“Mimesis as the Representation of Types - The Historical and Psychological Basis of an Aesthetic Idea“

Ranta, Michael

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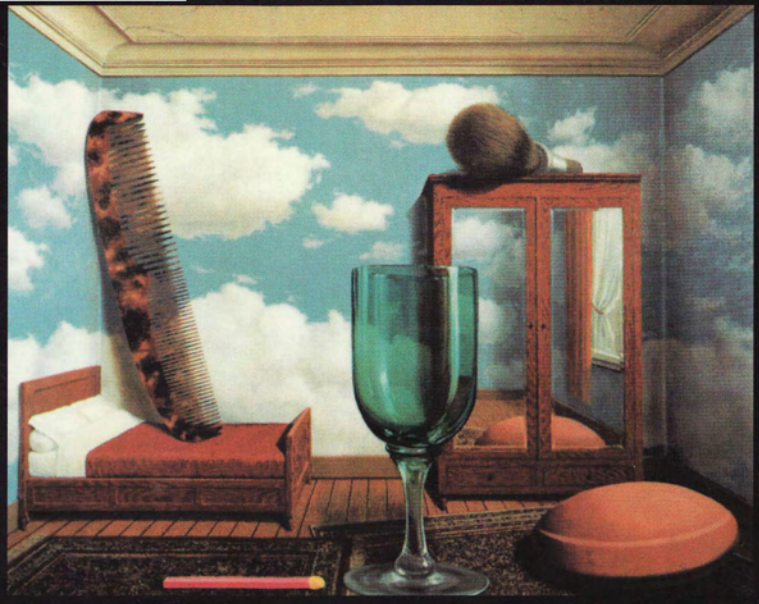

MIMESIS AS THE REPRESENTATION OF TYPES

THE HISTORICAL AND PSYCHOLOGICAL BASIS OF AN AESTHETIC IDEA

MICHAEL RANTA

According to a long-standing tradition within the history of aesthetics, the function of pictorial representation consists of the rendering of general or idealized types rather than particulars. Proponents of this view may be found in various versions from antiquity to the present.

How could this tradition be explained or given any plausibility? Aestheticians, and perhaps most notably analytic aestheticians, have been rather reluctant to take empirical research into account. In this study, however, it is claimed that empirical/psychological research may be of considerable importance for clarifying at least some aesthetic issues, such as that mentioned above.

In this book several psychological attempts along these lines will be discussed, though its focus is upon cognitive psychology and recent categorization research. A basic tenet within cognitive psychology consists of the idea that higher organisms are capable of constructing and storing mental representations. Such representations can reflect general or exemplary characteristics of categories, but they may also involve ideal features defined in terms of goal-efficiency. Pictorial representations of general and idealized types may correspond to the stored mental representations of beholders. Based upon recent research within emotion theory, it is argued that matches and moderate mismatches between pictorial renderings of types and beholders' mental representations and schemata have hedonic effects and thus may have a bearing on aesthetic preferences.

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Mimesis as the Representation of Types
The Historical and Psychological Basis of an Aesthetic Idea

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ABSTRACT

This work attempts to investigate a long-standing tradition within the history of aesthetics according to which the function of pictorial representation consists, or ought to consist, of the rendering of general or idealized types rather than particulars. Proponents of this view may be found in various versions from antiquity to the present. The second chapter of this work gives a historical overview of this tradition.

How could this tradition be explained or given any plausibility? Aestheticians, and perhaps most notably analytic aestheticians, have been rather reluctant to take empirical research into account. In this study, however, it is claimed that empirical/psychological research may be of considerable importance for clarifying at least some aesthetic problems, including that mentioned above.

Thus the third chapter of this work gives a historical survey of some psychological attempts along these lines. Theoretical foundations of such an approach may be found among 18th century British empiricists, whereas concrete investigations have been made during the 19th and the 20th centuries.

The focus of this study will, however, be on recent cognitive psychology and categorization research, which will be discussed in chapters three and four. A basic tenet within cognitive psychology consists of the idea that higher organisms are capable of constructing and storing mental representations. Such representations may reflect general or exemplary characteristics of categories, but they may also involve ideal features defined in terms of goal-efficiency. Pictorial representations of general and idealized types may correspond to the stored mental representations of beholders. Based upon recent research within emotion theory, it will be argued that matches and moderate mismatches between pictorial renderings of types and beholders' mental representations and schemata may lead to hedonic effects and thus may have a bearing on aesthetic preferences.

KEYWORDS: Aesthetic preference, analytic aesthetics, behaviourism, categorization, cognitive psychology, emotion, experimental aesthetics, experimental psychology, history of aesthetics, mental representation, pictorial representation, prototypicality, schema theory.

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PREFACE

THE IDEAS PUT FORWARD IN THIS study have been several years in development and would hardly have been possible to elaborate in the present form without the support and encouragement of the numerous people and institutions involved.

My earliest thoughts on some of the topics of this study were discussed at three stimulating seminars during a year which I spent as a guest student in Graz, Austria. These seminars were initiated by Professor Götz Pochat at the Department of Art History at Karl-Franzens University, and I would like to thank him for having given me this opportunity. Moreover, the hospitality, generosity, and friendliness of both Götz Pochat and his wife Meike made this year a very pleasant one.

Some parts of this thesis have been presented in various contexts:

—An earlier version of the subsection *The Is/Ought Problem* (in section 3.6) was submitted at the XIIIth International Congress of Aesthetics (Lahti, Finland) in August 1995.

—An earlier version of the subsection *Empirical Arguments against Pictorial Conventionalism* (in section 2.6) was presented at the VIth International Congress of Semiotics (Guadalajara, Mexico) in July 1997.

—Some basic tenets of this study as a whole were submitted at the XVth Congress of the International Association of Empirical Aesthetics (Rome, Italy) in September 1998.

I would like to thank the participants for their comments and for all subsequent general discussions which have helped to clarify my thoughts. Most notably I am indebted to Professor Sven Sandström, who was a participant at the congress in Rome, for his comments and encouragement concerning my project, and for his thorough reading of parts of this study, especially chapter Three.

For several years I have had the opportunity to attend the higher seminar under the supervision of Göran Sörbom, Senior Lecturer at the

Department of Aesthetics at Uppsala University. I would like to thank the participants for their comments on some earlier versions of parts of this study and, not least, for many stimulating discussions on aesthetic issues.

For many reasons I am especially indebted to Göran Sörbom. Firstly, due to the fact that he has given me the opportunity to participate at this seminar at all. Secondly, his impressive work "Mimesis and Art" has been a major source of inspiration for my book. Thirdly, I am very grateful for his valuable comments on parts of this study, most notably chapter Two.

I have also benefited from comments by Åke Hellström, Senior Lecturer at the Department of Psychology at Stockholm University.

Many people at my own department, the Department of Art History at Stockholm University, have been extremely important for the progress of my project. I have especially profited from our higher seminar under the supervision of Professor Margaretha Rossholm Lagerlöf, partly because of the discussions of many inspiring texts put forward by the participants, partly because of the comments I myself have received from them. Thus I wish to thank all of them, especially Per Hedström, Eva Hallin, Dr. Tomas Björk, Dr. Maria Görts, and most notably Dr. Marta Edling. I am very grateful for Hans Öjmyr's comments on one of the last versions of my study. Åsa Asplund deserves of course thanks for her many years of patient helpfulness. Furthermore, many thanks go also to Professor Bo Grandien for his friendliness and indulgence, and for having renewed and intensified my interest in traditional art history.

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Furthermore, I am very grateful to Staffan Carlshamre, Senior Lecturer at the Department of Philosophy at Stockholm University for his

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This work is dedicated to my mother Ebba Linder-Ranta.

Stockholm, January 2000
Michael Ranta

1. INTRODUCTION

1.1 Questions of Value

THIS WORK IS ABOUT PICTORIAL representations and some basic determinants of preference satisfaction involved in the perception of such representations. It is not a study about works of art; not all representations are artworks, and not all artworks are pictorial representations. Still, these two categories overlap—many objects commonly considered to be art are indeed pictures, paintings, lithographs, reliefs, photographs, and the like.

Further, it is not a study about aesthetic value (or any other kinds of values); preference judgements are not tantamount to value judgements. Nevertheless, these types of judgements are sometimes interrelated. First, ordinary language utterances may have a formal structure characteristic of evaluations, though a closer analysis may reveal that they actually are covert preference judgements. Second, value judgements may—as I will argue—be derived from (or given corroboration by) taking investigations into people's preferences into account.

In this study I shall to a considerable extent be concerned with the nature of categories. Categorical distinctions with essentialist tendencies (for example, between art and non-art, the aesthetic and non-aesthetic, or philosophy and empirical sciences) are quite frequently employed or presupposed within the humanities. These distinctions will be problematized from a philosophical, i.e. Wittgensteinian, as well as from an empirical, i.e. psychological, perspective. Most notably, a strict demarcation of philosophical aesthetics from empirical approaches will be rejected. Thus a fundamental approach of this work is meta-theoretical in character, discussing how and by which means aesthetic investigations may—and indeed should—be carried out. An important tenet consists of

my conviction that empirical/psychological studies are highly relevant for elucidating numerous aesthetic issues. A second equally important topic has to do with the concrete rendering of categories—or types—in pictorial representations. What are such types more exactly, and why do we appreciate them, if at all? Before we take a closer look at these questions, some general introductory remarks seem to be necessary. I shall begin with some considerations concerning aesthetic value.

Aesthetic Value

There is no doubt that works of art frequently and in the most shifting contexts are the subject of evaluative judgements. These evaluations can be manifested as verbal utterances like "Picasso's paintings are excellent", "Jan van Eyck was a better painter than Petrus Christus" or "Matisse ought to have visualized the social reality". Not all value judgements are, however, as clear-cut and easy to identify as these. First, statements like "This painting is balanced" (or "dynamic", "complex", "unified") can—depending on the context—be understood in a descriptive or (also) in an honorific sense.[1] Second, to ascribe an object the status of being "art"—or to refuse to do so—may not always be intended as (just) an act of classification.[2] Calling something "art" can sometimes be understood as an evaluation according to which the object in question has certain good-making features. The statement "This is not art" may thus, in some contexts, mean something like "This is an inferior work of art—though it still is a work of art, seen from a classificatory point of view". Third, aesthetic evaluations may also be manifested by choices of actions. For example, a beholder's decision to visit a certain exhibition, to spend more or less time in front of certain works or to buy a work, while at the same time ignoring possible alternatives, could be interpreted as the result of evaluative—though perhaps vague—considerations. Selective choices like these are made by laymen as well as by persons belonging to the so-called "art world", although the reasons may vary. The practice of art critics or art historians presupposes that selective attention is paid to those works of art and those of their properties which for some reason(s) are considered to be noteworthy. The history of art history abounds with normative decisions according to which some artworks should be included in a list of historically/aesthetically significant "masterpieces", while

1 For discussions of the relationship between statements about aesthetic qualities—like those mentioned above—and value judgements, see e.g. Charles L Stevenson, "Interpretation and Evaluation in Aesthetics", in: Black (1950). Cf. also Hermerén (1973).

2 See e.g. Hermerén (1983), pp. 53–58, for a discussion of the relationship between concepts of art and of artistic value.

others are neglected or completely disregarded. Furthermore, aesthetic value judgements influence the distribution of grants to artists, whether they become accepted by art schools, get commissions or their products are acquired by museums or other authorities. Decisions like these have consequences for the production and distribution of art and may thus—if art is considered to be an important contribution to the welfare or happiness of a society—have a moral significance.[3]

Now, manifold reasons (and causes) influence our appreciation of art, and evaluations of artworks can be based on the most shifting properties, functions, or purposes ascribed to them. Works of art can be enjoyed for their formal properties (i.e. the interplay of lines, colours, forms etc.) and their beauty (whatever this means). They can be praised for their beneficial effects, e.g. their capacity to deepen our or other people's religious or political convictions, to reinforce morally desirable attitudes or dispositions, and so on. Sometimes they seem to give us valuable insight into or knowledge about a society, a historical situation or the mental state of the creator. Moreover, they can be appreciated for economic (profit-maximizing) or social (status-maximizing) reasons. Apart from giving such seemingly uncontroversial reasons for our value judgements, we may also adopt a more idiosyncratic attitude towards artworks. For example, I may appreciate a painting because it reminds me of a pleasant experience I had, say, in my infancy, or because of its functional efficiency as a windbreak. Quite obviously, these latter reasons do not imply common and institutionally fixed uses of art. The use and appreciation of a painting as a windbreak is certainly possible, but radically deviating from normal practices. The other reason is likewise odd: private and contingent associations which a painting may give rise to should not be confused with its meaning or content, i.e. an understanding that is essentially non-private and shareable by other members of a community. Hence we may distinguish between evaluations of artworks which, at least in principle, are shared by numerous people and those which have a more personal character.

Despite the frequent occurrence and probable inevitability of value judgements relating to our encounters with art, contemporary art historians and also aestheticians have given astonishingly little attention to normative issues. Among the latter scholars, however, especially one topic has been a matter of standing dispute, namely in what sense(s) evaluations may be regarded as subjective or objective. Numerous

3 Cf. Beardsley: "Aesthetic Welfare, Aesthetic Justice, and Educational Policy" in: Beardsley (1982).

attempts have been made within philosophical aesthetics, though perhaps most notably within moral theory, to account for the ontological, epistemological, and semantic nature of value judgements. According to some positions, evaluations seem to be reducible to private preferences, responses or uses. An utterance like "X is a good work of art" may be tantamount to non-assertive expressions of delight or approval ("Wow!"), or to performatory acts of commending ("I approve of X—do so as well."). On the other hand, such a sentence may have an assertive function, though it only expresses the speaker's feeling or attitude ("I like X."). There are yet further value-theory positions according to which evaluations may refer to generally accepted standards or attitudes. Thus they can mean something like "Most people like X" or "Experts like X".[4]

A deficiency with several of these accounts, whether they deal with aesthetical or ethical value judgements, is their tendency to regard one of the aforementioned paraphrases as more typical or correct than others. The meaning of many expressions in natural languages is ambiguous and context-dependent, and there is no reason to believe that value predicates or judgements should be exceptions in that respect. As the philosopher Francis Sparshott has put it, "[a]ssimilations of 'value judgments' to a common logical type are stupid and exclusions of types of judgments from one's account are absurd, unless one begins with the logical categorization and then stipulates that 'value judgment' shall be used merely as a label for the preferred category. And such stipulations solve nothing".[5] In numerous contexts, evaluations are not purely or primarily based on the speaker's private taste or feelings (although they certainly sometimes are), but are assumed to have some kind of interpersonal validity. As of course Immanuel Kant was aware of, many aesthetic judgements do indeed function as reports of personal feelings of pleasure or satisfaction. On the other hand, there are "disinterested" judgements of taste which, although they refer to states of pleasure, have some kind of universality as they imply that all other rational beings having the same cognitive faculties should in principle be able to feel pleasure and thus adhere to the judgments in question. When judging the beauty of works of art (or any objects), we implicitly claim that this judgement is universally valid. Thus it would be ridiculous to say that "this object...is beautiful for *me*".[6]

4 These examples illustrate various attempts to account for the meaning of value judgements. Still other topics within value theory concern, for example, the existence of value properties, or whether knowledge or well-founded beliefs with regard to evaluations can be obtained. For excellent surveys and discussions of various standpoints within value theory, see e.g. Bergström (1990) and Brandt (1959).

Actually, the relationship between aesthetic judgements and personal preferences may very well be contingent. It does not seem to be logically inconsistent to like an artwork, while at the same time admitting that it has a low value. And it is conceivable to judge a work to be valuable, although one dislikes it. If aesthetic value judgements were generally private by nature, such standpoints would look rather queer or semantically/logically inappropriate.[7] Sometimes value judgements concerning works of art imply that the work in question meets certain standards or norms. In these cases it should be theoretically possible to give reasons in support of the judgement and to point to standards which others (ought to) agree on. Moreover, due to the fact that there are interpersonally (socially, historically, and institutionally) fixed uses of art, not all kinds of standards one may refer to are as good as others. There are limits—though perhaps not always very clear—for what should count as common and appropriate uses of objects falling under the concept of "art". Evaluative judgements based on the functional efficiency with regard to the use of a painting as, for example, a windbreak, or as a profit-maximizing object would certainly appear to be misplaced. The value of a work of art has to do with whether or not it satisfies certain value criteria for objects belonging to a certain kind or class, in this case the class of "works of art". In the same way the "goodness" or "badness" of tennis players, knitters, cars, and steaks depend on whether they fulfil specific criteria for things of their kind.[8] Although it may be admitted that such sets of criteria are not always clear-cut, it would be a mistake to conceive of them as completely arbitrary. Aesthetic value judgements may have an intersubjective validity with regard to a relatively stable set of standards.

Furthermore, there is a clear difference between justifying a verdict and explaining one's taste (by, for example, referring to one's personal inclinations, childhood experiences, or social background). Both justifications and explanations are answers to why-questions ("Why does P appreciate X?"), but the latter refer to causal factors which have given rise to a person's (or a group's) likings. Scholars working within sociological, psychological, Marxist, or feminist frameworks are sometimes inclined to reduce evaluations to their causes in a rather simplifying way. These attempts tend to overlook the fact that aesthetic value judgements

5 Sparshott (1982), p. 500.
6 Kant (1974), § 7, p. 126 (my translation).
7 Cf. Margolis (1980), p. 218; Knight (1954), p. 154.
8 Cf. Knight (1954), p. 148.

can also be supported by justifying reasons, such as a set of criteria mentioned above. There may of course be causes for relying on certain reasons, such as perceptual-neurophysiological characteristics on the part of the recipient, properties of the artworks, and habitually fixed uses of the work.[9] Nevertheless, such reasons may be put forward as some kind of defence for the judgement in question. Aesthetic judgements sometimes imply the potentiality of argumentation and, moreover, an intention to convince others to concur with the evaluations put forward. An utterance which solely reflects the speaker's (or even a group's) own feelings does not have the same implications: one cannot argue someone else into enjoying or disliking something.[10] It may of course be claimed that aesthetic value judgements do not have a truth-value, i.e. are either true or false, in the same way as factual statements.[11] Still this does not preclude the possibility of maintaining some kind of rationality with regard to evaluations, such as outlined above.

As a point of departure it seems convenient to distinguish between two kinds of reasons for ascribing a positive or negative value to a work of art. The first kind of reasons has to do with inherent or functional properties which works of art have qua works of art, i.e. criterial properties of objects falling under the concept of art. This presupposes some kind of understanding of ontological, conceptual, functional or historically conditioned differences between works of art and other objects. These reasons may be called *aesthetic*. On the other hand, reasons for evaluating works of art, which do not refer to category-specific features of these objects, could be called *non-aesthetic*. This means, for example, that it is doubtful whether statements referring to profit-maximizing effects or the owner's improvement of his social position justly could be called aesthetic reasons—according to my stipulation—for evaluating a work of art. Such reasons are applicable to manifold objects or actions and hence too all-inclusive to count as genuine aesthetic reasons. However, a statement like "This work is visually unified and at the same time highly complex" seems to be a paradigmatic case of an aesthetic reason. While there

9 For example, I may appreciate a painting *because* I have a certain perceptual equipment which permits me to see the painting at all, because it has a pattern consisting of many disparate elements, *because* I experience this pattern as rather complex and dynamic, and *because* I am used to paying attention to the front of a painting rather than its back. These are causes for my liking it. On the other hand, I may give justifying reasons for my appraisal, namely by saying: "This painting is excellent *because* of its complexity and dynamics." Notice that the last use of "because" differs from the former ones.

10 Cf. Margolis (1980), p. 222.

11 This is of course a matter of considerable debate within value theory, but will not be discussed further as it would go beyond the main topic of this study

are reasons which clearly appear to qualify as aesthetic ones, and others which as clearly do not, it should still be stressed that borderline cases exist. For example, it may be argued that pointing to the capacity of an artwork to evoke feelings should count as an aesthetic reason. Yet, numerous other objects (such as an electric chair, or the photograph of a deceased relative) or actions (such as telling a joke, tickling someone, or describing a traffic accident) have this capacity. As we shall see later on, it is rather doubtful whether categories in general are definable or distinguishable from each other in strict essentialist terms (i.e. by referring to necessary and conjunctively sufficient conditions), and this applies also to the categories "works of art" and "aesthetics". Accordingly, it appears to be difficult, if not impossible, to judge an artwork by sticking exclusively to category-specific features which are not shared by members of other categories (say, handicraft products, natural environments, or weather phenomena).

The interest in aesthetic features like unity or complexity when evaluating works of art has a long tradition dating back to philosophers such as Plato, Aristotle, Plotinus, and St. Augustine. In our century Monroe C. Beardsley has been one of the most influential and debated analytic philosophers of art stressing the importance of these features with regard to works of art. In his well-known and elaborate work "Aesthetics—Problems in the Philosophy of Criticism", Beardsley suggests that aesthetic value judgements should be based on so-called "Objective reasons" referring "to some characteristic—that is, some quality or internal relation, or set of qualities and relations—within the work itself, or to some meaning-relation between the work and the world".[12] These reasons have the form of "descriptive...or interpretative statements" [13] focusing on characteristics, which can be divided into three groups, namely the degree of unity or disunity, the degree of complexity or simplicity and, lastly, the degree of intensity or lack of intensity of human regional qua-

12 Beardsley (1981), p. 462. According to Beardsley, Objective reasons should be distinguished from Genetic and Affective ones. While the former refer to "something existing before the work itself, to the manner in which it was produced, or its connection with antecedent objects and psychological states", the latter are concerned with the psychological effects of the artwork upon the percipient. These effects could, for instance, have to do with the capacity of artworks of giving pleasure, being exciting, dull, and so on. As we shall see, Beardsley is not dismissing the hedonic effects of works of art, but rather wants to stress their actual properties which may give rise to such effects.—Apart from these three kinds of reasons, Beardsley also mentions two further groups of arguments for aesthetic evaluations, namely those pointing to the cognitive and moral value of an artwork respectively. Only Objective reasons, so Beardsley claims, are informative with regard to the work itself and its distinctive features, thus any adequate attempt to evaluate art should be confined to them and disregard the other five kinds of reasons. See ibid., pp. 456–461.

13 Ibid.

lities (i.e. perceptual features of the work like vitality, humour, sorrow, stillness etc.). Objective reasons have to do with objectively perceivable or sensory properties.[14] In contradistinction to these properties Beardsley mentions (phenomenally) subjective qualities having to do with a beholder's expectations, projections, state of mind, and so on. Although Beardsley admits that there are borderline cases and degrees of objectivity ("We do not come to the object cold, and...our capacity to respond richly and fully to aesthetic objects depends on a large apperceptive mass."), he is very anxious to stress the importance of his quite rigorous proposal for giving "...the aesthetic object a certain stability of qualities"[15] and for keeping "...criticism from degenerating into sheer burbling, nonsensical jargon and maverick evaluations ".[16]

Now, it appears that a precondition for maintaining some rudimentary standard of rationality in describing and evaluating works of art is indeed to avoid arbitrary ascriptions of any form of functionality (and efficiency) and speculative assertions concerning causes, effects or other features of a certain work. Beardsley's interest in distinctive, non-contingent and verifiable features of works of art is understandable. In which way, though, would a "meaning-relation between the work and the world" qualify as such a feature? It seems obvious that numerous artworks are about something, i.e. have some kind of subject or theme. We would miss an important point of many paintings, if we only paid attention to the unified and complex play with forms and colours, and based a description and evaluation of artworks exclusively on these characteristics. When looking at a painting, most beholders will probably

14 It should be noted, though, that these properties are conceived as rather phenomenal than physical. Works of art have objective physical properties like having been painted in oils or on a canvas. Objective — and interpersonally verifiable — phenomenal properties, on the other hand, are the above-mentioned three groups of characteristics. Analogously, Beardsley also refers to "...the psychologist's reversible figures: the cube that turns inside out,...the profiles that face each other and turns suddenly into the background of a vase. The peculiarity of these figures is that in them we have one physical basis — the pattern of the light waves striking the retina — but two perceptual objects, the perception of which depends to some extent upon choice". Ibid., p. 32 (in the original text it is written as "...two preceptual objects...", obviously a misprint.).

15 Ibid., pp. 52–53.

16 Ibid., p. 6.

17 It is difficult to see that Beardsley would regard references to any explicit semantic features as aesthetically relevant, apart from manifested human regional qualities (which, for example, could be referred to by predicates such as "serious", "tragic", "violent", or "optimistic"). But would this be enough? Although he includes references to the meaningfulness of artworks among "objective reasons"—as already mentioned—, not all kinds of interpretative statements would count as good reasons. Elsewhere, however, Beardsley discusses the relevance of meaning at greater length. He suggests a distinction between approaches toward works of art, which he calls the "significance theory" and the "immanence theory" respectively. According to the former, all artworks have a meaning and are interpretable. Paintings, for instance, represent and refer to external objects, states of affairs, persons, emo-

have a direct and spontaneous interest in its "content" or "message", and meaning-related reasons could be put forward for justifying a positive evaluation of the work. For example, a work of art may be appreciated because it seems to give us information about ways of life in different historical, geographical, and social contexts, the visual appearance of persons and objects, mankind's deepest desires and fears, the existence and goodness of God, and so on. Would these be genuine aesthetic reasons, none at all, or rather borderline cases?[17]

In Beardsley's view, the notion of "aesthetic value" is intimately connected to two further concepts, namely those of "aesthetic experience" or "aesthetic enjoyment". First, aesthetic value is considered to be some kind of dispositional property: certain objects (or actions) have, under appropriate conditions, the capacity to provide aesthetic experiences and/or aesthetic enjoyment. As Beardsley puts it, aesthetic value judgements may be used in an adjunctive sense, that is, they point to the functional efficiency of works of art. Thus a statement such as "This is a good aesthetic object" would be tantamount to the sentence "This is an aesthetic object, it belongs to a certain function-class, and it is efficient for fulfilling the (valuable) aesthetic function F".[18] In the earliest attempts to define "aesthetic value", Beardsley proposed that an artwork's purpose or function is to produce aesthetic experiences of some magnitude. These experiences are characterized as being (i) valuable, (ii) intense, (iii) coherent or complete, and (iv) complex.[19] Here I do not attempt to discuss the concept of "aesthetic experience" and its criteria further, but only point out that this notion has been criticized by several analytic aestheticians during the last few decades for a number of reasons.[20] For example, it has been maintained that terms such as "coherent" or "complete" cannot

tions, and so on. Moreover, they *ought* (also) to be used *qua* meaning-bearers. The "immanence theory", on the other hand, rejects this claim: works of art do not primarily, by themselves, signify anything (although they can be used in this way). Rather, they exhibit or simply possess certain aesthetic properties, and it is with regard to this function that artworks are best approached. As we shall see in the next section, these contrasting positions resemble to a considerable extent Formalist and—what we may call—Representationalist views on art. How should the dispute between these standpoints be resolved? According to Beardsley, the basic question is whether one of these approaches is more efficient than the other for maximizing the aesthetic value (and perhaps other values) of artworks. See Beardsley (1981), p. 462; (1982), pp. 165–187.

18 Beardsley (1981), pp. 524–532. Cf. also Knight (1954); Slote (1971) for similar lines of thought.

19 Ibid., pp. 527–530. It should be pointed out that Beardsley has elaborated and modified this notion further. See e.g. the postscript in ibid., p. LXII: "...[E]xperience has a marked aesthetic character when it has some of the following features, including the first one: attention firmly fixed on a perceptual or intentional object; a feeling of freedom from concerns about matters outside that object; notable affect that is detached from practical ends; the sense of exercising powers of discovery; and integration of the self and of its experiences."—See also Beardsley (1982), pp. 288–281.

20 Most notably, perhaps, by Dickie (1965), (1974). Cf. also Davies (1991), pp. 62–64.

intelligibly be applied to (phenomenologically subjective) experiences, but rather refer to the features of an artwork itself. Furthermore, it may also be doubted whether a distinct aesthetic quality (having context-free, ahistoric, and cross-cultural stability) can be attributed to certain experiences.[21] Perhaps as a consequence of these attacks, Beardsley has subsequently stressed the hedonic aspects of encountering art. In this modified proposal, aesthetic value is defined as "the capacity to provide, under suitable conditions, aesthetic enjoyment."[22] An important assumption implied in the definition is that this enjoyment is—as also aesthetic experience was supposed to be—desirable, or worth having (otherwise the value judgement "X has aesthetic value" would not be synonymous to the apparently factual definiens).[23] Aesthetic enjoyment may be distinguished from other kinds of enjoyment because of the source that produces it, and, more specifically, by certain properties of this source. In the end, so Beardsley suggests, aesthetic enjoyment is definable as "the kind of enjoyment we obtain from the apprehension of a qualitatively diverse segment of the phenomenal field, insofar as the discriminable parts are unified into something of a whole that has a character (that is, regional qualities) of its own."[24]

Pleasure

The interest in the hedonic effects and value of art is by no means a new one in the history of aesthetics. Numerous philosophers, artists, and art critics have made use of the notion of aesthetic enjoyment—and cognates such as (aesthetic) "delight", "satisfaction", "pleasure", etc.—in order to account for the purpose, function and value of aesthetic objects. Similar concepts have also—as we shall see—been employed by psychologists concerned with the perception of art, thereby speaking of "positive feeling tones", "heightened levels of arousal", or "hedonic experiences". Moreover, the concept of pleasure has, generally speaking, frequently been an important ingredient in discussions of human motivation, values and moral theories. However, there are a number of questions and problems which this notion gives rise to, and which Beardsley has treated rather superficially.

21 For the latter objection, see Cooper (1992), p. 43. For Beardsley's discussion of Dickie's critique, see Beardsley (1982), pp. 77–92.

22 Beardsley (1982), p. 42.

23 Ibid., p. 68.

24 Ibid., pp. 40–42. Later on, however, Beardsley has—because there is "something threateningly reductionistic about taking the defining feature of aesthetically characterized experiences to be a particular kind of pleasure..."—suggested a modified definition of aesthetic experience. Ibid., p. 288.—See also note 19 above.

First of all, how should we define pleasure more exactly? Is it some kind of bodily sensation, such as having a headache? Or is it a kind of emotion—distinguishable from bodily sensations? In both cases we could assume that it is possible to isolate a single mental state which can accompany manifold different states of consciousness. But perhaps pleasure is an emotional state which, like other emotions, involves a cognitive dimension? It has sometimes been argued that emotions are related to external objects or situations. When we are afraid, for instance, there is of course a sensation, but also an awareness of and a directedness towards the object or activity which gives rise to a state of fear. We are afraid *because* of something else (or rather due to our beliefs and thoughts with regard to something else). Hence it would be unreasonable to speak of fear *per se*, strictly speaking, but rather of emotions such as fear-of-cancer, fear-of-tigers, and so on.[25] In a similar way, we should perhaps regard pleasure as something that varies dependent on the objects and activities involved. Consequently, there would be a great diversity of phenomenologically distinct feelings such as, for example, pleasure-from-strawberries, pleasure-from-landscape-paintings, pleasure-from-abstract-paintings, etc.[26] It might also be argued that pleasure is a conscious state which consists of the awareness that a desire or some previously existing want has been satisfied.[27] On the other hand, there are undoubtedly cases where people take pleasure in things or activities which they encounter for the first time (for example, having sex or eating chocolate without any prior experience). Moreover, sometimes we desire something which, after all, proves to be unpleasant (for instance, an ex-smoker's yearning for a cigarette, the taste of which, after a long time without, may be found to be offensive). For the time being these questions will be left aside, though some of them will be reiterated in further detail in section 5.2.

Be this as it may, in our ordinary life we are often inclined to regard many emotional states as having something in common, namely a quality of being pleasurable. Perhaps there is indeed such a quality which permits us to make comparisons and trade-offs with regard to different alternatives of actions and their consequences, the latter being more or less "pleasant". Neurological research suggests that higher organisms have specific regions ("pleasure centres") in the brain (e.g. the lateral hypothalamus) which, when stimulated electrically, produce intense,

25 For an account of the structure of emotions along these lines, see e.g. Carroll (1990), pp. 24–27.
26 For such a view, see e.g. Feldman (1997), ch. 5.
27 For such a view, see e.g. Parfit (1984), p. 493.

pleasurable feelings, apparently to some extent comparable to sexual pleasure. And hungry animals, being able to stimulate themselves by pressing a lever, have been reported to prefer this stimulation over food. Other neural regions seem to give rise to the opposite effect, that is, states of aversion or displeasure. Hence it has been maintained that "...the hypothalamus is able to exert considerable influence on a variety of behaviors, acting either to reward one's actions or to generate feelings of aversion so that one is less likely to act in a similar manner in the future."[28] Still, the notion of pleasure is rather troublesome and a matter of dispute as to the details, though it appears quite often to be the case, as the philosopher Jan Narveson has put it, that "when writers attempt to define the notions of pleasure and enjoyment, invariably they end up saying, in one way or another, that they consist of a pro-attitude or positive evaluation of some experience on its own account."[29]

Apart from the difficulty of defining pleasure there are further issues worth mentioning. First, discussions of human motivation and value problems have often consisted in arguing for and against pleasure as something that people *de facto* strive for, and as something that is *worth* having. The view that humans ultimately desire pleasure for its own sake and act in order to receive pleasure is frequently called *psychological hedonism*. This position should be distinguished from *ethical hedonism* according to which pleasure is valuable and desirable for its own sake. Numerous adherents of utilitarian ethical theories have argued that pleasure is an end in itself, i.e. intrinsically valuable apart from further consequences. Henry Sidgwick, for instance, has proposed a version of hedonistic utilitarianism where pleasure is regarded as intrinsically valuable and defined as a "...feeling which the sentient individual at the time of feeling it implicitly or explicitly apprehends to be desirable;—desirable, that is, when considered merely as a feeling, and not in respect of its objective conditions or consequences..."[30] A problem with this and many other accounts, however, is that pleasure is defined as desirable for its own sake, which appears to make the statement "Pleasure is intrinsically valuable" tautological.[31] Hence it is important to characterize pleasure in a value-neutral sense if this statement is supposed to give us any new information. It should also be noted that other things apart from plea-

28 Ramachandran (1994), p. 70. Cf. also Gregory (1987), p. 129.

29 Quoted from Brock (1973), pp. 241–242.

30 Sidgwick (1981), p. 131.

31 See, however, ibid., p. 111, where "desirable" is defined in value-neutral terms. Cf. also Brock (1973), p. 242.

sure might be considered to be intrinsically valuable (for instance, justice, truth, beauty, knowledge, etc.). Furthermore, it may be denied altogether that there is something which has intrinsic value. Beardsley himself, although he regards (aesthetic) pleasure as worth having, rejects the idea that anything may have a value in itself, or independent from its relationship to anything else.[32]

A second problem concerns the measurement of pleasure. In order to serve as a guide for evaluating actions and aesthetic objects it must be possible to compare varying degrees of pleasure they are capable of producing (or actually do), seen from a subjective as well as an interpersonal perspective. It has been common among utilitarians and psychologists to consider "pleasure" as one extreme of a single continuum, "displeasure" or "pain" as the other, and a neutral point in between. According to numerous utilitarians, such as Jeremy Bentham or Sidgwick, an action is, roughly put, justified to the extent that it tends to maximize pleasure or to diminish pain, or leads to a greater balance of pleasure over displeasure for everyone affected (compared to alternative actions). Thus it is assumed that one is able to specify amounts of pleasure, compared to amounts of pain, which constitute the total hedonic consequences of an action. Most utilitarians are primarily interested in quantitative differences between pleasure and pain for estimating the goodness of an action (or the goodness of a rule of action), though it occasionally has been claimed (for example, by John Stuart Mill) that there are qualitative differences, in a factual as well as in a normative sense (e.g. spiritual pleasures differ from, but are also better than, bodily pleasures). The latter view leads of course to further problems when it comes to comparing and evaluating the outcomes of alternative actions.

As we shall see later on, experimental psychologists have often attempted to investigate the dependence of pleasantness on various sensory stimuli and properties. Diverse stimulus conditions and differences with regard to the cultural, educational, or social background of the participating subjects are supposed to give rise to different degrees of "hedonic tone", or the like. Quite obviously, there exists an overwhelming consensus within experimental psychology that, at least in particular situations, degrees of pleasure may be specified. Philosophers, on the other hand, have, not surprisingly, doubted the possibility of quantifying pleasure, especially when it comes to comparisons between several people. How

32 For Beardsley's arguments against the idea of intrinsic value, and his so-called "instrumentalist" approach, see Beardsley (1981), pp. 539–543; Beardsley (1982), pp. 46–64.

can introspectively experienced states of pleasure become the subject of arithmetical operations, and which measuring procedures should be applied? Nevertheless, in ordinary life, and in discussions concerning (inter-) national economy and politics, it is far from unusual to estimate various (factual or likely) outcomes of alternative decisions in terms of pleasure and displeasure (or related concepts such as welfare, happiness, and the like).

All the questions and problems mentioned here deserve a thorough discussion, which, however, falls outside the scope of this study. Rather, it is my intention to stress the importance—and some of the difficulties—of the notion of pleasure as it occurs within moral theory, psychology, and—not least—philosophical aesthetics. When it comes to theories of art, this notion has frequently occupied a central position. Aristotle himself assumed that the imitative arts such as tragedy or poetry produce a unique form of enjoyment, and that humans—*qua* rational animals—take delight in seeing imitations of other objects or actions. To recognize something in an imitation is a form of learning, and it is natural for humans to take pleasure in cognitive efforts. Kant, as already indicated, characterized the aesthetic as some kind of universalizable and disinterested pleasure obtained from artifacts (and even natural phenomena). In contradistinction to Aristotle, however, Kant considered only the formal aspects of art, i.e. its perceivable pattern, structure, or appearance, to be important in this respect, whereas an object's semantic connection to the external world, and its cognitive and moral aspects, are regarded as irrelevant. A hedonic-formalist view on art has of course also been advocated by other scholars, such as Clive Bell, Roger Fry, and to some extent, Beardsley himself.[33] Aesthetic value depends, according to Beardsley, on the potential of artworks to provide aesthetic experiences or aesthetic pleasure (due to formal and regional qualities of an artwork). As to the latter view, aesthetic value is based on the degree of aesthetic pleasure an object *can* produce (under optimal circumstances); thus he could be interpreted as claiming that aesthetic value basically is a quantitative matter.[34]

33 It should be noted, though, that Beardsley has taken a very critical stance toward the formalist approach as proposed by Bell and Fry. Cf. Beardsley (1981), p. xvii.

34 "My view is that the aesthetic value of an object is not a function of the actual degree of gratification obtained from it...Aesthetic value depends on the highest degree obtainable under optimal circumstances...The amount of aesthetic value possessed by an object is a function of the degree of aesthetic gratification it is capable of providing in a particular experience of it." Beardsley (1982), p. 23. See, however, Beardsley (1981), p. 529, where the idea that more or less magnitude of an aesthetic *experience* implies "measurement" is rejected.

Opposed to the formalist tradition are theorists, who, although they also focus on the pleasure that works of art may afford, have stressed their cognitive content or representational function. According to Edmund Burke and David Hume, for example, humans take spontaneous pleasure in imitations, even if the imitated object in itself is unpleasant, and consequently one essential purpose of art is to give us pleasurable feelings resulting from its ability to represent external things. Arthur Schopenhauer may be mentioned as another example of emphasizing the hedonic (and at the same time cognitive) function of art, though he is interested rather in its capacity to reveal Platonic, metaphysical ideas which will free us temporarily from the painful burden of our desires and our self-assertion. Numerous further theorists with an hedonist view on art could be mentioned, but here it will be sufficient to note that the concept of pleasure and similar expressions have often been given a prominent role in various attempts to explain and to justify the existence of art.

This leads me again to the topics of this study. It is not my intention to seek to answer normative questions concerning art. Rather, I will attempt to account for and elucidate a question which has persisted for a long time in the Western history of aesthetics, namely why we take delight in pictorial representations. More specifically, are there any *basic* human needs and dispositions which might explain why depictions *per se*—quite apart from idiosyncratic interests in the depicted objects—give us feelings of pleasure, satisfaction, and the like? Furthermore, although the emphasis of this study lies on the relationship between pictorial representations and hedonic effects, which is an empirical and factual issue, the clarification of this relationship may very well have normative implications. As the previous survey of various normative and metanormative positions suggests, the regular and non-idiosyncratic occurrence of hedonic effects due to the capacity of visual works of art (and other visual representations) to depict external objects (more specifically, *qua* types) may have some bearing on normative matters.

1.2 Questions of Meaning

SO FAR, HOWEVER, I HAVE TREATED the concepts of representation and meaning in a quite superficial way, and some additional remarks appear to be necessary. First of all, we may note that, generally speaking, the concern with "meaning" has undoubtedly exercized a considerable influence on

contemporary philosophical and aesthetical studies, at least in the Western World. A central ambition has been to elucidate the connection between meaning and other concepts like "truth", "interpretation", "intention", and "reality", etc. Moreover, partly due to Ludwig Wittgenstein's work, Western philosophers (especially within analytic philosophy) have to a considerable extent tended to regard philosophical questions as basically linguistic or conceptual ones, thereby employing methods for language analysis in order to solve or to clarify them.[35] An essential problem, though by no means a new one, in linguistic or philosophical theories of meaning concerns the relation of linguistic expressions to external things, forms, thoughts or states of affairs. According to some of these theories, meaningfulness (at least with regard to proper names and/or personal pronouns) is explicated as the referential relationship between a word or sentence and external objects. Gottlob Frege (1848–1925), one of the pioneers in modern language philosophy, attempted to elucidate the notion of meaning on these lines, though by introducing the important distinction between *sense* and *reference*. A singular expression (name) is said to be meaningful in virtue of what it refers to (an object), but also by the mode of referring to it. Thus two expressions (for example, "Alexander the Great's teacher" and "The author of 'Poetics'") have the same reference (or denotation), namely (the person) Aristotle. Nevertheless, they have different senses, that is, there are different characteristics specified (or, as one might say, connoted) of the object referred to.[36] Now, traditional accounts of meaningfulness in works of art, most notably with regard to the visual arts, bear some affinity to referential theories of meaning in language philosophy. According to this tradition, artworks are meaningful *qua* representations, that is, due to their mimetic or referential relationship to other objects. Although this relation has commonly been regarded as a matter of (natural) similarity or resemblance, alternative suggestions stressing the conventional and basically denotative character of representations have become relatively widespread in academic circles theorizing about the arts during the last few decades.

Meaning Functions of Pictures

This study is intended to focus on *pictorial* representations (such as paintings, sculpture, outline drawings, photographs, and so on), and not on

35 For an overview of different approaches within analytic philosophy, see e.g. Rorty (1967).

36 Frege (1892). Cf. also Searle (1971). It should be added that Frege also extended this distinction to predicates and whole sentences.

representations in general. It may very well be claimed that literature, dance, or even music are capable of representing something else. Some of the issues raised in this study may undoubtedly have some bearing on representations in general, but the emphasis will lie on pictorial material —though, again, not necessarily on clear-cut "works of art". Apart from the mimetic or referential view on pictorial representation, there are of course several further meaning-functions of pictorial material which are noteworthy and could be taken into consideration. Hence we might say that a picture P can function as a meaning bearer in one or several of the following ways:

1. P represents O, where O could stand for
   a) one or several singular, real objects or subjects (like the mountain of Sainte-Victoire or Napoleon)
   b) one or several general, real objects or subjects (like an apple or a woman)
   c) one or several singular, fictional objects or subjects (like the Holy Grail or Zeus)
   d) one or several general, fictional objects or subjects (like a halo or an angel).

2. P expresses E, where E could be regarded as
   a) emotional properties inherent in P (such as gaiety, melancholy, aggressiveness, or serenity)
   b) emotional states attributed to the artist (e.g. at the moment of crea tion, or his usual state of mind)
   c) emotional states arising (non-contingentally) in the mind of the beholder.

3. P has a sense SE. Here, the term "sense" is supposed to refer to the occurrence of certain features or attributes being included in or constituting the depiction of O (i.e. modes of depicting O), for example,
   a) Napoleon *as* a child or *as* an emperor
   b) Zeus *as* aggressive or *as* contemplative
   c) Napoleon *as* a configuration of lines, patches, or rough strokes of brush.

4. P suggests ST. ST is supposed to refer to statements which P may imply, express or suggest, perhaps partly as the result of a beholder's

37 Cf. Hermerén (1983), p. 67–68.

background knowledge (e.g. relating to the context of creation, artistic traditions, the artist's probable meaning-intentions). These statements may be descriptive or normative, and they may refer to the world, society, the artist's mental state, human actions, God, and so on.[37]

5. P symbolizes SY. In this case external "clues of connection" between the depicted objects and, for example, (i) religious, mythological, philosophical, or metaphysical ideas, or (ii) persons, groups, national, geographical, or cultural areas are required in order to recognize the symbolic content. These clues may be symbolic dictionaries such as Cesare Ripa's "Iconologia" (1593), but also religious, mythological, or literary texts in general. Moreover, acquaintance with actual political, religious, or historical events seems also sometimes to be necessary. Thus P could symbolize SY (by representing O), for example, as follows:

a) O = dove; SY = Holy Ghost
b) O = pharaoh Narmer hitting another person; SY = Upper Egypt's victory over Lower Egypt about 3000 B.C.
c) O = bees; SY = Pope Urban VIII (Barberini).[38]

This survey of some significant meaning-functions of pictorial material of course gives rise to several questions, for example, the following.[39]

First, can Gottlob Frege's differentiation between "Bedeutung" (i.e. reference) and "Sinn" (i.e. the way in which an object is referred to) be applied to visual designs (which my proposed distinction between 1. and 3. is intended to suggest)? Despite the fact that there are, I believe, significant differences between verbal expressions and pictorial representations, Frege's terminology may at, least in a transferred sense, be used in order to distinguish between the depicted object of a picture and those features by means of which the object has been visualized.[40] Second, although it is rather doubtful whether visual works of art usually express propositions or state something, it seems that they may give rise to statements, being the result of interpretative activities on the part of beholders.[41] But by which criteria should we distinguish plausible interpretations from

38 For an analysis of the notion of symbolic representation, see e.g. ibid., pp. 106–116, from where the term "clues of connection" is taken.

