis and artistic anasemiosis.

A major part of contemporary artistic practices questions that limit which has simultaneously a phenomenological and institutional aspect. What happens if we abolish that limit? On one side, there is Finlay's *Great Turf*, which extended art to the dimensions of the world, where the *Sacred Grove* imparts the sacred aspect to the entire world. On the other side, conceptual art does exactly the opposite: it introduces the limit in a place where we do not expect it to be, by introducing a urinal in a museum[19] or a simple string in a gallery. In both categories, our categories themselves are questioned.

Indeed, the categories have been developed in order to organize the raw data of experience and to canalize its infinite variation, various stabilizations ensuring their permanency while guaranteeing their plasticity. However, in spite of that solidity, categories can still fail to account for certain experiences. Such experiences are then said to be new, like the categories whose refinement they ignite. These re-categorizations can be described as moments in a series of cycles of balance and un-balance. In semiotic words, one of the functions of art is certainly to contribute—like science does, but in the context of another praxis—to that constant game of re-categorization.

[19]Duchamp was illustrating conceptual art *avant la lettre*, with a clear conscience of what he was doing. His declarations leave no doubt about that (Jouffroy 1974, p. 24 sq).

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Sculpture, Diagram, and Language in the Artwork of Joseph Beuys

Wolfgang Wildgen

Abstract The artwork of Joseph Beuys was provocative in his time. Although he was very successful on the international art scene and on the art market, the larger public is still bewildered by his Fat Chair or his installations and his performances. The article shows the evolution of his artwork from classical materials (stone, steel) to soft materials (animals, products of animals) and further to his concept of "social sculpture" and to programmatic diagrams (with words and graphics). A special point of interest is the transition towards language (phonic and conceptual), the philosophy of art exposed in his drawings, and diagrams and the relation between art and science in his artwork.

Keywords (Beuys) • Language • Diagram • Performance • Politics • Social sculpture

1 Introduction

Aesthetic norms and values have two faces: an individual and a social (collective) face. The collective face may be highly ordered and symmetric as art and public displays in totalitarian states demonstrate, but it can very suddenly break down into chaotic modes. The destroyed towns of Germany and Japan after 1945 are the counter-image to the ordered troop parades in totalitarian regimes. The individual face gains its value from the opposition to established norms, habits, and conventionalized shapes; it displays local beauty under specific perspectives. It lives from surprise, provocation, deviance, and lack of conventionalized contents. In the case of language, grammars and lexicons of a standard language show the collective face of signs; slam poetry or spontaneous wit, the individual one. In the case of visual art, academic art (mainly before 1850) is akin to standard language whereas

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avant-garde artists after 1912 elaborated the individual face. In the period after 1945, with the breakdown of fascist regimes (later of the Stalinist analogues), the individualistic mode in art, which had survived in non-totalitarian countries and in emigration, became dominant again. Major philosophical aspects of the opposition are treated by Simmel's (1896) book *Soziologische Ästhetik*, which sees aesthetic principles at work in the construction and preference for political and social types of organization. A common feature of socialistic utopias is: "that society as a whole should become an artwork" ("Daß die Gesellschaft als Ganzes ein Kunstwerk werde," Simmel 1896/2008, p. 147).

In the following, I shall concentrate on Joseph Beuys, whose career had only begun in the late fifties when Germany reappeared as a global player in the international political and cultural scene. Contrary to another prominent and provocative modern artist, Jackson Pollock (1912–1956; cf. Wildgen 2010b, 2013, ch. 4.4), Beuys was himself a theoretician of art engaged in cultural politics and a protagonist of the rapidly changing scene of avant-garde art in Europe and America in the sixties and seventies.

2 Context and Development of Beuys' Artwork

Joseph Beuys was born in 1921 in Germany. Immediately after high school in 1940, he became a soldier (a radioman in an aircraft, later a pilot until 1945). After a period in prisoner camps (1947), he studied at the Art Academy in Düsseldorf (mainly sculpture). Beuys' motivation for art was different from that of most of his teachers and co-students. He combined a strong interest in biology (and other natural sciences) and philosophy (with a specific preference for the lineage: Goethe – Humboldt – Steiner) with interests in art (Beuys mentions the sculpture of Wilhelm Lehmbruck as his basic impulse). This basic reorientation explains why his art transports more complex messages that are not just meant for aesthetic pleasure.