39 It should be pointed out that this overview is somewhat simplified. There may be further meaning functions which perhaps fall outside this sketch, for example, narrative structures, the rendering of space and time, and metaphorical, metonymical, satirical, and ironic uses. Whether these functions fit in my survey or not would necessitate a more thorough discussion, which, however, falls outside the scope of my study.

40 Suggestions on these lines have been made by ibid., pp. 76–77; Danto (1981), pp. 72–73.

unconvincing ones? And what kinds of statements may artworks imply (e.g. pragmatic, logical, normative)? Third, and more important in the present context, does pictorial representation presuppose some degree of "natural" similarity between P and O, or does it just depend on certain conventions? As already noted, according to one of the most persistent views, the relation of resemblance or similarity between P and O lies at the heart of pictorial representation. Since Classical Antiquity through the Renaissance and Classicism, this view was more or less held as common sense. Beardsley's account of pictorial representation may be taken as a more recent version within this tradition. He distinguishes between two kinds of representation, namely "depiction" and "portrayal". Depiction has to do with the visual representation of (real or fictitious) objects in a general sense (e.g. *a* horse, *a* baby, *a* dance, or *a* city of the future) and is defined as follows:

> "The design X depicts an object Y" means "X contains some area that is more similar to the visual appearance of X's than to objects of any other class."[42]

Portrayal, on the other hand, has to do with the representation of (real or fictitious) particular objects (e.g. *my* horse, Napoleon, or Zeus):

> "The design X portrays the object Y" means "X contains some area that is more similar to the visual appearance of Y than to any other object."[43]

Depiction as well as portrayal are thus analyzed in terms of some kind of similarity relation between picture and object. What, however, is similarity supposed to mean in relation to fictitious entities? In the case of

41 Actually, as Beardsley quite correctly has pointed out, paintings do normally not have a syntactic structure comparable to linguistic utterances that admits a subject-predicate distinction (although exceptions due to strictly conventionalized visualizations may exist, e.g. certain allegories). See Beardsley (1981), pp. 369–373; p. 376. Cf. also Goodman (1978), pp. 130–132.—On the other hand, the painting may—in some sense—*imply* or *suggest* a proposition. In that case the implication would partly have to depend on the interpreter's background knowledge (for instance, concerning the artist's personal, social or historical situation, or of his known meaning-intentions). But anything could, of course, have a propositional content by implication. A stone implies the statement "This stone exists", and Picasso's "Guernica" implies "This painting has been made in the 20th century by a human being ".

42 Beardsley (1981), p. 270. The term "object" should be taken in a wide sense, that is, as also including people and events. Cf. ibid., p. 278.

43 Ibid., p. 273.

portrayal, Beardsley proposes a further distinction between "physical" and "nominal" portraits. While the former concerns similarity with regard to the physical or visual appearance *per se*, the latter is defined in the following way:

> "The design X *nominally portrays* the object Y" means "X has no notable characteristics incompatible with those attributed to Y, and there is a verbal stipulation, either in the form of a title, an oral remark, or an accompanying text, that X is to be called a portrait of Y."[44]

Nominal portrayal is thus not based on any similarity relation in terms of shared visual properties, but rather on external stipulations or perhaps conventions. Resemblance is quite obviously a problematic, maybe even superfluous notion when it comes to depictions of, for example, unicorns and angels, as well as portrayals of, for instance, Zeus or Sherlock Holmes. We have innumerable examples in the history of art where not the exact and literal imitation of reality seems to have been intended, but where (i) mythological, religious, or otherwise fictitious objects, (ii) idealized objects (which of course also to some extent may be regarded as fictitious) and (iii) classes—or objects with indefinite reference—have been depicted. How could we give similarity any explanatory role in these cases? Moreover, also with regard to existent entities, it might be argued that resemblance is neither a necessary nor a sufficient condition for something to function as a pictorial representation. As a matter of fact, during the last few decades various scholars in the humanities have come to suggest that the experienced relationship between pictorial representations and the represented objects is wholly determined by cultural-historical frameworks and internalized codes, conventions, or habits of representations. The philosopher Nelson Goodman, for example, has argued that depiction should be seen as a pictorial form of denotation.[45] According to Goodman, similarity is, logically speaking, a symmetric relation: if X resembles Y, then Y resembles X. Obviously similarity cannot be a sufficient condition for something to be a representation. A person P resembles an artwork that depicts him, but P does not depict the artwork.[46] Furthermore, anything may be similar in some

44 Ibid., p. 277.

45 In that case, examples 1.a and 1.b in my sketch above would be seen as having a unique or a multiple denotation, while 1.c and 1.d would have no denotation at all, but—according to Goodman—be denoted by one-place predicates like "Zeus-picture" or "angel-picture". See Goodman (1976), esp. chapter I.

46 Cf. Goodman (1976), pp. 3–4.

sense to any other object. Similarity in an unspecified sense cannot be used as a criterion for distinguishing representations from other objects. What, however, are the relevant properties which pictures have to share with external objects in order to qualify as representations? For example, as Goodman has pointed out, similarity seems to presuppose some kind of selection. A person can be depicted as "a man, a swarm of atoms, a complex of cells, a fiddler", and so on.[47] It is not possible to represent an object "under aseptic conditions by the free and innocent eye"[48]; instead, the artist is forced to take a certain stance, to show an aspect of the object. Moreover, as Goodman claims, similarity is perhaps not even a necessary condition for visual representation: "almost anything may stand for almost anything else".[49] A pictorial representation should basically be conceived of as some kind of denotation or reference—and accordingly as a contingent construal or a socio-historically variable interpretation of reality. This radical assumption, however, may very well be put into question by referring to empirical findings, and I will return to it later on in section 2.6.

Numerous further questions concerning the meaning aspects of visual artworks, as partly indicated above, could of course be raised, though many of them will not be focused on in this study. Further, my main purpose is not to discuss the capacity of visual works of art and other kinds of pictorial representations to represent or depict particular entities, but rather general ones—such as the meaning-functions 1.b and 1.d mentioned earlier, or "depiction" in Beardsley's sense. Moreover, the ability of pictorial representations to render idealized objects, subjects, states of affairs, and so on, will also be discussed at length. The pictorial meaning-functions of primary concern for this study are those which consist of the depiction of things considered to be typical in some sense. Renderings of typicality may either be conceived as referring to a class or a category in general, but they may also involve ideal features of category members. In the former case we may speak of *general types*, in the latter of *ideal types*.

Now, what is the purpose of pictures representing typical objects (or objects *qua* class-members)? Do we have any fundamental interest in recognizing something as typical? And do we experience aesthetic pleasure or some other kind of satisfaction in doing so? Superficially, the capacity of visual works of art to represent external objects—whether

47 Goodman (1976), p. 6.
48 Ibid., p. 7.
49 Goodman (1976), p. 5.

particulars or types—may in general be regarded as aesthetically irrelevant. We can illustrate this point by referring to some objections put forward against iconological research within art history.

Erwin Panofsky, one of the most influential art historians of the 20th century, may be credited for having elaborated the so-called iconographical or iconological methods. According to Panofsky, a fruitful investigation of works of art should be striving for an analysis of their meaning-aspects (in contradistinction to their formal aspects). These aspects occur on three levels.[50] First, we have a pre-iconographic level—the depiction of human beings, animals, natural or artificial objects, etc. The identification of actions, gestures or expressive qualities would also belong to this level. The second interpretative level—the iconographical analysis—consists of identifying the subject matter or the theme of the artwork. An iconographical interpretation would demand an identification of the depicted agents as certain persons (for example, the Virgin Mary or Heracles) or maybe personifications with certain attributes and would perhaps contain some reference to relevant myths or tales. A third—iconological—type of interpretation would treat the artwork as symptomatic of a cultural climate or world view, that is, formulate statements suggested by the work in this respect.

Though this approach towards works of art is well-known and prominent among art historians, it has not been accepted unanimously, but has been criticized for giving a one-sided account—and evaluation—of artworks because of its tendency to reduce them to something like verbal messages.[51] The problem can be stated as follows: if artworks are conceived as—in some sense—vehicles for communication, or for transmitting messages, they appear to be dispensable once their meaning has been understood (like certain verbal messages such as weather forecasts, for example). Furthermore, if having a meaning is supposed to be an essential function of works of art, any sign or text that conveys an identical or quite similar content as a certain work could, in this respect, be used as a substitute. Numerous other objects, texts or signs, which nor-

50 See e.g. Panofsky: "Ikonographie und Ikonologie" (1939/1955); reprinted in Kaemmerling (1987), pp. 207–225. For a thorough discussion from an analytical perspective, see Hermerén (1969), esp. chapters IV and VI.

51 See e.g. Otto Pächt: "Kritik der Ikonologie" (1977), reprinted in Kaemmerling (1979), p. 355 (my translation): "[One]...treats the picture or work of art as if it were an emblematic mosaic, a pictorial writing...Art is seen as a procedure...for wrapping certain messages for the purpose of transportation...The task of the art historian...is then to remove the kernel from the shell...For this way of thinking the ranking of the artwork is inseparably connected with the value and the content of the message which it transports. Art is here...a means for achieving some ends, not an end in itself, and could in principle, when its task has been accomplished,...be dismissed."

mally are not considered to be works of art (e.g. newspaper photographs or x-rays, maps, and advertising posters), can fulfil meaning-functions like depiction, having a sense or suggesting statements. Consequently, an evaluation of a painting because of its meaning could thus be seen as comparable to, for instance, an evaluation based on its functionality as a windbreak .

An alternative view has been defended by proponents of the so-called formalist tradition which claims that we should disregard any characteristics of an artwork which are not "intrinsic" to the work itself. Thus formalists have proposed a normative approach to works of art according to which mimetic or referential aspects are treated as irrelevant, or even disturbing, with regard to the genuine function or purpose of art: we ought only to pay attention to "structural" or "formal" properties—due to their capacity to evoke so-called aesthetic experiences or aesthetic pleasure—when evaluating artworks. Furthermore, art is said to have no essential cognitive function.

Now, would a formalist position seem plausible, and how exactly should we distinguish "formal" from "meaningful" aspects? Goodman, among other contemporary aestheticians, has argued that a distinction like this would not be tenable at all. He has proposed a functional definition of art: objects become works of art when used as symbols in a certain way. Artworks seen as symbols are partly characterized by being self-referential, that is, they exhibit or *exemplify* some of the properties they possess (e.g. being red, bright, unified, balanced or—metaphorically—being gloomy, optimistic etc.). Exemplification is considered to be a form of symbolization or reference, and, thus, there is no fundamental difference between formal and non-formal properties.[52] A similar view has been suggested by the philosopher Arthur C. Danto as well, who emphasizes that works of art not only are about something or have a subject, but—in contradistinction to other meaning-bearers or representations—also call attention to the manner of presentation of their subject.[53] The means of representation (or the artist's displayed way of seeing) are part of what an artwork represents or expresses, and thus part of its function as meaning-bearer. Obviously, Danto's position leads to the

52 See, for example, Goodman (1976), pp. 52–57, and, for a discussion of formalism, Goodman (1978), pp. 59–63, p. 65 f.

53 Danto (1981), pp. 147–149; pp. 155–164. Danto compares this kind of self-reference to Frege's concept of "Färbung" (i.e. coloration) which can be ascribed to linguistic signs besides their "Bedeutung" or "Sinn". Artworks, too, have something like a "Färbung", which partly manifests itself in our descriptive and appreciative utterances concerning them. For example, pictures of flowers can sometimes be said to be powerful or dynamic, while flowers—i.e. real objects—usually cannot.

conclusion that a formalist's distinction between formal and meaningful aspects in works of art must evaporate.

When looking at the histories of art history, philosophy and aesthetics, we will find numerous attempts to describe and to grade art—and to justify its existence—because of its cognitive function, its capacity to give (past, present, or future) beholders information of a certain kind (for instance, relevant, original, true or sincere information).[54] As a matter of fact, these attempts seem to be the rule rather than exception. Moreover, art with an explicit symbolic or representative function appears to have been produced and appreciated in all times and in most societies. How can this be explained convincingly? Why would so many artists have gone to so much effort in giving their works a meaning-function, if this were a contingent and not essentially good-making feature? Can art have an important and distinctive cognitive function, perhaps in giving us "knowledge by acquaintance" or "knowledge how"? It would hardly be controversial to maintain that laymen as well as experts very often enjoy or become engaged by the content or supposed messages of artworks spontaneously, as some kind of "natural" reaction. Undoubtedly, a radical dismissal of artworks' meaning-aspects when making aesthetic value judgements seems to be rather counterintuitive.

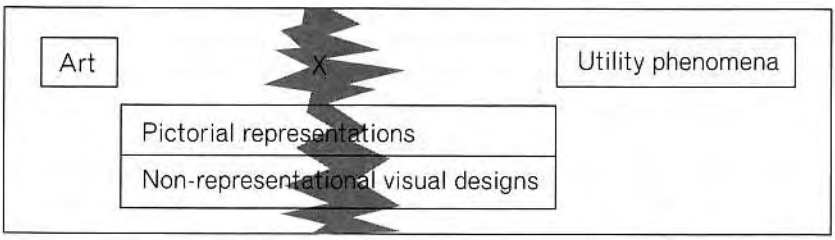
Basically, though, formalist and likewisely, as we might say, "representationalist" approaches to art are of course, insofar as they tend to propose any intrinsic characteristics of artworks, highly problematic. Any attempt to find essential properties which only objects belonging to the category "art"—in contradistinction to other categories—possess are doomed to failure. We shall discuss this issue below.

Pictures vs. Art

As already noted, works of art may be evaluated for a number of reasons. Not all of them can easily be classified as clear-cut aesthetic or non-aesthetic ones. Various scholars have come to suggest that the concept of art cannot be defined by reference to jointly necessary and sufficient conditions. Instead, as for instance Morris Weitz has argued, art should be regarded as an *open* concept having no essential characteristics. Inspired by Ludwig Wittgenstein's idea of "family resemblance", he claims that works of art do not share one or several pervasive properties which might constitute the category art. Rather we should conceive of art as a class of objects with various networks of similar properties.[55] Recent catego-

54 Cf. Hermerén (1983), pp. 66–68, for various kinds of information which works of art may convey.

rization research within cognitive psychology—which will be discussed in chapter 4—has given empirical support that, psychologically speaking, categories in general do not emerge due to experienced necessary and sufficient conditions, but frequently by virtue of sharing a family resemblance. If aesthetic reasons for value judgements concerning works of art are stipulated as category-specific ones, it should thus come as no surprise that they also are applied and applicable to objects belonging to related or overlapping categories. First, the relationship between works of art and related categories may, for example, be illustrated by the following diagram:



As this sketch is supposed to illustrate, there is no exact dividing line between the main categories "art" and "utility phenomena".[56] The grey zone "X" indicates that there are borderline cases which, due to various functions, purposes, or habits, may be categorized in either way. The relative sizes of the areas has no significance in the present context, apart from the fact that the class "utility phenomena" is represented as larger than the class "art". The latter is here conceived as a rather broad category, including music, drama, dance, literature, paintings, and so on. "Utility phenomena", on the other hand, may include artifacts, but also actions and acoustic stimuli, for example. A borderline case with regard to music might be, for example, the ringing of a doorbell or a mobile telephone, playing a certain tune, which has a clear utility function, though it also could be classified as music. "Visual designs" may be regarded as a subclass within the main categories. Some of them may be thought of as clear-cut works of art (e.g. paintings by Jan van Eyck, Michelangelo, or Willem de Kooning), while others fall outside that category (e.g. passport photographs or X-rays). Within this category we

55 Weitz (1956). For an excellent analysis and discussion of anti-essentialist views on art, see Davies (1991).

56 "Natural" phenomena such as sunsets, landscapes, fruit, vegetables, and pets may of course also be conceived of as overlapping with the categories "art" and "utility phenomena" respectively. In that case the relations between these categories would be more complex than the sketch above indicates. These complexities have, however, no bearing on the point I want to make.

may further distinguish between pictorial representations (i.e. depictions or portrayals) and non-representational designs. Also in these cases it should be noted that there are no strict category borders. First, objects such as advertising posters, furniture, clothes or handicraft products, and religious paintings have clearly non-artistic utility functions, but may also function as works of art. Second, some designs (such as ornaments consisting of, for example, a wave-pattern, or certain paintings by Piet Mondrian) may be regarded as representations as well as non-figurative patterns. Third, the category "visual design"—whether representational or not—overlaps with other subcategories within the category "art"—such as drama or dance (e.g. in costumes and scenery), architecture and motion pictures—as well as with subcategories within "utility phenomena". I shall leave it to the reader's imagination to find borderline cases with regard to various relations between any conceivable categories.

The point I want to make is that reasons for value judgements concerning art—and its subcategories—cannot be category-specific in a strict sense. Rather, we should probably regard them as more or less applicable to the category (or categories) in question, that is, as a matter of degree. Thus it seems more reasonable to stress the "visual unity in combination with a certain degree of complexity" when it comes to evaluations of, say, paintings compared to cars or furniture. On the other hand, even utility goods may be subject to evaluations by virtue of such visual qualities, though of course other considerations play an important role. Cars, for example, may be appreciated for their visual appearance, but also for numerous further characteristics (e.g. their size, speed, price, second-hand value, durability, and so on).

With regard to pictorial representations it might be argued that their meaningfulness should be considered as a good-making feature. However, does meaning have any aesthetic relevance (as specified above)? Historically the most persistent view on the meaningfulness of visual works of art (and perhaps artworks in general) is based on the concept of imitation or *mimesis*. This approach has a descriptive as well as a normative component. First, visual artworks are *defined* as objects which somehow are visually similar to external objects. Apart from having a descriptive approach, mimetic theories of art may also be regarded as proposing criteria for *evaluating* works of art. According to this view, the value of artworks is considered to depend on (i) their degree of similarity to external objects: the more they resemble the things depicted, the better they are. Moreover, it has commonly been claimed that also (ii) the value of the imitated object, and (iii) the moral, cognitive, hedonistic

effects on the beholder of imitating certain objects are relevant for judging the value of an artwork. However, apart from the quite problematic descriptive constituent in this account, it seems questionable whether the normative claims have any bearing on pictures *qua* works of art. Manifold pictorial representations which commonly are not conceived of as "art" may be evaluated by pointing to such characteristics and effects. Nevertheless, although any representational function is not limited to exclusively visual art, we have, I think, reason to believe that this function rather frequently and regularly has been important when seen from something like an aesthetic point of view. To be more exact, there is one aspect of pictorial representation, which will be discussed in this study, that appears to afford pleasurable feelings on a quite basic level. Once again, it is not my intention to elaborate a normative theory concerning visual works of art. Rather, I intend to show that there is one significant aspect of pictorial representations which gives rise to hedonistic effects. Although value judgements should not be confused with preference or pleasure judgements, the occurrence of pleasure may very well be used as support for evaluations (or incorporated in a normative theory)—as described in the preceding section. Thus it may be claimed that hedonic effects which certain aspects of pictorial representation actually (or dispositionally) provide are relevant to aesthetic evaluations. Put in another way, evaluations based on these characteristics seem to be *more* relevant (and *more* category-specific) with regard to visual works of art than, for example, evaluations based on their economic worth or windbreak-functionality. In the next section, I shall attempt to outline the strategy applied in this study for investigating this issue further.

1.3 Methodology, Structure, and Aim of This Study

THE THEORETICAL ROOTS OF A theory of imitation as here described—both as a descriptive as well as a normative view—may be traced back at least as far as Classical Greece. Most notable in this respect are the works by Xenophon, Plato, and Aristotle. An important and far too often overlooked aspect of their lines of thought, however, concerns the degree of similarity between works of art and the imitated "objects", and the exact nature of these objects. Numerous handbooks on aesthetics or art history describe mimetic theories of art—especially Plato's view—as defending

some kind of neutral realism, a faithful copying of particular physical objects or states of affairs.

For example, Gene Blocker, in his handbook "Philosophy of Art", interprets Plato's approach as a naive copy theory, which ignores the fact that "pictorial representation is partly conventional"[57] and for several reasons must deviate from reality. Plato's so-called mirror-concept of art is said to imply the view that "[the] ideal...is...to be fooled and then discover that one has been fooled."[58] Aristotle, though, is regarded as representing a more adequate position:

> "Aristotle, for example, objected to Plato's view that the artist could produce only deceptive copies of concrete sensible objects, arguing instead that the artist's portrayal of particular objects represented general truths about ideal types. But the general truth about the *kind* of thing in question is not limited, as in the copy theory, to recording the way particular things actually happen, but only to the *kind* of thing that is likely to happen."[59]

Still, as we shall see, it is rather doubtful whether Plato regarded mimetic works of art as representations of particular phenomena, at least not exclusively. It seems more reasonable to interpret him as proposing a conception of art as the imitation of type- or species-characteristic features, and in this respect his view is comparable to Xenophon's as well as Aristotle's. Mimetic objects must, according to Plato, necessarily deviate from reality; they are not just duplicates of things (otherwise it would not be possible to distinguish them from the objects of imitation). Furthermore, artistic aims are not generally characterized as the attempt to achieve some kind of flat realism: Plato is fully aware of the fact that works of art may represent fictitious objects or idealized types.[60]

57 Blocker (1979), p. 48.

58 Ibid., p. 35.

59 Ibid., p. 49.

60 Arthur C. Danto may be mentioned as another example of having misinterpreted Plato in this respect. In his discussion of the "theory that 'art is a mirror held up to nature' ", thereby using Plato as a paradigmatic proponent of this idea, he asks:

"Who needs, and what can be the point and purpose of having, duplicates of a reality we already have before us? Who needs detached images of the sun, the stars, and the rest, when we can see these things already, and since nothing appears in the mirror which is not already there in the world to be seen without it?" (Danto [1981], pp. 7–9.)

Plato's view on art, as described by Danto, cannot explain why we are interested in works of art that are supposed to be illusory reflections of the sensible world. Aristotle is mentioned as proposing a more sophisticated position, as he is aware of the fact that part of the pleasure we derive from artistic imitations is our knowledge "that it is an imitation...and not real". Ibid., p. 14.

Generally speaking, mimetic theories of art do not necessarily define art as artifacts which neutrally reflect an external reality, nor do they require neutral copies as some kind of normative ideal. Indeed, there is an extremely strong and persistent tradition stemming from ancient Greece and with several subsequent variations in the history of aesthetics, according to which the function of art is to represent objects *qua* types. The proper models for imitation are not particular, empirical objects. Instead, works of art (ought to) represent general or typical features of things, organisms, human characters, actions, or states of affairs.

What exactly, though, are typical characteristics supposed to be? Understood in a *descriptive* sense, typical features could mean non-accidental, essential characteristics. In that case they would be the defining (i.e. necessary and conjunctively sufficient) features for something to belong to a certain class of objects. Typical features could also be regularly recurring ones; thus typicality would consist of some kind of quantifiable frequency. Sometimes typical characteristics are conceived in a *normative* sense, i.e. as features that contribute to an object's perfection. There are passages in Xenophon and Plato's writings which suggest this line of interpretation (without necessarily precluding the descriptive one).

These questions, however, will be discussed further on. I will begin this study with a review of the mimetic theories of art proposed by Xenophon, Plato, and Aristotle. It should be pointed out that, strictly speaking, their views do not concern *art* in a modern sense, but rather images, imitative activities, products resulting from such activities, and technê (i.e. any rational production or activity based on teachable rules). Still, there exists, I believe, a continuity between their theories and subsequent views on the function of objects which, seen from our present perspective, fall under the concept "art". Moreover, "genuine" theories of art which assumed definite shape during the eighteenth century are to a considerable extent influenced by classical thought and overlap with it. Thus in Chapter 2 the central ideas of a mimetic tradition concerned with the representation of types will be outlined.

Ernst Gombrich, whose important work "Art and Illusion" (with the subtitle "A Study in the Psychology of Visual Perception") was published more than 35 years ago, may be referred to as a relatively recent proponent of the view that pictorial art is concerned with the representation of types. His concern with the development of naturalistic Western art led him to investigate the psychological principles for the production and perception of visual representations. According to Gombrich, there is no "innocent eye", nor an innocent, neutral way of copying reality.

Instead, there are preformed expectations, categories, or "schemata" (partly due to socio-historical conventions) which the artist as well as the viewer employ when creating or perceiving depictions. Despite the numerous and unquestionably noteworthy examples mentioned by Gombrich in order to corroborate his thesis (and some scattered references to psychology) his work could be criticized for relying too much on advanced guesses and intuitions instead of genuine psychological research. Much has happened in the domain of empirical psychology during recent decades, and Gombrich's ideas appear from our present perspective to be somewhat obsolete. Nevertheless, his work has offered some remarkable insights on mimetic representation, and recent research done on cognition, object or pattern recognition and visual perception in general might give his approach further substantial and empirical strength.

There are two questions which lie at the heart of this study.

First, why are we interested in mimetic representations at all? As Aristotle himself noted, human beings are often fascinated by mimetic renderings per se, quite independent of the experienced value of the depicted objects. Thus we may enjoy works of art despite the fact that they depict unpleasant objects or activities, such as cadavers or acts of violence.

Second, is it possible to explain our interest in visual mimesis by taking psychological research into account? Philosophical aesthetics has usually been rather reluctant to give any special attention to psychology. Aestheticians have frequently attempted to solve theoretical questions concerning art by clarifying and defining certain concepts, by eliminating logical inconsistencies and by relying on their own intuitions and beliefs. Empirical studies of the arts—which, for example, disciplines such as psychology, sociology, neurophysiology, or anthropology may provide—are normally dismissed as quite irrelevant for philosophical aesthetics. In particular, analytic aestheticians have revealed a sceptical attitude towards incorporating empirical research into their domain and focused almost exclusively on the linguistic practice(s) concerned with art. Undoubtedly the strategy of analytic aesthetics has been useful in many respects, helping us to get rid of unjustified intuitions or prejudices (or to give some intuitions further strength). An essential presupposition for eliminating misunderstandings and achieving rationality or coherence in any art-theory discourse consists of having well-defined concepts. Thus it may be admitted that many problems of aesthetics demand conceptual or philosophical considerations. Accordingly, several proposals put forward by analytic aestheticians will be reviewed and discussed in this

study. Nevertheless, as I will argue at the end of chapter 2, empirical knowledge seems for several reasons to be highly relevant, even unavoidable, for solving some aesthetical problems (perhaps even including normative questions). In this respect my approach to the issues raised in this study will be rather meta-theoretical.

Now, the mimetic tradition having been outlined from a historical point of view will be conceived as some kind of theoretical raw data from which we may proceed. Thereafter I will attempt to discuss mimesis (as the representation of types) from a psychological perspective. However, first I intend to review some early philosophical suggestions according to which aesthetics should take empirical studies into consideration. Then some concrete attempts to solve some aesthetic problems by means of psychological-empirical research will be examined. I will begin with the first endeavours starting at the end of the 19th century, before I proceed to more recent and behaviouristically orientated investigations. It should be pointed out that art historians in contradistinction to aestheticians have shown a somewhat greater interest in psychological research. Most notable is perhaps the influence which Sigmund Freud and psychoanalytical methods have had on several art historians. There are numerous scholars which have attempted either to explain the creation of certain artworks by reconstructing the psychological profile of artists, while others have used psychoanalysis to interpret the overt or covert content of art. These two attempts do not of course necessarily exclude each other, but are sometimes interrelated. Psychoanalysis as a method used in art history, though, may be charged with being terminologically and methodologically inexact, thus giving room for arbitrary and idiosyncratic results. Empirical psychology (such as behaviourism or cognitive psychology), on the other hand, has the advantage of permitting empirical and statistical confirmation, which gives this approach a higher epistemic reliability. I will return to this topic in Chapter 3 where various attempts to bring empirical psychology and aesthetics together will be discussed.

In recent decades the behaviouristic approach in psychology has come under attack and successively been replaced by alternative research strategies. One of the major reorientations within psychology consists of a renewed concern with human consciousness. Cognitive psychology is a branch which has been explicitly concerned with mental states or processes such as perception, learning, object or pattern recognition, and mental representations. There is one field of research in particular which deserves mention, namely categorization and prototypicality research. As

I intend to show in Chapter 4, the results achieved from this psychological approach may give us some important insights regarding our interest in mimesis *qua* representation of types. Cognitive psychology may thus have some significant bearing on giving us a deeper understanding of why we care about mimetic representations as discussed by philosophers and aestheticians from Classical Greece onwards. Hence it seems that an empirical discipline such as psychology is highly relevant for clarifying some aesthetical questions. A basic tenet within cognitive psychology is the idea that human beings (and higher organisms in general) are capable of storing mental representations, which are employed in perception and object recognition. These images are frequently conceived of as general schemes or types which are learned on the basis of long-term, repeated exposure to regularly occurring events (objects, persons, actions, etc.) in the environment. Moreover, such representations may also involve ideal features of category members defined in terms of goal-efficiency (category members may possess characteristics which are considered to be efficient for achieving certain goals). In Chapter 5 some basic principles which seem to underlie our interest in pictorial material will be discussed. It will be argued that matches or discrepancies between mental representations and external information may result in affective responses, such as feelings of pleasure or displeasure. Findings from recent research in cognitive psychology suggest that congruity or moderate incongruity between these representations and stimuli can have hedonic effects. Pictorial material concerned with the representation of types may—more or less—correspond to mental schemata shared by groups of beholders. Dependent on the beholder's previous experience and expectations, pictorial representations demand various degrees of cognitive processing which may result in hedonic experiences.

2. HISTORICAL OVERVIEW: MIMESIS AS THE REPRESENTATION OF TYPES (MRT)

2.1 Introduction

THE PROBLEMS CONNECTED WITH the concept of representation (and cognates such as depiction, portrayal, etc.) in visual works of art have given rise to frequent discussions among contemporary aestheticians, and especially the common-sense view—according to which representation consists of the visual reproduction or imitation of external subjects, objects, events or states of affairs by way of similarity—has been the target of numerous critics during the last few decades.[1] Historically this view is one of the most persistent and dominating ones, and imitative or mimetic depiction has sometimes been regarded as a necessary or even sufficient condition for something to be an artwork. Furthermore, the idea that works of art essentially are imitations has usually resulted in normative positions according to which the value of an artwork to a considerable extent is determined by (i) the degree of similarity between the artwork and the imitated model, (ii) the value of the imitated model and (iii) the moral and/or cognitive value and/or effects of the artwork. Numerous variations of these ideas have been elaborated and defended by scholars theorizing about the arts in the course of the last two thousand years—more or less correlated with coexistent practices of art criticism and art production. Influential sources can be found in Classical Greece, and, perhaps most notably, in the works of Plato and Aristotle. Although later positions may differ in detail, there is still a noteworthy historical continuity with regard to several central ideas.

It is important, however, to bear in mind that so-called imitation theories of art may differ in at least three respects. First, we may think of

1 Such as, for example, Black (1972); Blocker (1979); Eco (1979); Goodman (1976); Bryson (1983); Walton (1993).

mimetic representation as the imitation of particular objects, subjects, actions, or states of affairs (i.e. a straightforward copy theory). Second, mimesis might also be conceived as the imitation of universals, abstractions, essences, or types. Third, imitation theories may also describe—or prescribe—mimetic representation as rendering certain idealizations (e.g. in terms of morality or beauty). Numerous contemporary textbooks and articles in aesthetics tend unfortunately to focus on the first version, usually in order to show its inadequacy as an all-embracing theory of art, or because of other deficiencies. The emphasis placed on this theory is, though, to some extent historically quite misleading. Indeed, it is doubtful whether any philosopher has in fact proposed such a view.[2] Some scattered remarks on these lines occur occasionally in Plato's dialogues (for example, as already mentioned, his comparison of mimetic representation with a mirror of nature), or in writings by Renaissance artists or critics such as Leonardo da Vinci or Giorgio Vasari (though by no means consistently and throughout). Thus a "simple" imitation theory has perhaps had some proponents among certain artists and critics, and it is probably a widespread view in everyday contexts. Still, virtually no philosophers or aestheticians have attempted to defend this position; rather, they have been concerned with the latter two versions.

The aim of this chapter is to present some significant aesthetic positions based on a view of art and/or pictorial representation as imitation—or, to be more exact, mimesis as the representation of general or idealized types. My approach is not primarily exegetical; instead I will attempt to sketch and clarify early lines of thought from which a main tradition in Western aesthetics seems to have emanated. This means that my presentation is intended to focus on certain ideas regarding the value and nature of mimetic representations, while more or less complex ontological or epistemological presuppositions related to these ideas, but which seem to fall outside the scope of this study, will to some extent be neglected. Furthermore, the terminological and argumentative ambiguity which occurs in numerous texts dealing with mimetic art (or related concepts) will be reduced, and it should be borne in mind that alternative interpretations may be legitimate. Thus my description of the following aesthetic positions will be somewhat simplified and schematized, though with the advantage that they are made more precise and easier to discuss. In this respect I have been influenced by the philosopher Anders Wed-

2 Cf. Stolnitz (1960), p. 110, p. 112, p. 116. See also Lee (1940), pp. 203–210, for an overview of scholars and artists proposing literal imitation or ideal imitation respectively.

berg's strategy for outlining the history of Western philosophy from ancient Greece onwards. According to Wedberg, it is important to be aware of the fact that any such attempt is something like a sketch, a schematic mode of presentation. He describes his account as follows:

> "In its original version, a theory can be likened to a face delineated by a multitude of interlacing strokes or fine dashes; my presentation of the same theory is like a drawing which depicts the face by a few simple lines. It is always possible to discern in the original picture—the philosopher's own words—several competing faces. I have then seized upon the one that has interested me most."[3]

Due to the ambiguity or vagueness of many philosophical statements, a fixation and clarification of their conceivable meanings is unavoidable, and the possibility of alternative interpretations should not be excluded. Moreover, when it comes to ancient texts, written in foreign languages, problems of incommensurability might arise. Because of the temporal and cultural distance (and language uses which sometimes are not directly comparable to ours), it is not always possible to give exact translations of the formulations used. To some extent the reconstruction of past aesthetic theories implies a constructive element, though, as I hope, without necessarily being idiosyncratic and unreasonable.[4] Lastly I would like to point out—as Wedberg also does—that my account not always is based on first-hand knowledge. First, due to the fact that I do not read ancient Greek, Latin, or Italian, I have had to rely on translations made by others—which for obvious reasons is unfortunate. Second, the extensiveness of the literature has sometimes forced me to adopt interpretations occurring in secondary sources. In particular, Göran Sörbom's work "Mimesis and Art" has been of considerable value in my attempt to sketch early Greek thoughts on mimesis.[5]

3 Wedberg (1982), p. 4.

4 Scholars influenced by post-structuralist theories of meaning have come to deny that interpretations in general have any validity whatsoever in terms of rationality or truth-value. This radical form of scepticism concerning the stability of meaning, understanding, and interpretation is, however, quite problematic and unconvincing. For a critical discussion and refutation of Jacques Derrida's view on these matters, see Ranta (1993).

5 Sörbom (1966).

2.2 The Continuity between Ancient and Modern Views on Art and Representation

IT IS QUESTIONABLE WHETHER art-specific considerations were discussed or had any explicit significance for the production of cultural artefacts in the West before the fifth century B.C. During the Paleolithic and Neolithic periods mainly pragmatic and magical-religious interests seem to have been the motivating factors for any cultural production. In ancient Egypt, for instance, the economic value of used metals and other materials, the everlastingness of buildings and other objects, and religious or political concerns appear to have played a far more important role than explicit aesthetic purposes.[6] Of course, this does not necessarily mean that aesthetic intentions had no importance at all or did not exist. Despite the fact that we have no knowledge of an art-specific discourse or terminology, the cultural production in, say, Egypt may nevertheless have been influenced by aesthetic considerations, i.e. by efforts to give their products qualities which—according to present standards—works of art may also possess.[7]

In Greece, however, a different awareness of functional or inherent properties distinguishing paintings, sculptures or dramatic performances from other objects or activities seems to have emerged during the Classical period (c. 480–323 B.C.). It has frequently been maintained that in texts from this period no concept of art is used that exclusively denotes the "fine arts", nor had clear-cut theories of art been elaborated.[8] If we, as Göran Sörbom claims, "by the term 'theory of art' mean statements that are intended to clarify the nature of art and by so doing draw the borderlines between art and non-art sometimes stated in the form of a definition of art", it seems to be a mistake to ascribe intentions like these to pre-Hellenistic writers such as Plato or Aristotle, who rather tried "to clarify the conception of image, not that of art".[9] Moreover, the ancient

6 Cf. Beardsley (1985), pp. 21–23.

7 For a similar point, see Beardsley (1982), p. 308, who criticizes Danto's proposal according to which theories of art are necessary for constituting works of art: "...Arthur Danto must be mistaken in his well-known view that it is theories that make art 'possible.' Danto says, 'It would, I should think, never have occurred to the painters of Lascaux that they were producing *art* on those walls. Not unless there were neolithic aestheticians.' Perhaps so; but it does not follow that they were not producing art. An art theory may make the *concept* of art possible, but that's not the same as making *art* possible. Unless there were neolithic microbiologists, it would not have occurred to the cave dwellers that their illnesses were caused by micro-organisms; nevertheless they died from them."

8 For instance, by Kristeller (1951), pp. 498–499.; Pollitt (1974), pp. 32–33.; Tatarkiewicz (1963), p. 231, p. 240; Sörbom (1992), p. 219.

9 Sörbom (1992), p. 217.

Greek term for art, *technê*, has a broader extension than our modern use of the term. *Technê*, or its Latin equivalent *ars*, was supposed to refer to any rational production or activity based on teachable rules, and could perhaps, as suggested by Pollitt, be translated as "organized knowledge and procedure applied for the purpose of producing a specific preconceived result".[10] This means that *art* was supposed to include the fine arts (i.e. sculpture, painting, music, poetry and perhaps architecture) as well as the crafts and sciences. Furthermore, the concepts of art and beauty were not always correlated, at least not before late Antiquity. Beauty (*to kallos* or, in its Latin translation, *pulchritudo*) could be achieved in works of art through the mastery of *symmetria* (i.e. measure and right proportions or "commensurability of parts", as suggested in the sculptor Polykleitos' *Canon*, fifth century B.C.)[11], but it was also associated with knowledge, morally desirable dispositions or patterns of behaviour, and the functional efficiency of objects in general. Beauty was neither considered to be a sufficient nor a necessary condition for something to be a work of art, i.e. objects which we nowadays would include among the fine arts. Lastly, we may note that the concept of imitation, or rather the group of mimesis-related expressions, is not specifically applied to objects representing reality (such as painting and sculpture), but also denotes the activity of imitating something else (in dramatic performances, ritual dances, and other contexts).[12] We shall return to this concept and some of its uses in the next section. Right now it is important to emphasize that the concepts of art, beauty, and imitation had a rather broad area of applicability in ancient Greece and only subsequently emerged into specifically aesthetic notions.[13]

Despite the fact that our current understanding of art, representation, and aesthetics may differ in important respects from views held in ancient Greece, these differences have sometimes been overstated. Paul Kristeller, for instance, maintains, probably correctly, that the "system of the five major arts, which underlies all modern aesthetics and is so familiar to us all, is of comparatively recent origin and did not assume definite shape before the eighteenth century..."[14], and he further claims that "ancient writers and thinkers, though confronted with excellent works of art and quite susceptible to their charm, were neither able nor eager to

10 Pollitt (1974), p. 32. See also Tatarkiewicz (1970 a), p. 26.

11 Pollitt (1972), pp. 105–106.; (1974), p. 14 ff., p. 256 ff.

12 See Pollitt (1974), pp. 37–41, Tatarkiewicz (1970 a), pp. 16–17, and especially Sörbom (1966), pp. 11–21 for detailed discussions of various meanings of mimesis-related terms.

13 Cf. Tatarkiewicz (1970 a), pp. 25–26.

14 Kristeller (1951), p. 498.

detach the aesthetic quality of these works of art from their intellectual, moral, religious and practical function or content, or to use such an aesthetic quality as a standard for grouping the fine arts together or for making them the subject of a comprehensive philosophical interpretation."[15] According to Wladyslaw Tatarkiewicz, "the ideas current in the classical aesthetics of the Greeks...seem aesthetically inadequate"[16] because of the broadness of their concepts, and "despite the numerous ancient classifications of the arts none of them separated out what is most important for aesthetics; none faced the possibility that fine arts could form a distinct group of arts."[17] Interestingly, though, Tatarkiewicz does not hesitate to categorize certain ancient lines of thought as *classical aesthetics*, though no sufficient explanation is given in which way ancient theories of *technê* and modern theories of art may have a common denominator (and thus in both cases the term *aesthetics* might be legitimate).

Indeed, most attempts to demarcate classical from modern *aesthetics* appear in several respects to presuppose or imply significant connections. First, ancient and modern theories are assumed to be at least partially coreferential, that is, some of the concepts used are seen as referring to the same types of objects or activities. The concepts used are not treated as incommensurable, and a relative ontological or functional stability and theory- (or concept-) independence of the objects or activities in question is taken for granted. Second, the existence of some kind of foundational continuity between ancient and modern views on art is regarded as almost self-evident. For many centuries certain texts from Antiquity have *de facto* been used and interpreted as theories of art, and their influence on modern aesthetics can hardly be denied. Third, a common trait in those ancient texts that deal with objects or activities such as dance, theatre, music, painting and sculpture is the stress on their imitative or *mimetic* function. The most systematic philosophical attempts during classical Antiquity to investigate the ontological, epistemological and functional status of these objects or activities with regard to their capacity to resemble or imitate something else—i.e. theories of imitation—probably appear in the works by Xenophon, Plato and Aristotle. Although being mimetic is neither a necessary nor a sufficient condition for something to be a work of *art* (antique *or* modern), numerous artworks have actually been created with the intention of imitating or representing something, and they have been used and evaluated accordingly. Thus

15 Ibid., p. 506.
16 Tatarkiewicz (1963), p. 231.
17 Ibid., p. 239.

Sörbom admits that "[in] a looser sense...it is possible to regard the theory of imitation as an art theory, namely in the sense that it is a theory that tries to say something important about a number of things that we nowadays call works of art".[18] Kristeller, according to whom no system of the fine arts actually existed during Antiquity, acknowledges that "the ancients contributed to the modern system...the theory of imitation that established a kind of link between painting and sculpture, poetry and music".[19] As already mentioned, during the last few decades it has become quite common among aestheticians to deny the possibility of offering an essentialist definition of art at all, i.e. to give a specification of its jointly necessary and sufficient conditions. Weitz, one of the first and most widely cited proponents of an anti-essentialist position in this matter, regards past attempts to define art as rather evaluative and stipulative than just descriptive and classificatory.[20] According to Weitz, there is no pervasive property shared by all objects which we are inclined to call art (or which in the future might be classified as such), and he suggests that art ought to be thought of as an open concept without necessary and sufficient conditions for its application. Inspired by Ludwig Wittgenstein's remarks concerning the nature of games and other open concepts[21], he claims that the concept of art is comparable to such concepts, thus being like a family whose members resemble each other in some, but not in all or in commonly shared respects. These complicated networks of similarities constituting the class of artworks are, borrowing a Wittgensteinian term, called *family resemblance*. Now if Weitz' position is tenable, neither ancient theories of imitation nor modern theories of art could justifiably be described as *theories of art*, if this presupposes, as Sörbom suggests, drawing "the borderlines between art and non-art sometimes stated in the form of a definition of art".[22] None of these types of theories would in a descriptive sense be correct *qua* art theories: if an anti-essentialist position is reasonable, a correct (all-embracing) theory of art has never existed, and cannot do so for conceptual reasons. According to Weitz, it is of course possible and legitimate to use stipulatively closed concepts of art for special purposes. We could decide to consider a certain view (for instance, Abbé Batteux's treatise "Les beaux arts réduits à un même principe" from 1746, which expresses the view that the imitation of

18 Sörbom (1992) p. 219.

19 Kristeller (1952), pp. 43–44.

20 Weitz (1956).

21 Wittgenstein: "Philosophische Untersuchungen" (Philosophical Investigations), esp. Part I, §§ 65–75, 1953; reprinted in Wittgenstein (1984).

22 See footnote 9.

beautiful nature is the principle common to the arts) as a theory of art.[23] In such a case it would be wrong to regard ancient ideas concerning (certain manifestations of) *technê* as theories of art, but this objection would also apply to other views (for example, George Dickie's institutional theory of art, or Immanuel Kant's view). If the category "art" overlaps with other categories—as outlined in section 1.2—theories of art demand necessarily a rather broad area of applicability—otherwise they would be too restricted and thus unconvincing. On the other hand, theories which attempt to elucidate the nature of various categories—including those which have (some) works of art as instances—do consequently also to some extent concern "art". Be this as it may, it is not obvious why attempts since the 18th century to find a common denominator for the "fine arts" deserve the classificatory title "theories of art", whereas ancient theories of imitation or *technê* are thought of as being concerned with something completely different or incomparable. Moreover, as already noted, it seems undeniable that the latter have subsequently been interpreted and used as theories of art, and as such have exerted a considerable influence on aesthetic discourse.

Lastly, it seems quite clear that the notion of imitation—being the object of attention in numerous texts concerning the arts—refers to an important functional or inherent feature characterizing numerous, though not all, artistic objects and activities such as paintings, sculptures, music, dance, and so on. This feature could thus probably be ascribed a paradigmatic significance in constituting a family resemblance among works of art as well as theories of art—a question to which we will return later on. Now, in the next section we shall take a closer look at Plato and Aristotle's lines of thought concerning mimetic representation. However, I shall begin with Xenophon's remarks on this subject, which—apart from the fact that they probably reflect Socrates' views quite authentically—deserve some attention as one of the first attempts to distinguish painting and sculpture from other arts or activities.[24]

2.3 Ancient Views on MRT

Xenophon

The concept of imitation, or rather the term *mimesis* and related expressions[25], occurs in several writings from ancient Greece, though probably not before the fifth century and not always in art-related contexts.[26] Actions in general may be described in mimesis-related terms (for

instance, when performed with the intention of deceiving beholders, or resembling other people's behaviour), as well as the behaviour of actors in dramatic performances. Being mimetic is not a feature that is restricted to works of art (i.e. our fine arts), and only particular artworks in concrete situations are characterized as being mimetic.[27] Xenophon (c. 431/425–354 B.C.), on the other hand, is one of the first writers who appears to use mimesis-related terms to describe a distinctive characteristic of a class of objects, i.e. painting and sculpture. In his *Memorabilia*, passages can be found which seem to suggest something like an attempt to circumscribe or perhaps to define visual artworks and to propose a criterion for evaluating them. For instance, Socrates is reported as having argued in the following way in a discussion with Parrhasius:

> "'Well, then, Parrhasius, is painting an image-making...of the things we see with our eyes? In any case, you (painters) represent..., don't you, bodies that are high and low, in light and in shadow, hard and soft, rough and smooth, young and old, when you make images...by means of colours?'
>
> 'That is true', Parrhasius answered...
>
> 'And when you assimilate your beautiful figures...you collect from many individuals what is most beautiful in each of them, because it is not easy to hit upon a person that has everything without blame, and make in this way the bodies appear to be beautiful all over.'
>
> ...'Yes, we make them in this way.'
>
> [...]
>
> 'And further', he said, 'do you think those people look more pleasant in whom beautiful and good and desirable dispositions come to light than those in whom ugly and base and hateful dispositions come to light?'
>
> 'By God! It makes a great difference', he answered."[28]

23 Cf. Kristeller (1952), p. 20–21.

24 Cf. Tatarkiewicz (1970 a), pp. 100–101.

25 That is, the verb *mimesthai* and the nouns *mimos* and *mimema*. See also footnote 12.

26 See Sörbom (1966), p. 27 ff., according to whom the term mimesis and its cognates occur 63 times in texts from the fifth century, though only 19 times in relation to works of art. The latter uses can be found in writings by, for instance, Aeschylus (525–456 B.C.), Herodotus (c. 490–425 B.C.), Aristophanes (c. 455–385 B.C.) and Euripides (c. 480–406 B.C.).

27 Ibid., p. 78.

28 Ibid., p. 83–85 (*Memorabilia*: III. 10.1–5). Trans. by Sörbom.

Pictures and sculptures are characterized as representing or imitating something else by means of similarities or by having the same properties as the things imitated.[29] Although primarily visual phenomena are said to be exhibited, it is also claimed that dispositions and states of mind may be represented by depicting their visible manifestations, i.e. as facial or bodily expressions. In a subsequent discussion between Socrates and the sculptor Cleiton it becomes apparent that the rendering of lifelike qualities, or depictions of humans as units of body and soul, is regarded as quite important.[30] Further, the representation of (visually revealed) mental states, though only pleasing ones, is supposed to produce feelings of enjoyment in the beholders.

Even a passage as early as that quoted above the passage quoted above indicates that the so-called theory of imitation is far from as simple and uncomplicated as numerous descriptions in various textbooks on aesthetics or art history suggest. Works of art are obviously not expected to imitate particular objects or individuals: a relation of similarity is rather required between the artwork and an idealization or an embellishing generalization (or, as Sörbom proposes, some kind of "mental image"), being the result of observations of several particular objects or persons (the actual models which are more or less similar to the general image).[31] Indeed, this requirement seems to agree with artistic practices from the Archaic and Classical periods where the visualization of relatively essential and stable characteristics of human beings, emotions, animals, etc. had probably been attempted. Portraits of individuals are exceptions and recognizable only because of complementary inscriptions or attributes. Representations of persons show types like "the warrior", "young standing man", and so on, or figures from historical or religious myths. This tendency towards the generic is perhaps most notable in Archaic art and diminishes successively during Antiquity.[32]

29 See ibid., p. 83, note 14, for slightly different connotations of the words used in this passage referring to mimetic relations.

30 See also ibid., pp. 93–94, and Sörbom (1994), where depictions of human figures made in Classical Greece, intended to exhibit an organic interplay between body and soul, are said to be radically innovative in this respect compared to Egyptian or Archaic paintings and sculptures.

31 Cf. Sörbom (1966), p. 88–90. Sörbom considers, with regard to this passage, the "model" of the artist to be a rather value-neutral generalization of particular things, though in this passage rather the collection of valuable characteristics is said to occur. —Something like a mental image seems to have been indicated in the following passage from Xenophon's Symposion (IV.21): "Do you not know that I have so clear an image...of him in my heart that had I ability as a sculptor or painter I could produce a likeness...from the image as well as if I were looking at him." Trans. by Todd (1947) and Sörbom (ibid., p. 88, note 26).

Xenophon's text appears in this respect to be compatible with more widespread views among his contemporaries concerning the visual arts, and the same may also be the case with those passages which seem to propose evaluative guidelines.[33] Represented feelings and lifelike qualities in general are said to give the beholders "enjoyment", but manifestations of "good and desirable dispositions" look even more "pleasant". Interpreted as value judgements, and not (only) as commentaries on probable hedonistic effects which certain works of art may have on beholders, these passages appear to suggest that the value of a work of art is dependent on the value of the represented content.[34] Pictures representing 'beautiful' or 'good' dispositions or figures are valuable because of those dispositions or figures' value. Not just any represented states of mind are acceptable, only the 'desirable' ones. Moreover, the degree of similarity between an artwork and what it represents seems also to be of importance. Lifelike features, for instance, "make...sculptures look more similar...to the real figures and more convincing", as Socrates claims in the conversation with Cleiton.[35] Formal or stylistic qualities which artworks may have are not taken into consideration. In conclusion, then, we may discern a line of thought in Xenophon's writings which can perhaps be formulated as follows:

(i) X is a mimetic object (for example, a painting or a sculpture) if X represents, and is similar to, (mentally imagined) embellished generalizations (idealizations) of external, perceivable objects or subjects.

(ii) The value of X is dependent on
a) the degree of similarity between X and the imitated generalization,
b) the value of the imitated generalization.

32 Cf., for instance, ibid., pp. 50–52, pp. 88–90.; Pollitt (1972), p. 6, p. 96, pp. 195–196.

33 See also Sörbom's argument (ibid., pp. 81–82): "Xenophon's position may very well have been shared by the average educated Athenian...Essential to Xenophon was to show, in his *Memorabilia*, that Socrates benefited his compatriots and that, hence, his execution was a disgusting deed. Xenophon argues that Socrates benefited even artisans by his conversations with them. In the discussions Socrates points out important traits of their crafts and, by making the artisans conscious of them, these traits could be more distinctly and effectively brought out in their subsequent creations. If this argument was to have worked effectively Xenophon cannot have diverged too much from the commonly accepted view. Otherwise his readers would not have understood in what way the artisans were benefited and his plea for Socrates would have failed."

34 Cf. ibid., pp. 92–93, pp. 94–95.

35 Ibid., p. 86.

Plato

The philosophical work of Plato (c. 428–c. 348 B.C.), and his spokesman Socrates (whose own thoughts are commonly assumed to be more salient in the earlier dialogues), has undoubtedly had an enormous impact on Western philosophical, religious and political thinking for more than two thousand years. Explicit traits can, for instance, be found in works from later antiquity and the Middle Ages (e.g. Plotinus and St. Augustine), the Renaissance (e.g. Marsilio Ficino) and Romanticism (e.g. Friedrich Wilhelm Schelling). Even today the relevance of numerous of Plato's thoughts is unquestionable, not only in philosophical contexts, and several of his questions and proposals still deserve thorough discussion. One example is his view on art, which—despite its dubious metaphysical ingredients—appears to have some kind of *prima facie* plausibility and is still deep-rooted in our common-sense beliefs concerning the function, value, and dangers of art.

Plato's most important doctrines about art are commonly assumed to occur in dialogues like the *Sophist*, *Laws*, and especially *Republic* (which do not belong to his earliest period and thus may be relatively independent from Socrates' own thoughts), where he presents a body of ideas concerning mimetic objects and practices, which are closely related to his political philosophy and his approach to semantic and ontological issues. In many respects his discussion is far more elaborate and complex than Xenophon's, but both share the conviction that paintings and statues (in Plato's case also music, theatre and dance) function mimetically in some sense. Being mimetic, however, is, according to Plato, a characteristic that is not restricted just to works of art. In the dialogue *Cratylus*, for example, it is claimed that names are similar to and imitate the things they designate, though only with regard to the designated objects' essential qualities.[36] Names seem somehow to resemble non-perceivable and general conceptions of the things they refer to. Works of art, on the other hand, are imitative in that they exhibit perceivable and contingent qualities of objects, like their colours, shapes, sounds, etc. Furthermore, objects in general are mimetic, as they are supposed to be imitations of their archetypes, i.e. their Forms or Ideas. The world which we live in and perceive with our senses is supposed to consist of manifold phenomena or appearances like chairs, knives, houses, and so on. All these phe-

36 Plato, Crat. 422 D–423 E. The word "name" seems, according to Richard Richardson ("The theory of names in Plato's Cratylus", *Revue internationale de philosophie*, Vol 9, 1955, pp. 221–236, cited in ibid., p. 106, note 4), to refer to at least five different notions: the proper name, the name, the word, the noun, and the subject of predication.

nomena lack perfection in some sense, they have contradictory properties (such as being beautiful *and* ugly, or small *and* big, at the same time—due to the fact that they may be compared to diverse phenomena at the same time), and they are not immutable. The ideal Forms, on the other hand, which perceivable phenomena participate in, and are imitations of, are unchangeable and eternal. For instance, a couch belonging to the world of phenomena has numerous contingent qualities (like a certain colour, weight, length, economic value, etc.), but conforms also—to some extent—to the Form of a couch, i.e. its ideal function and efficiency. Forms exist independently from appearances and have thus a different ontological status.

Works of art are objects that do not imitate Forms, but rather phenomena. A sculpture participates of course in Forms such as "sculpture" and perhaps, for instance, "beauty" or "verticality" (as all other beautiful and vertical objects do), but artworks are not capable of mimetically representing any Forms.[37] Instead of instantiating the essential being or function of things, artworks just imitate the way things look like, seen, for example, from a certain angle or distance. They are superficial and delusory imitations, appearing to be, but not really being, the things they represent. Actually, artworks must necessarily deviate from the things they imitate. The degree of similarity—or the number of shared properties—between an artwork and the imitated thing must be limited, otherwise it would be more reasonable to talk of another example or duplicate of the thing in question.[38] Moreover, artistic mimesis is presumably not supposed to be the same as imitating particular phenomena or to having some kind of "photographic" realism as an ideal goal (though Plato's views on art have repeatedly been interpreted along these lines). One passage in particular from the *Republic* is frequently cited or referred to in order to illustrate this:

> "'Well, now, see what you call this craftsman here...For this same manual artisan is not only able to make all implements but also everything that grows naturally from the earth, and he produces all animals...'
>
> 'That's quite a wonderful sophist you speak of,' he said...

37 For an explicit denial that paintings imitate Forms, see Plato, *Rep.* 598 A (Bloom [1968], p. 281): "'..Toward which is painting directed in each case — toward imitation of the being as it is or toward its looking as it looks? Is it imitation of looks or of truth? ' 'Of looks,' he said. 'Therefore, imitation is surely far from the truth; and, as it seems, it is due to this that it produces everything — because it lays hold of a certain small part of each thing, and that part is itself only a phantom.'"

38 Plato, *Crat.* 432 (Plato [1997], p. 148).

'It's not hard,' I said. 'You could fabricate them quickly in many ways and most quickly, of course, if you are willing to make a mirror and carry it around everywhere; quickly you will make the sun and things in the heaven; quickly, the earth; and quickly, yourself and the other animals and implements and plants and everything else that was just now mentioned.'

'Yes,' he said, 'so that they look like they *are*; however, they surely *are* not in truth.'

'Fine,' I said, 'and you attack the argument at just the right place. For I suppose the painter is also one of these craftsmen, isn't he?'

'Of course he is.'" [39]

Now, although the sensuous and perceivable qualities of phenomena are represented, this does not mean that they are not idealized. Artworks seem, at least as a rule, rather to imitate general conceptions or types of phenomena than particular and concrete ones (which is not the same as imitating the Forms being instantiated by phenomena).[40] As, for example, Sörbom claims, the artist's model is not assumed to be an individual phenomenon, but a collection of phenomena, resulting in the representation of ideal types. In the *Republic*, for instance, Plato explicitly denies that "...a painter is any less good who draws a pattern of what the fairest human being would be like and renders everything in the picture adequately, but can't prove that it's also possible that such a man come into being..."[41] Such patterns are quite obviously not conceived of as Forms: the latter are non-perceptual and thus impossible to visualize, e.g. in a painting. This and other passages may be interpreted as a view on artistic mimesis which stresses the representation of general characteristics of objects as well as of characters and actions—though, as it seems, primarily their good-making features.[42] The similarity of this view to Xenophon's is quite obvious, and also in accordance with artistic practices from that time. In both cases it seems as if some kind of mental images are necessary in order to produce mimetic objects. First, according to Plato even non-existent objects or subjects may be imitated, such as fictitious or mythological figures. In such cases works of art would be mimetically related to imagined phenomena, i.e. inner images. Second,

39 Plato, *Rep.* 596 B–E (Bloom [1968], pp. 278–279). Cf. also Sörbom (1966), p. 131, pp. 139–140.

40 Cf. Sörbom (1966), pp. 117–121; pp. 142–145; p. 171.

41 Plato, *Rep.* 472 D (Bloom [1968], p. 152). In this quotation the Greek term "paradeigma" — which means something like "ideal pattern", "model", or "sample" — has been translated as "pattern", which should be distinguished from Platonic Ideas or Forms (i.e. "eidos" or "idea").

42 Cf. Plato, *Laws* 829 C; Sörbom (1966), pp. 171–172.

images in general do not have to share (sensuous) properties with concrete imitated things, such as portraits of individuals have to. Rather, they "resemble" mental images which we have abstracted from the world of appearances. Put in another way, pictures exhibit something like "concrete universals" which correspond to mental images which we, artists as well as beholders, previously have created through observation by means of the imaginative faculty (*fantasia*). According to Sörbom,

> "[the] concrete universal can...be an ideal of a given class or a type of a given class of things showing their perceptually characteristic traits. It is the kind of universal the faculty of fantasia can produce. It is a compound of perceptual qualities conceived in the mind and eventually rendered in some material in order to make it accessible to others. It is the work of the image maker to conceive of what is perceptually most characteristic, typical or ideal of a given class, youthful, male nude for instance, and then by his craft exhibit this inner image to the rest of mankind."[43]

Despite the fact that mimetic objects may reveal some kind of universality, they should nevertheless be regarded with suspicion: they are only capable of imitating contingent appearances or sensual phenomena. If phenomena deviate from the essential reality which the Forms constitute, and artworks deviate from the phenomena they depict, then artworks are, according to Plato, twice removed from this essential reality. Works of art are not capable of giving us fundamental knowledge of reality, only of its accidental manifestations, and no genuine knowledge of reality is required to produce art. Nevertheless artists, and especially poets, may give the false impression that they really have knowledge about the things represented, and together with the habit-forming power of art this might have morally devastating consequences.

Although works of art are systematically false and deceptive in a factual sense, Plato admits the possibility that they may have some value in a moral sense. When discussing mimetic arts like poetry, drama and "music" (i.e. tunes accompanied by words or dance movements), Plato demands that these arts—probably also paintings and sculptures—have a morally good subject-matter or content, and that this content be represented correctly. Plato seems to claim that they have the capacity to express general ideas or statements such as, for instance, "the god is not

43 Sörbom (1987), p. 27.

the cause of all things, but of the good".[44] Art should be condemned "...if the lie a man tells isn't a fine one", that is, "[when] a man in speech makes a bad representation of what gods and heroes are like, just as a painter who paints something that doesn't resemble the things whose likeness he wished to paint."[45] Moreover, moral dispositions are supposed to manifest themselves in the behaviour, movements and gestures of people. Works of art that represent this overt behaviour reveal at the same time the inner characteristics of the persons represented. According to Plato the moral value of these characteristics usually determines the moral value of artworks that represent human behaviour. It should further be noted that sometimes the degree of similarity, or fidelity, between mimetic object and its model is regarded as a criterion for evaluating a work of art. For example, a good "judge" of artworks is described as someone who, apart from being able to identify the representational content and to estimate its moral value, can also assess the "correctness" of the representation. There are, for example, questions concerning a work of art such as the following which he must be able to answer in order to make a value judgement: "...[Does] it preserve the overall proportions of the body and the position of each of its various parts? Does it hit off the proportions exactly and keep the parts in their proper positions relative to one another? And what of their colours and contours? Have all these features been reproduced higgledy-piggledy?"[46]

Plato's view on mimetic representations is to a considerable extent connected with his political philosophy and his conception of an "ideal city". Art has to be judged by standards of truth, and if this is understood as some kind of correspondence to reality, art has generally a very low cognitive value. On the other hand, works of art may be evaluated according to standards of moral truth, in the sense described above. Although mimetic works of art ought to be morally correct, the fulfilment of this requirement is not supposed to be an end in itself. The main purpose of art is to stimulate the citizens in an "ideal city" to behave in a morally correct way. To perform mimetic actions (as in songs, dances, or drama), or just to behold them, may condition the participants or beholders to act in a way that is similar to the actions represented in mimetic art—for better or worse. Young citizens in particular are easily to be influenced by means of concrete exemplifications of behaviour, and participating in mimetic performances which have a morally correct subject-matter

44 Plato, *Rep.* 380 C (Bloom [1968], p. 58). Cf. Sörbom (1966), pp. 117–121.
45 Plato, *Rep.* 377 D—E (Bloom [1968], p. 55).
46 Plato (1970), p. 109 [*The Laws* 668].

ought to be a basic element of their education. Though mimetic arts cannot give their participants or beholders any genuine knowledge, either factual or moral, their representational content may, because of the simultaneously occurring pleasure, result in a conditioned disposition to experience real patterns of behaviour as pleasurable.[47] Indeed, Plato admits to some extent that the occurrence of pleasure may be used as a criterion for evaluating mimetic works of art, but with the qualification that this pleasure is experienced by virtuous and well-educated citizens. Basically, though, artistic value is determined by an artwork's moral content and effects, and in the "ideal city" only art ought to be permitted which represents a morally correct subject-matter faithfully.[48]

Despite the fact that Plato also discusses formal properties like measure or proportion and their capacity to constitute beauty, these features do not appear to be as essential to works of art as their mimetic aspects. Art may be beautiful, and thus participate in the Form of beauty, but so may human bodies and all kinds of objects. Beauty is not supposed to be a distinctive characteristic of artworks. There are numerous intricacies and ambiguities in Plato's view on mimetic representation, which, however, seem to be less relevant for the issues raised in this study. To sum up, then, we may discern a line of thought in Plato's writings which might be condensed into the following statements:

(i) X is a mimetic object if X represents, and (to some extent) is similar to (mentally imagined) idealized types of perceivable or imagined objects, subjects, characters, or actions.

(ii) The value of X is dependent on
a) the degree of similarity between X and the imitated type
b) the moral value of the imitated type (or subject-matter)
c) the moral effects of X on the part of the beholders of or participants in X.[49]

47 Plato, *The Laws* 655 D–656 B. Cf. Sörbom (1966), pp. 167–170. —It should be pointed out that this last argument occurs in a discussion about "music" and choir-dances, but there is no reason to suspect Plato to have judged other art forms as exceptions in this respect. Plato believes in some kind of general psychological rule according to which representations of good or bad moral characters or patterns of behaviour are internalized by the participants or beholders of mimetic art, resulting in corresponding dispositions or habits.

48 Sometimes, however, art with morally incorrect subject-matter should be allowed "...in order [to influence the citizens] to avoid ever doing or saying anything ludicrous, through ignorance..." (Sörbom (1966), p. 170; Plato, *The Laws* 816 E). Thus art might have positive moral effects despite morally bad content.

49 Normally (ii) b and (ii) c seem to be correlated, but not necessarily. See footnote 48.

Aristotle

Aristotle (384–322 B.C.), having been a student and teacher at Plato's academy in Athens for about 20 years, shares the conviction that works of art are essentially imitative, but his approach to art deviates in substantial ways from Plato's. Art is not seen as morally or cognitively suspect, but rather as an important means of affording genuine knowledge and valuable emotional experiences. Aristotle's discussion of art, in the treatises *Politics*, *Rhetoric*, and especially *Poetics*, is mostly focused on poetry, drama and music, but a number of remarks on painting and sculpture occur in relation to these main topics. His *Poetics* has often been interpreted as implying a general theory of art, and is probably one of the most influential works in the history of aesthetics. Its significance as authoritative antique source is apparent in art theoretical debates during, for instance, the Middle Ages (e.g. St. Thomas Aquinas), the Renaissance[50], the Enlightenment, and Romanticism (e.g. Johann Wolfgang von Goethe).

Although Aristotle uses mimesis-related terms in shifting contexts, referring to imitative actions and the productive crafts in general, a specialized use of *mimesis*—applied to the creation of likenesses by means of artistic media such as colour, shape, and sounds—occurs in numerous passages in the *Poetics*.[51] At the beginning of the treatise the various arts are claimed to be distinguished from each other with respect to the medium, the objects that are represented and the methods for representing them.[52] While some arts consist of imitating "a variety of things by means of shapes and colors, making visible replicas of them", others (i.e. the musical/poetic arts) "carry on their imitation through the media of rhythm, speech and melody".[53] The objects of poetic works of art differ according to the implied moral value of the actions they represent (i.e. tragedies imitate the behaviour of people with a higher, and comedies those with a lower, moral value than the average). A comparable distinction may also apply to the visual arts, whenever they represent human actions: "Since those who imitate men in action, and these must necessarily be either worthwhile or worthless people..., it follows that they imitate men either better or worse than the average, as the painters do—for Polygnotus used to portray superior and Pauson inferior men..."[54]

50 Especially in Italy, after the publication of the *Poetics* in Latin (1498) and Greek (1508). Cf. Beardsley (1966), p. 134.

51 See Sörbom (1966), pp. 177–180; pp. 196–197.

52 Aristotle (1967), 1447 a–1448 a; pp. 15–18.

53 Ibid., 1147 a, p. 16.

Aristotle's main interest lies, however, in the art of poetry or drama, and neither in this passage nor in the following one, which differentiates between possible modes or manners of imitation, is anything said about visual works of art that do not imitate "men in action". In the *Politics*, on the other hand, Aristotle maintains that *ethos*, the (morally good *or* bad) character of persons, may be indirectly represented (i.e. in dramatic performances, painting and sculpture) by imitating the bodily manifestations of it. The indirect representation of *ethos* does not necessarily presuppose the imitation of human activities: physiological features of persons might as well indicate certain moral dispositions.[55] Moreover, the encounter with paintings that represent *êthos* (i.e. *good* character) might have morally desirable effects on the youth: "...[The] young should not look at the works of Pauson but rather at those of Polygnotos, or any of the painters or sculptors who is *êthikos* [concerned with *êthos*]."[56]

Aristotle's view concerning the possible representation of ethos resembles Plato's [57], and both are convinced that the capacity of art to represent characters may influence people's behaviour and thus is educationally important. Significant differences remain, though.[58] Aristotle has not the same suspicion about sensory perception as Plato, and he does not accept the theory of Forms (which he explicitly criticizes in his *Metaphysics*). Particular things, animals or persons are not at all pale reflections of a higher reality, but are ontologically prior to abstractions such as species, genera or forms. The forms or functions of particulars do not exist independently from their material manifestation. The observation of sensible objects is presupposed as a necessary condition for getting at least some genuine knowledge and Aristotle's epistemology has undoubtedly stronger empiricist tendencies than Plato's.[59] Generally speaking, Aristotle's interest in the sensible world seems to permit a more generous attitude toward imitative works of art and their ability to afford knowledge.

54 Ibid., 1148 a, p. 17.

55 Cf. Sörbom (1966), pp. 183–184.

56 *Politics*, 1340 a 33, in Pollitt (1965), p. 230.

57 It should be noted that this stress on the rendering of characters in works of art conforms to a general shift of artistic interests since the Early Classical period, i.e. 480–450 B.C. Cf. Pollitt (1972), pp. 43–50.

58 According to Pollitt (1965), p. xvi, a "significant group of writers on ancient art might be called the *moral aestheticians*, and would include Plato, Aristotle and the other Greek philosophers who judged art *chiefly* by its capacity to influence man's moral awareness and behavior" (last italics by me). This comment is, with regard to Aristotle, undoubtedly a gross oversimplification, as the following pages will reveal.

59 Cf. Randall (1960), pp. 95–98.

In the *Poetics*, it is claimed that "[since] the poet is an imitator just like a painter or any other image-maker, he must necessarily imitate things one of three possible ways: (i) the way they were or are, (ii) the way they are said or thought to be, or (iii) the way they ought to be."[60] Now, although image-makers may choose between each of these subject-matters—that is, (i) historical or present, (ii) religious or mythological, and (iii) morally correct events or persons—, Aristotle requires that the chosen topic be constructed according to the "rule of probability and necessity" and thus exemplify a typical situation or event.[61] The goal of artistic mimesis is not to represent particular phenomena *per se*, but to present them as somehow universal:

> "[The] poet's job is not to report what has happened but what is likely to happen: that is, what is capable of happening according to the rule of probability or necessity. Thus the difference between the historian and the poet...lies in the fact that the historian speaks of what has happened, the poet of the kind of thing that *can* happen. Hence also poetry is a more philosophical business than history; for poetry speaks more of universals, history of particulars. "Universal" in this case is what kind of person is likely to do or say certain kinds of things, according to probability or necessity; that is what poetry aims at, although it gives its persons particular names afterward; while the "particular" is what Alcibiades did or what happened to him."[62]

For Aristotle, generalizing features like these are essential, and the omission of them is a far more serious defect than the occurrence of unrealistic details in artistic representations. As the proposed subject-matters mentioned above indicate, the notion of imitation should not be understood in too narrow a sense: both existing and imagined phenomena may serve as models for mimetic artworks, and criticizing a work because "the imitation is untrue" might miss the point that "perhaps it was done as it ought to be"[63]. Furthermore, even in cases where existing particulars are imitated, it is not sufficient just to imitate them *qua* particulars, but rather as instantiating essential and typical characteristics. This could, for example, mean that the rendering of the actual appearance of Homer is not

60 Aristotle (1967), 1460 b, p. 67.

61 Even historical subject-matters may exemplify typical events. See ibid., 1451 b.

62 Ibid., pp. 32–33.

63 Ibid., 1460 b, p. 68.

64 Richter (1965), pp. 47–48, in an analysis of two portraits from the Early Classical period representing Homer.

as important as the representation of him *qua* poet, maybe as "an inspired man in deep contemplation" or as "benevolent, dignified, removed"[64].

Art may give us essential knowledge about human behaviour and the sensible world, and knowledge is required to produce good art. We can learn something about how people, gods and heroes usually—under certain circumstances—act (or ought to act). Artists, on the other hand, must have insight into the motives, needs, fears, habits, etc. which might determine human (or godlike) behaviour.[65] Apart from this, the recognition of likenesses is a cognitive activity which gives us enjoyment. Aristotle is convinced that it is natural for human beings to feel pleasure when encountering mimetic representations (due to the fact that all cognitive activities are supposed to be pleasurable). In his *Rhetoric* he writes:

> "And since learning and admiring are pleasant, all things connected with them must also be pleasant; for instance, a work of imitation, such as painting, sculpture, poetry, and all that is well imitated, even if the object of imitation is not pleasant; for it is not this that causes pleasure or the reverse, but the inference that the imitation and the object imitated are identical, so that the result is that we learn something."[66]

In Aristotle's view the enjoyment of art and the acquisition of knowledge through it are clearly not incompatible. Indeed, as he claims in the *Poetics*,

> "...the habit of imitating is congenital to human beings from childhood..., and so is...the pleasure that all men take in works of imitation. A proof of this is what happens in our experience. There are things which we see with pain so far as they themselves are concerned but whose images, even when executed in very great detail, we view with pleasure. Such is the case for example with renderings of the least favored animals, or of cadavers. The cause of this also is that learning is eminently pleasurable...[In] the process of viewing they find themselves learning, that is, reckoning what kind a given thing belongs to: 'This individual is a So-and-so'."[67]

65 Cf. Beardsley (1966), p. 63.: " ...Aristotle's point is simply that to make a coherent and powerful plot, the poet must show how actions grow out of motives and motives out of circumstances. But this can be done only in terms of universals, or psychological laws (that a man under such-and-such circumstances would necessarily or probably act in such-and-such way). Thus Aristotle is not saying that poetry is very philosophical, but only that it involves psychological knowledge (as, he thinks, history does not)...For though the poet can plausibly pretend to knowledge of shipbuilding or military strategy which he does not have, he cannot fake psychological knowledge — he must understand human nature...And, other things being equal, the better the play the more profound and extensive must the poet's knowledge be...Hence there is an important cognitive element in Aristotle's critical theory..."

Perhaps, as the philosopher Paul Woodruff suggests, one point of this passage is to assert that "[mimesis] starts with a particular object, and then calls our attention to the universal that is exemplified by that particular. At best, mimesis reproduces only selected features of its object...Generally, mimesis can present us with images that reveal the form that is common to a certain species..."[68] In order to achieve a mimetic representation, not even the direct observation of particulars seems to be absolutely necessary: there are passages in Aristotle's work which indicate that having something like an inner or mental image of the model in question might be sufficient for its mimetic rendering.[69]

Quite obviously, emotions evoked by works of art are not seen as being as harmful as Plato fears. Tragedies, for instance, are said to have the capacity to enhance feelings of "pity and fear by means of imitation" which—despite the tragic subject-matter (or plot)—may result in pleasurable experiences.[70] Although the subject-matter in itself is not pleasurable, our recognition that the events presented are not real, but are imitations (of interesting activities, i.e. human behaviour), causes enjoyment.[71] Moreover, the feelings aroused may result in a state of *catharsis*, a notion introduced by Aristotle in the *Poetics*, which usually has been interpreted as "some sort of therapeutic effect upon the audience's mental health, giving a pleasurable sense of relief."[72]

We may conclude this section by pointing to Aristotle's normative view on mimetic representations which bears some affinity to the adjunctive use of value judgements referred to earlier in section 1.1. In his *Metaphysics*, Aristotle claims that the explanation of a thing ought to include four conditions or *causes* that contribute to and constitute its existence. A mimetic object (X) could also be explained with reference to these causes, which are (i) the material cause (the material which X consists of), (ii) the efficient cause (the activity of the agent or agents who have produced X), (iii) the formal cause (the function and essence of X) and (iv) the final cause (the end or purpose for which X exists). Most important for Aristotle is (iv), which according to him often includes (ii) and (iii)—obviously there are not always clear-cut boundaries between these causes. Now, the value of things (and of human beings) may, at least sometimes, be determined by teleological considerations, that is, if and how they ful-

66 Aristotle, *Rhetoric* I, xi, 1371 b, quoted in Beardsley (1966), p. 57.
67 Aristotle (1967), 1148 b, p. 20.
68 Woodruff (1992), p. 87.
69 Cf. Sörbom (1966), pp. 195–197; Sörbom (1987), pp. 23–24.
70 Aristotle, *Poetics*, 1453 b 1–14.
71 Beardsley (1966), pp. 58–59.

fil the end for which they exist. Even works of art can be evaluated in this way if their function or end is known. With regard to tragedy, Aristotle claims that its principal part is its plot, which should preferably have good-making features such as unity, likeness, inevitability or prob ability, so that it may cause pitiful and fearful emotions, a cathartic relief and, finally, enjoyment. Tragedy is, because of its subject-matter, seen as the most valuable form of poetry, but it appears that this judgement is based on the intensity of pleasure afforded by its specific subject-matter.[73] Mimetic works of art are in general supposed to provide various kinds of pleasure, due to species-related means, manners and subject-matters, and if this is their functional purpose, Aristotle might be interpreted as suggesting a normative approach toward art with significant hedonistic ingredients.[74]

Aristotle's lines of thought so far suggest a conception of mimetic representations and related normative criteria that perhaps can be stated as follows:

(i) X is a mimetic object if X represents, and is (to some extent) similar to, (mentally imagined) types of perceivable or imagined objects, subjects, or actions.

(ii) The value of X is dependent on
a) the moral effects of X on the part of the beholders
b) the intensity of pleasure it may afford.

(iii) The intensity of pleasure that X may afford is dependent on
a) the degree of similarity between X and the imitated type
b) its subject-matter (preferably human actions or characters)
c) the general scope of its subject-matter (i.e. its probability or necessity)

2.4 Subsequent Views on MRT

AFTER THE PREVIOUS OUTLINE OF some paradigmatic views from Antiquity concerning mimetic representations we may now turn to some subsequent positions. As we have seen, mimesis is not conceived as the repre-

72 Ibid., p. 64.
73 Ibid., p. 58. Cf. also Sörbom (1966), p. 200.

sentation of particulars or individuals; instead, mimetic objects are at least sometimes said to render universal or embellished characteristics of things. Numerous variations on the Greek idea that artworks rather (ought to) represent general or idealized types instead of particular phenomena can be discerned in the history of art and aesthetics. For example Cicero (106–44 B.C.), Pliny the Elder (c. 27–79 A.D.), Maximus of Tyre and Philostratos (both 2nd century A.D.), and Plotinus (c. 205–270 A.D.) have expressed similar ideas. Indeed, it might be argued that the view on mimesis as the representation of types was relatively common from the 5th century B.C., though it sometimes was given an explicit and elaborated form, as done by the writers mentioned above.[75] Differences occur as regards the criteria for similarity and the models and properties that are recommended for imitation, but several classificatory, descriptive and normative principles are relatively stable.

The Middle Ages

Mimetic theories of art do not disappear altogether during the Middle Ages, although the similarity between an artwork and its model to a lesser extent is considered to consist of (straightforward) perceivable qualities. Instead, works of art imitate on a highly abstract and formalized level. For example, St. Augustine (354–430) claims that art is not imitation (animals imitate, still they don't have art), but on the other hand he regards formal properties (such as heterogeneous unity, proportion and number) as reflecting the cosmic order and the beauty, wisdom and goodness of God—that is, the most essential characteristics of the universe.[76] The Byzantine monk Theodorus Studites (759–828) has argued that images basically refer to God: the world is a creation and manifestation of God, thus all of its things refer to, partake in, and partially resemble God. In order to manifest the Divine visually, an artist may make use of general forms of sensual things (indeed, it is impossible to get a glimpse of the spiritual without using the roundabout way via the physical) which correspond to the Divine ideas; accordingly, works of art are not just simple reproductions of particulars, although they nevertheless have to take nature into account.[77]

Formal/symbolical considerations strongly influenced abbot Suger

74 Cf. Oates (1963), pp. 359–362.

75 Cf. Sörbom (1987), p. 13, and the general discussion and overview in his paper. See also Tatarkiewicz (1970 a).

76 Especially in poetry, music and dance, and to a lesser degree in painting and sculpture.

77 See Tatarkiewicz (1970 a), pp. 41–47.

78 Cf. Simson (1962), chapters 2 & 3.

and his followers' plans for the construction of Gothic cathedrals during the twelfth century.[78] The church was generally seen as an earthly version of the kingdom of God, the vault symbolized heaven, square stones the four virtues, and the use of twelve columns the number of apostles. Most details, such as the use of windows and light, geometrical forms, or expensive materials, had symbolical significance.[79] The relationship between a work of art and its object was not supposed to be arbitrary and conventional, rather some kind of natural similarity between properties considered to be universal, essential and stable was postulated.

Lines of thought like these can also be found in the works of Thomas Aquinas (c. 1225–74) and other scholastic thinkers.[80] According to Aquinas, artworks do not simply copy natural objects, but they imitate general or exemplary forms of things (which basically stem from God). For example, an architect or a painter may have a general idea of an object which functions as a model for the imitative act. Moreover, the artist's experience of nature enables him to think of non-existing things which can be realized through dividing, combining and rearranging existing things.

Generally speaking, medieval aestheticians stressed the importance of non-contingent truths, religious symbolism, and intellectual art. Thus the rendering of the sensory world's particular and temporal characteristics was regarded as more or less incompatible with such ambitions. As Tatarkiewicz, regarding the visual arts, puts it,

> "[a]n art whose subject-matter could only be conveyed by means of signs or symbols suited those whose chief interest was in the transcendental...There was no need to portray...[an object] accurately or with its peculiarities. It was only meant to jog the memory or recall an idea. To do this, a schema was enough, better even than an accurate portrayal. Thus painting in the Middle Ages made abundant use of schemata...This schematic and cryptic approach to painting applied even where the artist portrayed the real world, which he did by means of schemata. He used a certain number of types of faces and figures, each of which had an established meaning and was a sign of some characteristic." [81]

To some extent, then, the medieval view of art as imitating essential or schematized qualities of things could be interpreted as a more radical

79 Cf., for example, Tatarkiewicz (1970 a), pp. 144–146.
80 Cf. Eco (1986); (1988), pp. 165–172.
81 Tatarkiewicz (1970 a), p. 152.

variation on the Greek view that mimesis consists of the representation of typical or general characteristics of objects or subjects.

The Renaissance

The aesthetic interest in mathematical ratios and formal/schematic characteristics survives during the Renaissance, though the stress on some kind of spiritual symbolism diminishes, and the "imitation of nature" as revealed through immediate perception becomes an artistic goal recommended by, for example, Leon Battista Alberti (c. 1404–72), Leonardo da Vinci (1452–1519) and Albrecht Dürer (1471–1528). Art is considered to be a science, and artists are expected to have psychological, anatomical, physiological and other forms of knowledge; they have to understand the "laws of nature". The window and the mirror are sometimes mentioned as visual ideals which painters ought to approximate. According to Leonardo, the "Mirror is the Master (and Guide) of Painters":

> "When you want to see if your picture corresponds throughout with the objects you have drawn from nature, take a mirror and look in that at the reflection of the real things, and compare the reflected image with your picture, and consider whether the subject of the two images duly corresponds in both, particularly studying the mirror."[82]

Despite this recommendation, the production of imitative artworks is neither in the Renaissance nor in the Baroque exclusively understood as the faithful and neutral copying of particular, empirical things, not even by Leonardo himself who states that painting "gives heed not only to the works of nature but to an infinite number of things that nature never created".[83] Imitation in art is not regarded as the passive rendering of the world, but as an active articulation of it by visual means, striving to incorporate order, novelty, abundance and a variety of objects—as, for example, suggested by Alberti.[84] Moreover, according to Alberti, art may, first, imitate general types and species, and, second, make a selection from nature, choosing the most perfect parts in order to achieve ideal beauty.[85] In a similar way Dürer proposes that a human figure should be depicted as follows:

82 Leonardo, in Holt (1981), p. 284.

83 Leonardo, in Beardsley (1966), p. 128. See also the comments by Lee (1940), pp. 203–204, pointing to the ambivalent attitude among Renaissance scholars towards visual representation as the imitation of the particular or of the ideal.

84 Alberti (1966), pp. 75–76.

> "The sight of a human figure is above all things pleasing to us, wherefore I will first construct the right proportions of a man...No single man can be taken as a model for a perfect figure, for no man lives on earth who is endowed with complete beauty; he might still be much more beautiful...How beauty is to be judged is a matter of deliberation. One must bring it into every single thing, according to circumstances, for in some things we consider that as beautiful which elsewhere would lack beauty...You therefore, if you desire to compose a fine figure, must take the head from some and the chest, arm, leg, hand, and foot from others, and, likewise, search through all members of every kind. For from many beautiful things something good may be gathered..."[86]

As this passage reveals, the "right" depiction of human figures, and perhaps other objects, seems to be incompatible with the use of particular, single models, and Dürer's remark undoubtedly resembles Socrates' view as referred to by Xenophon. The suggested model for imitation is thus a kind of idealized type of object or subject. Giorgio Vasari (1511–1574), perhaps the first genuine art historian, may be mentioned as yet another proponent of the view that the mimetic arts have a universalizing function. According to Vasari, the artist creates a mental and general image from encounters with many different things which he subsequently tries to visualize.[87]

In a similar way the Mannerist painter Federigo Zuccaro (1542–1609) claims that an artist, because of his previous sensory experience, forms a mental image, i.e. an *Inward Design* ("disegno interno"). This mental image is some kind of general idea of the essential and typical characteristics of an external object.

> "And I declare from the outset that Design is neither matter nor body nor the accident of any substance, but is the form, idea, rule, and object in which the things comprehended are expressed. This Design one finds in all external objects...[T]here are two kinds of operations: namely, one external, like drawing,...painting, sculpturing, and building; and the other internal, like comprehension...Inasmuch as it is necessary that all external operations have an ultimate goal,...thus it is

85 Tatarkiewicz (1970 b), p. 84; Alberti (1966), p. 93.

86 Holt (1981), p. 316. Of course there are numerous other adherents of such a view, for example, Lodovico Dolce (1508–1568) or Raphael [Sanzio] (1621–1520). Cf. Lee (1940), pp. 204–210; Tatarkiewicz (1970 b), pp. 206–207.

87 See Panofsky (1960 a), p. 33; Tatarkiewicz (1970 b), pp. 205–206, p. 213.

> also necessary that the internal operations have an ultimate goal in order that they, too, may be complete and perfect. That ultimate goal is none other than the thing comprehended. For example, if I wish to comprehend what kind of thing a lion may be, it is necessary that the lion known to me be the ultimate goal of my intellective process. I do not mean the lion that runs through the forest and hunts other animals in order to live, for that one is outside me; but I mean an immaterial form shaped in my intellect which represents to it precisely and distinctly the nature and form of 'the lion'. In that form or image of the mind the intellect clearly sees and recognizes not only the single lion in his form and character, but also all lions."[88]

Thus, as this passage reveals, the suggested model for imitation has its roots in external reality, though abstracted and condensed into a generalizing mental representation of particular phenomena.

Neo-Classicism

The view that artistic mimesis consists of the representation of types rather than particulars had also numerous proponents during Neo-Classicism. However, we may first consider Giovanni Pietro Bellori (1615–1696), an important art theorist from the transitional period between the Baroque and Classicism, who likewise endorsed the view that artists form a mental image of selected and embellished nature in order to surpass simple imitation. Bellori also follows the "empirical" tradition of Xenophon, Dürer, etc., according to which the artist has to observe a variety of particular things, whereafter idealized composite examples are constructed and transferred to a visual medium.[89] Thus the artist's models for imitation are supposed to be inner ideas having resulted from observations of, for example, human bodies (though, interestingly, a differentiation regarding the sexes and different ages is recommended), actions, emotional manifestations, and other kinds of things.

Two leading spokesmen from the neo-classical period who adhered to a similar conception deserve mention, namely Samuel Johnson (1709–1784) and, perhaps most notably, Sir Joshua Reynolds (1723–1792). Although Johnson is chiefly concerned with the nature and function of poetry, his remarks may be regarded as representative of a commonly held view applied to other arts as well during this period. According to

88 Reprinted in Holt (1982), p. 89. Cf. also Tatarkiewicz (1970 b), p. 208, pp. 219–220.

89 See Tatarkiewicz (1970 b), pp. 336–337; Panofsky (1960 b), pp. 59–61, Lee (1940), pp. 208–210, Holt (1982), pp. 93–106.

Johnson, the aim of poetry is to represent general facts about nature, specifically about humanity, while individual and particular features should be disregarded. The observation of "real life" is only the empirical starting-point from which the poet has to deviate in order to provide us with universal and durable facets of life.[90] Reynolds, a close friend of Johnson's, proposed similar ideas concerning the visual arts. In his famous *Discourses on Art* he rejected a simple copy theory of imitation, thereby referring to aesthetic ideals claimed to stem from Antiquity. The goal of great art is, according to Reynolds, to represent general nature rather than particular objects. No individual object can possess the important and beautiful characteristics which the species as a whole is capable of affording.

> "[A] mere copier of nature can never produce any thing great; can never raise and enlarge the conceptions, or warm the heart of the spectator...[A]ll the arts receive their perfection from an ideal beauty, superior to what is to be found in individual nature...All the objects which are exhibited to our view by nature, upon close examination will be found to have their blemishes and defects...[The painter's] eye being enabled to distinguish the accidental deficiencies, excrescences, and deformities of things, from their general figure, he makes out an abstract idea of their forms more perfect than any one original; and what may seem a paradox, he learns to design naturally by drawing his figures unlike to any one object.... Thus it is from a reiterated experience, and a close comparison of the objects in nature, that an artist becomes possessed of the idea of that central form...from which every deviation is deformity."[91]

It should be pointed out that there is some kind of ambivalence in Reynold's account. Sometimes the reader gets the impression that valuable representations, i.e. of general forms, result from something like an averaging process, derived from the observation of manifold particulars. There are, however, other passages which indicate that Reynolds rather considers "great" art to be based upon a selection of beautiful characteristics.[92] Perhaps a strict distinction between general and ideal types should be made with some caution, in Reynold's case as well as in others. Thus we cannot exclude the possibility that, due to problems of translatability,

90 Cf. Stolnitz (1960), pp. 121–128; Beardsley (1985), pp. 144–147.
91 Reynolds (1975), pp. 41–45, Cf. also Stolnitz (1960), pp. 121–128.

commensurability, and the lack of conceptual clearness already discussed in sections 2.1 and 2.2., a clear-cut demarcation of the general from the ideal may to some extent be somewhat artificial. We shall return to this issue in section 5.3.

Now, apart from those examples mentioned in this section, there are numerous other adherents of the view that the actual or proposed function of mimetic works of art is to represent types of things rather than particulars, which regrettably had to be omitted. Still, I hope that the positions referred to are sufficient enough to illustrate my general point, that is, that a long-standing and by no means insignificant art theory tradition rejected the simple mirroring of nature. In conclusion, then, we may summarize this tradition—which may then be conceived of as having a descriptive and/or normative view with regard to typicality—as follows:

(i) Mimetic works of art (ought to) imitate type or species-characteristic features of external phenomena rather than their individual and contingent features—i.e. general types.

(ii) Mimetic works of art (ought to) imitate typical features of external phenomena which contribute to their perfection or beauty—i.e. ideal types.