In 1961, he was appointed professor of monumental sculpture at the Academy of Düsseldorf. After 1962, he joined the "Fluxus" movement for some time, which, following the tradition from Dadaism, aimed at an art based on performance and multi-mediality (music played a central role). In 1963, he organized the "International Festum Fluxus Fluxorum." The eminent conceptual level of Beuys' artwork was developed beyond the Fluxus-movement, when Beuys included politics in his artistic program and applied his political ideas to decisions in the Art Academy in Düsseldorf where he was teaching. Eventually, he decided to accept all students who had applied and to ignore the "numerus clausus" imposed by the Minister of Education. This led to a conflict with the minister, Johannes Rau (who became later Federal President of Germany). In 1969, Rau fired Beuys because he and his students had occupied the office of student inscriptions (Beuys argued that they had just gone there in order to get all of them enrolled). After several years of struggles in court, his sudden dismissal was cancelled (1978), but as he did not have tenure, his contract had ended anyway. He later got the right to use a room

at the Academy and work there (without becoming a member of the staff). Beuys stopped teaching (although he had the opportunity to continue his educational work in Vienna) and concentrated his energies on expositions, actions, and his artwork, e.g., his repeated participation in the Documenta in Kassel, the foundation of an International University for Creativity and Interdisciplinary Research, and events of *performance art* in New York, Edinburgh, Basel, and many other places. Beuys died in Düsseldorf in 1986.

He is surely an intriguing figure in modern art and many visitors to museums remain bewildered when they experience his artworks. Nevertheless, his long-lasting international success shows that his art triggered many significant reactions and contained a message to his public that was understood by many colleagues, collectors, and critics of art (he also had some famous pupils). If the general public is rather reluctant in appreciating such art, this seems to be a general characteristic of avant-garde art. But what is the message of Beuys' artwork? Is the kind of very complex, abstract, and performance-oriented artwork an expression of new aesthetic norms or are aesthetic norms part of the traditions that are negated?

In the following, I shall consider innovative art insofar as it explores the means and channels of possible signs (including their limits) in the human world. It may help us understand how human communication and signs work. I shall begin considering the visual materials used by Beuys in the development of his art.

3 Materials and Techniques in Beuys' Artwork

When Beuys studied at the Academy of Art in Düsseldorf, he had as his major teacher the sculptor Mataré (1885–1962). As Mataré's master student, he mainly produced sculptures in stone and iron (sepulchral and religious art). In 1952, he created a fountain in steel commissioned but not accepted by a steel company in Krefeld. It became in 1984 part of the installation "Barraque D'Dull Doddle." Very soon, he added organic material (plants and animals): deer, elks, sheep, hares, bees; and animal matter: wax, honey, grease (derived from animal fat), and felt (derived from the fur and hair of sheep). In the further course of his artistic development, the materials became more numerous (complex) and more dynamic. Performances became the center of his activities. Major examples are:

- In 1965, Beuys explained his drawing to a dead hare; his head was covered with honey and then with 50 dollars worth of gold leaf.

> The gallery was closed to the public and Beuys' action was witnessed only by the photographer Ute Klophus and a television crew. Beuys sat on a chair in one corner of the gallery, next to the entrance. He had poured honey over his head, to which he had then affixed fifty dollars worth of gold leaf. In his arms he cradled a dead hare, which he looked at steadfastly. Then he stood up, walked around the room holding the dead hare in his arms, and held it up close to the pictures on the walls; he seemed to be talking to it. Sometimes he broke off his tour and, still holding the dead creature, stepped over a withered fir tree that lay in the middle of the gallery. All this was done with indescribable tenderness and great concentration. (Stachelhaus 1987, p. 13).

For pictures of this action see: http://uploads3.wikipaintings.org/images/joseph-beuys/how-to-explain-pictures-to-a-dead-hare.jpg

- In 1974, he lived 3 days on stage in a New York gallery together with a coyote.
- In 1982, he began to plant 7,000 oak tress in Kassel, each one accompanied by a basalt stone.

Some halting marks of his sculptural work (first in the traditional sense as three-dimensional objects made by an artist) are: Kreuzigung (crucifixion) 1962/1963; Staatsgalerie Stuttgart (cf. for a picture in the net: http://www.staatsgalerie.de/media/malereiundplastik/bis1980_beuys_l.jpg) and "Fettstuhl" (Fat Chair, 1963, Hessisches Landesmuseum Darmstadt; cf. for material in the net, e.g. http://kitchentalkblog.files.wordpress.com/2013/02/beuys-fettstuhl.jpg).