2.5 Recent Views on MRT: Gombrich and Baxandall

IN THE LAST SECTION OF THIS historical overview of MRT we may also take some relatively recent accounts along these lines into consideration. The art historians Ernst Gombrich and Michael Baxandall may to some extent be regarded as having given this mimetic tradition a new outlook, although it should be mentioned that they have focused more or less on the general principles for visual perception and representation. Thus their approach has rather been descriptive, and evaluative issues are not explicitly dealt with. Furthermore, in Gombrich's account the notion of (natural) similarity is treated as quite a problematic relationship; instead, the role which conventions play in the production and perception of pictorial representations is recurrently stressed. Gombrich and Baxandall's approaches have attracted relatively large amounts of attention among

92 See also the discussion by Hipple (1952/53) who interprets Reynolds as having recommended the rendering of idealized types.

art historians and (especially in Gombrich's case) aestheticians, and at least for this reason it seems appropriate to include them in my survey of the MRT tradition.

Ernst Gombrich's Schema Theory

Gombrich, in his influential work *Art and Illusion* (first published 1960), has become known for his criticism of common-sense views on visual representation,according to which depiction consists more or less of recording or reproducing particular visual impressions, at least as an ideal to strive for. Artists ought to strive for neutral copying of the visible world. As we have seen already, a copy theory of visual representation has been far from as unanimously advocated as numerous textbooks on the history of aesthetics seem to claim, not even during the Renaissance. Still, artists or theorists have of course sometimes argued for the possibility (and normative ideal) of rendering things and environments with almost some kind of scientific accuracy or neutral fidelity. The basic problem Gombrich attempts to elucidate concerns the development of visual representation. Why have the representative arts a history (in terms of change and perhaps even progress toward naturalistic accuracy) and not simply a chronology? How can stylistic changes be explained? And how can a visual configuration stand for something else at all? These are some of the questions Gombrich discusses by taking psychological and philosophical proposals into account (the sub-title of his work is tellingly *A Study in the Psychology of Pictorial Representation*). Now, according to Gombrich, neither artists nor beholders have an "innocent eye": there are historically/culturally variable presuppositions and conventions which determine our way of seeing and depicting something. Influenced by Karl Popper's view on scientific progress as an interplay between the creation of hypotheses, on the one hand, and repeated attempts to falsify them, on the other (i.e. a continuous process of conjecture and refutation), Gombrich suggests an analogous model for the development of visual representation by introducing the concepts of "schemata and corrections" or "making and matching". Schemata may roughly be described as models for depiction, visual vocabularies, perceptual and cognitive expectations, and normative convictions. In Gombrich's view, such schemata precede corrections: artists have some kind of pictorial/perceptual models of what they intend to depict. Visual stimuli are interpreted according to these models and transferred into pictorial representations. Afterwards these representations may be compared with the depicted objects in question and deficiencies regarding the accuracy of

the picture will become apparent. As a result of this, corrections and improvements will be made, which in turn lead to the emergence of new schemata.[93] The latter also reveal certain deficiencies and further corrections become necessary. This interplay of making and matching does not necessarily proceed within the work of particular artists but should rather be understood as a historical principle explaining the development and change of pictorial styles (with regard to fidelity or naturalism).[94] Moreover, due to the fact that schemata must precede comparisons and subsequent corrections, it may also be assumed that Gombrich regards the priority of schemata almost as logically necessary: neither perception nor depiction are possible without guiding schemata.[95]

Gombrich's account has given rise to important art-theory discussions concerning the nature of pictorial representations. Generally speaking, his basic conviction that there is no unmediated reality, no world-as-experienced without concepts or schemata and no neutral or ultimate way of depicting something has usually been received with assent.[96] Occasionally his proposal has been taken as some form of pictorial conventionalism, that is, "a view that leads to the consequence that art is a kind of language of conventional signs or symbols rather than a relationship based on resemblances or natural causes."[97] However, this account of Gombrich's view seems to some extent to be misleading. It may be admitted that Gombrich rejects the view that there may be any neutral or unique naturalism in pictures. Furthermore, the conventionality of pictorial modes of representation is repeatedly compared by him to that of natural languages.[98] Nevertheless, pictures are said to be more or less naturalistic, or to convey more or less accurate information about the visible world. A painting by Constable, for example, is "a closer rendering of the motif than is that of ... [a] child", the latter being more schematic and simple.[99] And "all representations can be somehow arranged along a scale which extends from the schematic to the impressionist. What is more, it remains important that there exists a natural pull toward the schematic which artists such as Giotto or Constable succeeded in overcoming. Because of this gravitation toward the schematic

93 Gombrich (1977), p. 24; pp. 63–64; p. 99.

94 Though probably with the exception of the Middle Ages, where the "schema is the image", i.e. pictures function more like pictographs and less efforts are made, compared to previous and subsequent periods, to adjust them in order to maximize fidelity. Cf. ibid., pp. 130–131; p. 148.

95 Cf. Wollheim (1974), pp. 272–273.

96 By, for example, Goodman (1976), p. 7; Eco (1976), pp. 204–205.

97 Dickie, Sclafani & Roblin (1989), p. 513.

98 Gombrich (1977), p. 76, pp. 305–307.

99 Ibid., pp. 247–252. The quotation is taken from p. 252.

or 'conceptual', we have a right to speak of 'primitive' modes of representation, modes, that is, which assert themselves unless they are deliberately counteracted."[100] Now, if certain (schematic) means of depiction occur as almost natural and spontaneous phenomena, they can quite obviously not be merely conventional.[101] Moreover, Gombrich seems also to suggest that less schematic styles are somehow 'better' with regard to the (objective) amount of information they can give us: the change of pictorial styles is apparently seen as some kind of pictorial progress. Thus, there is a certain lack of clarity in Gombrich's account which appears to vacillate between the view that pictorial representation is not based on natural similarity relations, on the one hand, and that it also to some extent is non-conventional, on the other.

Another problem with Gombrich's account concerns our ability to compare pictures with the depicted objects. As already noted, schematic pictorial models are adjusted when deficiencies in their informativeness become perceivable. On the other hand, perception in itself is said to be determined by schemata of some kind. It has frequently been argued, for example by Richard Wollheim and Norman Bryson, that Gombrich's analysis seems to be self-contradictory: we need, as Wollheim puts it, a schema-independent "exit to the object" in order to compare the latter with the picture.[102] However, if perception itself is guided by schemata, how could that be achievable? Both perception and pictorial representation are analyzed in terms of schema and correction, but in this way the possibility to adjust pictures in accordance with something other than schemata is ruled out: schemata can only be compared to other schemata, and thus the idea of any progress within representational art towards verisimilitude becomes rather unintelligible.

What, though, are schemata more exactly? Clear-cut definitions are largely absent in Gombrich's account; instead, circumscriptions, synonymous expressions, and examples prevail. There are at least three different conceptions of what *pictorial* schemata are, as pointed out by Wollheim.[103] First, a schema may be any visible form or configuration used to depict something else. Simple Egyptian hieroglyphs as well as more sophisticated paintings by Giotto or Constable employ schemata. Second, sometimes schemata are conceived of as highly simplified configurations with Gestalt character, such as a divided oval or egg shape

100 Ibid., p. 247.
101 Cf. also Gombrich (1982), where his earlier conventionalist inclination has been toned down.
102 Wollheim (1974), p. 283. See also Bryson (1983), p. 34.
103 Wollheim (1974), pp. 286–289.

representing a head.[104] Third, schemata are also thought of in a rather broad sense, namely as stylistic characteristics including modes of representing depth, light, and a certain atmosphere; even the choice of subject-matter seems to play a role in this respect.[105]

Apart from pictorial schemes, there are also conceptual or *mental* schemata determining perception in general. According to Gombrich, perception and cognitive activities involve prior expectations, classifications, categorization, and the like. We need initial "mental sets" or schemata in order to recognize objects and to interpret "the clues which rush in on us from the outside world".[106] These mental schemata are not fixed once and for all, but will be adjusted and refined when anomalies and discrepancies occur, that is, in accordance with the principle of trial and error, or conjecture and refutation.

> "Without some starting point, some initial schema, we could never get hold of the flux of experience. Without categories, we could not sort our impressions. Paradoxically, it has turned out that it matters relatively little what these first categories are. we can always adjust them according to need. Indeed, if the schema remains loose and flexible, such initial vagueness may prove not a hindrance but a help. An entirely fluid system would no longer serve its purpose; it could not register facts because it would lack pigeonholes...The progress of learning, of adjustment through trial and error, can be compared to the game of 'Twenty Questions', where we identify an object through inclusion or exclusion along any network of classes. The traditional initial schema of 'animal, vegetable, or mineral' is certainly neither scientific nor very suitable, but it usually serves us well enough to narrow down our concepts by submitting them to the corrective test of 'yes' or 'no'. The example of this parlour game has become popular of late as an illustration of that process of articulation through which we learn to adjust ourselves to the infinite complexity of this world."[107]

This view on cognition and perception is, as already indicated, influenced by Popper's account of scientific progress. However, another source of inspiration stems from Gestalt psychologists such as Wolfgang Köhler and Rudolf Arnheim. A basic assumption within Gestalt psychology

104 Gombrich (1977), pp. 144–148.
105 Ibid., p. 325.
106 Ibid., p. 276.
107 Ibid., pp. 76–77.

is that perception involves the instant organization of stimuli into whole configurations or "Gestalts". This tendency to reduce the complexity and ambiguity of the perceptual field to rather simple forms, at least at an initial stage, is explained by reference to innate neurophysiological characteristics in our brain. Thus we spontaneously strive to achieve simplicity and cohesion during the process of vision. We shall return to the Gestalt psychological approach and its problems in section 3.4. Right now it may be sufficient to point out the proposed isomorphism between Gestalt perception, the formulation of (scientific) hypotheses, and the production of pictures as envisaged by Gombrich. In his view, we proceed from simple assumptions, in cognition as well as in perception, which we refute and modify in the light of further experience. We may have provisional and simplifying hypotheses concerning states of affairs or law-like relationships, and we may perceive simple Gestalts. These initial assumptions are then subsequently corrected and refined.[108] For example, Copernicus' guess that the planets move in circles round the sun, was, as the result of more accurate observations, disproved by Kepler, according to whom their movements are rather elliptic. And the preceding perception of a vertical Gestalt may be turned into the recognition of a human being, and subsequently the identification of a friend.

Pictorial representations, too, are obviously created in the same manner. Actually Gombrich's account of representation may, as pointed out by Wollheim, be regarded as parasitic on his theory of perception: the plausibility of the principle of schema and correction regarding representation seems to be based on the plausibility of this principle's applicability to perception in general.[109] However, perception would be incomprehensible if conceived of as a hermetic process, i.e. as strictly determined by mental schemata. As noted above, we must have access to something outside the circle of schemata, otherwise the very idea of correcting our observations by reference to schema-independent features would be quite obscure. Thus schemata cannot be thought of as rigidly governing perceptual processes; rather, we must allow for some degree of flexibility in this respect. Put in another way, in contradistinction to Gombrich's claim, we must assume that we, in some sense and to some extent, have "innocent eyes".

Pictorial and mental schemata are, according to Gombrich, not equivalent in a straightforward way. The former are obviously not considered to be simple reflections of the latter: "[none] of us carries in his head such

108 Ibid., p. 231.
109 Wollheim (1974), pp. 283–284.

schematic pictures of bodies, horses, or lizards...".[110] And it would be a "misunderstanding" to adhere to "the idea that the styles of the past literally reflect the way these artists 'saw' the world."[111] Still, Gombrich frequently stresses that previously existing pictorial schemata at least influence ways of seeing and categorizing reality (as well as our habits of depicting it). Pictures are evidently constructed due to our background knowledge, that is, mental sets, anticipations, categories, and so on: "[all] art originates in the human mind, in our reactions to the world rather than in the visible world itself,...all art is 'conceptual'...".[112] Thus an artist "begins not with his visual impression but with his idea or concept...[the] individual visual information, those distinctive features..., are entered, as it were, upon a pre-existing blank or formula."[113] Unfamiliar items are classified and recognized by applying familiar (pictorial/mental) schemata on them. Whatever the exact relation between pictorial and mental schemata may be in Gombrich's somewhat elusive account, it is quite clear that pictures are more or less thought of as revealing pictorial/mental stereotypes rather than individually distinct particulars. There is then, in one sense, no fundamental difference between the more schematic drawings of a child and more detailed and "naturalistic" images. Both represent typical, familiar, noteworthy aspects of the world, though from different points of view.

> "Even Dutch genre paintings that appear to mirror life in all its bustle and variety will turn out to be created from a limited number of types and gestures, much as the apparent realism of the picaresque novel or of Restoration comedy still applies and modifies stock figures which can be traced back for centuries. There is no neutral naturalism."[114]

Michael Baxandall on Cognitive Style

The conviction that pictures to a considerable extent represent the typical rather than the particular is also a basic tenet in Michael Baxandall's well-known work "Painting and Experience in Fifteenth-Century Italy" (first published in 1972). According to Baxandall, visual information is

110 Gombrich (1977), p. 19.

111 Ibid., p. 20.

112 Ibid., p. 76.

113 Ibid., pp. 62–63.

114 Ibid., p. 75. This passage continues, though, as follows: "The artist, no less than the writer, needs a vocabulary before he can embark on a 'copy' of reality." Although one might get the impression that Gombrich primarily is stressing the importance of previous pictorial schemes, it seems quite obvious from the context that he also regards the existence of mental schemes as decisive in this respect.

115 Baxandall (1988), p. 29.

generally interpreted by a beholder by means of a "stock of patterns, categories, habits of inference and analogy", thus giving the complex sensory data a simplified structure and a meaning.[115] This so-called "cognitive style" may vary historically and socially, though "most experience is common to us all: we all recognize our own species and its limbs, judge distance and elevation, infer and assess movement, and many other things."[116] Still, the cognitive style, the acquaintance with pictorial conventions, and general experience and background knowledge drawn from the environment are culture-specific and influence our encounters with pictures. Pictorial representations demand skills of interpretation and discrimination in order to be understood and to be enjoyed, skills which are related to and based on our daily activities. Indeed, as Baxandall claims, "[much] of what we call 'taste' lies in this, the conformity between discriminations demanded by a painting and skills of discrimination possessed by the beholder....If a painting gives us opportunity for exercising a valued skill and rewards our virtuosity with a sense of worthwhile insights about that painting's organization, we tend to enjoy it..."[117] Some visual skills, however, are more decisive for the perception of artworks than others, namely those learnt and taught, governed by rules, categories, and a certain terminology, and which are highly esteemed in a society. The artist, of course, is more or less aware of and responds to the visual competence of his public.[118]

This rather general view on (artistic) perception is, as the title of Baxandall's study reveals, applied to and exemplified by fifteenth-century Italian painting. In this context, the public which is (economically) most important to artists consists of "...patronizing classes, ...[i.e.] mercantile and professional men, acting as members of confraternities or as individuals, princes and their courtiers, the senior members of religious houses."[119] Within this group, visual skills which have to do with the fact that its members were religious, had knowledge of geometry and arithmetics, and liked dancing seem to have been quite significant.

First, paintings had to represent biblical stories in order to deepen religious convictions and to give beholders the opportunity to meditate on particular themes. Thus paintings functioned as some kind of exterior reminder of religious stories which were completed and "filled in" by an individual's private and more detailed meditation (or preconceived inner

116 Ibid.
117 Ibid., p. 34.
118 Ibid., pp. 37–40.
119 Ibid., pp. 38–39.

picture). Accordingly, paintings tended to represent, despite the apparent richness of details, rather general types of situations, places, and people which were completed by the beholder's imagination.[120]

Second, a normal education for this group of beholders included training in mathematics for commercial purposes. Due to the fact that no international or even national standards for measuring or weighing commodities existed, it was necessary for merchants to acquire skills in calculating quickly the size, volume, weight or number of things. Many painters had received the same training and were thus able to respond to the public's background knowledge in this respect. There was a repertory of standard objects used in gauging exercises, such as cisterns, columns, brick towers, paved floors, and so on. Painters could make use of such objects, thereby inviting the beholder to (imaginatively) gauge or to estimate the size of the represented objects.

> "In his public appearances, the painter more normally depended on his public's general disposition to gauge. To the commercial man almost anything was reducible to geometrical figures underlying any surface irregularities—the pile of grain to a cone, the barrel to a cylinder or a compound of truncated cones, the cloak to a circle of stuff allowed to lapse into a cone of stuff, the brick tower to a compound cubic body composed of a calculable number of smaller cubic bodies, and so on....As a man gauged a bale, the painter surveyed a figure. In both cases there is a conscious reduction of irregular masses and voids to combination of manageable geometric bodies. A painter who left traces of such analysis in his painting...was leaving cues his public was well equipped with."[121]

Similarly, beholders could also analyze visual configurations with regard to certain mathematical proportions or intervals.

Third, the grouping of figures in paintings was intended to suggest dramatic events, relationships, and actions. Of importance for the understanding and analysis of these groupings was, among other things, an acquaintance with dancing, most notably the so-called *bassa danza*. According to Baxandall, this pacing dance was quite popular in Italy during that time, treatises were written about it, and people seemed to recognize parallels between dancing and painting. The treatises that were written

120 Ibid., pp. 45–48.
121 Ibid., pp. 87–89.

submitted, "in the form of the dances they describe, model figure patterns quite transparently expressive of psychological relationships."[122] The style of grouping used by the painter was adapted to these patterns, especially when it came to paintings with classical and mythological themes (in contradistinction to religious ones), and was thus easily recognizable and interpretable by the public.

Although Baxandall's study focuses on strategies for pictorial representation used in fifteenth-century Italian painting, it seems quite possible to take his account as suggesting a more general point. The production of visual works of art is influenced by the demands and needs of a certain public. The artist responds to these demands and offers opportunities for the beholder to apply his background experience of his 'way of life' as well as artistic conventions. The beholder interprets a work of art according to acquired category systems and habits which the work has been adapted to. The recognition of familiar items or themes, the experience of something as typical in some sense, may give the beholder a feeling of satisfaction. With regard to the historical context discussed in Baxandall's study, such recognizable and enjoyable motifs may be typical religious events, typical geometric forms or mathematical relationships, and typical dance formations.

While Gombrich discusses the nature of perception and of pictorial representation on a more basic level (although he of course takes numerous examples from the history of art into consideration), Baxandall's approach is explicitly socio-historical, though based on some general (though somewhat superficial) reflections on visual perception, especially of paintings. There is, however, an interesting common denominator between these two studies, namely their concern with the representation of the typical. To Gombrich, pictures must necessarily represent schematized models of objects, that is, abstracted stereotypes deviating from reality. On the other hand, there are obviously degrees of schematization in his view: children's drawings and Egyptian art are experienced, at least from our point of view, as more schematic than, for example, Dutch paintings. Nevertheless, the occurrence of schemata and types of things seems to be an unavoidable ingredient in all kinds of pictorial representations. Baxandall is apparently not as radical in this respect as Gombrich, though he too emphasizes the rendering of typical phenomena in pictures and the satisfaction the recognition of them may give rise

122 Ibid., p. 78.

to. Now, the claims of interest for the topic of my study that have been reviewed in this section may perhaps be condensed as follows:

> Pictorial representations necessarily (Gombrich) or frequently (Baxandall) represent aspects of reality experienced as typical (in some sense) in a certain socio-historical context.

2.6 Discussion: Aesthetics and the Relevance of Empirical Support

THE PREVIOUS ACCOUNT OF SOME important views on MRT gives rise to a number of questions. As we have seen, there is a long-standing tradition among art theorists according to which the rendering of general, typical, or idealized aspects of reality is recommended, and sometimes even regarded as unavoidable or inherent in the nature of pictures. Moreover, this tradition obviously also has some kind of counterpart in the actual practice of artists, most notably perhaps in ancient Greece, the Middle Ages, and Neo-Classicism, though, as, for example, Baxandall has shown, such a practice is far from absent even during the Renaissance. How can this tradition be explained, if at all? Why are beholders interested in renderings of the typical or the ideal? Why should they be? What are notions such as "pictorial representation", "similarity", and "typicality" supposed to mean? Is it possible to give this view any plausibility, and if so, what strategy (or strategies) might we employ? And lastly, what kind of questions or issues are we talking about here? Are these aesthetic or non-aesthetic problems?

What is Aesthetics?

The last question leads me to the issue to be discussed in this section, namely if we can reasonably distinguish aesthetics from other fields of inquiry, most notably non-philosophical or empirical studies, such as psychology, sociology, anthropology, history, art history, and so on. First, we may ask what the term "aesthetics" is supposed to mean at all. Etymologically speaking, we should note that its roots are in the ancient Greek term "aisthesis", meaning something like "sensation/perception".[123] As a term used to denote a special branch of study (as a science

123 Cf. e.g. Sörbom (1987), pp. 9–10.

of sensory perfection) it was introduced first, and actually as late as about 1750, by Alexander Gottlieb Baumgarten.[124] Despite this late, relatively specialized use of the term, it would undoubtedly be quite narrow-minded to assume that aesthetic studies did not exist before that time. At least we have to recognize that numerous questions asked, whether past or present, in a loose sense may be called "aesthetic", being included in or somehow overlapping with those discussed in "aesthetics" as a particular, demarcated discipline theorizing about the arts. Indeed, as I believe, it seems rather futile to insist on strict boundaries for the subject. Now from a traditional point of view, something like the following problems may probably be regarded as clear-cut, prototypical examples of aesthetic issues:

(i) What is art (an aesthetic object, drama, tragedy, etc.)?
(ii) What is beauty (sublimity, aesthetic experience, aesthetic value, etc.)?
(iii) What is representation (depiction, symbolization, meaning, etc.)?
(iv) What is expression (emotional quality, emotional effects, etc.)?
(v) What is imagination (creativity, fiction, etc.)?
(vi) What is aesthetics (philosophy of art, art theory, art criticism, etc.)?

There are some rough distinctions which could be made with regard to this (by no means comprehensive) list. First, we may distinguish between descriptive and normative questions. The former are concerned with attempts to find definitions or to elucidate the ontological status of "art", "beauty", "representation", and so on. The latter have to do with the value or utility of these things in general, or with finding certain criteria for estimating the value of their various instantiations. Second, it is also possible to differentiate between explanations and justifications. The former attempt to find specific causes (thereby explicitly or implicitly presupposing certain law-like relationships) for the emergence of particular beliefs concerning the nature or meaning of, for example, "art" or "beauty". The latter seek to find justifiable reasons for having these beliefs. Third, we may as well distinguish between empirical and aprioristic strategies for answering these questions. An empirical strategy may take certain assumed "facts" (based upon observation or sensory experience) into consideration, such as concrete works of art themselves as well as beliefs

124 That is, in his "Reflections on poetry" ("Meditationes philosophicae de nonnullis ad poema pertinentibus", 1735) and the unfinished work "Aesthetica" (1750, 1758). In England, the term "aesthetic" seems to have first been used in this sense as late as about 1830. Cf. Diffey's interesting article on various uses of the term (Diffey [1995]). For Baumgarten, see also Beardsley (1985), pp. 156–159.

and language uses (by, for instance, artists, art historians, aestheticians, or people in general) concerning art and other significant concepts. Moreover, it can also incorporate studies from disciplines such as psychology, sociology, or anthropology in order to account for those factors which are crucial for the emergence of certain beliefs, preferences, language uses, or experiences which are aesthetically relevant. An aprioristic approach, on the other hand, would disregard these facts; instead, it would either invent new aesthetic theories or concepts, or derive them from something like innate ideas or theoretical, non-empirical (e.g. logical) considerations. Lastly, we may differentiate between questions concerned with aesthetical problems, such as those listed above, and questions about problem-solving strategies, or about aesthetics' (in contradistinction to other fields') "proper" subject-matter. Aesthetics is, as philosophy in general, to a considerable extent a self-reflective field of study, describing and/or criticizing existing conceptions regarding its goals and methods, as well as recommending or shaping certain conceptions.[125]

These distinctions should probably not be taken in too strict a sense; unquestionably most of them overlap. For example, some attempts to clarify concepts such as "art" or "beauty" may have descriptive as well as normative/prescriptive elements. So-called *explications* of such notions may partly be based upon considerations concerning the etymology or current uses of a concept, though at the same time recommending a certain use (or a limited range of uses) of the term in question. Explanations have to take empirical knowledge into account, while justifications have normative ingredients (and so may also aprioristic strategies). Meta-aesthetical questions and answers may have descriptive and/or normative ambitions. Purely aprioristic approaches do probably not exist, except perhaps as a theoretical ideal to strive for. Most aesthetic theories have more or less considered (or been influenced by) existing artistic practices or objects, historically significant aesthetic theories, and experts' and other people's beliefs or language uses concerning aesthetic theories or concepts. Put in another way, they have (at least implicitly) taken empirical data into account.

A deficiency, though, of numerous aesthetic theories consists of the rather narrow and somewhat arbitrary selection of empirical data considered to be relevant. Sociological, historical, art historical, psychological, neurophysiological, anthropological, or other "empirical" studies

125 For a more detailed account of the range of aesthetical problems and methods, see Tatarkiewicz (1970 a), pp. 1–9.

have to a regrettable extent been neglected or even completely ignored. Aesthetics has frequently been regarded as a "philosophy of art", that is, as a branch of philosophy which is supposed to critically examine our (or experts') beliefs concerning art and related notions. Such beliefs may, as, for example, suggested by the aesthetician Jerome Stolnitz, be justified or refuted depending on whether they are supported by evidence, reasoning, or logical considerations.[126]

Well, how do we know what beliefs people have? Should we initiate (statistically reliable) queries in order to find out? Or should we rely on our beliefs and (to some extent speculative) intuitions concerning other people's beliefs? And what about past, non-existent generations' beliefs (or those held by people belonging to remote cultures)? Ordinary people's beliefs or preferences have, historically, barely been manifested in written form, but have usually to be reconstructed by considering secondary sources, such as artistic practices, contracts, the frequency and distribution of artistic styles and motifs, and so on. Mostly only experts' opinions (that is, those of artists, philosophers, theologians, etc.) have been recorded in an explicit form. In any case, though, people's beliefs (whether those of experts or non-experts) cannot necessarily be treated as reliable data from which one might proceed; they may be vague, speculative, mistaken, or only partly (semantically or metaphysically) comprehensible.

Furthermore, what kind of evidence should we take into account in order to support or refute certain aesthetic beliefs or theories? It would hardly be controversial, I think, to maintain that theories which appear to be irreconcilable with existing artistic practices, language uses and beliefs are less convincing than those which are compatible with them. Apart from taking that kind of evidence into consideration, aesthetic studies might as well profit from empirical inquiries made within the social as well as the natural sciences. Aesthetics' tendency to neglect the latter kind of evidence seems, however, to be somewhat arbitrary. Why should we stick to one kind of empirical data, while at the same time disregarding other sources? Indeed, as already indicated, the concern with people's or art critics' so-called beliefs or language uses—which is especially notable within analytic aesthetics—seems to be empirically somewhat speculative and unreliable; its "empirical" validity may very well be put into question. Moreover, the lack of empirical groundwork increases

126 Cf. Stolnitz' remarks concerning the purpose and range of aesthetics, and philosophy in general (1960, pp. 3–7). It should be pointed out, though, that Stolnitz is not rigidly dismissing the relevance of non-philosophical or empirical studies for aesthetics. See ibid., pp. 13–14.

the risk of being affected by one's own intuitions and prejudices. In the following I will exemplify how the neglect of empirical confirmation may lead to quite dubious results, namely by pointing to some empirical problems with the view that pictorial representations are basically conventional signs.

Empirical Arguments Against Pictorial Conventionalism

A central notion, which the MRT-tradition is usually based upon, is that of similarity or resemblance: pictures resemble somehow (the visual appearance of) the objects of depiction (whether these are particulars or types). During the last few decades, though, the idea that pictorial representation somehow depends on resemblance has come under attack, and Gombrich's account marks the beginning of a debate which has by no means come to a standstill. Various scholars in the humanities have suggested that the experienced relationship of similarity between pictorial representations and the represented objects is wholly determined by cultural and historical frameworks and internalized codes, conventions, or habits of representation. Indeed, mimetic (or iconic) pictures should rather be regarded as arbitrary signs, more or less comparable to linguistic items. This conventionalist view seems nowadays to have gained widespread acceptance in academic circles which theorize about the arts. Among the most well-known proponents of this position—which we may call *pictorial conventionalism*—are, for instance, Nelson Goodman, Umberto Eco, and Norman Bryson.[127]

Now, pictorial conventionalism may be described as an art theory form of scepticism according to which the relationship between a picture and the object(s) it represents cannot justifiably be thought of as a "natural" or "objective" relation. The common sense view that visual representation presupposes some kind of correspondence between picture and object in terms of (natural) resemblance or similarity is explicitly rejected. Instead, the comprehension of pictorial representations is considered to be contingent upon and more or less explainable by reference to cultural/historical habits or conventions internalized by the beholder. Thus we cannot reasonably talk about depictions or pictorial fidelity *per se*—rather we should talk about depictions or pictorial fidelity *for* certain persons (due to variable and arbitrary personal presuppositions). Pictorial conventionalism may be compared to a somewhat analogous position in

127 Goodman (1976); Eco (1979); Bryson (1983). It should be noted that the views put forward by Black (1972), Walton (1973), and Gombrich (1977) have also sometimes been interpreted as some kind of pictorial conventionalism. See, for example, Gilman (1992 b).

epistemology, namely *cognitive relativism*. According to this view, assertions or propositions cannot justifiably be regarded as true or false in themselves, but rather as true or false *for* certain persons, depending on their personal characteristics. Normally these characteristics are thought of as being shared by groups of persons, and possible candidates in this respect are, for example, conceptual or linguistic schemes, forms of life, world views, paradigms, and so on.[128] All versions of cognitive relativism reject simple correspondence theories of truth, that is, the claim that truth consists of a correspondence or conformity between assertions (propositions, beliefs etc.) on the one hand, and reality (facts, states of affairs etc.) on the other. Instead, truth is conceived of as relative to a culturally and historically variable framework and thus basically a matter of convention.

The pictorial conventionalist's dismissal of objective fidelity and any relation of similarity between pictorial representations and reality has, to some extent, a counterpart in the cognitive relativist's denial of objective truth or relation of correspondence between assertions and facts. Historically, however, there appears to be one noteworthy difference between these two forms of scepticism. Cognitive relativism has a long tradition, dating back at least as far as Protagoras with his well-known dictum "Man is the measure of all things", as it is quoted in Plato's dialogue *Theaetetus*.[129] Plato, of course, took the (cognitive and moral) relativist threat personified by Protagoras quite seriously and tried to argue for an absolutist view (with regard to cognitive as well as to ethical or aesthetical claims). Interestingly enough, pictorial conventionalism is not a view which Plato conceived in order to dispute. Obviously he had no doubt whatsoever that activities and artefacts such as music, drama, paintings, and sculptures can imitate perceptual properties of the sensual world. Works of art are generally conceived of as (essentially) having a mimetic function due to their natural and non-conventional similarity to external, sensual phenomena. This view, which is persistent throughout the Western history of aesthetics, especially with regard to pictures, has had important advocates even in the 20th century. For example, Beardsley, as already noted in section 1.2, has suggested that pictorial concepts such as depiction or portrayal should be defined with reference to some kind

128 Subjective relativism (according to which notions such as truth or knowledge should be related to particular individuals, with their private biases, interests, or beliefs) is of course a possible form of relativism, though less frequent than intersubjective versions. For an excellent discussion of different types of cognitive — and moral — relativism, see Meiland & Krausz (1982).

129 151e–186e. Reprinted, for instance, in Matthews (1972), pp. 144–180. See also the discussion of Protagoras' maxim in ibid., pp. 23–27.

of resemblance between a picture and the depicted object.[130] However, during the last few decades it has become almost fashionable to regard such a standpoint, and the tradition it stems from, as hopelessly obsolete or quite simply wrong. I will give a short review of three versions of pictorial conventionalism.

Goodman's attempt to reduce pictorial representation to a certain kind of denotation may serve as one of the most provocative examples of this relatively modern form of scepticism. According to Goodman, the notion of resemblance is, logically speaking, a symmetric relation: if X resembles Y, then Y must necessarily resemble X. Pictorial representation, on the other hand, is not symmetric: a picture of a man represents the man, though, of course, the man does not represent the picture. Moreover, any picture may resemble something else much more than the object it depicts—for instance, another picture. We need some kind of specification as to which properties ought to be regarded as relevant in order for something to qualify as a depiction. Thus, Goodman concludes, resemblance cannot reasonably be thought of as a *sufficient* condition for pictorial representation.[131] This last claim is, I believe, quite plausible (though unfortunately also quite trivial). But Goodman maintains further that resemblance is not even a *necessary* condition. As he puts it, "[...] almost anything may stand for almost anything else".[132] Pictorial representation is basically conceived of as a kind of reference or denotation, though pictures—in contradistinction to verbal predicates—are considered to belong to semantically and syntactically dense symbol systems. All systems of representation, including pictorial ones, are claimed to be historically and socially variable, depending on learnt habits or traditions. Thus the interpretation of pictorial representations presupposes previously acquired knowledge on the part of the beholder, and the notion of resemblance, understood as a "natural" or "objective" relationship between a picture and what it depicts, is dismissed.

Likewise, Umberto Eco, for example in his important work "A Theory of Semiotics", stresses the difficulty of giving an exact definition of pictorial representation—or, as he prefers to say, iconism—as it appears to cover a variety of different phenomena.[133] Essentially, however, pictorial representations should be regarded as iconic signs, or rather as sign-functions which depend on culturally established codes correlating

130 Beardsley (1981), pp. 270–278.
131 Goodman (1976), pp. 4–5.
132 Ibid., p. 5.
133 Eco (1979), p. 216.

expression and content. Eco rejects a naive conception of similarity based on the common-sense idea that there are shared properties between a picture and what it depicts: we need some kind of specification as to which properties should count as pertinent ones. Put in another way, "...similarity does not concern the relationship between the image and its object but that between the image and a previously culturalized content".[134] According to Eco, our comprehension of iconic signs is governed by so-called *recognition codes* (stipulating which properties are pertinent or relevant to the experience of similarity) and *iconic codes* (establishing a correspondence between a picture's graphic features and the object which it depicts).[135] Familiarity with these codes is not innate, but has to be learned. Our understanding of pictorial representations is supposed to be culturally determined, and thus basically a matter of convention.

The art theorist Norman Bryson's point of view will be mentioned as the last example of a pictorial conventionalist position. Bryson has become known for his harsh attacks on traditional art history, which he criticizes for having treated issues such as perception in general or the comprehension and production of pictorial representations in a naive and superficial manner. The main problem, he appears to claim, consists of art history's lack of insight into the "fact" that pictures are fundamentally arbitrary signs. The notion of an innocent eye and the view that pictures may (more or less neutrally) reflect the visual aspects of reality are rejected. According to Bryson, pictures acquire representational status because of conventionally established codes of recognition.[136] Inspired by Wittgenstein, Marxist theory and Saussure, he attempts to show that pictorial representations achieve their significance in a social discourse conditioned by political and economic interests. The meaningfulness of pictures has nothing to do with natural relations of similarity or references to a given, external world. Perception and knowledge are said to be culture-dependent, and we have no neutral access to an objective reality with which we could compare pictures. Hence, Bryson concludes, pictorial representations are by nature entirely conventional.[137]

After this brief survey of some pictorial conventionalist positions, let us take a closer look at the types of arguments which have been used in support. As already mentioned, pictorial conventionalism bears some form of theoretical affinity with cognitive relativism. Thus it is not very

134 Ibid., p. 204.
135 Ibid., p. 216.
136 Bryson (1983), pp. 38–43.
137 For a more detailed account and criticism of Bryson's view, see Ranta (1997).

surprising to find that numerous pictorial conventionalists have accepted or argued for a cognitive relativist view. In particular, Goodman and Bryson have explicitly advocated the latter standpoint. As Goodman has put it, "[...] reality in a world, like realism in a picture, is largely a matter of habit".[138] There are, he claims, different ways to describe the world, and none of them can be tested by comparing them to an objective reality. Descriptions *or* depictions of the world can only be compared to other descriptions or depictions, and which of them we accept as true *or* realistic has largely to do with habits and purposes. Bryson, of course, shares this belief.

A common denominator of both positions is usually the assumption that observations are mediated by certain frameworks: there is no such thing as an "innocent eye". The plausibility of cognitive relativism does not rest on the claim that linguistic signs are arbitrary by nature, but rather on the more basic assumption that perception and observation—which give rise to propositional beliefs and assertions—are dependent on theoretical presuppositions (or conceptual schemes, and so on). Due to the "fact" that sensory perception is assumed to be theory or concept-bound, and due to the additional "fact" that people's theoretical or conceptual background is variable, empirical beliefs or propositions have consequently to be variable. In a similar way pictorial conventionalists deny any possibility of observing or representing the-world-as-it-is. Perception, or the recognition and interpretation of stimuli, is said to be determined by changing cultural, socio-historical, or conceptual presuppositions. Moreover, the interpretation and production of pictorial representations is conceived of as being dependent on the existence of and acquaintance with certain pictorial codes, schemata, or the like. Hence both cognitive relativists and pictorial conventionalists claim that the results of observations—propositions or pictorial representations respectively—must be variable. We may thus distinguish between three relativist/conventionalist positions which are of interest in this context:

(i) *Cognitive relativism*: propositions cannot be judged to be true or false by themselves, but must be judged so in relation to a certain background (such as a theoretical or conceptual context, a world view, and so on).

(ii) *Pictorial conventionalism*: pictorial representations cannot be judged to be accurate or non-accurate by themselves, but must be judged so in relation to a certain background (such as a theoretical or conceptual context, pictorial codes or schemata, and so on).

(iii)*Perceptual relativism*: (interpretations of) observations have no accuracy or validity by themselves, but depend on the percipient's background (such as those aspects mentioned above).

Now, it should be pointed out that cognitive relativism and pictorial conventionalism are not logically related to each other in a straightforward way (which at least Bryson appears to be unaware of). There is no logical inconsistency in being a pictorial conventionalist and at the same time a cognitive absolutist: from the claim that our comprehension of pictorial representations is relative to variable frameworks or circumstances, it does not follow that our observations and beliefs regarding the rest of the world have no absolute validity.[139] We may, for example, assert that pictures acquire their representational function due to pictorial codes or schemata, while at the same time admitting that perception in general is not theory or concept-bound. Only the way perceptual information is *transferred into* (and *recognized within*) a specific medium (e.g. a painting, a sketch, or a sculpture) is based upon contingent codes, habits, and so on. On the other hand, a cognitive relativist position seems to imply some form of pictorial conventionalism: if *all* propositional beliefs only have a relative truth-value (because of the framework-dependence of our observations), assertions concerning the fidelity of pictorial representations, or concerning relations of similarity, cannot be true or false in an absolute sense.

As already noted, most pictorial conventionalists seem to be perceptual relativists. This latter form of relativism seems thus, at least in practice, to be a crucial mediating factor between cognitive relativism and pictorial conventionalism. Within philosophy of science and epistemology, the view that all observation is theory or concept-laden has been a much debated topic in our century, having influential proponents such as Karl Popper, Thomas Kuhn, and Paul Feyerabend. An extensive number of books and articles concerned with this issue have been—and continue to be—published.[140] Most of this debate's intricacies and the arguments used for and against are, however, do not concern us in the present context. Still, one type of argument, based upon psychological evidence, deserves mention. Psychological investigations into perception have quite frequently made use of so-called reversible figures as stimulus material. Such figures are, for example, the Necker cube (which can be

138 Goodman (1978), p. 20.
139 Cf. Humble (1984/85), p. 220.
140 For an introduction into this debate, see e.g. Newton-Smith (1981).

seen either as a cube seen from above, or as a cube from below), vase/face-figures (which can be seen either as two opposite faces in profile, or as a vase), and the famous duck-rabbit (which can be seen either as a duck, or as a rabbit). Such perceptually ambiguous figures have sometimes been referred to by cognitive relativists (e.g. Kuhn) in order to illustrate the theory-dependence of our observations.[141] In these cases the same visual pattern can be interpreted in two ways, either as X, *or* as Y, depending on the observer's expectations or assumptions, though *not* as X and Y *at the same time* (the observer has to oscillate between these two interpretations). In a similar way, so the argument goes, all kinds of observations are determined by one's presuppositions (e.g. theories, conceptual schemes, and so on). The question arises, though, whether the analogy between the perception of reversible, quite artificial, and unusual configurations and *perception in general* is very plausible. Vision in general and in everyday contexts does not seem to be as ambiguous as it is in the case of reversible figures. As a matter of fact, it may very well be argued that it has not been convincingly shown that there are no epistemologically relevant differences between these two kinds of perception, and it seems to be quite odd to use atypical cases as paradigmatic for analyses of typical ones.[142] Although we might allow for a certain plasticity and even unreliability in perception, this does not mean that "anything goes"; there may be significant constraints for people's perception of objects and visual patterns, and in that case observation is not entirely theory or concept-bound. At least the empirical evidence as here described, which has been used in support of perceptual relativism, is highly problematic or insufficient. On the contrary, recent research into visual perception within, for example, neurophysiology and cognitive science seems to suggest that there is indeed a remarkable, cross-cultural stability in terms of, at least, some basic aspects of feature, object and pattern recognition (evidence suggesting noteworthy perceptual stability in pattern recognition will be reviewed below).[143] Furthermore, even category formation (i.e. the construction of categories) appears sometimes to a remarkable extent to hold across a diversity of cultural environments, due to the fact that the features of the category members in question are similarly perceived among various categorizers. We shall return to some of these findings in section 4.3.

To sum up, then, the justification of perceptual relativism, and consequently cognitive relativism, seems to demand thorough empirical con-

141 Kuhn (1970), pp. 113–127.
142 Cf. Mandelbaum (1982), pp. 46–47; Gilman (1992 a), pp. 304–305.
143 For discussions on these lines, see Gilman (1992 a); (1992 b); (1994).

firmation. It might very well be called into question that acquisition of knowledge through observation has to be framework-dependent in *all* respects, namely by referring to the inadequate empirical support of this thesis.[144] In general, cognitive relativism seems to presuppose the acceptance of factual judgements which are considered to be true in a non-relativistic sense. At least it is not uncommon to use such judgements as support.[145] For example, it has quite often been claimed that empirical beliefs *de facto* vary or have varied under different historical or social circumstances. The relativity of our empirical beliefs is sometimes regarded as an empirically established "fact". If this latter statement is considered to be absolutely true, then the generalizing claim of cognitive relativism becomes untenable. Moreover, the generality of cognitive relativism must lead to the conclusion that this position itself is only relatively true, and thus it has frequently been remarked that this radical form of relativism is self-contradictory or self-refuting.

Now, pictorial conventionalism has occasionally been justified by referring to empirical (e.g. psychological, sociological or anthropological) investigations, though logical or conceptual considerations are often given a prominent role. Goodman's symmetry argument against the appeal to similarity for elucidating the nature of pictorial representation may serve as a typical example of this latter kind of approach. We may of course admit that, logically speaking, similarity is a symmetric relation; however, in real life cases similarity may actually be experienced as asymmetric. For example, recent categorization research within cognitive psychology—to which we will return in section 4.3—has given empirical confirmation that similarity ratings may very well be asymmetric. In a series of experiments subjects were asked to make similarity judgements concerning members of various categories. Astonishingly, they tended to regard less representative or typical category members as more similar to more representative members than vice versa. For example, American subjects regarded the USA—in contradistinction to Mexico—as a typical example of the category *country*. The same subjects considered Mexico to be more similar to the USA than the converse.[146]

Be this as it may, although it may be argued that similarity is not sufficient for pictorial representation, it could still be claimed that it is a necessary condition. I shall not be concerned here with a detailed discussion of the arguments used by Goodman against this latter view. My

144 Cf. Gilman (1992).

145 Cf. Mandelbaum (1982).

146 See e.g. Rosch (1994), p. 516; Tversky (1977). Cf. also Sonesson (1989), p. 226; (1992), pp. 131–132, who points out that similarity relations in "Lifeworld" situations may be asymmetric.

point is rather that to a considerable extent these arguments include rather artificially constructed examples, while empirical evidence from disciplines such as anthropology, sociology or psychology is largely omitted. There are, however, some scattered references to ethnographic studies according to which so-called primitives are incapable of comprehending photographs. These occasional remarks appear in the form of footnotes, thus empirical investigations are obviously not given any significant attention.[147] A similar omission also characterizes Bryson and Eco's defence of pictorial conventionalism.

It should be mentioned, though, that another kind of empirical support is quite frequently used to defend pictorial conventionalism (which, by the way, is comparable to the aforementioned argument used by cognitive relativists). According to this line of reasoning, humans' experience of pictorial fidelity, or their ability to comprehend pictures, have *de facto* varied historically and culturally.[148] The question arises, however, as to what extent or degree such variations have occurred. Despite our culture-specific limitations we have, apparently, no doubts that the Paleolithic cave paintings at, for example, *Lascaux* represent horses, bulls, and so on. We have no serious problems in recognizing the represented objects of numerous pictures or sculptures from pre-Columbian, Sumerian or other ancient cultures—despite the fact that we are not acquainted with their codes or conventions of depiction. Pictorial conventionalism presupposes the acquaintance with pictorial codes (or at least verbal stipulations according to which certain configurations depict certain objects), but this is hardly the case in the examples mentioned above. How do we know that it is horses or bulls which are actually depicted—and not, for instance, flowers or clouds? Indeed, we cannot be sure at all that these visual configurations are representations at all (and not just formal and purely decorative patterns). Pictorial conventionalism in its most radical form leads to the absurd conclusion that we have no rational or well-founded means of comprehending and making comparative investigations of pictures (*qua* representations) belonging to remote cultures.

Although we may admit that anything can stand for anything else, it is still far from clear that anything may function as a (good) pictorial representation of anything else. We have, I believe, reason to suspect that there are lasting and historically continuous constraints on anything functioning as a picture. Consequently, it is by no means obvious that the comprehension of pictures is entirely determined by culture-dependent recog-

147 Goodman (1976), p. 15, note 15. See also Black (1972), pp. 126–127, note 38.
148 Cf. Eco (1979), pp. 204–205.

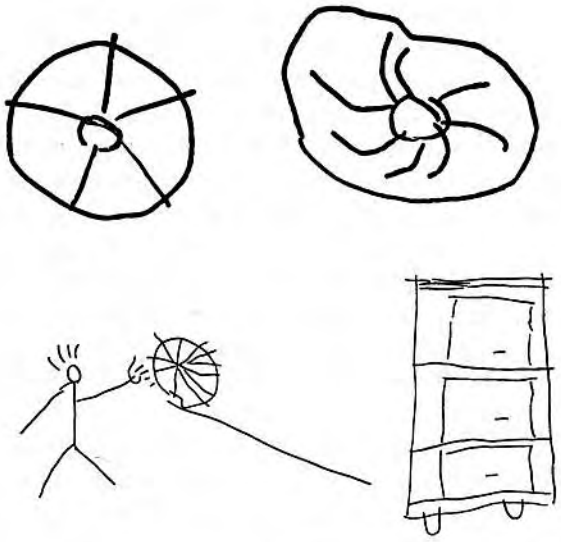


Figure 1. Outline drawings by congenitally blind people: Wheels, static and spinning. Man rolling a wheel. Cabinet.

nition codes, habits, conventions, and so on. There are, in fact, numerous empirical studies which indicate that the radical and rather counter-intuitive claim put forward by pictorial conventionalists is simply wrong.

For instance, investigations with congenitally or early blind adults (and who thus are unacquainted with recognition codes, or any other pictorial codes) have shown that these persons are capable of producing drawings in much the same way as sighted people do (see, for example, figure 1).[149] These configurations (which are admittedly quite simple) have been intended to depict, for example, faces, human bodies, emotional gestures, wheels, tables, and so on (sometimes even perspectively distorted) which sighted people are able to recognize as such.[150] We have historical examples where people (for example, from 18th-century Japan) who had hitherto only been accustomed to domestic ways of pictorial representation not only could comprehend foreign (in this case Western) pictorial styles, but also experienced the latter as more realistic or faithful.[151] These examples contradict, of course, the pictorial conventionalist's

149 This illustration has been taken from Kennedy (1980), pp. 160–161.

150 Kennedy (1980), pp. 158–159. For the relationship between vision and tactile perception (which seems to be crucial for explaining the ability of blind people to create pictures), see Eriksson (1998), e.g. pp. 16–19; pp. 244–247.

claim that the comprehension of pictures, or one's experience of pictorial fidelity, is entirely culture-bound or simply a matter of habit. We have empirical evidence that children who have grown up without previous familiarity with pictures, and thus without training in how to interpret them, were still able to recognize and identify objects portrayed by both photographs and drawings.[152] Moreover, experimental research indicates that even apes, such as chimpanzees and orang-utans, can identify the representational content of simple colour as well as black-and-white photographs at first sight—without specific training and without prior acquaintance with photographs.[153] These findings undoubtedly undermine the assertion that pictorial or other codes have to be learned in order for pictorial representations to be understood. Now, with regard to the so-called primitives mentioned by Goodman: although some cross-cultural studies actually indicate that not all people can understand photographs, at least not at the first glance, there are yet other investigations which contradict these findings. Numerous inquiries have been carried out by anthropologists and ethnologists where subjects belonging to different cultures and so-called primitive tribes were almost unanimously able to identify pictorial representations of certain objects. When photographs (as well as outline drawings!) were shown to these people, the consensus as to whether, for example, animals, humans, or trees were represented was quite remarkable. A depiction of a man was never mistaken for a depiction of an elephant, and vice versa. On the other hand, interpretations of the visualized content—in contradistinction to simple object recognition—were more diverse. A picture could be interpreted by different subjects as showing a dead elephant *or* one dangerously jumping. The depiction of a crowd scene could be interpreted as people dancing *or* fighting.[154]

Nevertheless, these and the aforementioned empirical findings appear to contradict the radical version of pictorial conventionalism. It may be admitted that comprehension of pictures may depend on the beholder's previous learning and his cultural or historical presuppositions insofar as the interpretation of visual configurations is concerned. Thus facial or body movements, postures or events, implied metaphysical, religious or political assumptions, to mention some examples, may be interpreted differently

151 Tormey (1980), pp. 69–71.

152 Hochberg (1972), pp. 69–70.

153 Davenport/Rogers (1971); cf. also Lenain (1997), p. 162

154 Kennedy (1974), pp. 66–75.

155 Gombrich (1982) has rather belatedly modified his earlier pictorial conventionalist inclination along these lines.

by different viewers (a point which is stressed by Bryson especially). But this rather trivial insight does not permit the conclusion that the understanding of pictorial representations is completely contingent upon cultural-historical circumstances. If there are physical and biological constraints (i.e. due to features of our perceptual system on the one hand, and of objects on the other) on our ability to recognize depictions of certain types of objects and to experience relations of similarity, this ability cannot be explained with reference to mere conventions or habits.

We may admit that similarity cannot reasonably be regarded as a sufficient condition for something to be a pictorial representation; this does not, however, imply that a similarity relation might not be necessary. Of course this relation cannot be referred to in an unspecified sense; if we define (visual) similarity as something like "shared (visual) properties", an additional account of which properties are relevant to pictorial representations seems to be necessary. Here I will not attempt to discuss the notion of similarity in detail, nor suggest any possible candidates for "relevant properties". My point is rather that the *experience of relevant similarity* appears to occur quite spontaneously, and obviously with remarkable historical and cross-cultural stability. Similarity, as seen from a *phenomenological* perspective has to be explained by considering the nature of the human mind and human perception. Accordingly, it might be fruitful to give greater attention to those biological/perceptual presuppositions which appear to be significant in this context and, moreover, have been relevant from an evolutionary point of view. I believe it is far from unreasonable to suppose that humans have some kind of visual input system which, to a considerable extent, functions independently of conventionalized frameworks and which may have emerged because of its survival value.[155] Pictures are artefacts which have been adapted in order to correspond to our perceptual presuppositions. This assumption, of course, deserves much more thorough discussion and, not least, empirical confirmation. Clearly, pictorial conventionalists have not convincingly shown that this strategy might not be fruitful. On the contrary, I believe we have (empirical) reason to suppose that pictorial conventionalism in its most radical form is incorrect.

Aesthetics as Language Analysis

Let us return to the more general point I want to make, namely that numerous scholars theorizing about the arts, perhaps most notably within philosophical aesthetics, are reluctant to take empirical research into consideration. Aesthetical problems are usually dealt with by means of

introspective methods, through deduction, and logical or linguistic analyses. In particular, analytic aesthetics has been devoted to the analysis and clarification of aesthetic concepts and statements. Hence definitions or explications of concepts such as "art", "meaning", "metaphor", "aesthetic value", and so forth, are proposed as philosophical attempts to eliminate logical inconsistencies from and to clarify the linguistic practice of art critics or art historians. Linguistic analyses, as conceived of by analytic aesthetics (and analytic philosophy in general), may either attempt to break down certain concepts into more basic components or properties, or strive for the clarification of vague notions or statements, thereby distinguishing between their various senses and use conditions.[156] Inspired by the analytic approach introduced by George E. Moore, Bertrand Russell, Gilbert Ryle, Charles L. Stevenson, and Ludwig Wittgenstein, analytic aestheticians tried to apply their methods on a field which, as they saw it, had been dominated for far too long by speculative theories and obscure metaphysical assumptions. As Benjamin Tilghman put it,

> "[t]he philosophy of art in the first half of this century was a hodge-podge of theories presented by professional philosophers, practicing artists, art historians, literary critics, psychologists, and just about anyone with an interest in art and the temerity to express that interest in the borrowed trappings of some philosopher's system. As chief among these theories in the English-speaking world can be mentioned the idealist aesthetics of Bosanquet and Collingwood along with, of course, that of Croce and, of importance especially in this country, the theories derived from the naturalism and pragmatism of such people as Santayana, Dewey, Prall, and Pepper."[157]

According to Tilghman, a change for the better occurred during the 1950's, marked by the publication of William Elton's collection of analytically inspired articles with the symptomatic title "Aesthetics and Language" (1954).[158] This collection indicated a shift within the philosophy of art from previous concerns with art itself to linguistic practices concerning art. Thus analytic aesthetics saw itself as a second-order discipline, a philosophy of criticism, which attempted to elucidate and

156 Cf. Shusterman (1987), p. 117.
157 Tilghman (1973), pp. 2–3.
158 Elton (1954).
159 Cf. Shusterman (1987), p. 118.
160 Isenberg (1987), p. 128; quoted in Dempster (1993), pp. 352–353.
161 Tilghman (1973), pp. 3–4, (my italics).

clarify the practices of art critics and art historians, rather than investigating the nature, function(s), and assumed effects of artworks themselves. What science was for philosophy in general (the latter being concerned with the epistemological and logical foundations of scientific practice), art criticism was for aesthetics.[159] Arnold Isenberg, one of the contributors of this collection, had, as early as 1950, defined aesthetics as follows:

> "Philosophical aesthetics is an analysis of the concepts and principles of criticism and other aesthetic studies, such as the psychology of art...Analytical aesthetics has a preliminary, critical, and reflective role in relation to these other activities. It concerns itself with the clarity of their premises, the meaning of their statements, and the character of their methods—of which they are themselves frequently not aware."[160]

More than 20 years after this proclamation, Tilghman concluded that the analytic strategy had proved to be extremely fruitful for aesthetics, having elucidated and brought out the "real" problems of interest.

> "Traditional aesthetics...was a generally unfortunate business that was either bogged down in bad metaphysics or else really a matter for empirical psychology, and hence was of no inherent philosophical interest...We now, I think, have a much juster estimate of the nature of these problems and also, I would add, of what we now can refer to as traditional aesthetic theory. These problems are properly conceptual problems and are to be dealt with by getting a clear view of the language-games in which the relevant concepts occur, and not by constructing metaphysical systems and *certainly not by adducing the empirical evidence of psychology*. In this light the traditional theories can be seen and appreciated as serious, although mistaken, attempts to deal with very real problems."[161]

As this passage reveals, any concern with psychological research is explicitly dismissed. Psychological findings are of no more importance for aesthetics than are the linguistic practices of art critics. They may, of course, be taken as a more or less interesting subject for analyses, but they cannot make any genuine contribution to aesthetics as such. Now, in Tilghman's view, one of Wittgenstein's aims was to straighten out the nature of language in order to get important insights into the nature of mind. Briefly put, language games and mental states are said to be interrelated,

and the latter have to be analyzed by reference to some form of overt behaviour. According to Tilghman, "[a]esthetics must involve the philosopher in the investigation of perception, sensation, attention, intention, emotion, and other notions that can be subsumed under the fuzzy shelter of the term 'experience'...In order to do aesthetics we first have to do the philosophy of mind."[162] And Wittgenstein's "work in the philosophy of mind has allowed much to be made clear about the nature of aesthetic experience and the role that emotion, for example, plays in it."[163] Basically this means that investigations into the nature of language are required; if we understand language, we understand the nature of psychological and mental concepts.

Philosophy, Aesthetics, and Science

The conception of philosophy as conceptual or logical analysis as envisaged by Wittgenstein, Ryle et al. is of relatively recent origin. Historically, philosophers have by no means consistently stuck to "aprioristic" — in contradistinction to empirical—problems and approaches. To be sure, they have attempted to elucidate notions such as knowledge, being, morals, and beauty; on the other hand, they have also dealt with empirical questions or made empirical claims. Philosophers have not usually been very reluctant to determine motivating factors for human behaviour, to describe possible or probable effects of art on the public, to speculate about the smallest elements of matter, to account for human mind, and so on. Whether their claims still are tenable or not, it is quite obvious that numerous topics traditionally discussed within philosophy nowadays would be regarded as scientific rather than philosophical problems; at least some of them seem to be empirically testable.

Despite the impact of the analytic approach, and perhaps a general aprioristic inclination within philosophy, there have been some attempts to resolve traditional philosophical issues by taking empirical findings into consideration. The linguist and philosopher Noam Chomsky, for example, criticized behaviourism's stimulus-response model of language acquisition (and its underlying empiricist epistemology) for having failed to account for the ability of language speakers to understand and use a virtually unlimited number of sentences.[164] This ability goes beyond our previous experience or familiarity with already heard sentences. A central idea in Chomsky's theory consists of the (by no means uncontroversial)

162 Ibid., p. 3.
163 Ibid., p. 4.

assumption that language speakers have an implicit knowledge of grammar's universal deep-structure, and that this knowledge is innate, not learned. In this respect Chomsky adhered to a rationalist view on knowledge, thus rejecting strict empiricist accounts. Interestingly, though, his arguments were to a considerable extent based upon a host of empirical evidence taken from psycholinguistics and psychology.[165]

Within the philosophy of mind, conceptual clarification and analyses of various language games were the dominant problem-solving strategies from about the 1940s to about the 1970s. Thereafter, however, a renewed interest in first-order questions concerning the general nature of mind, and not exclusively our way (or ways) of talking about its various aspects, has led to a shift in orientation.[166] During the last few decades, philosophers of mind have paid increasing attention to empirical research within neuroscience and experimental psychology. Philosophical discussions concerning the nature of consciousness, emotions, personal identity, and so forth nowadays rather frequently take scientific research into account. Current philosophy of mind is by no means restricted to pure language analyses in a Wittgensteinian sense; instead, a clear demarcation of philosophy from empirical sciences has come to be regarded as unreasonable.[167] A deeper understanding of mind seems to demand cross-disciplinary approaches, and the growing literature in this field of research reveals that this conviction has become rather widespread.[168] The philosopher William Lycan summarizes this recent development as follows:

> "In the past thirty years, the philosophy of mind has seen a massive shift of doctrine, of method, and of perspective. Characteristic of this shift is the unprecedented attention of philosophers of mind to science: not only to psychology and linguistics, but to computer science, evolutionary biology and neuroanatomy as well. As a result, the mind-body problem is now better understood than at any previous point in human history...That is not to claim consensus for any one solution to the mind-body problem, for (of course) none exists. It is to claim a fairish consensus on questions of what the going arguments do and do not show, what the live options are, and what is at stake."[169]

164 See e.g. Chomsky (1965); (1980).
165 Cf. Guttenplan (1994), p. 504.
166 Cf., for example, Lycan (1990), pp. 37–38.
167 Cf. Kurthen (1984), p. 70.
168 See, for example, ibid., Churchland (1984), Dennett (1991), Lycan (1990).

Now, according to Tilghman, aesthetic problems can only be solved if we understand the nature of mind. Contemporary philosophy of mind is, in contradistinction to Tilghman's view, to a remarkable extent interested in empirical research. Accordingly, one might argue that aesthetics should also take findings from empirical disciplines (e.g. neuroscience or evolutionary biology) into consideration. In order to gain a better insight into perception, sensation, attention, intention, or emotion —notions which Tilghman claims to be subject for aesthetic investigations —we need more data than just linguistic articulations of deep-rooted *assumptions* concerning these conceptions. Our assumptions or intuitions may very well, as mentioned earlier, be misconceived or empirically dubious (or even false). Empirical findings may convince us that our, or art critics', previous beliefs concerning, for example, perception were defective or far too superficial. Thus it could be claimed that scientific research can lead to a revision of some of these suppositions, quite apart from any possible logical or linguistic deficiencies.

Beardsley has suggested that we should "think of aesthetics as a distinctive philosophical inquiry: it is concerned with the nature and basis of criticism—in the broad sense of the term—just as criticism itself is concerned with works of art".[170] This approach is certainly in accordance with the general tenet of analytic aesthetics. Still, it is far from clear whether Beardsley himself has stuck exclusively to "problems in the philosophy of criticism" (which is the subtitle of his influential work "Aesthetics"). At least, it may be argued that a number of his remarks concerning perception, aesthetic qualities, perceptual characteristics of visual designs, and so on, are based on psychological assumptions derived from art critics' statements (and his own intuitions). The plausibility of these assumptions is certainly not a matter of logical consistency or terminological exactness, but rather dependent on the plausibility of empirical/psychological hypotheses. In a relatively late article Beardsley has actually expressed a certain susceptibility towards the incorporation of psychological studies into aesthetics. Most notably, the examination of what is involved in aesthetic experience seems to require psychological research:

> "[T]he nature of aesthetic experience has continued to seem to me, especially in its bearing on philosophical questions about the distinctive

169 Lycan (1990), preface.
170 Beardsley (1981), p. 6.

> value of art, or of individual arts, to present clearly psychological questions and to demand psychological inquiry. In the light of all that has happened in aesthetics and psychology over the last couple of decades, it is a good deal easier now to see why psychology is indeed relevant to aesthetics."[171]

Psychology can, Beardsley appears to claim, afford explanations as to how and in which way certain stimuli, or works of art, lead to various reactions or experiences.

> "When we turn to the explanation of psychological facts (or example, about our experiences of artworks), we will require laws to connect these facts with the appropriate explaining facts. And among such laws will be those describing certain propensities of art-apprehenders: tendencies to react in certain ways to certain data, to process data in certain ways, to seek out certain kinds of data when opportunity arises. Such propensities will evidently play a crucial role in explaining experiences of artworks, and their existence consists in the truth of psychological laws. It is precisely here that psychology becomes relevant to aesthetics—if psychologists do in fact supply such laws and they can actually be used in framing explanations of artwork-experiences."[172]

Indeed, we cannot exclude the possibility that sometimes "the theorist of visual art does...a kind of psychology, and many of his key explanatory principles turn out to be psychological laws."[173]

Now, whether there may (or can) be anything like psychological laws, comparable to those in the natural sciences, could very well be called into question.[174] However, even if there are no such laws in a strict sense, we might nevertheless suspect that (methodologically and terminologically stringent) psychological research can afford us deeper insights into aesthetic behaviour, perhaps by suggesting certain correlations or probability relations, which would undoubtedly be superior to speculative assumptions or personal intuitions put forward by art critics and, consequently, traditional analytic aestheticians. On the other hand, we must of course be prepared to admit that empirical inquiries presuppose some kind of theoretical/conceptual framework, and there are surely numerous

171 Beardsley (1980), pp. 185–186. See also Fenner (1992), who argues that psychology may have an ancillary use for aesthetic investigations, not least regarding the notion of aesthetic experience.

172 Beardsley (1980), pp. 194–195.

173 Ibid., p.199.

fundamental issues which demand philosophical consideration, whether in aesthetics or in other disciplines. With regard to the former, we need some preliminary hypotheses, eventually derived from art critics' statements, as to which objects, which properties, and which effects deserve attention. Traditional methods of philosophical aesthetics may detect ambiguities and inconsistencies, they may make explicit concealed premises and assumptions, and they may of course analyze the relevant concepts. In this respect aestheticians may be able to make a significant contribution to aesthetic problems. Nevertheless, empirical and psychological research may have an important role to play, and it seems that scholars within aesthetics—compared to other branches of philosophy, most notably perhaps philosophy of mind—are still far too reluctant to recognize that role.

Contemporary Aesthetics and the MRT Tradition

To conclude this section, let us return to the main topic of this study, namely mimesis as the representation of types. We have seen that numerous art theorists throughout history have stressed the rendering of kinds of things (whether as idealized or as representative members of a class) rather than particular things. Moreover, pictorial works of art have, from the point of view of art history, quite regularly been created in order to represent fictional, ideal, or typical entities (objects, subjects, environments, states of affairs, etc.). Astonishingly, though, contemporary aestheticians have given the MRT tradition relatively little attention. Discussions concerning pictorial representation have frequently tended to focus upon the rendering of real particulars, often in connection with questions about their cognitive, moral, or aesthetic value, the nature of such renderings, and their relationship to the concept of art. To be sure, notions such as "fiction", "symbolization", "universals", and so on, have more or less been of concern among aestheticians; still, when it comes to discussions of pictorial representation, straightforward "copy theories" have received something like paradigmatic status. This emphasis, which appears to be prevalent within numerous textbooks and articles on aesthetics, is, however, historically rather misleading.

A notable exception in this respect is Jerome Stolnitz who clearly dis-

174 Cf. Donald Davidson: "Psychology as Philosophy", reprinted in e.g. Glover (1976), pp. 101–110, for a discussion and rejection of the idea of explanatory laws concerning actions of human agents.

175 Stolnitz (1960), pp. 109–133.

176 For an interesting overview of various uses of the concept "ideal" with regard to so-called 17th century "ideal landscapes" (e.g. by Annibale Caracci, Nicolas Poussin, and Claude Lorrain), see Rossholm Lagerlöf (1990), pp. 17–21.

tinguishes between three theories of art and aesthetic value based upon the notion of "imitation", namely (i) "simple imitation", (ii) "imitation of essences", and (iii) "imitation of the ideal".[175] Interestingly, Stolnitz devotes considerably more attention to the latter two theories, whereas the "simple imitation" theory (i.e. the depiction of particulars) is described as a view which has perhaps had adherents among some artists (and been widespread as a common-sense view), but almost no philosophers. Now, with regard to the "imitation of essences" theory (thereby referring to important proponents such as Aristotle and Joshua Reynolds), Stolnitz admits its superiority over the first theory due to the fact that it gives a better account of artistic value and what artists actually have done. On the other hand, it seems difficult to determine *the* essence of things; instead, we must allow for a multiplicity of essences, which are more or less crucial or important for the constitution of things. Moreover, this theory does not offer an adequate definition of the "fine arts" (e.g. paintings stressing particularities or having fictitious motifs would have to be ruled out), nor does it suggest any sufficient criteria for artistic value. When it comes to the "imitation of the ideal", Stolnitz notes that something like "aesthetic" idealizations may occur in works of art, though he restricts his discussion to "moral" idealizations. According to Stolnitz, this last theory, in contradistinction to the "essence theory", has no descriptive aspirations regarding the concept of art, but should rather be regarded as prescriptive, that is, as offering a criterion of the value of art. This theory is also deficient because of its one-sidedness; it is not applicable to all works of art, and it emphasizes the importance of a work's subject matter, thereby disregarding its sensory and formal attractiveness.

Stolnitz' commentaries on these three theories are unfortunately to some extent quite disappointing. The concepts of "essence" (or related notions such as "universal", "type", "stereotype", or "category") and "ideal" are touched upon rather briefly. The latter concept is only discussed from a moral point of view, and any account of other conceivable kinds of idealization (e.g. aesthetic idealization, the rendering of antique environments, etc.) is omitted.[176] As we shall see in section 4.3, considerably more can be said about the nature of "essences" and "ideals", not least from a psychological perspective. Nevertheless, Stolnitz is of course (almost trivially) right when he concludes that these theories are inadequate as all-inclusive (descriptive or a prescriptive) theories of art. On the other hand, which theory would be more adequate in this respect, and is the very idea of such a theory even conceivable? If "art" is a concept with fuzzy boundaries, there would always be counter-examples or

borderline cases which would not fit into a proposed definition or a given category-specific set of value criteria. Similar problems would probably even arise if these three theories were restricted to solely "pictorial representations" instead of "works of art". Pictures fulfil all kind of semantic functions, such as outlined in section 1.2, and they may be more or less efficient (or valuable) in terms of a multiplicity of goals or purposes.

Still, to recapitulate, the view on mimesis as the representation of ideal or general types seems to be historically quite persistent, among art theorists as well as within artistic practices. How can this be explained? Why should we care about representations of anything like "essences" or "ideals"? Numerous theorists have been concerned with the moral value or effects of such representations, others with their capacity to afford hedonic experiences. Aristotle takes a position somewhere in between: mimetic objects may give us moral and other kinds of knowledge, and they may at the same time—apparently due to this cognitive aspect—be experienced as pleasurable. Generally speaking, human beings take pleasure in acquiring knowledge, and recognizing likenesses is seen as a cognitive activity. This assumption is (at least in principle) empirically testable and could be taken as a psychological law or hypothesis.

In this context it seems appropriate to consider Beardsley's view on these matters, to mention another influential contemporary aesthetician who seems to regard hedonic (or aesthetic) and cognitive functions of artworks as quite irreconcilable. In his discussion of the capacity of art to reveal or to represent universals, types, or essences, any hedonic effects are not even conceived of.[177] Instead, Beardsley focuses on the question of whether the representation of universals (if, as he notes, there are any such things at all) may afford us with any knowledge whatsoever.[178] In distinguishing between "knowledge by acquaintance" and "knowledge by description", where the former is concerned with direct experiences and the latter involves inferences and propositional truths, Beardsley doubts whether any noteworthy cognitive status can be established for aesthetic objects. First of all, works of art can usually not express (true) statements or propositions; thus they cannot—as such—give us "knowledge by description". Second, the very idea of "knowledge by acquaintance" is rejected; rather, we should think of acquaintance or experience *per se*,

177 It should be noted that Beardsley has hardly devoted any attention to the representation of "ideals". For some brief remarks, however, see Beardsley (1981), pp. 287–288.

178 Cf. also Hospers (1974), pp. 167–175, who likewise discusses the rendering of typicality (with regard to characters, actions, and experiences) in terms of its cognitive function (i.e. as being "true-to" something else).

which, as some kind of raw material, can lead to knowledge in a strict sense.[179] This experience, though, does not constitute an act of knowledge in itself. It might be argued, Beardsley admits, that works of art may reveal something like universals (being essential characteristics of class members). However, any object may be classified in manifold ways, thus "[n]o characteristic is essential in itself, apart from human purposes and human classifications".[180] Moreover, the question arises as to whether the representation of essences can be ascribed any cognitive importance.

> "There is no essential characteristic of trees...for the creative artist to abstract, intensify, and embody in his work. But even if it were, we would still have to question the cognitive status of the work. For the object that exemplifies the essence...is in this respect no different from the original tree...itself, which also exemplifies that essence: it does not give us knowledge unless it informs us *which* of the universals it exemplifies are the essences, and which are not."[181]

Indeed, why should we be interested in encountering representations of typical items and essential characteristics if real objects may fulfil the same function? And how do we know what actually is (or ought to be considered) essential? Shouldn't we rather conclude that "...a painter or musician who says his work is justified, and given a high cognitive value, because it makes us acquainted with qualities we have already met with, or could meet elsewhere, is making a very weak case"?[182] What is important, Beardsley claims, is not the discovery and revelation of universals, but instead the creation of hitherto new universals never exemplified before, that is, novel properties revealed by works of art that surprise us.

Beardsley's doubts concerning the existence of given essential characteristics of objects is to some extent understandable. Nevertheless, the same doubts are noticeably suppressed when it comes to works of art. Actually, in contradistinction to the usual anti-essentialist tenet within analytic aesthetics, Beardsley seems to embrace some kind of essentialism on art: works of art constitute a special function-class of objects which have the capacity to produce aesthetic experience.[183] To classify, say, paintings, sculptures, and music in such a way may of course be considered

179 Beardsley (1981), pp. 382–383. The distinction between "knowledge by acquaintance" and "knowledge by description" stems from Russell (1982), ch. 5.

180 Beardsley (1981), p. 384.

181 Ibid., pp. 384–385.

182 Ibid., p. 386.

183 Cf. Shusterman (1987), p. 123

to be compatible with general "human purposes"; still, other purposes (e.g. political, religious, moral, economic, and so on) and, accordingly, classifications of these things might likewise be conceivable. However, Beardsley is rather reluctant to consider such alternative classifications; indeed, it is easy to get the impression that he regards paintings, sculptures, etc. as having something like "given essential characteristics" which almost naturally suggest the classification "art". Due to his pronounced ambition to demarcate "art" from other classes of objects (or activities), functions or properties which can also be ascribed to other kinds of things are regarded as irrelevant. We may ask, though, why we should stick to such a strict view regarding *art*, whereas apparently no stable essential characteristics can be found for other classes of objects.

Moreover, even if we accept some kind of anti-essentialism on art as well as other categories, this does not necessarily lead to the conclusion that all classifications are in a continuous state of flux, seen from a personal as well as from an intersubjective and cross-cultural point of view. As we shall see, empirical findings from psychology and anthropology indicate that a relative stability in our categorizations may be discernible. Beardsley's constraints on art prevent him from taking into consideration properties or functions which more or less overlap with other kinds of things. Even if other objects can be used to exemplify or reveal typical or essential characteristics, this does not exclude the possibility that the recognition of typicality in pictorial representations—whether art or non-art—may be of considerable interest for beholders. The recognition of likenesses (in terms of typicality) in pictures might be enjoyable, quite apart from any knowledge to be gained, in contradistinction to simply looking at a real object (e.g. a tree) experienced as typical. On the other hand, it seems that deviations from the typical, uniqueness, distortions and surprises might also be of some interest (which Beardsley obviously would subscribe to). How could these apparently opposed interests be reconciled, if at all? And do hedonic and cognitive functions of pictures exclude each other? These questions, I believe, may be discussed and tentatively answered by taking, for example, current psychological research into consideration.

As I have argued in this section, psychological and other empirical findings may have considerable bearing on aesthetic issues. Indeed, it may very well be doubted, whether any strict boundaries between aesthetic and empirical/psychological questions can reasonably be upheld. Discussions

of pictorial representation, naturalism or realism have for a long time suffered from a lack of concern with empirical studies, thus sometimes leading to rather odd and counter-intuitive results. Gombrich is an exception in that respect, though the psychological research his account is based upon—most notably from Gestalt psychology—nowadays has to be regarded as somewhat obsolete. Research on visual perception, object recognition, and relevant neurophysiological presuppositions has made remarkable progress over the last few decades, and Gombrich's work is not surprisingly in need of being updated. Before I review and discuss some recent psychological investigations and proposals which seem to be relevant in this context, we shall look at some early ideas put forward by empiricist philosophers on the question of incorporating psychology into aesthetics. Furthermore, I will give an outline of some noteworthy, though more or less convincing, concrete attempts to study people's encounters with art and pictorial representations from a psychological perspective.

3. EMPIRICAL PSYCHOLOGY AND AESTHETICS

3.1 Introduction

THE PREVIOUS CHAPTERS WERE concerned with some historically significant philosophical and art theory attempts to determine (i) the nature and function of mimetic representations, and (ii) the criteria for evaluating these representations. As I shall argue later on, a deeper understanding and justification of some basic assumptions in the MRT tradition can be achieved by taking empirical findings into account. The view that mimetic representations (ought to) represent general or idealized types may thus be investigated from another angle, namely by considering the research done in disciplines such as cognitive psychology and neurophysiology. Although numerous problems in aesthetics demand philosophical consideration, empirical studies on the arts may be of ancillary use and help us in achieving a deeper understanding of aesthetic behaviour. Empirical research can of course not be done without certain conceptual or theoretical presuppositions. We require preliminary hypotheses to determine which properties of stimuli might be most important in creating certain responses and preferences, and preliminary criteria for distinguishing aesthetically relevant from less relevant aspects. Nevertheless, given these hypotheses, controlled procedures in which subjects are exposed to various stimuli (simple or complex) and their preferences and responses towards varying characteristics are tested and recorded can help to corroborate or modify these hypotheses. These investigations may contribute to the confirmation of our intuition that, from an intersubjective and intercultural perspective, certain characteristics of mimetic representations may be more significant than others as supporting reasons for evaluative judgements. Hence these studies may be relevant for determining the instrumental efficiency of these characteristics with regard to

"art-relevant" goals. In this chapter I will review and discuss hypotheses and empirical research in psychology that may help to elucidate our interest in mimetic representations. I will begin by outlining some of the first philosophical suggestions according to which aesthetic problems may be solved or clarified by taking empirical investigations into consideration.

3.2 British Empiricism: Hume and Hutcheson

HISTORICALLY, PSYCHOLOGICAL AND philosophical problems had not been clearly distinguished or attributed to separate academic disciplines until quite recently. Before the 19th century, psychology usually belonged to the domains of philosophy or theology and was quite often discussed in relation to moral, aesthetic, and epistemological issues. Aesthetic theories and norms have since classical Antiquity repeatedly been influenced by psychological hypotheses concerning the nature of mind, sensory experience, emotions, human behaviour, and so on. As noticed earlier, Plato is convinced that mimetic representations of human characters and patterns of behaviour may have significant psychological effects, i.e. participants or beholders of mimetic art may become habituated to and internalize certain dispositions and patterns. This psychological—and in principle empirically testable—hypothesis has of course a considerable bearing on his normative conclusions concerning different sorts of mimetic representations. Aristotle, to mention another influential example from Antiquity, shares to some extent this view, though he also stresses the cathartic and arousing effects (and feelings of pleasure) that mimetic works of art can give rise to. In his attempt to explain why humans are interested in mimetic representations these aspects are obviously as important as moral or cognitive effects.

In the history of aesthetics, the attention given to psychological questions (with regard to either the perceivers' responses or processes of artistic creation) has of course varied, sometimes probably depending on whether empirical approaches or rationalistic and *a priori* ways of reasoning were most influential (the latter being more prevalent among, for instance, scholastic and medieval aestheticians). It has frequently been maintained that the 18th century brought some significant changes to aesthetic discourse, or even, to be more exact, gave birth to aesthetics as a separate discipline, a "philosophy of art". While some fundamental (and still persistent) ideas and notions may be traced back to Antiquity,

other central aesthetic concepts such as "beauty" or "art" undergo quite radical alterations. "Art", understood as a broad concept including the crafts and sciences (i.e. *technê* or *ars*) assumes a more precise shape and develops into the modern system of the "Fine arts" (or "Beaux Arts").[1] "Beauty", which traditionally was regarded as a *quality* inherent in objects, is increasingly seen as an idea in the mind of a percipient. Though the search for objective properties in artworks that participate in constituting their beauty does not disappear completely, the focus is now also directed towards an analysis of human nature. The attitudes and responses of percipients receive growing attention, and notions such as "aesthetic experience" or "disinterested pleasure" are placed side by side with, or even replace, the ancient concept of beauty. This tendency seems to be especially notable and influential during the British Enlightenment with its regular emphasis on beauty as a subjective reaction of the perceiver, and its general interest in human psychology.[2]

Empirical and psychological investigations of aesthetic behaviour were thus advocated by British empiricists such as Francis Bacon, Thomas Hobbes, John Locke, Francis Hutcheson, and David Hume during the 17th and early 18th centuries. According to their anti-Platonist and anti-rationalist position, only sensory experience can provide the mind with ideas and knowledge. The ascription of truth-values to factual statements has to be done *a posteriori*, and non-analytic general truths or law-like relationships have to be grasped by means of inductive methods. During this period the experimental sciences began to receive special status as paradigmatic cases of knowledge acquisition (whereas mathematics and metaphysics were ascribed a similar role in earlier periods). Perhaps as a consequence of this attitude, the British empiricists called for empirical studies of psychological processes involved in the creation of and response to art. In this section I will exemplify this general view by taking a closer look at the proposals made by two much debated empiricists, namely Hume and Hutcheson.

David Hume

Hume (1711–1776), in his famous essay "Of the Standard of Taste" (first published 1757), might be interpreted as recommending, or foreshadowing, an empirical strategy in order to find rational criteria or principles of beauty. Although he notices a seemingly great historical and social variety of aesthetic value judgements, Hume is quite reluctant to adhere

1 Kristeller (1951); (1952), pp. 17–21.

2 Cf. Stolnitz (1961); Korsmeyer (1979/80), pp. 145–146.; Beardsley (1985), pp. 166–179.

to a relativist position. Beauty is, strictly speaking, no quality inherent in objects, but rather "...exists [...] in the mind which contemplates them..."[3] and seems to be comparable to secondary qualities such as sweetness or bitterness. Nevertheless, the percipients' experience of pleasure resulting from works of art—which according to Hume is equivalent to the experience of their beauty[4]—is not necessarily a contingent and subjective matter. Certain aesthetic value judgements are undoubtedly as absurd as if someone "...had maintained a molehill to be as high as Teneriffe, or a pond as extensive as the ocean."[5] Evaluations of aesthetic objects do not have to be less empirical than factual judgements: they may refer to the disposition of objects to cause pleasurable feelings in humans. Careful empirical observation of those objects and qualities that have proved to give rise to these emotional effects, investigations into human nature, and inductive reasoning could help us to find general principles or criteria of aesthetic value.[6]

> "It is evident that none of the rules of composition [or principles of aesthetic value] are fixed by reasoning *a priori*...Their foundation is the same with that of all the practical sciences, experience; nor are they anything but general observations concerning what has been universally found to please in all countries and in all ages."[7]

However, some people's reactions are less relevant or trustworthy than others. People may be inexperienced, have prejudices, illnesses, or "defects in the internal organs"[8] which will influence their aesthetic reactions and lead to improper judgements. Thus Hume introduces the ideal of a Qualified Percipient whose judgements are more reliable in these matters:

> "Strong sense, united to delicate sentiment, improved by practice, perfected by comparison, and cleared of all prejudice, can alone entitle

3 Hume (1994), p. 24.

4 In Hume (1896), p. 299, he explicitly states that "pleasure and pain...are not only necessary attendants of beauty and deformity, but constitute their very essence."

5 Hume (1994)., p. 25.

6 Cf. also Beardsley (1985), p. 190.

7 Hume (1994), p. 25. My addition in brackets. Cf. also ibid., pp. 28–29: "Some particular forms or qualities from the original structure of the internal fabric are calculated to please, and other to displease, and if they fail of their effect in any particular instance, it is from some apparent defect or imperfections in the organ. [...] Though it be certain that beauty and deformity, more than sweet and bitter, are not qualities in objects, but belong entirely to the sentiment, internal or external, it must be allowed that there are certain qualities in objects which are fitted by nature to produce those particular feelings."

8 Ibid., p. 28.

> critics to this valuable character; and the joint verdict of such, wherever they are to be found, is the true standard of taste and beauty." [9]

Hume's insistence on certain qualifications which art critics should fulfil in order to be trustworthy seems to be reasonable and consistent with our intuitions as well as ordinary practice. Some people's judgements are undoubtedly less reliable or relevant than others. Children and colour-blind or mentally disturbed people are usually taken less seriously in this respect than others. Despite the occurrence of some relatively clear-cut cases of non-qualified percipients, the question still remains as to how to distinguish people who are sufficiently experienced, sensitive and without prejudices from those who are not. Are the latter ultimately only characterizable by the fact that they make improper aesthetic judgements? In that case it might of course be argued that Hume's line of reasoning is circular: aesthetic evaluations are justifiable if supported by Qualified Percipients, and these are distinguishable from others as they make justifiable aesthetic evaluations.[10] On the other hand, Hume seems to suggest that superior judgements and percipients can be identified because in the long run they will be acknowledged by people in general.[11] Hence the final and decisive criterion for the validity of aesthetic evaluations appears to be their historical persistence:

> "But in reality the difficulty of finding, even in particulars, the standard of taste is not so great as it is represented...Though in speculation we may readily avow a certain criterion in science and deny it in sentiment,

9 Ibid., p. 36.—Hume's idea appears to be reminiscent of a well-known value theoretical position—the so-called Ideal Observer theory—which has quite frequently been discussed by moral philosophers. According to this (naturalistic) semantic theory, ethical value judgements are synonymous with empirical statements referring to the ethical preferences of a person who fulfils certain qualifications (for instance, who is impartial, normal, has all relevant knowledge, and so on). In a similar way, judgements such as "x is aesthetically more valuable than y" could be conceived of as translatable into something like "Qualified percipients would prefer x to y". It is doubtful, though, if this account of aesthetic value judgements really would provide a dictionary definition, a general description of people's actual linguistic behaviour (though some might use aesthetic value terms in this way). Certainly aesthetic evaluations are also sometimes used to refer to our personal or other existing people's preferences—if to any preferences at all. See also my remarks in section 1.1.—For a discussion of the Ideal Observer Theory, see Brandt (1959), pp. 173–176.

Be this as it may, Hume is probably not proposing a semantic theory, but rather uses the concept of a Qualified Percipient in order to find proper standard conditions for encounters with works of art (and thus a pragmatic criterion for accepting aesthetic value judgements).

10 See, however, Kivy (1976), pp. 143–148 (esp. p. 147), who claims that some of the qualities characterizing Qualified Percipients indeed lead to a vicious circle, while others do not. Cf. also Dickie (1988), pp. 141–145, for a similar point. For a recent discussion of the circularity argument against Hume's theory, and of Kivy's partial defence, see Carroll (1984/85), p. 189–191.

11 Hume (1994), p. 37. Cf. Korsmeyer (1976/77), p. 205.

> the matter is found in practice to be much more hard to ascertain in the former case than in the latter...[N]othing has been experienced more liable to the revolutions of chance and fashion than these pretended decisions of science. The case is not the same with the beauties of eloquence and poetry. Just expressions of passion and nature are sure, after a little time, to gain public applause, which they maintain for ever. Aristotle and Plato and Epicuros and Descartes may successively yield to each other, but Terence and Virgil maintain a universal, undisputed empire over the minds of men." [12]

Hume's belief that the final corroboration of standards of taste consists in the fact that they will stabilize and become widespread in the course of time (oddly enough, they are described as even more stable than scientific or philosophical opinions) could perhaps be interpreted as a capitulation to tradition and conventionalism.[13] However, his conviction is unmistakable that empirical investigations in principle could reveal those properties of works of art which, due to certain features of human nature, may lead to aesthetic pleasure. Unfortunately, Hume is far from sufficiently explicit on this point. Unlike Hutcheson, whose ideas he adopted to a considerable extent, Hume is reluctant, at least in "Of the Standard of Taste", to specify conceivable good-making characteristics of artworks.[14] Thus a contemporary and anonymous reviewer of the essay expressed his disappointment about this lack of definite answers with the remark that "instead of fixing and ascertaining the standard of taste, as we expected, our author only leaves us in the same uncertainty as he

12 Ibid.

13 As, for instance, Lüdeking (1991), pp. 229–231, maintains.

14 It should be noticed, though, that in the "Treatise of Human Nature" [Hume (1896)] he considers formal qualities such as balance or imbalance (in paintings) to be aesthetically relevant qualities. Furthermore, functional appropriateness in the representation—that is, in their visual appearance—of, for instance, buildings and ships is recommended. Generally speaking, he seems to advocate neo-classical ideals—though it should be noted, that he does not give any specific rules for the construction and evaluation of art (which numerous neo-classicists attempted to elaborate). Cf. Korsmeyer's (1976/77) attempt to relate "Of the Standard of Taste" to Hume's earlier works, especially the "Treatise": "...[U]nlike others of his age [such as Hutcheson—my comment], Hume did not speculate about the purely formal combinations of lines, shapes, and colours that might give rise to aesthetic pleasure. On the other hand, he clearly did explore the idea that our enjoyment of proportion and composition is grounded in our perception of formal qualities which are associated with pleasurable or painful situations traceable to a broad concept of utility. Qualities evocative of unstable, threatening, and therefore painful situations would be perceived as ugly or deformed..." (p. 209). See also Hume (1896), Book III, Part III, section 1, p. 576: "Thus the conveniency of a house, the fertility of a field, the strength of a horse, the capacity, security, and swift-sailing of a vessel, form the principal beauty of these several objects. Here the object, which is denominated beautiful, pleases only by its tendency to produce a certain effect....Most of the works of art are esteem'd beautiful, in proportion to their fitness for the use of man, and even many of the productions of nature derive their beauty from that source."

found us: and concludes with the philosopher of old, that all we know is, that we know nothing."[15] It should be noted, though, that Hume is convinced that an artwork's mimetic function *per se* —whether the subject-matter is pleasant or not—may give pleasure to beholders.

Francis Hutcheson

Hutcheson (1694–1746) is also, like Hume, convinced that "beauty" does not simply designate any quality in objects, but rather refers to the pleasure which the exposure to certain qualities of objects may evoke in percipients. In his treatise "An Inquiry into the Original of our Ideas of Beauty and Virtue" (first published 1725) Hutcheson distinguishes between two categories of beauty, namely *absolute* (or *original*) and *comparative* (or *relative*) beauty. The latter category has to do with pleasure which arises as a result of some kind of mimetic relationship between an object and something else:

> "All *Beauty* is relative to the Sense of some Mind perceiving it; but what we call relative is that which is apprehended in any *Object*, commonly consider'd as an *Imitation* of some Original: And this *Beauty* is founded on a *Conformity*, or a kind of *Unity* between the Original and the Copy. The Original may be either some Object in *Nature*, or some *establish'd Idea*; for if there be any known *Idea* as a Standard, and Rules to fix this Image or *Idea* by, we may make a *beautiful Imitation*. Thus a *Statuary*, *Painter*, or *Poet* may please us with an Hercules, if his Piece retains that *Grandeur*, and those Marks of *Strength* and *Courage*, which we imagine in that Hero.
>
> And farther, to obtain *comparative Beauty* alone, it is not necessary that there be any Beauty in the Original; the Imitation of *absolute Beauty* may indeed in the whole make a more lovely Piece, and yet an exact Imitation shall still be *beautiful*, though the Original were intirely void of it: Thus the *Deformitys* of old Age in a Picture, the *rudest Rocks* or *Mountains* in a *Landskip*, if well represented, shall have abundant Beauty, tho' perhaps not so great as if the Original were *absolutely beautiful*, and as well represented: Nay, perhaps the *Novelty* may make us prefer the Representation of Irregularity." [16]

Now, as the first sentence of this passage also indicates, beauty is considered to be relative to a percipient's mind, that is, "...the Word *Beauty*

15 Critical Review, III (1757), p. 213; quoted in Kivy (1976), p. 149.
16 Hutcheson (1969), pp. 39–40. (Section IV, article i).

is taken for the [pleasurable and disinterested] *Idea rais'd in us.*"[17] For both Hutcheson and Hume the pleasure taken from works of art is disinterested: it is not self-directed, and it has nothing to do with the fulfilment of the percipient's desires (e.g. to possess the object), or with self-love. Both share the conviction that an artwork gives pleasure if it imitates or resembles something, even if the imitated subject is unpleasant. However, Hutcheson's concept of *absolute* beauty seems to have no exact counterpart in Hume's theory (at least the latter only gives us vague hints in this respect). This category consists of aesthetic pleasure that artworks (as well as natural objects) may give rise to independently of any comparison of them with external subjects. According to Hutcheson, an inductive and empirical survey of those objects which we, aside from any mimetic features, call beautiful, reveals one common and essential characteristic, namely a compound ratio of *uniformity* (or *unity*) *amidst variety*.[18] Numerous examples are mentioned in order to illustrate this generalization: simple geometric forms, plants, animals, mathematical or scientific theorems, architecture, music, and works of art in general. The occurrence of qualities such as uniformity and variety is of course not identical with the occurrence of absolute beauty, though it is a necessary condition for *experiencing* beauty. Beauty is, as already mentioned, just an idea (i.e. a feeling of pleasure), but objects have, under certain circumstances, the capacity to cause this experience of pleasure. These circumstances include, first, features of the objects. In the case of visual beauty, this could be the formal arrangement of, for instance, shapes and colours with respect to a uniformity/variety ratio.[19] Any object of visual perception could thus have absolute beauty if its constituents exhibit a balance between uniformity and variety, or, as we might also say, between order and complexity.[20] Moreover, as noted above, even references to the external world, by means of imitation, can give us an experience of (relative)

17 Ibid. p. 7 (Section I, article ix). My addition in brackets.—See also ibid., p. 11 (Section 1, article xiii, xiv): "And farther, the Ideas of Beauty and Harmony, like other sensible Ideas, are *necessarily* pleasant to us, as well as immediately so; neither can any Resolution of our own, nor any *Prospect* of Advantage or Disadvantage, vary the Beauty or Deformity of an Object: For as in the external Sensations, no View of *Interest* will make an Object grateful, nor View of *Detriment*, distinct from immediate *Pain* in the Perception, make it disagreeable to the Sense; [...] Hence it plainly appears, 'that some Objects are *immediately* the Occasions of this Pleasure of Beauty, and that we have Senses fitted for perceiving it; and that it is distinct from that *Joy* which arises upon Prospect of Advantage'."