In a classical iconographic analysis, the first sculpture reproduces the crucifixion scene with John and Mary contemplating Jesus on the cross (cf. the title of Beuys artwork). The bottles were containers of blood and stand for living bodies, the Red Cross stands for Jesus and his service for humanity. The materials are poor; without material value and thus fulfill criteria of minimal art. However, basic meanings and references to cultural values have been conserved. Nevertheless, one cannot imagine that this artwork could function in the context of Christian ceremonies. In this sense, it negates the contextual value given to religious art (cf. Wildgen 2010a, 2013, ch. 3.1.7 for the transformation of the topic "Last supper" in modern art).

The chair is a classical design object (cf. Beyaert 2012), but the chair chosen by Beuys is a very simple and poor token; the mass of fat "sitting" on the chair may stand for the human being reduced to the energy reserve of his body (fat). The human body is geometrically abstracted to the half of a cube (itself a platonic solid), with a smooth quadratic surface and a coarse triangular side. Solids of fat were a frequent form in Beuys' sculptures. Their contrary parts are basalt cylinders or columns such as those used in the installation "7,000 oaks."

In the sixties (first in 1967, as a professor in Düsseldorf) and in the seventies, Beuys began to enlarge and redefine his concept of sculpture and art and created the concept of "social sculpture" ('*soziale Plastik*'). The materials are not only of organic and animal origin, but they are also social and political (society, humanity). Thus, Beuys expanded the type of materials for "sculpture":

- From stone and steel to "warm" materials (wax, honey, grease, animals).
- From sign-using individuals (animals, humans) to social and political entities and even to humanity as a whole.

As a consequence, he sketched the program of a new political movement that, together with other currents, contributed to the foundation of the "Green Party" in Germany and Beuys even stood on the list for the first elections in which they participated. After his dismissal as professor at the Academy of Art, he also initiated a program for alternative universities. Thus the "Free International University of Creativity and Interdisciplinary Research," first conceived in a German context (1974; together with e.g. Heinrich Böll), was realized in Ireland (Dublin, Belfast, and Derry).

Beuys' political activities and their relation to his artwork are difficult to appreciate. Some critics considered Beuys' political ideas as conservative or even reactionary. In the intellectual and political context after the war in Germany, it is rather obvious that Beuys tries to find a third way, leading out of the disaster of ideological dualities such as fascism versus communism. The innovative power of art was meant to find a new perspective beyond politically and intellectually proposed alternatives. Science and philosophy had been put to service by both regimes and art was thought to take over the moral and intellectual guidance lost in this process. The fact that both regimes had made modern art one of their major enemies left to art the duty to create new alternatives beyond traditional ideals and projects. A basic element of his program is the opposition against fixed or philosophical ideas, purporting dogmatic messages, or claiming a kind of intellectual leadership associated with manipulation, lying, and fraud given the experience of the war generation. Symbolic messages should avoid such deceptive strategies; they should instead be non-directive, bodily rooted, in continuity with natural signs and symbols. As a consequence, the new type of art had to deceive the expectation of the larger public socialized by the war regimes and still unable to free itself from the false securities implied by clear-cut programs and populist argumentation. In this sense, Beuys' art is a very natural outcome of post-war German progressive intellectualism.

Beuys shares the view of many poets and intellectuals that even language had been devaluated as a means of social communication by the totalitarian regimes. The late work of Ernst Cassirer, *The Myth of the State* (1946), describes how the official misuse of linguistic propaganda and the control of literature, science, and public utterances had corrupted the normality of language use such that, as an emigrant in the States, he had the impression that the German language used by the fascist regime had changed its basic function and, although phonetically similar, had lost its major signifying and communicative capacity. It thus became opaque to people like Cassirer who had left Germany in 1933. The writer (and insofar as the visual artist operates with linguistically transmitted concepts, also the painter and sculptor) had to change this basic semiotic medium underlying all other symbolic media in order to repair its malfunction, heal the symbolic diseases created by totalitarian regimes, the war and the crimes of deportation and mass executions during holocaust.