18 Ibid., pp. 16–29 (Section II).

19 These arrangements should obviously be conceived of as primary qualities (such as redness) which can excite secondary qualities (such as beauty), though beauty, compared to other secondary qualities (for instance, coldness or sweetness) is said to bear a closer resemblance or relation to objects giving rise to it. Cf. ibid., p. 14 (Section 1, article xvi).

beauty. The awareness of uniformity consists in this case of experiencing a relation of resemblance between a work of art and what it represents. Second, the percipient must fulfil certain conditions. He has to be equipped with an inner sense of beauty (i.e. the mental disposition to appreciate an object's formal arrangement)[21] and a disinterested attitude. Moreover, Hutcheson is very well aware of the fact that aesthetic judgements or tastes vary. This may be due to education and upbringing, to custom and prejudices, and to subjective associations interfering with the act of perception.[22] Nevertheless, the essential property which makes things (absolutely) beautiful is *uniformity amidst variety*. Sometimes objects with this property fail to give us pleasure, but this does not, according to Hutcheson, count as negative evidence against his proposed generalization. Instead this failure may be explained with reference to the previously mentioned subjective variables. Here, then, we may notice another feature in Hutcheson's proposal which bears some resemblance to Hume's theory, namely his attempt to specify proper conditions under which aesthetic pleasure will be evoked (or beauty will be discerned). Moreover, the question as to whether *uniformity amidst variety* is the essential beauty-making property could be regarded as an empirical one.[23]

20 Thus Hutcheson has a strong formalistic bent: absolute beauty is the beauty of form. Furthermore, it seems that this kind of beauty is considered to be more important than relative beauty, which is given less attention. According to Kivy (1976), pp. 93–94, relative beauty also appears to be based on the principle of *uniformity amidst variety*, "...existing in virtue of a correspondence [or, as Hutcheson (1969; p. 39, Section IV, article i) puts it, "...a kind of Unity"] between two objects, or between an object and an idea." (p. 94).

21 Ibid., p. xiii (Preface): " These Determinations to be pleas'd with any forms [correction by Hutcheson on p. 309: "...pleas'd with certain complex forms..."], or Ideas which occur to our Observation, the Author chooses to call SENSES; distinguishing them from the Powers which commonly go by that Name, by calling our Power of perceiving the Beauty of Regularity, Order, Harmony, an INTERNAL SENSE;..."

22 Ibid., pp. 78–92 (Section 6, articles vii–xiii; Section 7, article i–v).

23 At least Hutcheson explicitly suggests an empirical strategy in order to verify his hypothesis. Observation and inductive reasoning will reveal that *uniformity amidst variety* (UAV) regularly arouses ideas of absolute beauty (AB). This could probably be stated as a causal law: if an object has the property UAV, and proper conditions C are fulfilled, then UAV will cause AB (cf. Kivy [1976], pp. 75–76.) Since this law is conceived of as an empirical generalization, there should then in principle be the possibility of falsifying it. However, it is not quite clear under which circumstances Hutcheson would admit that his hypothesis is untenable. Granted that we could specify the descriptive criteria for UAV (which is not obvious so far), how could we identify the idea of AB and distinguish it from other pleasurable ideas? It seems that AB is mainly characterized by the fact that it is (and has to be) causally induced by UAV. But then the dependence of AB on UAV appears to be a *criterial* characteristic which thus is necessary and logical, not factual. Hence Hutcheson's approach could be criticized for lacking the empirical basis that he apparently intends to establish. See also ibid., p. 93; Stolnitz (1961), p. 195.

Setting the Stage: Aesthetics as an Empirical/Psychological Inquiry

Now what I want to maintain is that the ideas on beauty put forward by Hutcheson and Hume, as well as by other British empiricists, mark an important theoretical stage in the history of aesthetics—or, to be more precise, with regard to the development of an empirical/psychological strategy towards aesthetic behaviour. It has commonly been pointed out that British empiricism has played a major role in the development of psychology as a distinct science of mind.[24] It is not my intention to ascertain whether and how these philosophers actually exerted a causal influence in this respect, though perhaps a case could be made on these lines. Numerous translations of their works had been published in Germany[25], and it is here, and to a considerably greater extent than in Britain or France, that psychology emerged as an experimentally based discipline.[26] What I rather want to emphasize is that certain ideas elaborated by British empiricists could be regarded as theoretical presuppositions for a significant change in aesthetic research, a change that has (also) been manifested by the emergence of certain new kinds of studies concerning the arts. These are experimentally/psychologically orientated investigations of aesthetic reactions and processes that started to be carried out in Germany at the end of the 19th century and received somewhat greater interest in the subsequent century. But before I discuss these attempts, let us list the ideas put forward by British empiricists, such as Hutcheson or Hume, that theoretically seem to be most notable in this context.

(i) Beauty is not a property of works of art or natural objects, but exists rather in the mind of the percipient.

(ii) Beauty is intimately connected with, or even defined as, the exprience of pleasure.

(iii) Certain properties of works of art or natural objects are, due to the constitution of human nature, more likely to cause this kind of pleasure than others.

(iv) An artwork's mimetic function per se gives pleasure to beholders.

24 See, for instance, Schultz & Schultz (1992), pp. 37–52; Hearnshaw (1987), pp. 89–96.

25 Cf. Kristeller (1952), p. 31.

26 See Schultz & Schultz (1992), pp. 58–60; Beloff (1973), pp. 23–28; Hearnshaw (1987), pp. 124–127.

(v) Investigations of human nature may, together with empirical studies of artworks or natural objects, reveal those properties that under proper conditions will lead to pleasurable experiences.

3.3 19th Century Germany: Gustav Fechner

AS ALREADY INDICATED, IDEAS such as those outlined above penetrated the experimental and psychological approach to aesthetics that was initiated in Germany. Despite their roots in British philosophy, several factors seem to have contributed to the fact that Germany, rather than Britain, was the place of origin of empirical aesthetics, and experimental psychology in general.

Science in Germany

Science was conceived in a broader sense in Germany during the 19th century than in France or England. While science in the latter countries used to be restricted to disciplines such as physics or chemistry, and a general reluctance to permit new areas of research prevailed, science in Germany incorporated, for example, aesthetics, literary criticism, history, linguistics and archaeology as well.[27] The conviction that any topic could be investigated in a scientifically stringent manner was widespread at German universities, and thus experimental investigations of human experience were also considered to constitute legitimate research projects. Experimental psychology was treated with much more scepticism in Britain. As late as 1877 a request to teach experimental psychology in Cambridge was refused because it would "insult religion by putting the human soul in a pair of scales", and in Oxford this topic was not officially taught until 1936.[28]

Moreover, Germany had (due to the former political autonomy of its separate districts or city-states) numerous universities, whereas England only had two, Cambridge and Oxford. The academic life of Germany was characterized by two significant concepts, *Lehrfreiheit* (freedom of teaching) and *Lernfreiheit* (freedom of learning).[29] The former characteristic implied that university teachers had considerable freedom in choosing the topics for their research and lectures, the latter implied that students were allowed, and even encouraged, to choose courses and lectures according

27 Schultz & Schultz (1992), ibid.
28 Hearnshaw (1987), p. 125.
29 Dobson & Bruce (1972).

to their inclination. The exchange of professors among universities was quite common, and so was the movement of students between universities and different institutions. Hence the interdisciplinary atmosphere and dynamic structure of academic studies and education promoted, together with favourable economic conditions for scientists, an openness towards new fields of research. Taken together, all these components seem to have been important for the advancing research in experimental psychology.

There are four German scientists in particular who are often mentioned as influential forerunners in this domain: Hermann von Helmholtz, Ernst Weber, Wilhelm Wundt, and Gustav Theodor Fechner. Their focus of interest was directed towards sensory physiology and, broadly speaking, the relationship between objective properties of external stimuli and the mental experience of them. Traditional introspective and qualitative methods, that is, the subjective examination of mental states, prevailed, but there was also a strong tendency to make use of quantitative techniques inspired by the natural sciences.

Fechner's Approach

The first investigations in experimental or empirical aesthetics, a subdivision of experimental psychology, were carried out by Gustav Theodor Fechner (1801–1887) who tried to systematize the relationships between preferences and properties of artworks or other stimuli. Actually, his essential endeavour was concerned with the relation of mind and matter—or sensation and stimulus—in general. Thus he developed a research program, aptly entitled *psychophysics*, which he outlined in the famous work "Elemente der Psychophysik" (first published in 1860). One presupposition for this kind of research is the postulation of certain standard conditions, that is, the subject of an experiment has to be "normal", or in a normal state of mind, and the surrounding situation in general has to be ideal (whatever attributes such as "normal" or "ideal" are supposed to mean). Essential for psychophysical inquiries is, furthermore, the attempt to specify the way in which variations in certain stimuli are related to variations in the conscious experience of these stimuli. This specification may be made by proposing laws, or quantitative, statistical relationships. Fechner's proposal as to how to measure the subjective intensity of sensations was inspired by Weber who some years earlier had introduced the concept of *just-noticeable-differences* (JND). If we proceed from an *absolute threshold*, i.e. a point where a subject first reports having noticed a stimulus (and below which no such sensation is reported), the subjective intensity of a stimulus may be regarded as quantifiable with regard to

the number of JNDs above the absolute threshold. In accordance with this methodological principle, Fechner carried out various experiments where subjects had to lift weights or estimate tactile or visual differences in stimuli. Although numerous objections have been raised against the possibility of scaling sensations in the way suggested by Fechner (for instance, with regard to the upper and lower limits of the scale, the additivity of JNDs, or the assumed logarithmic relationship between stimulus and sensation[30]), textbooks on the history of psychology commonly point out that Fechner's general idea of psychology as an experimental and quantitatively exact discipline and his methodological suggestions have been a major and influential contribution to its development.[31]

As regards aesthetics, Fechner's outspoken methodological ambition was likewise empirical, nomothetic and inductive, striving for the replacement of philosophical and speculative aesthetics "from above" with a factual aesthetics "from below".[32] His investigations were intended to focus on common and averaged responses of groups of subjects in order to develop general aesthetic principles instead of proceeding from aesthetic theories put forward by individual philosophers or art theorists. In 1871, for instance, Fechner initiated an experiment in a Dresden museum where two versions of Hans Holbein's *Madonna with Burgomaster Meyer* had been placed side by side. Visitors were asked to write down which of these paintings they judged to have a higher aesthetic value. Although only a small number of people participated in the poll, and many of them did not follow the instructions properly, this experiment has nonetheless been regarded as a methodological innovation in aesthetic research.[33] Other experiments arranged by Fechner were concerned with the aesthetic importance of the golden section, i.e. the proportion 1:1,618 between the sides of a rectangle. Subjects were presented with a number of rectangles with ten different ratios, and then had to choose those they judged to be most pleasing.[34] In 1876 Fechner published the book

30 The latter is sometimes called the Weber-Fechner Law according to which "the subjective intensity of a stimulus increases as the logarithm of its physical intensity", thus the magnitude of a sensation in relation to the magnitude of a stimulus is not supposed to be a one-to-one relationship. Beloff (1973), p. 24.

31 Cf. Beloff (1973), pp. 24–25.; Hearnshaw (1987), pp. 127–129.; Schultz & Schultz (1992), pp. 73–74.

32 See Fechner (1876 a), pp. 1–7.

33 By, for example, Berlyne (1971), p. 11.

34 In these experiments, as many as 35% of the subjects chose rectangles with the proportion of the golden section. See Höge (1984), pp. 119–120, who also mentions experiments with similar or deviating results compared to Fechner's. See also Boselie (1992) for experimental evidence suggesting that the golden section has "no special aesthetic attractivity".

"Vorschule der Aesthetik" which includes reports of some experiments on aesthetic preferences, but mainly consists of a theoretical account of his approach. Here it becomes obvious that he considers pleasure to be the essential motivational force in aesthetic behaviour.[35] The essential conditions for likes and dislikes in aesthetic matters are said to be reducible to pleasure and displeasure (which may vary with regard to their intensity and duration[36]), and in this respect he anticipates modern versions of experimental research in aesthetics. It should be pointed out that Fechner is very well aware of the need for preliminary demarcations or definitions of certain significant concepts such as "approval/disapproval", "beauty", "aesthetics", or "art" ("pleasure" is said to be a simple, unanalyzable property which, however, may have different causes, effects and relationships to other—definable—properties).[37] No investigations can start from scratch, he correctly asserts, so certain definitions or explications are said to be a necessary precondition for an "aesthetics from below". Interestingly enough, his striving for conceptual clarifications is to a considerable extent based on an analysis of the use of ordinary language. Thus his linguistic reflections bear some resemblance to approaches in analytic aesthetics which take the use of ordinary language (or the language of art critics) as a point of departure for solving descriptive and/or normative problems (though, not surprisingly, the linguistic methods and lines of reasoning of analytic aestheticians are far more sophisticated than Fechner's).

In his "Vorschule der Aesthetik", Fechner presents a number of theoretical principles which, despite his proclaimed scientific/empirical ambitions, are not derived from systematic experiments, but rather from conceptual analyses, loose observations and reflections. Three of these principles in particular seem to be noteworthy. First, his "principle of aesthetic associations" suggests that aesthetic pleasure is closely related to an artwork's capacity to cause meaningful "impressions" or associations. A beholder can receive a direct, sensual impression of an object, for instance, the colour and form of an orange, but he may also in it "mentally see a thing with exquisite smell, refreshing taste, on a beautiful tree, in a beautiful country, grown under a warm sky...he sees, so to speak, all of Italy in it."[38] A beholder's memory and previous experience may contribute to give any object—such as a landscape, a human body

35 Fechner (1876 a), pp. 7–32.
36 Ibid., p. 75.
37 Ibid. pp. 7–38. Fechner (1876 b), pp. 1–13.
38 Fechner (1876 a), p. 89 (my translation).

or a work of art—some kind of associative meaningfulness or, as he says, a "mental colouring". An object's beauty, i.e. the aesthetic pleasure it is capable of affording, seems to a very high degree to be dependent on (i) the quantity and (ii) the pleasantness of the associations it gives rise to. It should be noted, though, that the pure sensual constitution of an object is regarded as a necessary condition for its capability of providing aesthetic pleasure.[39] Second, his "principle of the unitary connection of the manifold" is supposed to refer to a general human need for experiencing something like "unity amidst variety". Human beings strive for variety in their activities as well as their impressions. This variety must not, however, be too extreme, otherwise it would be experienced as unpleasant. Lack of coherence or the feeling of disintegration vs. boredom and monotony are thus two extremes that we try to avoid.[40] With regard to the reception of aesthetic objects, this tendency seems to be especially striking. Now works of art may have a "unitary connection" because of formal qualities (such as symmetry, balance, rhythm, and so on), but a uniting idea or tone (that is, some kind of semantic unity) may also lead to a coherence among its elements.[41] Moreover, although an artwork needs certain objective characteristics in order to be unitarily connected, the experience of the latter depends to a considerable extent on subjective conditions (such as previous experience, attention, the capability to discriminate, etc.) on the percipient's part.[42] Third, Fechner proposes the "principle of the aesthetic mean" (which obviously is closely related to the aforementioned principle):

> "When an object of our contemplation undergoes random variations in size or shape, then, all other things equal, the mean value seems to be preferred from the aesthetic point of view or appears with the character of predominant pleasingness as the normal value in comparison with the others, which, according to their degree of deviation from the mean, can appear less pleasing or, if certain limits are exceeded, even displeasing."[43]

Thus an object which is balanced or intermediate in terms of characteristics such as size or shape is supposed to give rise to experiences of pleasure.

39 Cf. Höge (1984), pp. 32–36.
40 Fechner (1876 a), pp. 53–54.
41 Ibid., p. 67.
42 Ibid., p. 57; p. 74–75.
43 Quoted and translated by Berlyne (1971), p. 124. Original in Fechner (1876 b), p. 260.

It is further claimed that beholders "tolerate most often and for the longest time a certain medium degree of arousal, which makes them feel neither overstimulated nor dissatisfied by a lack of sufficient occupation."[44] As we shall see later on, these last two principles have been resurrected in modern behaviourist research into the relationship between preferences and degrees of complexity or informational uncertainty in different kinds of stimuli. Most notably, these principles seem to bear a close affinity to the implications of the so-called Wundt curve, which will be discussed in section 3.5.

Moreover, Fechner's reflections are, to a noteworthy extent, reminiscent of several ideas proposed by British empiricists. His emphasis on the active role of the percipient (and the influence of personal characteristics)[45] in the process of experiencing beauty in works of art, the definition of beauty as the experience of pleasure, the relevance he ascribes to an artwork's capacity to evoke associations[46], his belief in finding aesthetic principles by means of induction and observation—all bear a significant resemblance to British empiricist aesthetics. Moreover, the aesthetic principle proposed by, for example, Hutcheson—unity amidst variety—is given a new, modified shape in his "principle of the unitary connection of the manifold".

Form and Content

Fechner was, as we have seen, very interested in the "meaningfulness" of artworks. Some textbook accounts of his work have misleadingly created the impression that he mainly was concerned with the "formal" or "structural" properties of art.[47] This misunderstanding may be due to the fact

44 Quoted and translated by Cupchik (1986), p. 347. Original in Fechner (1876 b), p. 217.

45 In a discussion concerning possible objections to an experimental aesthetics, Fechner writes: "Even the remark that education, age, sex, individuality have an influence on aesthetic preferences...will only lead to an enlargement of the field of investigations as it becomes necessary to take these influences into consideration, and to find partly common, partly modified aspects due to these; although in short *that which applies on average to adults with a medium or higher education should be preferred to that which applies to the child or the crude man.*"—1876 a, p. 189 (my translation, my italics).

46 When introducing his "principle of aesthetic association", Fechner explicitly refers to several 18th century British philosophers (such as Locke) as having given this principle much more reasonable attention than their German colleagues Kant, Schelling and Hegel. Fechner (1976 a), p. 86

47 See, for instance, Beloff (1973), p. 25: "...Fechner, in his *Vorschule der Ästhetik* of 1876, was also the sole founder of experimental aesthetics where he extended the methods of psychophysics to deal with form preferences, especially in connection with the problem of ideal proportions of rectangles or other geometric shapes."—See also Winner (1982), p. 56: "Unlike Freud, Fechner restricted himself to questions about the arts that could be answered in an experimental laboratory. Rather than posing the broad question of the needs served by art, Fechner set out to determine, through rigorous experimental procedure, those formal properties of art that people find pleasing."—These two statements are quite misleading.

that most of the empirical investigations actually carried out by Fechner focused on formal qualities (such as the golden section). Furthermore, he approved the use of relatively simple stimuli, such as geometric figures, in order to find testable evidence of stimulus-response relationships and to eliminate contingent and non-verifiable aspects.[48] Works of art differ, because of their complexity, in innumerable respects—hence the search for those physical aspects which determine, or significantly influence, a percipient's preferences motivates the use of simple and relatively controllable stimulus material (cf. Berlyne's approach described in the next section).[49]

Despite Fechner's obvious concern with the formal properties of artworks, he was still very conscious of the capacity of art—and things in general—to evoke associations.[50] Everything that we encounter in everyday life is supposed to be impregnated with "meaning"—that is, it gives rise to associations (partly depending on our memory of and previous experience with the thing in question).[51] Moreover, Fechner emphasizes several times that he considers the traditional distinction between "form" and "content" in aesthetic discourse to be rather diffuse.[52] Hence he strives for a compromise to solve the age-old "quarrel between form-aestheticians and content-aestheticians concerning the visual arts".[53] The quantity and pleasantness of the evoked associations, and moderate mimetic truthfulness are semantic aspects which are as aesthetically relevant, from a hedonistic point of view, as formal ones (such as unity in variety, or certain proportions). Visual works of art even *require* some kind of "meaning"—so Fechner unmistakably claims—in order to qualify as beautiful.[54] As regards mimetic pictures and sculptures, they must necessarily deviate from nature—there are no perfect imitations in art.[55] Visual deviations from the depicted objects have nevertheless,

48 Fechner (1976 a), p. 186.

49 In his outline of a methodological strategy for an experimental aesthetics, Fechner distinguishes between the "method of choice", the "method of production", and the "method of application". These methods are described as follows: "According to the first, one arranges for many persons to choose between *forms or formal* relations that are to be compared with respect to their pleasingness, according to the second, they must themselves produce the most pleasing according to their tastes, according to the third, one measures *forms or formal* relations that are to be found in use." Cited and translated in Berlyne (1972), p. 27. Original in Fechner (1876 a), p. 190. My italics.

50 "But one has often believed in the possibility to determine the beauty of visible things with reference to these forms (e.g. the circle, the square, the ellipse, and the golden section—my comment) without taking the much more important contribution of the association...into consideration."—Fechner (1876 a), p. 184 (my translation).

51 Ibid., pp. 93–94.

52 Fechner (1876 b), p. 23; p. 30; p. 33.

53 Title of chapter XXI in ibid., pp. 20–35.

54 Fechner (1876 a), pp. 177–178.

according to Fechner, to be temperate. The divergence from nature has no value as an end in itself, it is only legitimate if it ultimately leads to an experience of pleasure. Such deviations are especially advantageous if they reveal the essence of natural phenomena, thereby disregarding their accidental or contingent features, or if they exhibit ideal objects or states of affairs.[56] In an Aristotelian spirit Fechner suspects that we have an innate predilection for imitating and perceiving imitations[57], thus it seems that mimetic representations *per se* may cause aesthetic pleasure, whether or not the depicted object is pleasant.

Several recent reviews of experimental aesthetics have, as we shall see, criticized its apparent one-sided preoccupation with the formal features of artworks or other stimuli. This criticism may well be justified in many cases, though Fechner himself, probably the most important forerunner in this field, gave the "meaningfulness" of art a great deal of attention, at least on a theoretical level, and undoubtedly considered it to be aesthetically relevant.

3.4 Interlude: Psychoanalysis and Gestalt Theory

MORE THAN A HUNDRED YEARS have passed since Fechner's studies of and reflections on aesthetic preferences, and contemporary attempts have of course, as regards methodology and theoretical assumptions, become far more advanced and elaborate. It should be noted that despite increasing

55 Fechner (1876 b), p. 37.

56 Ibid., pp. 55–56.

57 Ibid., pp. 48–49.

58 Among the most well-known attempts in this respect are, for instance, G. Birkhoff's investigations into the relevance of complexity and order to the aesthetic value of various stimulus patterns (Birkhoff [1932], [1933]). Birkhoff claimed that the aesthetic merit (i.e. the amount of pleasure they may afford) of stimulus categories such as polygons, vases, lines of poetry and melodies in principle could be measured according to the following formula: M=O/C (where M refers to aesthetic value, O to order and C to complexity). In the case of polygons, complexity is defined as the number of straight lines that contain all the sides of a polygon, whereas features such as symmetry, repetition, or horizontal/vertical orientation are regarded as constituting order. Birkhoff's theory has for several reasons been brought into question. First, his equation leads to the dubious result that stimuli with the simplest and most orderly characteristics will have the highest aesthetic value, or lead to the highest amount of pleasure (as M varies directly with O and inversely with C). Cf. Berlyne (1971), p. 128. Second, only polygons have actually been used in his experimental investigations, and the question as to whether this theory is applicable to artworks, and whether its normative pretensions are justifiable is far from obvious. Moreover, a number of studies have contradicted Birkhoff's model even with regard to simple stimuli. Hans Eysenck, for instance, has maintained that available empirical data rather suggest the formula M=OxC, thus indicating that a medium degree of order and complexity respectively would be most pleasing. Cf. Eysenck (1941 b), (1942).

interest in our century in psychology in relation to aesthetic issues, direct experimental research in aesthetics was only occasionally carried out before the 1950s, and this was sometimes methodologically still questionable.[58] However, these psychological inquiries still lacked a common theoretical foundation, in contrast to the most influential psychological schools studying aesthetic behaviour during that period, namely psychoanalysis and Gestalt theory which I will outline in this section.

Emphasizing the Content: Psychoanalysis

Psychoanalysis is undoubtedly one of the most well-known fields of psychology to have aspired to interpret and explain aesthetic behaviour. Furthermore, it has had a considerable impact on art criticism and artistic practice from the turn of the last century on (e.g. the Surrealist movement). A central idea in psychoanalytic theory is the conviction that human behaviour in general is determined by unconscious drives and needs in combination with superego norms, transformed and channelled by the ego into overt behaviour. The same principle can, according to Sigmund Freud (1856–1939) and his followers, also be used to explain processes of artistic creation or perceivers' interest in art. Freud himself did not develop a systematic theory of aesthetic behaviour, though his interest in the arts and artistic creativity is undeniable.[59] Now, the essential function of art is supposed to consist of its capacity to gratify repressed wishes and instinctual desires. Art can, because of its manifest and latent content, have a therapeutic or cathartic effect as it permits disguised or unconscious wish-fulfilment. Thus the tension between infantile or primitive wishes and drives on the one hand, and social rules or internalized norms on the other, becomes released, leading to a experience of

Apart from the pleasingness of factors such as order and complexity, experimental aestheticians have, for instance, dealt with preference judgements for colour (Eysenck [1941 a]; Guilford [1940]), ontogenetic questions (Hildreth [1936]), or individual differences (with regard to education, cultural background or personality characteristics such as introversion or extroversion) in aesthetic response. See also the reviews and literature referred to in Berlyne (1971), pp. 257–261; Eysenck (1981); Winner (1982), pp. 66–72.

59 As regards the visual arts, Freud wrote–apart from scattered remarks in his writings—extensively about Michelangelo's *Moses* (1955) and, perhaps most notable, Leonardo da Vinci's life and artistic production (1948). The latter attempt, though, has been criticized for several reasons: "[Freud's]...major retrospective account of the psychology of the artist Leonardo seems seriously flawed: apart from a mistranslation which undermines the plausibility of the interpretation of Leonardo's childhood memory..., it is highly selective in specifying which aspects of the artist's work might be considered of psychological significance. For example, the portrayal of St Anne is held to be of particular significance because the depiction of the Saint as a young woman is deemed to be unusual, yet this disregards the fact that by Leonardo's time there had been a longstanding cult of St Anne, and it was one which tended to depict saints as youthful. Additionally, Freud ignores many of the details of composition which are peculiar to the artist." (Crozier & Chapman [1984], p. 8)

pleasure. In this respect art has a similar effect as jokes, dreams and daydreams have, and—not least—neurotic behaviour. Psychoanalytic studies concerned with art have usually focused on the motivations of the artist and to a lesser extent on the percipient's experience, though the same fundamental principle is claimed to be at work in both cases.

Although a large number of works influenced by psychoanalysis have been—and continue to be—published in the fields of art history and art criticism, this approach has been criticized for a number of shortcomings. First, a psychoanalytic theory of art is chiefly concerned with the (overt or latent) content of artworks, and tends to treat the formal aspects in a superficial way. The medium itself, or matters of line, colour, rhythm, etc. are usually neglected; instead, the representational content receives most attention. Freud maintained that a percipient could respond to the formal and semantic aspects of an artwork separately (which is questionable), and that only the former were capable of giving superficial pleasure, thus being of minor importance compared to the latter (which is also rather doubtful).[60] Furthermore, a clear-cut distinction between form and content seems to be quite problematic: even so-called formal properties may be regarded as functioning symbolically, that is, in a—roughly speaking—self-referential way.[61] A second serious problem with psychoanalysis consists of its methodological and terminological inexactness, and the difficulty of testing its hypotheses. A psychoanalytic approach to art permits a large number of diverse interpretations of an artwork, especially of its latent content. There are, however, no sufficiently exact criteria for verifying, or falsifying, different, competing interpretations; thus the choice between them seems to allow for arbitrary and idiosyncratic decisions.[62] Psychoanalytic hypotheses in general, and not least those concerning aesthetic response, have frequently been criticized because of the lack of their statistical or empirical confirmation.[63] This leads us to a third major deficiency, namely the tendency to reduce a percipient's interest in art to the therapeutic or cathartic effect it may afford. No sufficient evidence has been produced in support of the hypothesis that the fantasy gratification of unfulfilled wishes or drives is one

60 Cf. Winner (1982), pp. 54–55.; Crozier & Chapman (1984), p. 8.

61 Cf., for example, Goodman (1978), pp. 59–66.

62 See Kreitler & Kreitler (1972), p. 7; Winner (1982), pp. 55–56.

63 For a critique of psychoanalytic theory in general, see for example Beloff (1973), pp. 253–265; Hearnshaw (1987), pp. 161–165. ; Schultz & Schultz (1992), pp. 451–454.

64 Winner (1982), pp. 55–56.

65 Beloff (1973), pp. 257–258.

66 Kreitler & Kreitler (1972), p. 8.

of the most essential motivating factors for our encounters with art—in contradistinction to, for instance, cognitive or otherwise emotional functions.[64] And Freud—whose focusing on sexual motives, and neglect of others, has become much debated[65]—himself admitted that psychoanalysis is not capable of saying much more about beauty than that it arises from sexual sensations.[66] Moreover, it is, from a psychoanalytic perspective, far from clear why persons who daydream, listen to jokes, or act neurotically or psychotically should be attracted to art. The satisfaction of repressed wishes and drives may be equally obtained by these activities as by experiencing or creating works of art.[67] Hence it seems that psychoanalysis cannot specify why exactly encounters with objects belonging to the category art are felt to be rewarding. It may very well be doubted, though, whether any such specification would be solely applicable to members of this category; as we may recall, works of art may have important functional or ontological properties which overlap with other categories. Still, there is an unmistakable tendency in psychoanalytic accounts to reduce the creation and appreciation of art to its therapeutic effects, and thus numerous conceivable aspects have been left out.

Despite all these objections against a psychoanalytic theory of art, it is nevertheless a merit that this approach has drawn attention to, and perhaps contributed to a heightened sensitivity and openness towards the capacity of art to function as representations (as well as to its semantic ambiguity).

Emphasizing Form and Expression: Gestalt Theory

Another major psychological movement interested in aesthetic, or rather perceptual phenomena—*Gestalt theory* (which, as already noted, exercized a considerable influence on Gombrich's work)—has on, the other hand, been criticized for its superficial treatment of art's representational aspects. Gestalt psychology was initiated by Christian von Ehrenfels (1859–1932) at the end of the last century and further developed by Max Wertheimer (1880–1943), Kurt Koffka (1886–1941), and Wolfgang Köhler

67 Ibid.; Höge (1984), p. 24.

68 The German word "Gestalt" has no exact equivalent in English and means originally something like shape, form, figure, or stature. As a technical term that has become part of the English language, it is normally used in two senses. First, Gestalt may denote concrete objects or entities having a specific shape or form (such as triangles or circles). Second, the term may refer to formal properties that objects possess (such as triangularity or symmetry). Moreover, as Köhler maintains, the term is not only applicable to visual or sensory properties or entities, but also "the processes of learning, of recall, of striving, of emotional attitude, of thinking, acting, and so forth, may have to be included" (see Schultz & Schultz [1992], p. 387, from where also this quotation is taken).

(1887–1967) in the first decades of our century. A basic tenet of this school is that perception in general, and therefore also the perception of artworks, involve the instant, active organization of a stimulus pattern's constituents into whole configurations or "gestalts".[68] In contradistinction to British empiricism, with its "atomistic" view of perception as the combination of individual sense impressions, Gestalt theorists have thus argued that we spontaneously perceive whole units, such as melodies or visual shapes, which are not reducible to constituent elements. Wertheimer described the "fundamental formula" of Gestalt theory as follows: "There are wholes, the behaviour of which is not determined by that of their individual elements, but where the part-processes are themselves determined by the intrinsic nature of the whole."[69] A melody, for instance, can be recognized as the same melody, even when it is played in a new key, or—as Wertheimer put it—"[t]he sum of the elements is different, yet the melody is the same; indeed, one is often not even aware that a transposition has been made."[70] Gestalt psychologists also gave considerable attention to perceptual constancies of visual phenomena. Why is it, for example, that we continue to perceive a window as rectangular even when we look at it from the side, and not as a trapezoid (or a circle as a circle, and not as an oval)? Why is a triangle seen as an independent entity and not solely as three lines and three angles? And why do visual elements that are similar or close together appear to form a group? According to Gestalt theory, these and other (lower-level) perceptual experiences do not depend on learning, but rather on processes of perceptual organization in the nervous system. Sensory information is not passively registered, but supposed to be actively transformed in accordance with certain hypothesized principles or "Gestalt laws", such as that of closure, or figure-ground.[71] A probably more fundamental principle, the "law of Prägnanz", states that we strive to perceptually organize stimuli into comprehensible and so-called "good" gestalts. With regard to visual configurations, this means that ambiguous, incomplete or very complex forms and shapes tend to be grasped in a simplified (and thus distorted) way, increasing their regularity, symmetry, unity, conciseness, and so forth. It should be pointed out that the concepts of "gestalt" and

69 Ibid., p. 388 (excerpt from the lecture "Gestalt Theory" given by Wertheimer to the Kant Society in Berlin, Germany, on December 17, 1924).

70 Ibid., p. 389.

71 See ibid., pp. 395–396., where exemplifications of these and other laws can also be found. The law of closure states that we tend to perceive incomplete figures as wholes: we fill in the gaps. According to the figure-ground law we often distinguish perceptually between an object (the figure) and a supposed background (the ground) against which it appears.

"goodness" seem to be rather broad (they are applicable to sensory stimuli as well as to ideas, actions, beliefs, and many other phenomena) and imprecisely defined. Koffka himself merely states that "the term 'good' is undefined. It enhances such properties as regularity, symmetry, simplicity, and others..."[72] Furthermore, it is not quite clear if "goodness" is always used as a descriptive and value-neutral predicate. On the contrary, there are clear indications that visual stimuli which deviate too much from an ideal state of "goodness" (that is, which are somehow unorganized or lack balance, simplicity, and so on) are regarded as aesthetically less valuable than figures which, because of their physical properties, permit themselves to be easily grasped *qua* "good gestalts".[73] Rudolf Arnheim, for instance, a Gestalt psychologist who has perhaps most thoroughly dealt with visual perception and art, seems to assume that "good gestalt"-making features such as balance or simplicity add to the (aesthetic) value of pictorial and other artworks.[74] Gestalt theory may thus be interpreted as proposing a normative standard according to which a stimulus pattern's pleasantness or capacity to evoke aesthetic satisfaction is correlated with its simplicity, regularity, etc. (thereby presupposing that a positive value may be ascribed to mental states such as pleasantness or aesthetic satisfaction). In this respect the Gestalt account of aesthetic value or aesthetic preferences bears a clear resemblance to Birkhoff's formula of aesthetic merit (mentioned in footnote 58).[75] However, as numerous experimental findings in aesthetic research carried out during the last few decades indicate, this assumption is, at least with regard to percipients' preferences, rather questionable. As we shall see in the next section, people do often prefer stimuli which are experienced as neither too simple nor too complex, while easily grasped simple stimuli tend to be regarded as boring and uninteresting.

Gestalt psychology has also become known for its theory of "physiognomic expression", i.e. the idea that stimulus patterns may reveal expressive qualities (such as sadness, joy, melancholy, and so on) which

72 Koffka (1935), p. 110. Also quoted in Berlyne (1971), p. 16.—See also note 74.

73 Cf. Kreitler & Kreitler (1972), pp. 89–90.; Berlyne (1971), p. 17.

74 See e.g. Arnheim (1960): "Why is pictorial balance indispensable?...In a balanced composition all such factors as shape, direction, and location are mutually determined by each other in such a way that no change seems possible, and the whole assumes the character of 'necessity' in all its parts. An unbalanced composition looks accidental, transitory, and therefore invalid...Under such conditions the artistic statement becomes incomprehensible...Any visual quality must be defined by its environment in space or time. A balanced pattern does just this" (p. 9).—For his positive evaluation of simplicity, see, for example, ibid., pp. 38–39.

75 Cf. Smets (1973), p. 14.

directly and without previous learning can be perceived by humans. The perception of emotional qualities in works of art (as well as in other objects) is considered to occur as spontaneously and unmediated as the perception of their formal aspects.[76] Moreover, as Arnheim claims, no "pure" forms exist: formal qualities are always permeated with expressive meaning (and thus function symbolically).[77] This expressiveness of sensory stimuli is explained with reference to the so-called principle of isomorphism: there is some kind of correspondence or similarity between experienced moods (or neurophysiological activity in the brain field of vision) and perceptual "forces" which are active in a stimulus pattern. Hence the experience of expressiveness is due to features that a stimulus objectively possesses, and to the neurophysiological reaction of a percipient.[78]

The Gestalt theory of expression has, not surprisingly, been criticized for several reasons. First, if the perception of expressive qualities is supposed to occur without previous learning (i.e. without being culturally determined), it would be reasonable to suspect a high level of agreement among people judging the expressiveness of certain patterns. Actually, numerous studies indicate that people within a culture tend to make similar judgements in this respect.[79] On the other hand, cross-cultural studies show much less consensus with regard to the experienced expressiveness of particular forms. If expression can be explained solely or chiefly with reference to isomorphic relationships between neurophysiological processes and perceptual forces, as Gestalt psychologists seem to maintain, these divergences are difficult to understand. Thus expression is obviously a more complex phenomena than Gestalt psychology claims.[80] A second problem with the Gestalt account of expression is its lack of

76 Cf. Kreitler & Kreitler (1972), p. 9.

77 Arnheim (1960), p. 376.

78 Arnheim (1960), p. 368. See also Höge (1984), pp. 19–20.; Kreitler & Kreitler (1972), p. 9.—A similar view on expressiveness was developed by Susanne Langer (1948, 1953) who argues that artworks essentially function as iconic symbols of human feeling. According to Langer, the symbolic functioning of pictorial works of art has nothing to do with their capacity to represent or depict something, but rather with their expressive formal aspects. These aspects—which she claims to be somehow similar to emotional states—can be perceived without previous learning (thus this concept of symbolism does not imply conventionality). For a discussion and critique of Langer's approach, see e.g. Dickie (1971), pp. 78–84.

79 In one study, for instance, most subjects attempted to visualize expressive adjectives such as "gay" or "forceful" by upward lines, "sorrowful" or "weak" by downward lines, "aggressive" or "furious" by irregular and sharp-angled lines.—Mentioned in Winner (1982), p. 109; Kreitler & Kreitler (1972), p. 112, where other investigations are also referred to according to which the experience of certain expressions seems to be interpersonally shared by people within a culture—and to some extent even cross-culturally.

80 It should be pointed out, though, that Arnheim sometimes seems to be aware of the role a percipient's contextual situation plays when ascribing expressive qualities to a stimulus pattern. Cf. Winner (1982), p. 106.

81 See e.g. Hearnshaw (1987), p. 215; Beloff (1973), pp. 56–57, pp. 65–66; Höge (1984), pp. 20–21;

empirical evidence. It has frequently been argued that the assumption according to which certain "brain fields" correspond to "forces" of stimulus patterns has not been given sufficient empirical support and, consequently, is rather dubious from a scientific point of view.[81] In general, the work carried out by Gestalt theorists appears to be deficient because of the fact that the proposed Gestalt laws, or other—undoubtedly noteworthy—perceptual phenomena, have by no means been given a satisfactory explanation. The subjects used in their experiments seem too often to have been these theorists themselves, and quantitative or statistical controls of their investigations are largely absent.[82] Compared to a behaviouristically influenced psychology of art, Gestalt theory may probably justly be criticized for its methodological laxity.

Further, the Gestalt approach has paid much less attention to the representational function of artworks, or stimuli in general, than to their formal and expressive characteristics. While a psychoanalytic theory of art suffers from a one-sided interest in the content of art and neglect of its formal qualities, Gestalt psychology may on the other hand be accused of the opposite flaw. Certainly the meaningfulness of art is not completely

Kreitler & Kreitler (1972), p. 9; Crozier & Chapman (1984), p. 9. As Beloff (ibid., pp. 56–57) points out, "...from the modern cybernetic standpoint there is something rather quaint in this idea that the brain should encode information in a way that preserves a formal resemblance to the structure of the message itself: the dial of the speedometer does not have to be moving in order to indicate motion! Thus, little in the end remained of the isomorphic assumption and in retrospect one can say that the most lasting contribution the Gestalt school made to the development of modern psychology, apart from the stimulus it gave to research in a variety of fields, was its phenomenology."

82 Cf. Schultz & Schultz (1992), pp. 408–409.; Swede (1993), pp. 15–16.

83 Arnheim (1960), pp. 370–371: "...[S]ymbolic meaning is expressed only indirectly by what our reasoning or learning tells us about the subject matter. In the great works of art the deepest significance is transmitted to the eye with powerful directness by the perceptual characteristics of the compositional pattern. The 'story' of Michelangelo's Creation of Adam, on the ceiling of the Sistine Chapel in Rome...is understood by every reader of the book of Genesis. But even the story is modified in a way that makes it more comprehensible and impressive to the eye...The essence of the story appears in what strikes the eye of the observer first: the dominant perceptual pattern of the work."—A psychoanalytic approach to art is criticized for its one-sided interest in art as representation (ibid., pp. 372–373.): "It will be evident why we must hesitate to accept the interpretation of artistic symbols presented by some psychoanalytic writers. In their analyses we find, first of all, a tendency to understand the artistic object as a representation of other objects, such as the womb, the genitals, or the artist's father or mother...The most common objection to this kind of interpretation points to its one-sidedness, that is, to the presupposition that sex is the most basic and important human experience, to which everything else is spontaneously referred...But another objection seems even more pertinent. The psychoanalytic theory describes the visible facts of the work of art as a representation of other, equally concrete and individual facts. If after penetrating the work of a master we are left with nothing but references to organs and functions of the human body or to some close relative, we wonder what makes art such a universal and supposedly important creation of the human mind." It is not quite clear whether Arnheim primarily criticizes psychoanalysis because of its focusing on the sexual implications of an artwork, or because of its treatment of art as representational objects—though the latter criticism, of course, would be compatible with his general approach to art.

84 See Hearnshaw (1987), pp. 141–142.; Schultz & Schultz (1992), pp. 165–166.

ignored, but unconvincingly reduced to its expressive function.[83] The question is still left unanswered, why works of art represent, depict, portray, and so on, and why we are interested at all in art qua representations. Nevertheless, the claim that perception involves instant organization into whole "gestalts" has a somewhat intuitive plausibility, though, as we shall see later on, comparable proposals from cognitive psychology are more sophisticated and empirically more well-founded.

3.5 Daniel E. Berlyne and the New Experimental Aesthetics

Psychology as a Science of Behaviour

One of the most influential schools of psychology since the 1920s, at least in the Anglo-American world, is undoubtedly behaviourism. At the end of the 19th century, psychology tended to a larger extent to make use of experimental and quantifiable methods, especially in Germany, thereby attempting to approach the natural sciences which were considered to constitute a scientific ideal. In England and the usa a similar tendency prevailed gradually after the turn of the century. A significant British component was Darwinian theory which influenced the work of, for instance, Lloyd Morgan (1852–1936). Morgan, an important pioneer in behaviourism, was chiefly concerned with animal behaviour. According to him, psychological research should strive for the simplest possible explanations of actions (e.g. an animal's behaviour should not be explained with reference to a higher mental process when an equally sufficient explanation could be given in terms of a lower mental process). Furthermore, psychology should make use of experimental observations under controlled and repeatable conditions, and of precise operational definitions of terms. In his studies of animal behaviour, Morgan emphasized the conditioning effects of the environment, and behaviour is largely seen as the response to circumstantial conditions.[84] Morgan's most important work was carried out in Bristol, but during the mid-1890s he lectured in the usa, and it was here that behaviourism, a radical attempt to adapt psychology to the natural sciences, would eventually come into existence. The American John B. Watson (1878–1958), commonly regarded as one of the most important founders of behaviourism, launched its

85 "Psychology as the Behaviorist Views it", *Psychological Review*, vol. 20, pp. 158–177, 1913. Excerpt reprinted in Schultz & Schultz (1992), pp. 297–307.

program in an article published in 1913.[85] According to Watson, animal psychology (or ethology) is a direct antecedent of behaviourism. Animals do not introspect, and thus the study and explanation of their behaviour can exclude any references to mental states. While psychology preceding behaviourism was more or less concerned with humans' internal consciousness as revealed through introspective reports, behaviourists since Watson have regarded psychological explanations involving any reference to mental states as methodologically and/or ontologically suspect. Mentalistic concepts, such as "desire", "consciousness", or "feeling", are said to be vague, and with no clear criteria for their application. Explanations which make use of these concepts do not seem to be reliable or verifiable (or falsifiable), and they have very limited predictive power.[86] A passage where Watson describes the program and scope of "his" psychology quite explicitly will be quoted at some length:

> "Psychology as the behaviorist views it is a purely objective experimental branch of natural science. Its theoretical goal is the prediction and control of behavior. Introspection forms no essential part of its methods, nor is the scientific value of its data dependent upon the readiness with which they lend themselves to interpretation of consciousness. The behaviorist, in his efforts to get a unitary scheme of animal response, recognizes no dividing line between man and brute. The behavior of man, with all of its refinement and complexity forms only a part of the behaviorist's total scheme of investigation...The time seems to have come when psychology must discard all reference to consciousness; when it need no longer delude itself into thinking that it is making mental states the object of observation. We have become so enmeshed in speculative questions concerning the elements of mind, the nature of conscious content...that I, as an experimental student, feel that something is wrong with our premises and the types of problems which develop from them...The psychology which I should attempt to build up would take as a starting point, first, the observable fact that organisms, man and animal alike, do adjust themselves to their environment by means of hereditary and habit equipments. ...[S]econdly, that certain stimuli lead the organisms to make the responses. In a system of psychology completely worked out, given the response the stimuli can be predicted; given the stimuli the response

86 Cf. Churchland (1984), pp. 88–89.
87 Reprinted in Schultz & Schultz (1992), pp. 298–301.

> can be predicted. Such a set of statements is crass and raw in the extreme, as all such generalizations must be. Yet they are hardly more raw and less realizable than the ones which appear in the psychology texts of the day." [87]

Behaviourism is thus interested in the explanation of the behaviour of humans (and animals) as related to environmental circumstances, and the investigation of observable features and changes in an organism (or stimulus-response relationships) constitute its primary goal. Non-observable features such as dispositions (or so-called "intervening variables") are not excluded, though their presence or absence must be determinable by behavioural tests. Furthermore, behaviourist analyses do not only focus on visible bodily movements, but also on other externally observable phenomena such as audible speech, temperature changes, detectable neurophysiological processes, and so on.[88] As this short review of behaviouristic doctrines reveals, there is a close affinity with an influential school in the philosophy of science, namely logical positivism or logical empiricism. According to logical positivists belonging to the Vienna circle, such as Moritz Schlick, Rudolf Carnap, and Otto Neurath, the meaning of any theoretical term has to be derived from observational terms, thus ultimately being connected with sensory experience. Consequently, mental terms should also be defined in this way. Non-analytic or non-tautological statements are only regarded as cognitively meaningful, i.e. as having a truth-value, if they are derivable from observations. The philosophical support that logical positivism thus could give behaviourism may have contributed to the latter's impact.

Behaviourism and Aesthetic Behaviour

While psychoanalysis and Gestalt psychology have given considerable attention to aesthetic phenomena, behaviourism has shown relatively little interest in human behaviour in relation to art, at least not before the 1950s. Thereafter, however, attempts, more or less influenced by behaviourism, to give an empirical validation to psychological hypotheses concerning our encounters with art have gained somewhat greater attractiveness. One of the most outstanding figures in this quite recent development is unquestionably Daniel E. Berlyne (1924–1976) of the University of Toronto. Like Fechner, whose influence on Berlyne is sig-

88 Churchland (1984), pp. 88–89. See also Berlyne (1971), pp. 6–7.
89 Berlyne (1974), p. 2.

nificant in many respects, he distinguishes between speculative and empirical aesthetics. The first is characterized as an armchair discipline, depending "heavily on deduction—from definitions of concepts, from self-evident principles, from generally accepted propositions, from an author's own beliefs, intuitions, and experience", relying on hermeneutic or interpretative examinations of artworks, and whose "ultimate criterion of validity is whether...[it] leave[s] the reader with a feeling of conviction."[89] Empirical aesthetics, on the other hand, derives its "conclusions from observation and, in particular, controlled observation...under circumstances that enable the effects of one factor to be distinguished from those of other factors that commonly accompany it."[90] This means that certain properties of stimulus patterns which subjects are exposed to in experimental situations become systematically manipulated in order to ascertain "their effects on some aspect of behaviour."[91] As for instance the last quotation indicates, Berlyne's approach is strongly influenced by methodological behaviourism, thus striving for the exclusion of any subjective experience or interpretation on the part of the percipients.[92]

One of Berlyne's most important contributions to traditional behaviourism is his inclusion of aesthetic activities as a subject-matter of behaviourist research. He mentions several methods for investigating them.[93] First, numerous studies have taken account of verbal judgements made by subjects who have been exposed to different kinds of stimulus patterns or objects. Quite often these judgements have been ratings of these objects' pleasantness or interestingness, in other cases they refer to a subject's mood during exposure, or descriptive scalings of stimuli's so-called *collative* properties (see below) have been sought. Second, changes in, for instance, the electrophysiological activity of the brain, in processes regulated by the autonomic nervous system, and in the skeletal musculature have been recorded during the exposure of subjects to stimuli. These processes have been regarded as indices of emotions or, as Berlyne himself proposes, *arousal* fluctuations (see below). Third, there are measures of non-verbal behaviour such as the exploration time or exploratory choice of stimuli. The former has to do with the duration of a subject's voluntary self-exposure to visual or auditory stimuli; in the latter case two or more stimuli are presented to a subject, who thereafter may decide which of them he wants to reappear.

90 Ibid., p. 4.
91 Ibid.
92 Cf. Cupchik & Heinrichs (1981), p. 468.
93 Berlyne (1972), pp. 25–26, (1974), pp. 13–15.

According to Berlyne, all behaviour, including aesthetic responses, may be related to biological structures in the nervous system and adaptive mechanisms such as natural selection and learning. While actions are in general supposed to be motivated by the search for material reinforcement from the environment, aesthetic activities seem not to have any utility in this respect, but to be intrinsically valued or motivated. Berlyne distinguishes between an organism's *extrinsic exploratory behaviour*, i.e. seeking out "stimuli whose information content is needed to guide subsequent acts with biologically valuable consequences of their own" (for instance, looking for food or a mate), and *intrinsic exploratory behaviour* directed to stimuli that appear to be "neutral from a biological point of view."[94] Aesthetic behaviour is, according to Berlyne, mostly the latter kind of activity, which is further distinguishable into *specific* and *diversive* exploration, and related to reward and aversion systems located in the brain.[95]

> "Specific exploration is a response to conflict and uncertainty resulting from incomplete perception. Since the selection of an adaptive or optimal course of action depends on information about conditions in the external environment and conditions inside the organism, it is easy to see that uncertainty (lack of information) and conflict among competing courses of action, none of which is strong enough to prevail over the others, threatens adaptation. Consequently, it is useful for an animal to find uncertainty aversive, so that it takes steps to gather the missing information, and for relief of uncertainty to be rewarding. Because of the considerable hedonic value with which satisfaction of curiosity is invested, an organism that is equipped to do so (as the human organism is) can be expected to seek out situations productive of perceptual disorientation, uncertainty, and curiosity when they hold out prospects of orientation and clarification without too much cost or delay. Art affords such opportunities..." [96]

94 Berlyne (1971), p. 99.

95 See ibid., p. 82; Berlyne (1973), pp. 20–22. for reviews of research concerning reward and aversion systems in the brain.

96 But, as Berlyne points out, "[s]o do other human intellectual activities, such as philosophy, mathematics, and science, as well as crossword puzzles and games of chess." Ibid., pp. 289–290. See also ibid., pp. 99–100.

97 Berlyne distinguishes further between *perceptual curiosity* ("...if uncertainty stems from nonsymbolic stimulation") and *epistemic curiosity* ("...if it is produced by symbolic structures"). Ibid., p 100.

98 Ibid., p. 100, p. 290.

99 Smets (1973), p. 4.

Informational uncertainty can thus in higher organisms generate aversive states of "curiosity"[97], and the reduction of uncertainty—that is, taking cognizance of a stimulus' properties or making them intelligible—will have hedonic effects. Diversive exploration, on the other hand, is characterized by an organism's attempt to receive moderate stimulation from its environment, especially in states of "boredom", i.e. when stimulation has been rare for some time, and this exploratory behaviour may also have a pleasure value.[98]

Arousal Changes and Pleasure

According to Berlyne there is strong evidence to suggest that the pleasure afforded by a stimulus pattern is correlated with fluctuations in arousal. "Arousal" is a variable commonly used by contemporary psychologists, and refers to "the extent to which someone is awake, excited, or ready for action at a particular moment."[99] The level of arousal of a human being (or a higher animal) is measurable by (i) physiological indices such as changes in the electrical activity of the brain (which can be registered as an E.E.G., i.e. an electroencephalogram), (ii) physical indices (e.g. an overall restlessness or increase/decrease in muscular tension), (iii) sensory indices (e.g. increased or decreased sensitivity), and (iv) autonomic effects (e.g. changes in the electrical activity in the skin, in blood pressure, heart rate and the dilation of the pupil of the eye).[100] There are, as Berlyne claims, two kinds of arousal changes which may lead to pleasure or reward in higher organisms. First, as "extremely high arousal seems to be unpleasant, punishing, aversive, and generally disturbing, ...when arousal approaches the upper extreme, a decrease to a lower level is pleasurable and rewarding."[101] This "arousal-reduction mechanism" may be detectable in connection with specific exploratory behaviour. Second, also "a limited rise in arousal, which is not enough to drive arousal up into the unpleasant range, can...be pleasurable. More often than not, such a moderate arousal increment is followed within a few seconds by a drop towards the initial level of arousal, but the rise is what produces the hedonic effect."[102] An "arousal-boost" effect like this may be the result of diversive exploratory behaviour.

100 Ibid. Berlyne (1971), pp. 64-67.
101 Berlyne (1971), p. 82. See also Berlyne (1974), pp. 8–9.
102 Berlyne (1971).
103 Ibid., p. 68-70. Berlyne (1974), pp. 175–219.

Determinants of Arousal Changes

There are numerous factors that may lead to arousal fluctuations and, accordingly, experiences of pleasure or displeasure. These are, for instance, intellectual efforts, muscular activities, and conditions such as hunger, thirst, sexual excitement, pain, or fear. However, most interesting with regard to aesthetics are, so Berlyne claims, three classes of stimulus properties.[103] First, there are *psychophysical* properties, such as the hue, brightness and saturation of colours, the loudness or pitch of sounds, and the intensity of stimuli in general. Second, *ecological* properties are those which "...involve association with biologically noxious or beneficial conditions", that is, features representing threats to health and survival, and, especially in the case of humans, which are arousing "...because of the significance that learning has given them."[104] The latter "...[r]esemble stimuli that have in the past regularly heralded or accompanied biologically important occurrences, such as the appearance of food or the onset of pain."[105]

> "Most ecologically arousing stimulus patterns in art, as in everyday life, are ones that have acquired learned associations with events or activities of biological importance. They may have accompanied such events, so that their impact may be ascribed, in older parlance, to 'association by contiguity' or, in more modern terms, to 'classical conditioning.' They may, on the other hand, bear some kind of resemblance to biologically important events, in which case the impact is due to 'association by similarity'...And of course, both mechanisms may be operating: a stimulus may be arousing because it resembles something that has previously coincided with biologically significant events.
>
> It is clear that the use of ecological variables belongs to the content rather than to the formal aspects of a work, i.e. to what is simulated or described...Painting, sculpture, drama, and novel rely chiefly on depiction of human beings and their interactions to produce arousal through ecological variables. Since most of the threats and satisfactions that occur in the ordinary course of events result from the actions of other people, representation of them and their actions is an effective way to generate arousal in the form of fear, anger, elation, or whatever. And through identification, we can be made to share, if only in a blunted form, the emotions corresponding to their expressive acts, postures, and utterances or to react to disturbing events that they experience as if we were confronted with them ourselves."[106]

The third class of determinants of exploratory behaviour are the so-called *collative* properties which, Berlyne claims, are especially interesting with regard to aesthetics. Collative properties are variables of stimulus patterns such as complexity-simplicity, novelty-familiarity, surprisingness-expectedness, ambiguity-clearness, incongruity-harmony, and instability -stability. According to Berlyne, these variables have received relatively little attention from experimental aestheticians. Since the 1950s, however, experimental research in aesthetics has increasingly focused on these factors—to a considerable extent because of the initiative of Berlyne himself. This new kind of approach, which Berlyne refers to as *The New Experimental Aesthetics*, is—besides (i) its research into collative properties of stimulus patterns— characterized by (ii) its interest in motivational questions, (iii) its research into non-viable behaviour as well as verbally expressed judgements, and (iv) its attempt to establish links between aesthetic phenomena and other psychological phenomena.[107]

Information Theory and Collative Variables

Collative variables are said to be closely related to the concepts of information theory, which was developed by Norbert Wiener and C.E. Shannon & W. Weaver during the 1940s. Essential to information-theory analyses of communication is the assumption that the distribution, frequency and probability of events, or signals, is statistically measurable in a specified communicative situation. In such a situation, a set of alternative classes of signals is presupposed, and it is, at least in principle, possible to make an objective calculation of the likelihood that a certain signal will occur. The term *information* (which in this case is used in a rather technical sense) is supposed to refer to the degree of probability or predictability of a given signal: stimuli with a low probability of occurrence generate more information. Moreover, the greater the number of alternative signals, the less probable is the occurrence of a certain signal, and, consequently, the higher is its amount of information. Information, conceived as the degree of (im)probability within communicative contexts, is also sometimes called *uncertainty*, a term which Berlyne seems to prefer, while other theorists have used related concepts such as *entropy* or *disorder*.[108] According to Berlyne, the principles of information theory are also applicable to works of art:

104 Ibid., p. 69.
105 Ibid.
106 Ibid., pp. 138–140.
107 Berlyne (1974), p. 5. See also Berlyne (1971), p. 181.

> "It will be evident that every element in a work of art is chosen from a set of alternatives that can be regulated by signals. For any particular art form and style, the set or vocabulary from which each element is chosen is limited. The alternatives that can occur in a particular location constitute a sample space. Their relative frequencies can be calculated and a probability associated with each of them. Consequently, every location in a work of art, whether spatial or temporal, can be allotted an uncertainty value. In a painting, for example, a spot will have a certain hue, saturation, and...'intensity' or 'brightness'..., each chosen from a set of alternatives."[109]

Collative variables imply comparisons of similarity and difference, made by a percipient, between elements which are simultaneously present in a stimulus pattern or between temporally distinct (present and past) stimuli.[110] Thus a pattern may be more or less complex depending on the number of disparate elements and the degree of similarity between them. At the same time, this pattern may possess relative novelty. Berlyne distinguishes between short-term novelty, being "a matter of similarity or difference between an element and another element experienced during earlier phases of the work...or with portions of the work that have been sampled earlier", and long-term novelty, "either with respect to the appreciator's daily life in nonaesthetic settings or with respect to works of art to which he has previously been exposed."[111] Berlyne is of course aware that "[a] pattern can be more novel, complex, or ambiguous for one person than for another or, for the same person, at one time than another".[112] Numerous experiments have been carried out in order to take account of these subjective conditions, though it should be kept in mind that in most studies, at least until the mid-seventies, the subjects have been Western undergraduate students.[113] Collative variables are thus not simply statistical and measurable physical properties which are translatable into information-theory terms; they also depend on the percipient's subjective conditions such as age, education, previous experi-

108 Ibid., pp. 38–39.—According to Berlyne, "[u]ncertainty can be identified with the average or expected amount of information, which can be calculated before the choice is revealed, whereas the actual amount of information cannot be specified until it is clear which choice was made." An amount of information can be assigned "[o]nce the awaited signal has appeared and we know which alternative has been chosen...This [amount]...will be greater, the lower the probability of the class to which the signal belongs...[it] varies between zero and infinity as the choice of the event in question varies between certainty and impossibility." Ibid., p. 40. See Eco (1973), pp. 99–108, for slightly different uses of information-theory terms.

109 Berlyne (1971), p. 39.

ence, cultural background, and expectations. Nevertheless, Berlyne claims that "...collative properties and subjective informational variables tend...to vary concomitantly with the corresponding objective measures of classical information theory".[114]

Most of the experiments initiated or mentioned by Berlyne make use of relatively simple, artificial stimulus patterns in order to permit controlled variations in particular stimulus properties. Ordinary works of art vary in too many respects (e.g. with regard to colour, brushwork, size, content, frame, economic value, and so on) to allow reasonable stimulus -response generalizations. It might of course be argued that investigations using simple stimuli miss important aspects of our encounters with art—a possible objection which Berlyne seems to be aware of.

> "Although...it is [indispensable] to examine simple cases in initial stages of scientific research, some qualifications must be recognized. There is a stage in which it may be fruitful to consider the peculiarities of the most complex instances as an aid to understanding the simplest ones, so that inquiries starting out from the simplest and the most complex poles will eventually converge on a satisfactory picture...Reactions to artificially simple sights and sounds are admittedly a long way from appreciation of art. On the other hand, any two paintings...must differ in many ways, so that,...if one is preferred to the other, we have no way of knowing which particular factor or combination of factors may be responsible. In other words, experiments using simple material and experiments using more complex material both have their advantages and limitations, and both are necessary."[115]

It should be noticed, though, that Berlyne's attempt has not exclusively been to establish regularly occurring hedonic effects on humans encountering art (or other kinds of stimuli)[116], but also stimulus-response mechanisms in animals as well. Perhaps the latter studies may—in combination with research into humans' reactions to works of art—give us

110 As Berlyne (ibid., p. 69) writes, "[t]he word 'collative', derived from the English verb 'collate' or the Latin past participle 'collatum', adverts to the fact that, in order to decide how novel, surprising, complex, and so on, a pattern is, one must compare or collate information from two or more sources."

111 Ibid., pp. 142–143.

112 Berlyne (1974), p. 19.

113 For a comparative study of Ugandan subjects from three different populations and Canadian students, see D.E. Berlyne, M.C. Robbins, & R. Thompson: "A Cross-Cultural Study of Exploratory and Verbal Responses to Visual Patterns Varying in Complexity", in ibid., pp. 259–278.

114 Ibid., p. 19.

115 Berlyne (1971), pp. 27–29. See also Berlyne (1974), pp. 17–18.

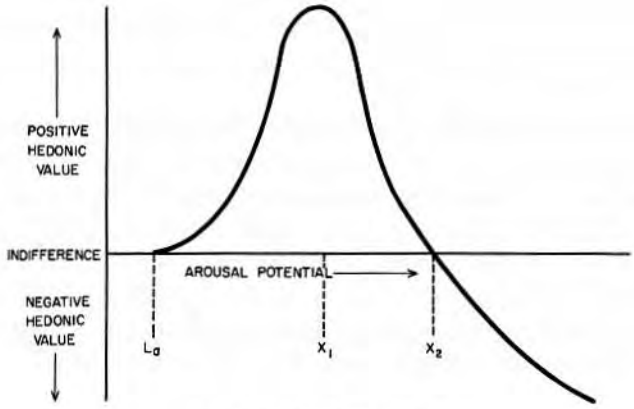


Figure 2. The Wundt curve.

valuable insights into aesthetic behaviour, at least concerning those aspects which are biologically and neurophysiologically based.

Central ideas in Berlyne's work are, as mentioned earlier, the assumptions that certain arousal fluctuations are experienced as pleasurable, and that psychophysical, ecological and (especially) collative properties of stimulus patterns may influence these fluctuations. These properties are regarded as important motivating factors in our encounters with art and determinants of aesthetic preferences. Stimulus patterns may give rise to pleasurable experiences as the result of the interaction of two sets of factors. While some properties are arousal-increasing (e.g. complexity, novelty, instability), others tend to reduce arousal (e.g. familiarity, stability).[117] Arousal potential of a stimulus and preference are, hypothetically, related to each other in an inverted-U fashion, as illustrated in the so-called *Wundt curve* (figure 2).[118] It should be observed, though, that this curve only considers stimuli which are experienced as pleasant (or as unpleasant) because of an "arousal-boost mechanism"—not stimulus pat-

116 For studies where actual paintings have been used as stimulus material, see D.E. Berlyne & J.C. Ogilvie: "Dimensions of Perception of Paintings"; D.E. Berlyne: "Hedonic Tone and Reward Value of Exposure to Paintings"; G.C. Cupchik: "An Experimental Investigation of Perceptual and Stylistic Dimensions of Paintings Suggested by Art History", in Berlyne (1974).

117 Quite obviously, his idea of two counterbalancing types of factors, leading to aesthetic pleasure, bears some affinity with Hutcheson's maxim of "unity amidst variety" or Fechner's "principle of the unitary connection of the manifold." Cf. also Berlyne (1971), pp. 124–128, who himself points to a certain resemblance between his and other scholars' (such as Hutcheson and Fechner's) proposals.

118 Illustration from Berlyne (1971), p. 89. As long ago as in 1874 the psychologist W. Wundt proposed an inverted-U relationship between preference and stimulus intensity as represented in this curve. Cf. Martindale, Moore, & Borkum (1994), p. 55.

119 Berlyne (1974), p. 9.

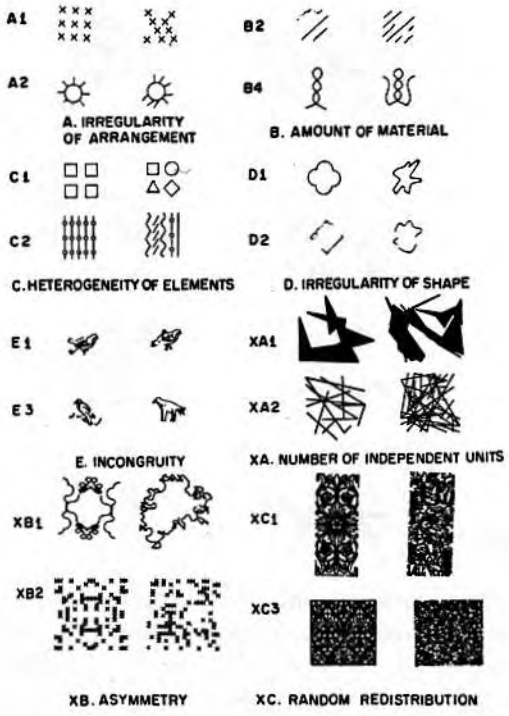


Figure 3. Stimulus patterns used in an experimental study. LC (Less complex, irregular, or incongruous) member of each pair is on left and MC (More complex, irregular, or incongruous) on right.

terns which are pleasing through arousal-reduction.[119] As this curve is supposed to illustrate, stimuli with a medium arousal potential are judged to be most pleasing. The arousal potential is thus considered to be the crucial mediating variable between psychophysical, ecological and primarily collative properties, on the one hand, and preferences, on the other. Now, any empirical investigation of our encounters with art presupposes that a preliminary decision is made as to which properties or elements are most important in creating certain effects, and which effects we ought to look for. Numerous experiments envisaged by Berlyne have focused mainly on collative variables—which he considers to be the most important determinants of exploratory behaviour—and their effects on percipients. Since these variables "...can be identified with the factors that constitute 'form', 'structure', or 'composition' in the arts", "...the term 'structural property' would not be too misleading as an alternative" to the term "collative".[120] Figure 3 shows some examples of stimulus patterns that have been used in investigations of correlations between (the

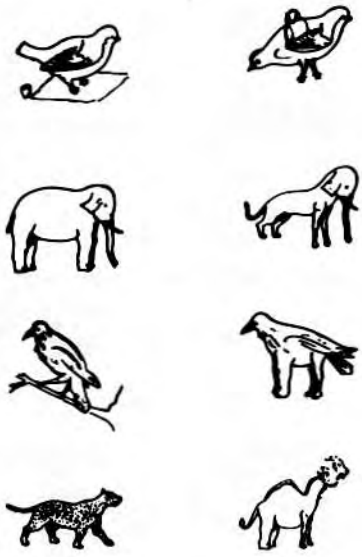


Figure 4. Patterns representing absence and presence of incongruity.

collative variable) complexity and looking-time, pleasingness or interestingness.[121] Each pair has a more and a less complex member, and the pairs are supposed to belong to different subcategories of "complexity".[122] One of these subcategories is called incongruity, which is defined as the violation of an expectation concerning a stimulus. When a stimulus causes the expectation of a simultaneously accompanying stimulus, but an unlikely combination of elements occur together, this stimulus is experienced as incongruous.[123] Berlyne mentions Hieronymus Bosch's paintings, Marcel Duchamp's ready-mades and Surrealist juxtapositions as examples of incongruity in art.[124] Though he considers the possibility that stimuli, particularly in music, may be *formally* incongruous, it seems in this case that he mainly has incongruity with regard to the *representational content* in mind. This may, for instance, be further illustrated with figure 4, which shows some examples of incongruity used in experimental research, i.e. representations of animals with inappropriate parts of the body.[125] Also, variables such as surprisingness (a violation of an expectation

120 Berlyne (1971), pp. 69–70.

121 From Berlyne (1974), p. 261; used in the study referred to in footnote 112. Also reprinted in Berlyne (1972), p. 32.

122 Berlyne (1972), p. 31.

123 Berlyne (1971), p. 145.

124 Ibid., p. 147.

125 Reprinted in ibid., p. 197.

with regard to a temporally succeeding stimulus) or ambiguity (a stimulus having multiple meanings) may have to do with the representational functions of a pattern. Thus it seems doubtful whether all collative variables, strictly speaking, are simply conceived of as "structural" or "formal" properties (as indicated in Berlyne's quotation mentioned above). In another context he explicitly states that they may be related to the semantic aspects of artworks.

> "...[C]ollative stimulus properties play an indispensable role even in connection with content or, in other words, with semantic, cultural, and expressive information. No work of art is indistinguishable from an object that it depicts. There are always cues to remind us that we are dealing with a replica in another medium, and there are frequently deliberate distortions, simplifications or ornamentations of the subject matter, as well as other departures from exact reproduction of appearance. So here also, degree of similarity or dissimilarity to something familiar, degree of expectedness or surprisingness, are what matter, which means that collative variables are crucial."[126]

In accordance with other information-theory aestheticians[127] Berlyne distinguishes between an artwork's *semantic* aspects (by which he seems to mean its representational or denotative function) and, on the other hand, its *expressive*, *cultural* and *syntactic* aspects (i.e. the information transmitted about the artist's mental processes or state, about social norms, and about relations or distributions of elements in a work of art). The last three aspects are regarded as constituting *aesthetic* information in contradistinction to semantic information.[128] Although he points out that there are no clear-cut boundaries between these four kinds of information (and, oddly enough, social information is sometimes described as a subcategory of semantic—not aesthetic—information! [129]), he nevertheless regards *aesthetic* information as a distinguishable and distinctive characteristic of artistic communication with its "...relative importance of *how* something is communicated, as compared with *what* is communicated, and by the relative importance of formal properties in the selection of something to communicate."[130] It is quite obvious, then, that

126 Berlyne (1974), pp. 18–19.
127 For instance, Moles (1966), Bense (1969).
128 See e.g. Berlyne (1971), pp. 43–44; (1974), pp. 6–8.
129 Berlyne (1971), p. 43.
130 Berlyne (1974), p. 8 (my italics).

Berlyne is especially concerned with the non-semantic features of art, notwithstanding the fact that occasionally—and far from consistently—semantic characteristics are also included among collative properties (as we have seen in the quotation above, footnote 126).

In concluding this section, it should be pointed out that in addition to Berlyne other scholars have also attempted to use the concepts and principles of information theory in order to explain aesthetic behaviour, or aesthetic value. Especially during the 1950s and 60s information theory gained a relatively wide acceptance within the humanities. Among the most well-known writers are, for example, Umberto Eco, Max Bense, Abraham Moles, Fred Attneave, Leonard Meyer, and Russian formalists such as Jurij Lotman.[131] In contradistinction to Berlyne, however, they have usually not initiated or carried out experimental studies themselves, but rather tried to apply information-theory concepts in their theoretical analyses of various cultural phenomena. Thus Berlyne may be credited for his endeavour—and courage—to employ these concepts on an empirical level. The question remains, though, to what extent this attempt is convincing.

3.6 Discussion: Objections to Berlyne's Approach

AS ALREADY NOTED IN SECTION 2.6, philosophical aesthetics has usually been rather reluctant to take experimental/psychological studies on aesthetic behaviour into account, most notably within analytic aesthetics. Most textbooks and articles on aesthetics simply ignore the fact that psychological attempts have been made to elucidate the nature of aesthetic preferences, aesthetic pleasure, and so on. Some scattered (sceptical and/or superficial) remarks concerning these attempts occur from time to time, but relatively thorough discussions of experimental aesthetics—with its problems and eventual prospects—are exceptions. In this section I will present two of these (by George Dickie and Joseph Margolis), though we shall first take a closer look at one of the cornerstones of Berlyne's theory, namely information theory.

The Inapplicability of Information Theory

As my review of Berlyne's approach has revealed so far, the relationship between collative variables, formal properties and representational aspects, aesthetic information, and quantifiable degrees of uncertainty is somewhat obscure and for several reasons quite problematic.

First, collative variables are conceived as structural properties having to do with "form" rather than "content", and conveying syntactic information. Still, as already noted, predicates such as incongruous, surprising or familiar are also applicable to the representational aspects of art. A surprising or common occurrence or combination of certain "semantic" components in mimetic representations would thus count as an instantiation of collative properties. However, it is questionable whether the incongruity of, for instance, a centaur's characteristics ought to be regarded as a formal rather than a semantic feature, a matter of *how* rather than *what*—or, in some contexts, as an incongruity at all.

Second, collative variables are, strictly speaking, not stimulus *properties*, because they are supposed to consist of statistical properties of a stimulus pattern *and* conditions of a percipient. Berlyne acknowledges to some extent the influence of the percipient's characteristics (with his previous experience, and so on) when a particular uncertainty value is ascribed to the features of a stimulus. However, there is an unmistakable tendency in his work to regard subjective and objective degrees of uncertainty or complexity as highly correlated.[132] Now, in the case of stimuli which have a linear sequence during a limited period of time (for instance, rhythms or music) it may perhaps be reasonable to speak of quantifiable information-theory probabilities with regard to the occurrence or frequency of succeeding stimuli. Thus predicates such as *novel* or *familiar* may be "objectively" applicable. In many other cases, though, neither a neutral ascription of collative predicates seems to be possible (a stimulus may be complex, familiar, surprising for one person, but not for another), nor is an objective probability quantification achievable.

In pictures, for example, it is far from obvious which of its constituents should count as discrete elements to which a certain uncertainty value may be ascribed. Nelson Goodman, for instance, has convincingly argued that pictorial representations—regarded as symbol systems—differ from other kinds of symbol systems chiefly because of their *semantic and syntactic density*, i.e. because of their lack of syntactic and semantic articulation. This means that certain requirements for an ideal (i.e. clearly articulated) notational system are violated. Syntactic density implies that the constituents of a picture, in contradistinction to letters in an alphabet, are not finitely differentiated: the finest differences among them could

131 See, for example, Eco (1973), Bense (1969), Moles (1966), Attneave (1959), Meyer (1956), (1957), Lotman (1974).

132 Cf. Cupchik & Heinrichs (1981), p. 470.

133 See Goodman (1976), pp. 135–137; Goodman (1978), pp. 67–68.

be taken as the token of a new type.[133] Semantic density, which also occurs in natural languages, has, roughly speaking, to do with the fact that the extension or denotation of symbols overlap (several symbols may have the same denotation, or one symbol may denote several objects).[134] If Goodman's view is correct, it would be impossible to make non-arbitrary and non-idiosyncratic decisions as to whether a part of a picture should count as a discrete (symbolic) element or not. Hence it is difficult to see how information-theory attempts to analyze mimetic or representational pictures could be fruitful (or even feasible), though perhaps the discrimination of elements in artificial and simple visual material may be more appropriate.[135]

R.T. Green & M.C. Courtis have pointed out that the application of an information-theory model presupposes that at least two requirements are met, namely (i) that "[t]here is an agreed alphabet of signs with known and constant probabilities of occurrence", and (ii) that "[t]hese probabilities are *objective*."[136] However, in the case of figure perception, these requirements cannot be fulfilled:

> "To meet the first requirement the experimenter is obliged to impose certain conditions upon the task presented to the subject. Firstly, he must define the alphabet; that is, break the figure up into a mosaic of elements...Then, he must impose a temporal sequence on the presentation of these elements to the subject. This procedure [is]...open to two kinds of criticism: (a) the task as presented to the subject no longer has anything to do with figure perception, (b) the conditions imposed are entirely arbitrary...As for the second requirement, this is flagrantly violated. It is tacitly assumed that subjective probabilities mirror objective probabilities. [But] that there are systematic discrepancies between objective and subjective probabilities is...firmly established by a wealth of experimental material."[137]

According to Green & Courtis, the process of perceiving is determined largely by subjective conditions on the part of the percipient, not by properties of the figure itself.

134 See Goodman (1976), pp. 152–154; Goodman (1978), p. 68.

135 For a critique on these lines, see Cupchik & Heinrichs (1981), p. 471; Cupchik (1986), pp. 353–354.

136 Green & Courtis (1966), p. 12.

137 Ibid., p. 13.

138 Ibid., p. 33.

139 See, for example, Bortz (1978), pp. 485–490; Hogg (1969), pp. 68–69, 82–84.

> "Figure perception, as it occurs naturally, does not involve the scanning of a mosaic of elements in a manner analogous to a television camera dealing with a grained photographic print...[Rather], we would do better to talk of perceptual strategies, as if the percipient were engaged in a search for the perceptual hypothesis that will best organise the raw sensory data. The sorts of hypotheses he entertains, and where he looks within the display for relevant clues, must depend on the task as presented to and conceived by the percipient, and on the percipient's past experience."[138]

Furthermore, it is suggested that the process of perceiving a figure consists of two distinct stages involving (i) the categorization of a figure, i.e. perceiving a figure as being *typical* (in some sense) *qua* member of a certain class of objects, and (ii) the identification of features which are *unique* to the perceived figure (some comparable proposals on these lines made within cognitive psychology will be reviewed in sections 4.3 and 4.4). This process may of course, as indicated, to some extent depend on subjective conditions on the part of the percipient.

Quite obviously, then, the integration of information theory into experimental studies of the arts suffers from serious problems. It seems doubtful whether collative properties, or degrees of complexity, and so on, are measurable in quantitative terms, especially when it comes to pictorial material. There are no objective criteria for rating complexity, uncertainty, etc., nor is it possible to determine statistically the probabilities of occurrence of (non-arbitrarily selected) elements in, for example, visual patterns. Some writers have stressed the fact that subjective presuppositions strongly influence how collative properties actually are experienced by percipients. Thus, it is claimed, we have no method for objectively specifying which aspects of the used stimulus material lead to certain responses or preferences. Consequently, proposed stimulus-response correlations concerning collative properties must be regarded as scientifically dubious or non-falsifiable, especially when it comes to aesthetic material (with manifold possible decisive features).[139]

On the other hand, it could be argued that an exact and objective quantification of degrees of complexity, etc. is unnecessary for experimental studies of responses to art. Within experimental psychology, various scaling techniques, which can establish relations between certain features of stimulus patterns *as experienced by the percipient* are quite frequently employed. For example, *multidimensional* scaling methods of data analysis obtain data which may be interpreted as reflecting a hidden psychological

"structure", that is, how subjects perceive, categorize, and evaluate stimulus objects. This structure may be rendered as a table or as a spatial representation, showing a configuration of points which correspond to the objects used in experimental situations, as on a map. At an initial stage, subjects may be asked to estimate the degree of overall similarity (or proximity) or dissimilarity between any given objects.[140] The larger the (experienced) dissimilarity between two objects, the further apart they are represented (as points) on the spatial map. For instance, given a set of pictures, experimental studies may reveal the subjects' judgements of similarity between members of all possible pairs of pictures in the set. In order to discover rather than impose the attributes of the stimuli to which the subjects pay attention in this respect, these attributes are usually not specified in advance by the researcher—only judgements of overall similarity are asked for. In other cases the subjects may be asked for specific kinds of similarity (say, concerning complexity, incongruity, and the like). Moreover, subsequent studies may help to reduce and specify those properties which are more decisive than others with regard to experienced similarity.

Apart from similarity judgements, it is also possible to incorporate other kinds of data, such as preference, familiarity, and complexity judgements, or the recorded looking time. Thus multidimensional methods may help us to examine significant relations between two or more variables, along several dimensions. Although there are studies which have taken account of five, ten, or even more variables, many applications of multidimensional scaling have for pragmatic reasons been restricted to no more than three, or only two dimensions. This restriction has the advantage that a "map" visualizing the relationships between the data can be constructed (such as a two-dimensional plane or a three-dimensional space); accounts of more than three dimensions cannot be visualized graphically and may thus be less comprehensible. In any case, however, even simple versions of multidimensional scaling require the aid of computers in order to permit satisfactory data analysis.

It should be pointed out, though, that not necessarily each subject will perceive a stimulus in the same way, or will attach the same level of importance to a perceived characteristic. A car, for instance, may be preferred because of its design by one person, or because of its low cost by another. Moreover, it is likewise admitted that such judgements need not remain stable over time. Subsequent exposures to the stimulus material, where, for example, judgements regarding interestingness or pleasure are asked for, may reveal within-subject variations (which Berlyne himself

As already noted, a further serious objection to the applicability of information theory to studies of aesthetic responses concerns its inability to account for figure perception, or, roughly speaking, meaningfulness. According to Green and Courtis, information theory deals with "...transition probabilities, while perception, whether of figures or patterns, is essentially non-sequential, or at least non-linear. A linear sequence may be imposed, but the data no longer have much bearing on problems of perception."[143] Even natural languages cannot be analysed in terms of objective transition probabilities, and information theory has actually not much to say about the communication of meanings. In conclusion, then, information theory may perhaps have some metaphorical value in this context, but should rather be conceived of as "a mathematical tool in communication engineering, particularly useful for dealing with the technical problems of channel capacity."[144]

A Neglect of Meaningfulness

This leads me to a general deficiency with Berlyne's approach, namely its lack of concern with the meaningfulness of artworks (or other kinds of stimulus material). Although some of his studies were concerned with responses to representational art[145], it seems quite clear that he focused to a considerable extent on the formal, rather than the semantic aspects, of aesthetic material. Meaning-functions such as expressiveness, mimetic depiction, and so on, are treated quite superficially, if at all. The strongest candidate in this respect is obviously the ecological variables which refer to the innate or learned signal value or meaningfulness of a stimulus. However, compared to his extensive concern with collative variables, ecological ones generally received very limited attention. Moreover, as the psychologist Colin Martindale has pointed out, those studies which actually were intended to take ecological variables into account did not show that they are related to preference in an inverted-U fashion. According to Martindale, stimulus prototypicality could be considered as an ecological variable. The notion of prototypicality—which will be discussed at length in chapter 4—refers, in succinct terms, to how typical a category member is within the category to which it belongs. There is a host of empirical evidence, so Martindale claims, that prototypicality is (positively) monotonically related to preference, that is, the more prototypical an item is, the more it will be preferred.[146] Even

143 Green & Courtis (1966), p. 30.
144 Ibid., pp. 32–33.
145 Berlyne (1974), pp. 181–226; (1975).

was very well aware of). Nevertheless, it is thought that most people make such judgements from a limited number of characteristics or dimensions, and that investigations with sufficiently large populations may reveal some relatively stable and common underlying relationships. Nowadays multidimensional and other scaling methods are used in manifold academic disciplines, such as psychology, sociology, anthropology, and economics. Furthermore, they are applied on a widespread basis in industry (for example, in consumer research) and various government sectors. One major reason for this development consists obviously of the advances made within computer technology, having facilitated the analysis of large quantities of complex data. The use of such techniques is thus quite well-established in many fields, though it should be noted that there are of course numerous problems and intricacies involved (this being a matter of debate among specialists in mathematics or statistics), a review and discussion of which, however, would fall outside the scope of my study.[141] The point I want to make is rather that such methods may very well be fruitful for studies of aesthetic material and responses.

Indeed, Berlyne himself has occasionally employed multidimensional scaling methods in order to determine the dimensions along which the responses to stimulus patterns may vary.[142] These dimensions can include individual differences (such as age, social background, gender, or education) or personality characteristics (such as being extrovert or introvert); hence numerous perceiver-related aspects can be taken into account. Within experimental aesthetics, the use of various scaling techniques has been increasingly used during the last few decades, thereby focusing on personality aspects as well as ratings made by subjects on scales such as simple-complex, uninteresting-interesting, emotional-unemotional, displeasing-pleasing, familiar-unfamiliar, realistic-abstract, and so on. Quite obviously, then, experimental studies on people's reactions towards works of art (or other stimuli) are not supposed to require any objective quantification of information-theory variables in order to reveal significant relationships.

140 Alternative terms used by psychologists are relatedness, dependence, association, complementarity, substitutability, and so on. See Kruskal & Wish (1978), p. 9.

141 For an overview and discussion of various scaling techniques, such as multidimensional scaling, multivariate data analyses, factor analyses, and so on, see e.g. Hair, Anderson, Tatham, & Black (1992); Kruskal & Wish (1978); Manly (1986); Nesselroade & Cattell (1988); Sharma (1996); Shepard, Romney, & Nerlove (1972).

142 For example, Berlyne (1974), pp. 181–226; (1975). For the usefulness of multivariate or multidimensional scaling techniques in experimental aesthetics, see e.g. Hogg (1969), p. 77, pp. 84–85; O'Hare (1976), (1979); Purcell (1984); Cupchik (1986), p. 358.

research into collative variables has not consistently revealed that preference always follows the Wundt curve. First, experiments investigating preference for random polygons showed that subjects rather preferred quite simple polygons compared to more complex ones, because the former reminded them of naturalistic objects. Thus the experience of meaningfulness was more significant for variations in preference ratings than degrees of complexity.[147] Second, although numerous findings indicate that at least sometimes the relationship between collative characteristics and preference may be described as an inverted-U function, anomalies arise when concurrent psychophysical and ecological variables are not held constant. Experimental studies have revealed that the latter may overrule the importance of collative variables, and in a series of studies of figure paintings, sexual and aggressive content (i.e. ecological variables) was more significantly related to preference than was complexity.[148]

Meaningfulness accounts apparently for a considerable part of variations in preference ratings, especially, as we might suspect, when it comes to pictorial representations and works of art. A serious shortcoming with Berlyne's approach consists of his emphasis on collative variables and his formalist bias, at least when it comes to his experimental work. On a theoretical level, though, semantic or symbolic aspects of stimulus patterns were dealt with at greater length. Moreover, his basic view on motivational questions (and the role which factors such as familiarity and novelty are said to play in that respect) is in principle compatible with more recent attempts to account for the relationship between preference and meaningfulness (if we disregard his behaviourist and information-theory conceptions). In his earliest work, Berlyne hypothesized that motivation (or interest) in higher organisms is influenced by a special kind of drive, a striving for novelty (which may be considered to have a certain survival value). He distinguished between three categories of this drive: (i) variation due to satiation or boredom, (ii) curiosity, i.e. the active impulse to seek out unfamiliar sensations and to endow them with meaning, and (iii) aesthetic interest in stimuli which are "interesting in themselves regardless of their representational content".[149] It was the latter category which he subsequently focused on in his research, while the second one unfortunately was given much less attention. However, as

146 Martindale (1984), pp. 53–54; (1988), p. 10; Martindale, Moore & Borkum (1994), pp. 57–58.
147 Martindale (1988), pp. 10–11; Martindale, Moore & Borkum (1994), pp. 56–57.
148 Martindale (1984), p. 54; Martindale, Moore & Borkum (1994), p. 58.
149 Berlyne (1949), p. 193. Cf. also Cupchik (1986), p. 348.
150 Martindale, Moore & Borkum (1994), pp. 87–88.

Martindale has argued, Berlyne's general approach might be preserved if updated and integrated into modern cognitive psychology.[150] According to one of the latter's basic tenets, perceptual processes involve the assimilation of stimuli to pre-existent mental representations or schemata. Encounters with stimuli experienced as familiar or less familiar—i.e. which more or less correspond to these internal representations—may have varying hedonic effects on various percipients. Such a view—which will be discussed in the next chapter—could then have a considerable bearing on attempts to explain some fundamental aspects of perception as well as appreciation of pictorial representations.

The Is/Ought Problem

Before we proceed to recent findings within cognitive psychology, however, it seems necessary to review and discuss some more basic objections directed against experimental aesthetics, quite apart from the shortcomings and anomalies in Berlyne's approach already noted. As mentioned earlier, a central idea in analytic aesthetics is the view that numerous, or even all, problems of aesthetics necessitate conceptual or philosophical considerations. Empirical studies of the arts are normally dismissed as quite irrelevant for philosophical aesthetics. Now, although I believe that the strategy and method (or methods) of analytic aesthetics have proved to be fruitful in many respects, empirical studies in psychology and neurophysiology seem for several reasons to be highly relevant, even unavoidable, for solving some aesthetical problems—and not only descriptive questions, but perhaps even normative ones.

Despite the frequent occurrence and probable inevitability of value judgements related to our encounters with art, contemporary art historians and also aestheticians have given relatively little attention to normative issues. Evaluative standards have of course been investigated in a descriptive sense, but attempts to challenge and especially to justify certain standards have usually been avoided. This reluctance to take an explicit normative standpoint is also characteristic for analytic aesthetics. This branch of analytic philosophy has been described as a second-order discipline, a "philosophy of criticism", which, as mentioned earlier, is rather preoccupied with the language used by art critics or art historians than directly with works of art themselves. Analytic aestheticians have to a considerable extent been engaged in topics like interpretation, representation,

151 For an excellent survey and discussion of analytic aesthetics, see Shusterman (1987), pp. 115–124, especially pp. 119–120.

expression, metaphor, and the definition and ontology of art.[151] Their attempts have primarily been descriptive, although, of course, many clarifications or explications seem to have been intended as recommendations for certain uses of concepts, and Beardsley's explicit normative proposals are certainly deviations from these attempts.[152] Furthermore, the linguistic bias of analytic aesthetics has resulted in a neglect of empirical investigations that might have some bearing on aesthetic issues. If, in a Wittgensteinian spirit, philosophical aesthetics is reduced to the analysis and clarification of concepts or statements, there is obviously no room or need for empirical studies of the arts, such as those attempted by, for instance, psychology or neurophysiology.

This attitude can be very well illustrated by an early article published by the analytic aesthetician George Dickie where the relevance of scientific and especially psychological information to aesthetics is explicitly dismissed. In Dickie's view, philosophical aesthetics is a discipline which, first, centres around "logical considerations: the meaning of critical concepts and the truth of critical statements, both descriptive and evaluative", and, second, investigates the nature of aesthetic experience. The latter has, according to Dickie, far too often been conceived as some kind of mysterious psychological state or process. Instead, we should rather attempt to specify those rules and conventions which guide our encounters with art—an endeavour which does not necessitate any psychological research. Examples of the first type of problems are: "...'Can music have meaning?' 'Can paintings make statements?' 'Is it proper to make use of the intention of the artist in criticism?'".[153] Questions like these, Dickie claims, cannot be solved by appeal to empirical inquiries. He discusses and specifically rejects two types of research, namely experiments on the meaning of artworks and investigations of preference orders.[154] Here I will focus upon Dickie's denouncement of the latter ones.