4 Visual Artwork and Language

With the emergence of abstract art (Duchamp 1911; Kandinsky 1913), reflective processes gained prominence in art, particularly in the artwork and writings of Paul Klee (1879–1940). Later gestures and movements/performances (possibly documented in film and video) came to the foreground; this is also characteristic for the work of Pollock after 1945 (cf. Wildgen 2010b). Complementary to the vanishing relevance of figurative art and the preponderance of reflective processes and a minimalist attitude (cf. Arte Povera; Art Informel; Minimal Art), this trend

found many admirers and influenced active artists. As a general consequence, the conceptual background of art gained dominance over artistic (technical) performance. This line of development brought visual artwork into the neighborhood of linguistic thinking, because concepts and the underlying abstractions are typical linguistic achievements. Beuys said in an interview 1985:

> My way was going through language, although this seems strange, it did not start from so called figural experiences.[1]

For Beuys, speaking corresponds to a kind of shaping of ideas and thus is akin to sculpture. Language as art is for Beuys primarily the play with language sounds and underlying concepts. Its primary goal is the creation of new social meaning. Rigid rules of syntax could be violated; the established items in a lexicon could be changed, filled with new meanings and functions. Art became, in this line of thought, a conceptual procedure (an operation with concrete forms, visual or spoken) and gave access to a non-visual space. The techniques of visual artwork focused on conceptual innovation were multiple:

- Graphical signs on surfaces.
- Diagrams (cf. next section).
- Sculptures (including interiors, installations).
- Actions with gestures, happenings with video documentation (accompanied by music).

Beuys' notion of language is nearer to its use in Dada poetry than in linguistics. The realm of different articulations is demonstrated in an 11 min presentation where Beuys repeats the words "Ja, Ja, Ja, Ne, Ne, Ne" (yes and no) in many tonal variants (cf. Beuys 1968). In his use of words and the associated concepts, he applies two techniques of innovation:

- Empty the meaning space either by reducing words to sounds (cf. Dada poetry) or by speaking to a dead animal (non audible to the public).
- "Play rock and roll" with words, throwing them around.

In one respect, Beuys sees language as a natural emanation of the human body; the human voice is a kind of artwork in itself (not dependent on the referential function it can have). In another respect, it is the manifestation of human thought and in this respect, it is instrumental, i.e. thought is the main feature; its expression through language is just a technique of enunciation (a channel of communication). Therefore the conventional architecture of language is rather a barrier, a filter that has to be overthrown, transgressed. The rigidness of the lexicon must be deconstructed in order to let new meanings emerge in context.[2]

[1] "Mein Weg ging durch die Sprache, so sonderbar es ist, er ging nicht von der sogenannten bildnerischen Erfahrung aus," Beuys at the Munich ‚Kammerspiele," 20th of November 1985; cited in: Blume and Nichols 2008, p. 64.

[2] This is rather common view in experimental poetry. Heidegger and (later in the same vein) Derrida have made a philosophical method out of this concept. Beuys is clearly related to experimental

5 Language as a Topic in His Visual Art

Language is a major topic in Beuys' drawings and diagrams. Spoken language is like smoke from the chimney of a factory (Bodentafel II 1970, in Edinburgh, since 1984 in Schaffhausen, Hallen für neue Kunst). One could say it is the by-product of an industry of thinking, feeling, and other human bodily activities. Language is also a vocal gesture that we can observe either in lip-reading or in the X-ray film of a speaking person. At the Experimenta 3, in Frankfurt 1969, Beuys recited parts of the play *Titus and Iphigenie*, handled musical instruments and pointed at diagrams that described the movements of the human tongue that utters the word IPHIGENIE. Language is understood as a sound *sculpture* accompanied by gestures. In a drawing, Beuys associates diagrams of speech articulators with drinking from a jug; cf. Fig. 1.

The system of articulators is situated at a point of bifurcation in a more general dynamic field encompassing human will, human motion, and consciousness ("*bewusstes Seelenleben*") (cf. Blume and Nichols 2008, p. 55). In a diagram, he describes his concept of language:

At the bottom, human volition ("Wille") is the source domain. At the level of the glottis (the bifurcation point in the diagram above), the unspecified stream of air is formed thanks to the elasticity of the cords and the plasticity of the vocal tract (above the diagram, Beuys mentions the different speech organs). It receives its specific content by the conscious soul and is finally converted into an utterance. The creativity of language may stand for artistic creativity in general or for the symbolic skills of man, which has an organic aspect related to the speech organs in the case

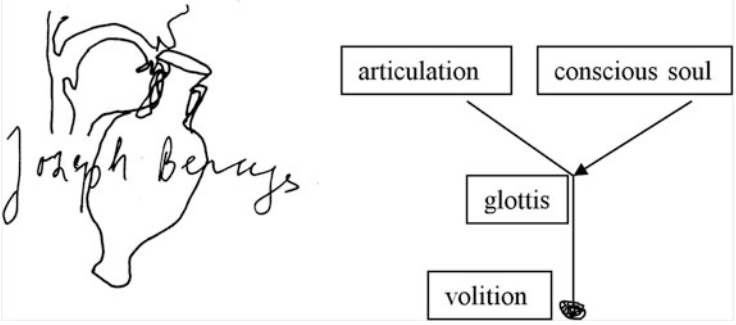

Fig. 1 Redrawn detail (W.W.) from Beuys' *Iphigenie-Set*, 1974, John Gibson Gallery, New York; cf. for a reproduction Blume and Nichols (2008, p. 55), and translation of the main concepts in a diagram (1960–1964, pencil on paper, DAS KAPITAL RAUM, 1970–1977, Hallen für Neue Kunst, Schaffhausen; cf. for a reproduction: Blume and Nichols [2008, p. 62])

poetry but no connection to Heidegger or Derrida can be established on the basis of his writings or talks (cf. Holzherr 2013).

of language and to the hands of the sculptor in the case of the artist. The creation of forms is the expression of the force Beuys called "bewusstes Seelenleben."

After his dismissal from the academy in Düsseldorf (1969), written words on paper or blackboard accompanied by schemata and sketches became a major element in his actions on stage. I will comment some examples of his diagrammatic style in the next section.

6 Diagrammatic Style in Beuys' Political Art

Plain art objects, e.g. sculptures or paintings and even configurations of many objects as well as technical installations (cf. Beuys' honey pump) were not on a par with Beuys' pedagogical and political ambitions. To meet his own requirements, he began to devise utopian political programs, and organized international meetings. In his diagrams performed on blackboards or on the floor, he combined figurative drawings with graphical symbols (lines, circles, arrows) and written words. He relates this style to Leonardo's codices (cf.: Blume and Nichols 2008, p. 230); a corresponding drawing was shown by Beuys in 1975: Hearing, Seeing, Feeling (cf. ibid., p. 231).

In Beuys' drawing from 1975, diagrammatic elements point to processes like: listening, seeing (e.g. the "channels" leading to the eyes and to the right ear) and feeling (e.g. the arrows from the waist to the head). In this example, the pictorial aspects still dominate the diagrammatic ones. In another artwork, Beuys returns to the technical use of diagrams: here, the chart paper for medical measurements or, as the title indicates, for the measurement of earthquakes. In these cases, diagrams function without further pictorial or linguistic specifications (Diagramma Terramoto, pencil on a cardiographic millimetre paper, shown by Ackermann and Malz [2010, p. 274] and, in several instances, on the net: http://www.exibart.com/foto/55724.jpg).

The main class of diagrams produced by Beuys combined pictorial and linguistic features and comes near to typical black board structures produced in the classroom and with a pedagogical aim. In a diagram from the same period (1972), he used logical oppositions written on paper or on a blackboard and combined with arrows, lines, and simple pictures. We find specific scales of concepts:

- Chaos – order; birth – death; cold – warmth; volition – feeling – thinking (Chaos – Ordnung; Geburt – Tod; Wärme – Kälte; Willen – Gefühl – Denken). In these scales with two or three values, one could be tempted to recognize the "semiotic square" introduced in Greimas (1970); but Beuys refers only to the classical Aristotelian technique of contraries.
- Order and form are depicted by crystals (regular solids). This is a classical topic since Plato's dialogue "Timaeus." Leonardo, Dürer, Kepler, Goethe, and many others in the Platonic tradition referred to regular solids and crystals to explain regularity in nature. The opposite – chaos, turbulence – is represented

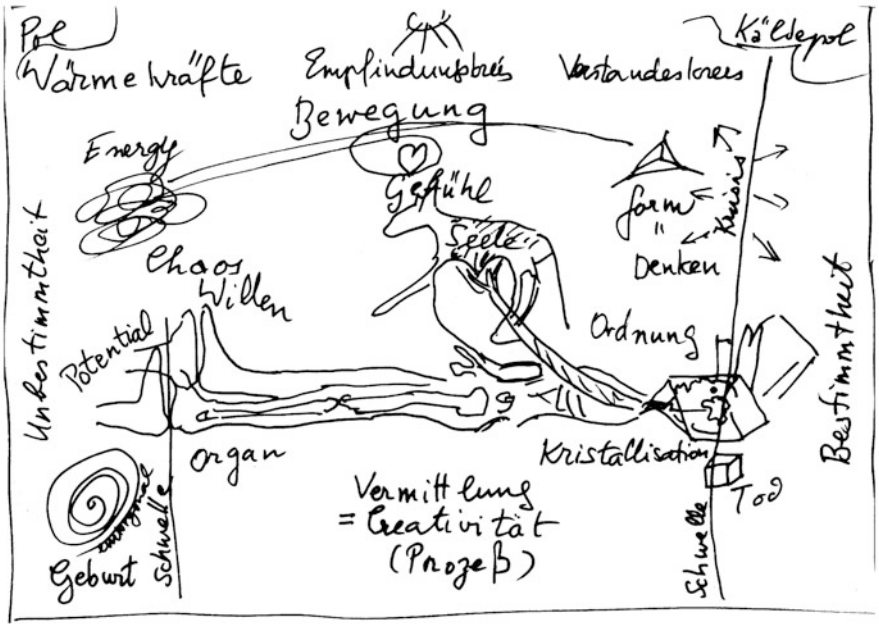

Fig. 2 Selectively redrawn diagram (W.W.), Beuys, *Untitled*, 1972, Sammlung Klüser, München (cf. for a reproduction of the original: Ackermann and Malz [2010, p. 261])

by spirals and quasi-chaos attractors. In Fig. 2, we recognize a human body lying on the floor. At its basis, the level of the feet, we see a cloud of ellipses (with the associated concepts [in German]: *Energie*; *Chaos*) and a spiral (with the associated concept: *Embryonen*) and under the body a scale: birth (*Geburt*) to death (*Tod*). The body has in place of the head a crystal (*Kristall*) accompanied by a cube (below) and a pyramid (above). The area between is one of mediation (*Vermittlung*) and is called the area of creativity (*Kreativität*). In a broadcasted discussion (Club2 1983; cf. internet sources) with György Ligeti and others, Beuys insisted that the totality of human capacities, i.e. intuition, imagination and logical thinking must be involved in art and he does not accept the reduction of art to simply imagination and intuition (which would exclude logical and scientific thinking).

Different drawings/diagrams allude to mathematical forms in nature and art and to concepts in the natural sciences:

- Regular solids (in the vein of Leonardo da Vinci and Dürer).
- Crystallization as an inorganic process (which produces regular shapes).
- Embryology (cf. René Thom's morphogenetic models; cf. Thom [1972]),
- Energy flow (warmth) and thermodynamics (cf. Prigogine's "non-equilibrium processes and dissipative structures," e.g. in Prigogine [1980, ch. V–VI]).

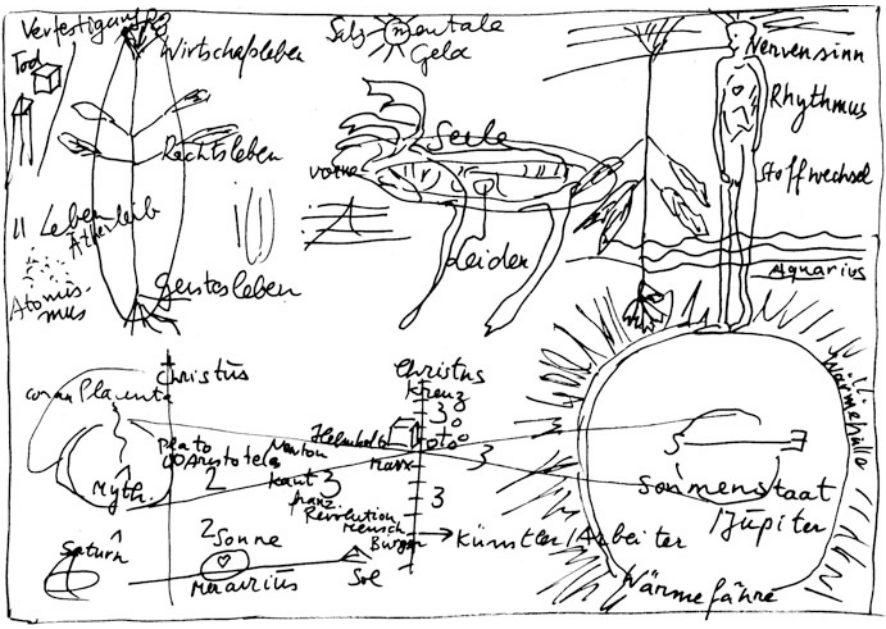

Fig. 3 Selectively redrawn diagram (W.W.), Beuys, *Untitled (Evolution)*, 1974 (private collection; cf. for a reproduction Blume and Nichols [2008, p. 313])

In fact, most diagrams are rather an accumulation of many diagrams with similar topics in one drawing or complex schema. Figure 3 is an example of such a complex arrangement, which combines drawings, diagrams and words.

The diagram named "Evolution" combines very different categories:

- A human body, a deer, plants, crystals, water, the sun.
- Social entities and phenomena: citizen – artist – worker; intellectual life – juridical life – economic life (Bürger – Künstler – Arbeiter; Geistesleben – Rechtsleben – Wirtschaftsleben).
- Names of philosophers on a historical scale: Plato/Aristotle, Newton/Kant/Helmholtz, Marx. At the extremes of the horizontal time scale stands Christ.
- The dominating drawing at the right is based on the sun and its rays (warmth) and supports pictures of the human body, the structure of a plant (cf. Goethe) and the deer (symbol of the light, the sun and the soul). Beuys had his own theory of (social) warmth, which may be associated with Peirce's agapism (end of the nineteenth century) and social theories opposed to social Darwinism, which dominated many economic and political ideologies at the beginning of the twentieth century.

7 Beuys' Diagrams and Peirce's Theory of Diagrams

Beuys refers several times to Leonardo da Vinci and Dürer in his work; both stand for the integration of contemporary science (and philosophy) in art (cf. Wildgen 2004, 2010a). In relation to modern art, Beuys' diagrammatic art points back to the Bauhaus tradition (and similar European traditions), more specifically to Paul Klee (1879–1940), who used diagrams in his teaching at the Bauhaus after 1920 (cf. Klee 1925). As the Bauhaus tradition stands for the integration of technical art (architecture), design, and visual art, it continues the Renaissance tradition initiated by Leonardo da Vinci and Dürer. In a philosophical perspective, one can even compare Beuys' diagrammatic style with the use of diagrams and visualization in the computerized world of contemporary natural sciences. I shall only give some hints, which can be discussed more thoroughly in the context of the semiotics of diagrams (cf. Stjernfelt 2007). The starting line is Charles Sanders Peirce's *diagrammatic logic*.

Peirce's diagrammatic logic and Beuys' diagrams only share the appeal to vision and visual cognition. The deductive power of Peirce's diagrammatic logic has no parallel in Beuys' diagrams; they are mainly suggestive or metaphorical devices. In an article on Kepler, Peirce distinguishes Kepler's imagination, which enables "a mental diagram of a complicated state of facts," from a poet's imagination, which "riots in ornaments and accessories" (Peirce 1958, p. 255). Kepler looks at the world "with an eye of sadness, without tears, yet without illusion." Beuys' diagrams correspond to a poet's imagination; they are optimistic and represent the result of a consideration of many relevant forces. The transition from one diagrammatic project to the other could be smooth, but the characters of the agents are different. Beuys is rather a utopian optimist; Peirce prefers the cool vision of Kepler and other naturalists.

It is evident that Beuys is not a scientist and that his conceptualizations are not a pathway towards a scientific model in the strict sense (they may be the sketch of a theory in the humanities, however). On the other hand, innovative science has to start from theoretical intuitions which can be sketched diagrammatically and later lead to exact theories if a proper mathematical formulation is found and if the predictions of such a model are checked in experiments or evaluated in relation to given observations (in qualitative models).

In his dictum "Kapital = erweiterter Kunstbegriff" (Capital = enlarged notion of art), Beuys refers first to the human creative (artistic) capacity, which is a capital for humanity. Next (in relation to Marx), he says that the products themselves, if exchanged for money, may become a kind of generalized goods of exchange; the artists in a society are then "means of production," a "Capital," which is owned only by the artists themselves. If the (industrial) products become more or less media of identity and social communication and are embedded in a circulation and flow of money, they function like artwork. They become a means of communication and are embedded in the economic flow of money, here conceived as the overarching level of economic reality.

As a corollary, Beuys may argue that the inability of scientific theories of the market (and the economic engineering applying these theories) to bring about a global change and to avoid imminent catastrophes leaves the artist with the duty to shape the future society (as a social sculpture). Art becomes a kind of political planning and experimental economy. This was certainly a utopia in the seventies and eighties, but only future will show if art can at least partially fulfill such a political and economic task.

Beuys became one the best paid artists in the world at the end of his life. His art and that of other successful artists in our time (behind whom stand an army of artists without any access to economic values) are used on a par with actions, gold, real estate and other assets.

8 The Aesthetic "Value" of Beuys' Art

My answer to the question of evaluation of art and specifically the art of Beuys can only be a preliminary one because the process of evaluation and re-evaluation is still going on three decades after his death. The concepts of art evaluation have been explicitly discussed by Ingarden (1969, papers VI–XI) who tries to propose a lexicon of evaluative adjectives ordered on different scales (material moments, formal moments, variations of specific qualities, etc.). I shall just propose some aspects relative to which Beuys' art may be evaluated:

1. As in other pieces of modern art, the material value is often low (simple, cheap materials are used). The value of the materials cannot stand for the value of art (in the same sense the value of paper used for a 50$ bill cannot stand for the exchange value of the bank bill).
2. The temporal scope of the artwork is rather limited, i.e. the evaluation concerns an artwork in its execution, in a specific situation, or in a restricted period of its existence (e.g. the 2 months of the Biennale in Venice for Beuys' "tramway station"). The resulting pieces stocked in a museum or sold as multiples in art auctions cannot be the primary object of aesthetic evaluation although they define the economic value (the price) of the artwork.
3. Many of his artworks have biographical memory values. The question is then: do these biographical memory values (concerning situations in Beuys' life) have an aesthetic value for the larger public, which does not share these memories?
4. Beuys' art typically reflects a "Zeitgeist," i.e. it has a value for some community (e.g., Germany or Europe) in a specific period (e.g., the sixties and seventies) insofar as it captures this "Zeitgeist." How does this value evolve over time? Is it likely to fade away? This is also a criterion for the evaluation of his artwork as "social sculpture." Did the "sculpture" influence political reality? Was it understood by the political rulers or by the population? Did it change the votes or the architecture of political parties or at least the intellectual atmosphere in political discourse?

5. Finally, the investment of personal life in the artwork is a criterion. The value of Beuys' installations and performances depended essentially on his bodily presence (including the hat he was permanently wearing in public). How did this value change after his death?

The criteria are certainly important for the evaluation of Beuys' artwork. The important questions are: How can they be computed to an overall judgment? Is such integration possible (in light of the heterogeneity of the criteria involved) and, if so, is the product stable over time (and in the population of collectors, art critiques, and the community interested in art)? Strangely enough, it seems that the value of artworks is very stable, although many political revolutions have shown sudden breakdowns or the destruction of artworks for religious reasons.

9 Conclusion

In this case study centered in the artwork of Joseph Beuys, it became clear that the ontological (substantial, material) nature of artwork was reduced or radically changed from stable, expensive and technically difficult materials and techniques of production to simple, almost worthless materials and to performances only existing for a short period of time and in restricted contexts (cf. Beuys explaining his drawings to a dead hare in a room without a public apart from the photographer and a television crew). What is left from the phenomenology of classical art experience? Are there specific "brain states or neural dynamics that correspond to that phenomenology" (cf. the statement in the introduction to this book)?

The traditional art recipient or the visitor in art museums may conclude that this is not art (as did the American president in 1913 in New York viewing modern European art and as did Hitler when he decided to destroy modern artworks after 1938). One century after the Armory show in New York that scandalized Roosevelt, we know that modern art took the path of innovation and avant-garde and continued it until today, and that a steadily increasing public has been able to follow this path. This means that the human brain is able to adapt to changing modes in art and that avant-garde artists are able to impose their experimental innovations on a larger public. This is the first observation we can make after a century of scandals caused by modern art. If we look closer, we may see that, beyond a few trends which have been accepted, a myriad of artistic experiments were made which had no impact on the public and that those which were successful needed assistance from other forces: either organized groups, the media, or the economical and political influence of sponsors, collectors, and art experts. Some, like Picasso, Dali, and, to a lesser extent, Beuys, were also very successful by themselves in gaining public attention and imposing their style on the market and among art experts. They intuitively or rationally used modern means of propaganda: Picasso and his women portrayed in many pieces of art; Dali and his eccentric behavior in public, Beuys in his special dress with his hat on.

On a more general level, the lesson taught by modern art says that human experience of art is, on one side, very open and can be adapted to new experiences. On the other side, it is guided by social processes, be they local such as groups or centers of art (cf. the role of art communities in Paris or in New York) or global such as the cultural changes after the wars (1919 and 1946). In the work of Beuys, the dimension of reflective processes, art theories, and art politics (even of a utopia where artists shape society or humanity) became a prominent factor. Meanwhile, this trend may have lost its fascination but it can be expected that it will show up again under specific conditions. Permanent change seems to be the distinctive mark of art in the modern world.

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