Preference tests are described as the exposure of subjects to pairs of stimuli such as shapes, colours or sounds, and a subsequent verbal ranking of these stimuli by the subject, whereby certain preference orders are established. Dickie expresses some doubts as to whether the ranking of relatively simple stimulus patterns (e.g. "cardboard triangles") is comparable to preference choices of more complicated stimuli such as works of art, but admits that "[if] there is a scientific problem to be solved..., it

152 Beardsley (1981), especially chapter x.

153 Dickie (1962), p. 288.

154 For a critical discussion of Dickie's objections against experiments on the meaning of music, see Dempster (1993).

would seem that there should be some relevance of the simple preference choice to the complex preference choice" and that more complicated tests are imaginable or in progress.[155]

Indeed, during the three decades since Dickie's article extensive research has been made in the field of experimental aesthetics, as we have seen. Many different groups of people (of various cultural, educational, socio-economic backgrounds and ages) have been exposed to simple as well as to complex stimuli (i. e. works of art). Moreover, records were made not only of the subjects' verbal ratings, but also, as mentioned earlier, the duration of self-exposure to stimulus patterns and biopsychological indices including changes in the electrophysiological activity of the brain, in processes regulated by the autonomic nervous system, and in the skeletal musculature. The research being done by experimental aestheticians is methodologically and scientifically far more advanced than becomes obvious from reading Dickie's article.

However, the plausibility of his main argument against the relevance of investigations like these to aesthetics seems to be independent from their degree of sophistication. Dickie suspects "that the main purpose which is envisaged is that the information about preference will serve as a basis for normative principles which can be used in art criticism".[156] Such attempts, he claims, must fail:

> "No matter how many data are collected, they still remain descriptions (the *is*) and no normative principles (the *ought*) can be derived from the descriptions alone. I am not, of course, suggesting that critical reasons cannot be given in support of evaluative judgments. I would deny, however, that statements about the preferences of some person, group of persons, or all persons can be used as supporting reasons. The only proper kind of supporting statement or reason is one that points out some characteristic of an art object."[157]

Dickie's dismissal of empirical findings for solving normative problems seems questionable for several reasons. First, from a metanormative point of view it is far from clear—and until now no consensus has been achieved—whether and in which way value predicates and value judgements differ from empirical predicates or judgements. Objectivists or non-naturalists who hold that value judgements imply the existence of

155 Dickie (1962), p. 294.
156 Ibid., p. 294.
157 Ibid., p. 295.

non-empirical value properties must face the charge of positing ontologically rather odd entities or qualities.[158] Naturalists, on the other hand, claim that value sentences should be seen as synonymous with certain other empirical statements. If value terms are definable as descriptive predicates, "aesthetically valuable" might mean something like "is approved or preferred by X", where X may stand for possible candidates like "the majority in our society", "the most powerful class in our society", "experts on art" (which here should be understood in a value-neutral sense) or just "me". In that case derivations of value judgements from empirical statements should cause no logical problems, and preference studies would obviously be relevant for normative questions. It seems, however, doubtful whether one or several naturalist definitions of value terms may give an account of all of their uses (cf. also section 1.1). On the other hand, value judgements may, at least in some contexts, function as substitutes for empirical statements such as those just mentioned. These ontological or semantic problems deserve careful examination, and thus Dickie's superficial treatment, or rather omission, of any discussion on these lines is surprising. Second, even if a naturalist position is untenable, empirical statements may of course—together with certain value premises —support normative conclusions. Take, for example, an inference with the following form:

1. X determines the aesthetic value of an artwork.
2. Y is the most efficient means for realizing X.
   Conclusion: Y is the most efficient means for realizing the aesthetic value of an artwork.

In this inference the variable X could stand for any empirical (functional or inherent) property or properties that a work of art might have (e.g. the capacity to produce pleasure, knowledge or aesthetic experiences) and which, according to premise (1), is considered to establish its aesthetic value (as a necessary and sufficient condition). In premise (2) the variable Y could refer to one or several empirical characteristics (like similarity, complexity, originality, unity or ambiguity) supposed to be the most efficient means, in a descriptive sense, for the realization of feature X. In such a case no naturalistic fallacy is committed: the value premise (1) together with the empirical premise (2) permits us to draw a normative conclusion.

158 Mackie (1977), pp. 38–42. See also Fenner (1992), pp. 286–287, and his critical discussion of Dickie's article.

For example, let us presuppose that an aesthetic value judgement refers to the dispositional property of an artwork to function efficiently under suitable conditions (and thus is used in an adjunctive sense as outlined in section 1.1). Let us further presume that the function aimed at is to provide the percipient with pleasurable experiences. We may then initiate investigations in order to corroborate the assumption that certain features are more efficient in this respect than others. With regard to mimetic representations, for instance, it might be argued that depicted objects which are experienced as very typical from the point of view of the beholder are regularly more likely to result in pleasure than objects which are not. On the other hand, we may also attempt to investigate whether moderate deviations from typicality provide even more pleasure (which, as we shall see in chapter 5, may very well be the case). If the latter assumption is supported by empirical inquiries, it then seems reasonable to suppose that moderate atypicality is at least a contributory cause for the establishment of aesthetic value (we should of course not exclude the possibility that there are additional characteristics which conjunctively constitute the value of an artwork). However, this does not mean that we have a method for estimating the value of a particular work of art, but rather that we may in principle decide what characteristics are normatively more relevant than others.

Dickie may perhaps to some extent be aware of the possibility of taking empirical arguments into account; at least he acknowledges that a "statement or reason...that points out some characteristic of an art object" might support evaluative judgements (though the normative standards which they are based upon cannot by themselves be justified or rejected by appeal to any empirical inquiries).[159] Unfortunately, no clear suggestions are made as to which characteristics of artworks we ought to choose as supporting reasons for aesthetic value judgements. However, in an earlier discussion regarding how to decide which descriptive adjectives are applicable at all to music and paintings, he dismisses the relevance of experiments or polls, i.e. querying groups of subjects, for judging the correctness of certain characterizations. According to Dickie, decisions like these, e.g. whether a Mendelssohn passage is sprightly or not, can be left to one or several competent critics. No investigation of non-experts' perceptual judgements, "[no] appeal to numbers is relevant to the question".[160] This means, oddly enough, that critics obviously are

159 Dickie (1962), p. 295.
160 Ibid., pp. 291–292.

allowed to query their own intuitions and responses, which, first, would also be some kind of empirical inquiries, and, second, could lead to arbitrary and idiosyncratic decisions.[161] It is far from clear why these rather limited "polls" are supposed to be legitimate, while systematic attempts to query the perceptual judgements of larger groups of subjects are categorically ruled out.

Now, Dickie claims, with regard to the evaluation or appreciation of art, that "we already know what we need to know", that is, "[the] mechanisms involved in the appreciation of art are similar to such concepts as knowing, believing, oughtness", thus being part of Wittgensteinian language games or life forms. It seems that Dickie regards the evaluation of art as some kind of rule-governed praxis which 'just rolls along', but which cannot be corrected or reformed, especially not by appeal to preference studies. Aesthetics is said to be comparable to moral philosophy in the way that "problems of ethics are not solved by a scientific study...".[162]

Most moral philosophers would, of course, deny that *only* empirical considerations could solve ethical problems, but certainly some of them—especially consequentialists—would maintain that *also* empirical knowledge, besides certain conceptual and philosophical considerations, may be necessary for the justification of moral judgements. If we want to know how we ought to act in a particular situation, the knowledge of all relevant facts appears to be important (for instance, which consequences our choice of action will have, which alternatives we have or whether an action will be instrumentally efficient for realizing a certain goal). Moreover, even our selection of moral principles might be justified by considering our moral intuitions or preferences, for example, when used as constituents of a reflective equilibrium or a coherence theory. Suggestions on these lines have been made by, for instance, Henry Sidgwick and, perhaps most notably, John Rawls.[163] According to the latter, moral principles may be checked against our initial and considered moral judgements (i.e. those that, for example, are held with some confidence, in a calm state of mind, not distorted by self-interest or lack of relevant information). Roughly speaking, a process of mutual adjustment of principles and considered judgements might result in a state of coherence or "reflective equilibrium", thus yielding reasonable moral principles.[164]

161 For a similar point, see Dempster (1993), p. 354.
162 Dickie (1962), pp. 300–302.
163 Sidgwick (1907); Rawls (1973).

In a similar way our knowledge of considered and *de facto* existing aesthetic judgements may be relevant for the justification of normative standards in aesthetics, and indeed analytic aestheticians have treated the beliefs and responses of (mostly contemporary) critics as some kind of empirical raw data from which, as in Beardsley's case, normative principles have been derived.[165] However, these attempts smack of arbitrariness due to the rather restricted selection of subjects and beliefs relied on (belonging mainly to the present time, Western Hemisphere and a cultural élite).

Although experimental studies on the arts cannot solve normative aesthetic problems, they may nonetheless be of ancillary use and help us in giving certain normative beliefs of critics—and, of course, also other groups of people—additional plausibility and strength. This kind of research cannot be done from "scratch" or without certain conceptual or theoretical presuppositions. Nevertheless, given these presuppositions, controlled procedures in which subjects are exposed to various stimuli (simple or complex) and their preferences and responses concerning varying characteristics are tested and recorded can help to corroborate or modify these hypotheses. These investigations may contribute to the confirmation of our suspicions that, from an intersubjective and intercultural perspective, certain characteristics of artworks are more significant than others as supporting reasons for evaluative judgements. Hence these studies could be relevant for determining the instrumental efficiency of these characteristics with regard to particular aesthetic goals (premise (2) in the inference mentioned earlier). Furthermore, preference studies may, together with candidates for normative aesthetic principles, function as the input of a reflective process reaching a state of coherence or equilibrium, thus justifying the selection and acceptance of certain principles (premise (1) in our inference). This suggestion requires of course a far more thorough discussion, which, however, would fall outside the scope of this study. In any case, value judgements concerning art have too serious consequences (for example, as already noted in section 1.1 with regard to the production and distribution of art) to be ignored or to be accepted as they *de facto* occur. An important task of aesthetics is, I believe, to explore the possibility of (epistemically or pragmatically) justifying aesthetic evaluations, and to propose suggestions as to which of them we ought to accept or not. If empirical knowledge can give certain proposals greater strength, it should not be excluded. Dickie and

164 Rawls (1973), pp. 21–22, pp. 47–48.
165 See e.g. Beardsley (1982), chapter 18.

other analytic aestheticians' scepticism in these matters may very well be too rigid.

It should be emphasized, though, that experimental aestheticians have normally been rather reluctant to deal with normative issues at all (which should be clearly distinguished from motivational explanations or investigations concerning people's preferences). Thus it seems that Dickie's critique to a considerable extent misses the point of experimental research into aesthetic behaviour (although there may be exceptions, such as the claims made by Birkhoff or Eysenck). Berlyne himself has recommended a strict separation between normative and factual questions concerning art.

> "[Experimental aesthetics]...can have nothing to say on normative questions, such as how superior and inferior art can be distinguished from each other. It may well examine the conditions that determine whether somebody will rate a work favourably or unfavourably, but this is quite different from considering how favourably something ought to be appraised. It must not offer pronouncements on the essence of art or of beauty, a commodity with which we are already lavishly stocked. These must be hauled up by the phenomenological philosopher from the depths of his noetic consciousness, sifted out by the 'ordinary-language' analytic philosophy from the folk wisdom enshrined in everyday English idiom..." [166]

The Lack-of-Historicity Charge

Joseph Margolis, another influential analytic aesthetician, has launched a quite pungent attack against psychological (scientific) approaches towards art and perception, including Berlyne's theory. The latter is, first of all, criticized for its account of aesthetic perception in information-theoretic terms. Margolis correctly asserts that information theory, as developed by Shannon, is concerned with "the merely technical transmission of messages regardless of their content—regardless of their meaning or value".[167] Berlyne is accused of having reduced aesthetic material to pure physical events to which an estimated probability value is said to

166 Berlyne (1972), pp. 21–22.—In another context, Berlyne advocates a rigid distinction between scientific and speculative aesthetics. Whereas the former deals with nomothetic research, explanations, and quantitative statements, the latter includes idiographic research, understanding, and qualitative statements (i.e. "...it does not hesitate to make value judgments, not only with respect to what is good and bad or beautiful and ugly, but also with reference to intrinsic value..."). See Berlyne (1977), p. 56.

167 Margolis (1980), p. 215.

be ascribable. This approach misses, according to Margolis, the fact that works of art can hardly be regarded as consisting of "suitably discrete elements" which "combine in some syntactically formulable way to produce complex message units".[168] Margolis denies that art can normally be conceived of as something like natural languages, that is, as having comparable semantic and syntactic features (which of course seems to be reminiscent of Goodman's view, although the latter regards denotation as a feature common to natural languages *and* art).

Moreover, any account of aesthetic perception must take culturally or historically contingent influences on the part of the percipient into consideration.

> "It is but a step to conclude that the perception of paintings, even taken singly, must reflect the conventions, experience, interests, and orientation of the viewing agent and his environing culture. How, for instance, can one judge what may be perceived in a Klee if one fails to appreciate Klee's persistent habit of experimenting with certain features of seeing—for instance, with the effects of fatigue on prolonged staring at particular forms or the way the eye may be tricked into moving through a particular scanning sequence? How could one possibly judge the 'balance' of James Ensor's grotesques without appreciating the way in which he exploits the remembered balance of post-Renaissance perspectival space and tests it in the extreme?" [169]

According to Margolis, all perceptual images may, due to their ambiguity, be interpreted in manifold different, culturally and historically variable ways. There are no promising prospects for any psychological attempts

168 Ibid., p. 216.

169 Ibid., pp. 220–221.

170 For a similar point, see Stolnitz (1960), pp. 12–13, who dismisses any psychological preference studies on forms or colours taken in isolation, that is, without considering a wider aesthetic or cultural context. On the other hand, Stolnitz admits that non-philosophical research (for example, in psychology and sociology) may contribute to aesthetics: "...[A]esthetics cannot afford to ignore these other studies. It must pay attention to their findings and use them to help answer its questions about the nature and value of art. Otherwise aesthetics would be working in a vacuum. It can talk intelligently about art 'in general' only if it is responsible to the factual evidence concerning particular works of art which is amassed by psychologists, art historians, art critics, and so on...Thus, aesthetics and the nonphilosophical studies are interdependent. Aesthetics is no substitute for researches in psychology, sociology, and other fields. It must organize and systematize their findings in order to arrive at sound beliefs concerning art. And the nonphilosophical studies can use these beliefs to give direction to their research. We should be prepared to alter our beliefs in the light of new evidence, and our revised beliefs, in turn, should be taken over by such fields as psychology to guide the search for still further evidence" (ibid., pp. 13–14).

to isolate stylistic or semantic features of artworks and to treat them as universal, historically indifferent elements, exposure to which may be investigated in experimental situations.[170] Hence, Margolis concludes, any studies concerned with the perception of art, and perception in general, cannot be compared to scientific research investigating the physical world. Rather, we should accept "some form of cultural relativism, conventionalism, historically groomed perception and intelligence, the complexities of linguistic influence and of other intensional distinctions".[171] These concessions are not only said to be absent in Berlyne's work, but also in numerous other approaches (such as those by the psychologists Jean Piaget, J.J. Gibson, and Arnheim).

Although Margolis' critique of Berlyne's use of an information theory model is plausible, his latter objections are less convincing. First, as we have seen, Berlyne is to some extent prepared to admit that individual (and consequently social and historical) contingencies influence perceptual processes and percipients' judgements concerning the (experienced) uncertainty value of stimulus patterns. According to Margolis' review of Berlyne's and his associates' approach, this awareness seems to be completely absent. This is of course not the case, though it could be debated whether Berlyne has given the subjective conditions on the part of the percipient sufficient attention. Second, it may be argued that Margolis' relativistic view is too radical. It is far from obvious, I believe, whether perceptual processes and interpretations vary historically and socially to such an extent that no general knowledge about their fundamental nature can be achieved. What kind of evidence do we have that perception is culturally contingent in all respects? On what grounds could Margolis' claim be epistemically justified? Could scientific inquiries (in Margolis' sense) give us such a general, ahistorical insight—or should we regard this claim in itself as permeated by culturally contingent circumstances? Moreover, as I have argued in section 2.6, we have a host of empirical evidence according to which the creation and recognition of pictorial representations can not at all convincingly be reduced to variable conventions or habits, but actually appears to involve cross-culturally stable aspects.

Furthermore, if no general (historically invariant) knowledge of perception can be achieved, we might also question whether we have any reason to believe that any general statements about human nature, learning, memory, emotions, and so on, could be justified. Indeed, psychology

171 Margolis (1980), p. 236.

as such, with its aspirations to achieve comprehensive and generalizing knowledge about human motivation and needs, about mind and behaviour, must presumably—seen from Margolis' perspective—be regarded as a hopeless and futile enterprise. General statements concerning human nature have to be rejected; the most we can strive for is to gain knowledge of human nature as it reveals itself in particular contexts, at certain times and places. Thus a very basic idea of scientific endeavours, namely to find regularities, law-like relationships, and the like, seems to be doomed. Instead, the most we can hope for is to formulate strictly context-situated statements with regard to mind and behaviour, but any attempts to connect them, to find common denominators between them, would seem to imply nomothetic concessions. It might of course be argued that psychological research in general is legitimate; still, when it comes to studies of works of art, and people's responses to them, such aspirations must be rejected. But is it actually reasonable to assume that there is something extraordinarily special about art—having undefinable, mysterious, or evasive qualities—which forces us to exempt it from scientific/psychological inquiries?

As for aesthetics, and philosophy in general, we may equally doubt whether its scholars have given sufficient attention to the historicity of its traditional issues and concepts. Within philosophical discourse, there is an unmistakable tendency to disregard any socio-historical complications. Attempts to elucidate the ontological or semantic nature of concepts such as knowledge, truth, meaning, justice, logical validity, and so on have scarcely taken contextual aspects into account (and claims according to which truth or meaning are context-situated, or concepts are based upon family resemblances and variable language games, are by themselves not at all conceived as context-situated). Indeed, a salient feature of philosophy has commonly been a striving for basic and eternal "truths", abstracted from cultural contingencies. A similar tendency may likewise be noted within aesthetics. Its accounts of the nature of art, aesthetic value, expression, or representation have usually been remarkably ahistorical. As a matter of fact, analytic aesthetics—a domain with which Margolis may be associated—is no exception in this respect.[172] It may be admitted that, at a theoretical level, the historicity of art, and people's responses to it, have been stressed by several analytic aestheticians. Still, in their actual approaches towards aesthetic questions, historical aspects

172 See also Shusterman (1987), pp. 120–121, who points to analytic aesthetic's neglect of art's historicity and socially charged context.

are often neglected. Certainly, historically noteworthy positions within aesthetics are frequently reviewed and discussed, but the goal aimed at is frequently an ahistorical and generalizing solution of standing aesthetic issues. Moreover, aesthetics as some kind of language analysis is, as already noted, usually based upon a non-systematic selection of utterances made by people from the West, the so-called artworld, and the present. Nevertheless, despite these methodological deficiencies, hesitations in drawing (sometimes astonishingly) generalizing conclusions are far too often absent.

A certain lack of historicity is thus by no means peculiar to experimental aesthetics or psychology, but to aesthetics, and not least analytic aesthetics, as well. Now, despite the need for historical awareness, it seems, I believe, not unreasonable or fruitless to search for regular patterns or responses when it comes to people's encounters with, and uses of, works of art—as with all kinds of artifacts and natural objects. Experimental studies investigating people's reactions to various kinds of stimuli (and single properties of stimuli) may, used within a broader theoretical framework, contribute to the confirmation or falsification of our beliefs concerning at least some aesthetic issues. This does of course not imply a reductionist strategy or a denial of socio-historical influences. Rather, empirical/psychological research may—together with other fields of research—participate in extending our understanding of aesthetic phenomena, and it should not necessarily be regarded as irreconcilable with socio-historical considerations.

Indeed, as I shall argue in the following chapters, a broader psychological framework which seems to be helpful in this respect—and most notably with regard to the main topic of this study, namely the MRT tradition outlined earlier—is provided by cognitive psychology. Experimental research within this field—as well as within neurophysiology—concerned with various aspects of visual perception and categorization has expanded impressively during the last few decades and is still in progress. Some of these aspects appear—in contradistinction to Margolis' view—to be characterized by a fundamental and remarkable cross-cultural (or even biological) stability, though, as we shall see, at the same time is compatible with the occurrence of individual and socio-historical variations.

4. COGNITIVE PSYCHOLOGY AND PROTOTYPICALITY

4.1 Cognitive Psychology

AS ALREADY NOTED, BEHAVIOURISTS regard introspective methods and reference to mental states as scientifically unreliable. The focus of behaviourist research is on stimulus-response mechanisms, that is, overt behaviour which is recordable, measurable, and explainable with reference to external circumstances and observable features of an organism. One of the most significant achievements of behaviourism is certainly the elaboration of sophisticated and methodologically rigorous techniques for psychological studies. Thus it has to a considerable extent participated in establishing psychology as an empirically based, non-speculative field of research. However, behaviourism's exclusion of mentalistic concepts such as feelings, internal representations, beliefs, intentions, and so on seems to be rather counter-intuitive. After all, seen from a first-person perspective, we have no doubt whatsoever that internal processes or states exist, and that they direct our actions. Although not all behaviourists have been prepared to deny the existence of mental states, they have nevertheless dismissed them as methodologically suspect as regards explanations or predictions of human behaviour.[1] Behaviourist explanations may include so-called intervening variables (such as, for instance, arousal), though it should be noted that these are fundamentally different from mentalistic notions. Indeed, the former are nothing more than covert stimulus-response relations occurring on a neural level, mechanistically linking external stimuli to external responses. Intervening variables are not seen

1 Martindale (1991), pp. 7–8. Methodological behaviourism may be distinguished from philosophical behaviourism. According to the latter theory, which is strongly influenced by the verificationism proposed by Logical Positivism, our ordinary speech about mental states can be paraphrased into sentences describing behavioural dispositions, or actual patterns of behaviour. Cf. Churchland (1984), pp. 23–25.

as essentially transforming any external input, but rather as transmitting it. Further, in cases where responses seem to be explainable solely with reference to stimuli, the interest in an organism's inner processes dissolves. The proper subject matter of psychology is, so behaviourists claim, the study of external behaviour. Consequently, studies on topics such as memory, consciousness, thinking, and mental imagery have usually been ignored or neglected.

Having been the most influential psychological school until the 1970s, at least in the USA, the behaviourist approach has successively lost ground in favour of cognitive psychology. Several factors may account for this development.

First, the behaviour of lower organisms such as frogs or rats, when confronted with simple and artificial stimuli, may perhaps be explained in terms of stimuli and responses (or associations between stimuli), but when it comes to primates, and especially humans, the situation looks quite different.[2] It has been argued, for instance, that behaviourism can hardly elucidate complex abilities such as mastering or learning a language. It seems, for example, that a stimulus-response model cannot explain our competence to understand and correctly employ new, hitherto unheard sentences—a competence which, to an impressive degree, even children acquire in an astonishingly short time.[3] Moreover, so-called minimal behaviour which is barely overtly manifested, but which, nevertheless, from a first-person perspective has considerable significance, quality and complexity, cannot adequately be described or explained in behaviouristic terms. For example, a person sitting in a church, looking at a picture, or listening to a concert may very well have an intense mental experience which underlies his behaviour. Any satisfactory attempt to understand or explain such activities must obviously include the agent's point of view, his beliefs and intentions, or, in short, his mental state or processes.[4]

Second, the use of theoretical terms (e.g. "electron" or "atom") is commonly regarded as legitimate in natural science (e.g. theoretical physics) —despite the fact that theoretical entities are not directly observable but have to be inferred by means of operational definitions in terms of obser-

2 It should be noted, though, that as early as 1932 the behaviourist Edward Tolman proposed the existence of so-called cognitive maps (in rats, for example) which are built up by the continued performance of a task. These "internal representations" of an external environment, such as a maze, enable rats and other organisms to find certain locations (e.g. where food is stored). See Schultz & Schultz (1992), pp. 336–337; Solso (1995), pp. 16–17.

3 Chomsky (1959). Cf. ibid., p. 3; Anderson (1995), p. 11.

4 Apter (1982), p. 3–4.

vables. However, it seems that no pure operational definitions which completely exclude the use of other theoretical terms can be given.[5] The positivistic ideal of to science (and meaningfulness in verificationist terms) is nowadays considered to be obsolete and far too rigid; thus there should be no epistemological reasons for excluding mentalistic terms if these may add to the explanatory value of psychological theories.

Third, the arrival of computer technology as well as developments in computer science, cybernetics and information theory are sometimes mentioned in order to explain the decline of behaviourism and a renewed interest in consciousness. If machines such as computers are granted mind-like properties, if their activities have to be explained with reference to internal processes, programs, rules, and so on, it would clearly be absurd to deny comparable internal properties to humans.[6]

The beginning revival of psychology as a discipline concerned with human consciousness (which of course historically, from ancient Greece onwards, has been psychology's usual focus of interest) seems to have emerged during the 1950s. Indeed, 1956 is sometimes mentioned as a crucial year in this respect: at the Massachusetts Institute of Technology a symposium was held on information theory, where topics such as experimental psychology, linguistics, and computer simulation were discussed; the so-called Dartmouth Conference on artificial intelligence took place, and perhaps the first book to take an explicitly cognitive/psychological stance was published (with the significant title "A Study of Thinking", written by J.S. Bruner, J.J. Goodnow & G.A. Austin).7 The following years saw a growing number of experimental investigations and publications covering issues such as problem solving, concept formation, mental imagery, pattern recognition, perception, and other forms of cognitive activities. Psychologists thus put increasing emphasis on internal processes underlying human activities, though without ignoring behaviour, or stimulus-response connections. Nowadays, that is, by the 1980s and 90s, cognitive psychology has become one of the leading movements in psychology, with an impact extending beyond the usa to Europe and the former Soviet Union.

Now, cognitive psychology may be described as an attempt to investigate (experimentally as well as theoretically) the information-processing

5 Churchland (1984), p. 90; Anderson (1995), p. 9.

6 Hearnshaw (1987), p. 273.

7 Hearnshaw (1987), pp. 273–274; Eysenck (1990), pp. 63–64. Participants at these meetings were, for example, the linguist Noam Chomsky, and the psychologists George Miller, A. Newell, and H.A. Simon.

capabilities (for example, perception, symbolic coding, short-term/long-term memory storage) of intelligent organisms. Though the focus is chiefly on cognitive processes in humans, research with animals is also carried out.[8] As Paul Churchland has put it, "[t]he aim of cognitive psychology is to account for the various activities that constitute intelligence—perception, memory, inference, deliberation, learning, language use, motor control, and so on—by postulating a system of internal states governed by a system of computational procedures...The aim is to piece together an outline of the actual functional organization of the human nervous system, or of the nervous system of whatever creature is under study."[9] The attribute "functional", as used in this context, is supposed to indicate that "the essential or defining feature of any type of mental state is the set of causal relations it bears to (1) environmental effects on the body, (2) other types of mental states, and (3) bodily behaviour."[10] In contradistinction to a behaviouristic approach, functionalism denies that types of mental states can solely be defined with reference to stimulus input and behavioural output; we also have to consider other mental states with which the mental state in question is causally connected (an example mentioned by Churchland is pain which may be caused by bodily damage and result in wincing, but may also be related to mental states such as distress and reasoning aimed at relief). Further, ontologically speaking, a functionalist stance is neutral with regard to the matter which constitutes or results in mental states: any substance(s) consisting of a certain organizational structure which is functionally equivalent to the structure of our nervous system may sustain mental activities. This means that, for example, an alien from another planet whose constitution is based on silicon instead of carbon, or an electronic system consisting of circuits, may in principle have an internal structure which functions as our nervous system does. In these cases we may be justified, according to functionalism, in attributing mental states, i.e. consciousness, to the systems in question.[11]

While behaviourists tended to uphold a somewhat mechanical view of the human cognitive system, cognitive psychologists have taken the computer—that is, its software, not the hardware—and its information-pro-

8 Apart from the fact that research with animals may have some relevance for understanding human consciousness, it has been claimed that mental processes such as coding symbols, constructing mental representations, and forming basic abstractions about space, time and number may also be attributed to animals. Cf. Schultz & Schultz (1992), p. 529.

9 Churchland (1984), p. 92.

10 Ibid., p. 36.

11 Ibid., p. 36–37; Dennett (1991), p. 30–31.

cessing abilities as heuristic model of mental activities. As already noted, the development of computer science is one of the major influences on the growing interest in a cognitive-psychological approach. AI (artificial intelligence) is a research area in computer science which seems to have had a significant impact on cognitive psychology. Although the computer metaphor may have had some heuristic value (and justifiable from a functionalist perspective—which numerous cognitive psychologists adhere to), it has been argued that there are important differences between computers and the human mind which sometimes have been neglected. For example, a clear-cut distinction between "hardware" and "software", which is possible in the case of computers, appears to be rather problematic when it comes to organisms, because their "counterparts" to these computer constituents seem to interact or influence each other.[12] Moreover, human thinking is characterized by individuality and intentionality, by motivation and emotion, and by cultural and contextual factors.[13] Thus the analogy between computers and minds is said to have some serious shortcomings, despite its present popularity among cognitive psychologists and especially cognitive scientists.

Cognitive science is, by the way, a broader research area than cognitive psychology. The former overlaps with and partly includes the latter, but has a more interdisciplinary approach, with contributing disciplines such as linguistics, philosophy, anthropology, neuroscience, artificial intelligence, and education. Furthermore, cognitive science makes use of logical analyses and computer simulations of cognitive processes to a larger extent, while cognitive psychology employs the experimental methodology developed by behaviourism. The difference between these fields is, however, not very clear-cut, and some psychology departments in the USA have been renamed cognitive science departments.[14]

As we have seen in the preceding section, experimental aestheticians such as Berlyne and his colleagues were influenced to a considerable extent by a behaviouristic and information theory approach. The focus of their interest was on the effects of stimulus properties on organisms, especially the arousal-increasing or moderating qualities of collative variables. While Berlyne et al. may be credited for extending behaviouristic research to aesthetic phenomena and for stimulating empirically less speculative investigations concerning the perception of art, their

12 Hearnshaw (1987), p. 277.

13 Ibid., pp. 271–272; Schultz & Schultz (1992), p. 530.

14 Schultz & Schultz (1992), ibid.; Anderson (1995), p. 11; Eysenck (1990), pp. 66–71; Kuper (1988), pp. 80–83.

attempts are for several reasons nowadays regarded as questionable (see section 3.6). Apart from the fact that an information theory model hardly appears to be appropriate for an analysis of our perception of artworks, nor of their syntactic or semantic structure, the superficial treatment of art's cognitive and semantic aspects seems to be quite insufficient. An important aspect of our encounters with, for example, pictorial art is not only (at least not primarily) its capacity to evoke feelings of pleasure or displeasure (due to correlated arousal changes), but its "aboutness", its embodiment of "meaning". Quite obviously, experimental aesthetics as conceived of and promoted by Berlyne and his colleagues has neglected this aspect. Instead, investigations into formal qualities (i.e. psychophysical and especially collative variables) have dominated—despite Berlyne's occasional and half-hearted attempts also to incorporate semantic aspects. The strongest candidate for an artwork's meaningfulness—the so-called ecological variables—has been treated rather cursorily.[15] Perhaps due to this deficiency, but also because experimental psychology in general has shifted towards a cognitive stance, experimental aestheticians have, since the 1970s, become increasingly interested in people's ability to create, store and recognize representations (whether visual, linguistic, or mental). This concern lies at the heart of cognitive psychology, and thus, as I intend to show, the research done in this field seems to be of particular relevance for a deeper understanding of the basic mechanisms giving rise to our interest in pictorial representations.

4.2 Mental Representations

COGNITION, AS THE TERM IS understood by cognitive psychologists, refers in a broad sense to knowledge or the process of achieving knowledge, though by no means only to propositional or declarative knowledge ("knowledge that"). Cognitive activities include our ability to reason, to remember past events, to perceive and recognize objects, to acquire and understand a language. Other topics of interest for cognitive psychologists have to do with strategies for problem solving, creativity, learning procedures, skill acquisition, and goal-oriented behaviour. Not all of these examples are reducible to propositional knowledge, but are more aptly described as forms of practical or procedural knowledge, that is, how we perform various activities ("knowledge how").[16]

15 Cf. Martindale (1988).
16 Eysenck (1990), p. 69; Anderson (1995), pp. 336–242.

Moreover, a major tenet in cognitive psychology is the assumption that the mind should be regarded as a symbol-processing system, and that one important goal is to identify and explain the representations and symbolic processes involved in cognitive activities. A significant characteristic of cognitive psychology, which clearly distinguishes it from traditional behaviourism, is thus the supposition that intelligent organisms are capable of constructing and manipulating mental representations. This assumption is of course by no means a new one, but has been defended or taken for granted by philosophers throughout history.[17] Aristotle, for instance, regarded mental representations as being picture-like due to their resemblance to external objects. The nature of memory is described as "...the persistent possession of an image, in the sense of a copy of the thing to which the image refers...".[18] Like pictures, mental representations do not evoke emotions, in contradistinction to real objects or situations: "...when we think something to be fearful or threatening, emotion is immediately produced, and so too with what is encouraging; but when we merely imagine we remain as unaffected as persons who are looking at a painting of some dreadful or encouraging scene."[19] The latter assumption appears to be rather doubtful, though: phobic people, for instance, may become emotionally upset when they imagine feared things or situations.[20] The first claim concerning the nature of memory, however, seems not to be as easy to dismiss and has actually been advocated by numerous Western philosophers. Not all of them have adhered to the view that mental representations are exact copies of the external world. Thomas Hobbes, among others, stresses their vagueness or sketchiness compared to real objects.[21] Nevertheless, something like a picture theory of mental imagery has quite frequently been put forward to account for our capacity to form inner representations of external phenomena.

A major difficulty with mental representations is, quite obviously, their elusiveness from a third-person perspective. The reliance on introspective methods which characterizes the aforementioned suggestions has for obvious reasons been called into question, and consequently the issue has been rather neglected as long as behaviourism has been the dominant school in psychology. However, as noted earlier, many activities of intelligent organisms cannot be sufficiently explained solely with reference to

17 Cf. Tye (1991), pp. 1–11.
18 Aristotle: "On Memory and Recollection", 451a 19, quoted in ibid., p. 2.
19 Aristotle: "On The Soul", 427b 22, quoted in ibid.
20 Ibid., p. 3.
21 Cf. ibid., pp. 4–11.

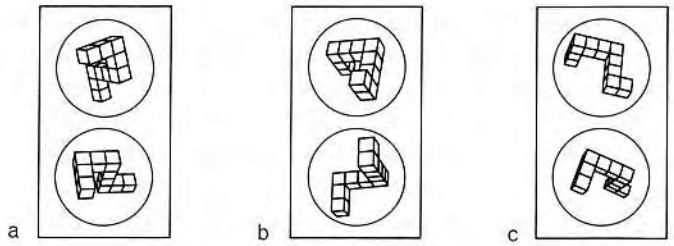


Figure 5. Stimuli used in a study on mental rotation: (a) the objects differ by an 80-degree rotation in the picture plane; (b) the objects differ by an 80-degree rotation in depth; (c) the pair cannot be rotated into congruity.

stimulus-response relationships. Thus the inference of internal processes or states from observable behaviour seems to be justifiable if it adds to the explanation of the activity in question.

Experimental Evidence for Mental Representations

A number of experiments carried out by cognitive psychologists since the 1970s actually seems to indicate that something like mental representations must be taken into consideration in order to explain at least some forms of behaviour. For example, a series of experiments performed by Roger Shephard and his colleagues on so-called *mental rotation* may be interpreted as pointing to the occurrence of inner representations of external objects.[22] Subjects were shown pairs of two-dimensional pictures of three-dimensional objects (see, for example, figure 5).[23] In some cases the objects were identical, though varying in orientation from zero degrees to 180 degrees. The task was to decide whether or not each pair represented the same object in different spatial orientations. The subjects themselves reported that in order to accomplish the task they mentally had to rotate one of each pair until it was congruent with the other. Now, the reaction time to determine whether they were identical proved to be a linear function of the degree of difference in orientation. Thus these experiments indicate that the mental processes involved are comparable to physical operations in a three-dimensional space.

Another class of experiments, initiated by the psychologist Stephen Kosslyn and colleagues, has been designed to investigate our capacity of *mental scanning*, that is, to scan distances across an imagined object.[24] The hypothetical assumption underlying these investigations has been that if

22 Anderson (1995), pp. 112–114; Martindale (1991), pp. 64–66;
23 Illustration from Anderson (1995), p. 113.
24 Cf. ibid., pp. 114–116; Eysenck (1990), p. 180; Pylyshyn (1984), pp. 231–233.

mental representations are somehow "depictive" (that is, represent spatial properties), then the time taken to shift attention from one point to another will be in proportion to the imagined distance between these points. In one experiment, for instance, subjects were presented with a map of a fictitious island which they had to memorize until they were able to draw it reasonably accurately. Afterwards the subjects were asked to imagine the map and focus mentally on one of several objects which the island was supposed to contain (such as a hut, a rock, a tree, a lake, and so on). Five seconds later they were asked to focus on a second object on the island and to press a button when this had been achieved. The results of these experiments confirmed the hypothesis that the time needed to fulfil these mental operations was relative to the distance between the recalled objects. Thus it seems that these processes are to some extent analogous to physical or perceptual operations with real objects.

Pictorialist vs. Propositionalist Views

Research into mental image manipulations such as the ones mentioned has been extensive over the last few decades. It should be pointed out, though, that the question as to whether representations actually may be "depictive" or not has not been answered unanimously. As a matter of fact, there has been a lively debate among cognitive scientists on this issue. Several critics of the "pictorialist" conception of mental representation, such as Zenon Pylyshyn, have argued that the behavioural data from the experiments above should be interpreted as indicating that only *propositional* representations are actually at work. According to the "propositionalist" view, mental representations are language-like structures consisting of small cognitive units with semantic properties, such as truth and reference, thus being transformable into separate assertions. The basic elements of propositional representations are considered to be symbols standing for objects or classes, properties, logical conditions (e.g. "if", "all", "and", "or") and relations (e.g. "gives", "likes", "on"). Though language-like, these representations do not necessarily assume the (mentally represented) form of sentences, or specific sentences, in a natural language (in that case one would have to deny that non-verbal organisms or infants may store this kind of representation). Experiments have shown, for instance, that subjects are very capable of remembering the assertive content of heard sentences, but are relatively insensitive to the exact combinations of words (for instance, subjects may have difficulties in remembering whether they heard a sentence such as "Lincoln freed the slaves" compared to the passive version "The slaves were freed by

Lincoln").[25] Propositional representations are thus considered to be medium independent, that is, they may be overtly manifested as sounds or inscriptions in any natural language. Now, the experiments on mental rotation or image-scanning are, according to the "propositionalist" view, more plausibly regarded as reflecting the time it takes to imagine a series of linked propositions and concepts. Roughly speaking, by creating a list referring to the objects or properties in question, and by scanning through one object or property after another, more time would be required to reach, so to speak, the end of the descriptive list (i.e. representations of objects which are farther apart would be farther apart on this list).[26]

Proponents of a "pictorialist" view are of course not denying that cognitive processes sometimes, or even unavoidably, presuppose propositional representations, nor do they claim that only depictive ones are at work. Rather, they reject the reductionist standpoint of "propositionalism" in favour of a more pluralistic account.[27] Numerous experiments have been carried out which, according to "pictorialism", indicate that visual information is processed and stored in a different way than verbal information. There are, for example, experimental findings according to which visual information (e.g. an array of geometric objects) is more easily remembered and identified with shorter reaction times depending on the spatial position of its elements, while our memory for verbal information (such as nouns) increases when it previously has been presented in a linear order.[28] Allan Paivio's influential *dual-code theory* distinguishes between separate representations for verbal and visual information. An initial aim of his research has been to explain the fact that memory for pictorial stimulus material (or pictured concepts) is often superior to verbal material (or verbalized concepts). Moreover, nouns which are easier to imagine visually are usually better remembered than abstract nouns. These findings are accounted for by suggesting that cognitive processes involve two parallel memory systems, a linguistic and a pictorial system respectively. The latter "...is regarded primarily as...specialized for the storage and symbolic manipulation of information concerning spatially organized objects and events", whereas "[t]he verbal system, on the other hand, is specialized for sequential processing..."[29] A similar dualistic view

25 Anderson (1995), pp. 145–148.
26 Cf. Lakoff (1987), p. 443 ; Eysenck (1990), p. 180; Kosslyn (1995), p. 7.
27 Cf. Eysenck (1990), pp. 178–180; Anderson (1995), pp. 106–111; Neperud (1988), pp. 284–287.
28 Anderson (1995), pp. 107–109; pp. 137–144.
29 Paivio (1979), p. 9. Cf. also Bruce (1996), pp. 64–66; Anderson (1995), p. 107.

on mental representations also characterizes Kosslyn's account which, as indicated already, conceives depictive representations as being image-like as they appear to map the spatial juxtaposition of points in a space. This means that such a representation is somehow analogous to the constellation of parts, or points, of the represented object in question.[30]

It is clear that the idea of depictive representation implies some kind of resemblance relation, although—as we shall see—no simple mirroring of external phenomena is intended. Moreover, as the experiments mentioned earlier indicate, mental images seem to some extent to be comparable to, or overlap with, the products or resources of perception. Other experimental findings have been regarded as corroborating this assumption. For example, in mental imagery, like perception, there seem to be constraints on resolution for fine visual details. Further, acuity of imagined, as well as perceived, features appears to decrease toward the periphery of an imagined or actual visual field.[31] It should be pointed out, though, that studies which chiefly focus on behavioural results have not generally been accepted as proving the occurrence of mental images. One might argue, for example, that a theory which denies the existence of depictive representations, and a theory which allows for two (or several) kinds of them both are compatible with the available behavioural data (or, put in another way, they are underdetermined with regard to these data).[32] On the other hand, there is also empirical evidence from neuropsychological research which seems to support the idea that mental representations are sometimes depictive in nature—or at least related to visual perception. For instance, experiments making use of positron emission topography (PET)—i.e. the measurement of changes in blood flow in various regions of the brain—reveal which areas become activated when subjects are involved in different tasks, thereby presupposing that higher blood flow indicates an increase in neural activity. To mention one example, studies designed to locate those areas which are involved in reading processes indicate that the process of actively reading and generating uses of nouns occurs in the frontal lobe, a part of the brain which is involved in higher-level processes such as planning and motor functions. Just passively looking at these words, on the other hand, activates the occipital lobe, or visual cortex, where visual information is processed.[33] Extensive research on so-called split-brain patients (where the corpus

30 Eysenck (1990), pp. 179–180; Kirby & Kosslyn (1992), p. 74; Kosslyn (1995), p. 5.
31 See Bruce (1996), p. 70; Eysenck (1990), p. 182.
32 Anderson (1978). Cf. also Kosslyn (1995), p. 12; Lakoff (1987), p. 443; Eysenck (1990), p. 180.

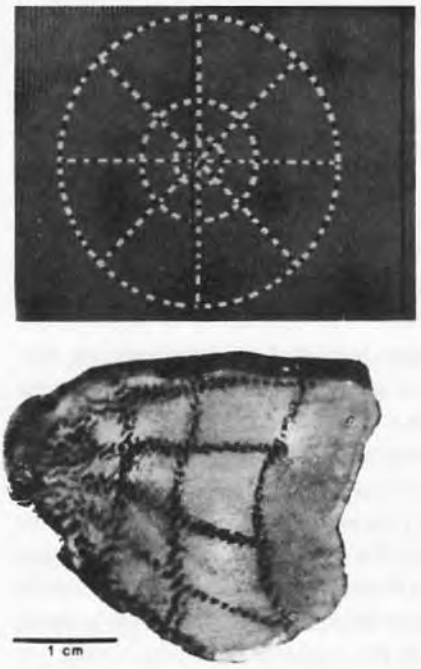


Figure 6. (a) The stimulus presented to the monkey.
(b) Pattern of brain activation produced by the visual stimulus.

callosum, normally connecting the left and right hemispheres of the brain, has been surgically severed), on individuals with brain injuries, and the employment of radioactive substances which, after being injected, indicate neural activity have contributed to an increasing clarification of cognitive processes, not least vision. The latter method has been used on, for example, monkey brains (whose visual areas seem to be similarly structured as those of the human brain). Investigations using this method have indicated that adjacent areas of the visual cortex represent adjacent regions of the visual field as it is projected on the retina. As figure 6 shows, the stimulus pattern perceived by the monkey is reproduced in its visual cortex as a similar neural activity pattern.[34] There is, apart from these studies, further empirical evidence which suggests that the same areas of the brain are active in visual perception as during the occurrence of some mental representations, thus giving the distinction between propositional and depictive representation additional support.[35]

Apart from the discussion concerning "propositionalism" vs. "pictorial-

33 Anderson (1995), pp. 27–28.
34 Illustration from ibid., p. 29. Cf. Eysenck (1990), p. 181.
35 Anderson (1995), p. 119; Eysenck (1990), p. 180; Farah (1988); Paivio (1991), pp. 345–359.

ism", there is yet another debate within cognitive psychology worth mentioning, namely whether depictive representations are actually based on spatial relationships (as, for example, Kosslyn claims) or whether other aspects also are involved. The latter view has been advocated by some researchers claiming that spatial correspondences should be distinguished from more specifically visual ones, which have to do with, for example, colour properties, brightness, or judgements of size. Thus Farah et al. state that "[n]europhysiological evidence suggests that our cognitive architecture includes both representations of the visual appearance of objects in terms of their form, color, and perspective and of the spatial structure of objects in terms of their three-dimensional layout in space."[36]

Furthermore, spatial correspondences may probably also be related to, for example, tactile or auditory modalities.[37] Experiments on mental imagery carried out with congenitally blind people have basically led to the same results as with sighted ones, though the latter had shorter reaction times. Blind people seem rather to apply tactual experiences, and it has sometimes been claimed that mental images quite often—also in the case of sighted people—are kinaesthetic, that is, independent of any specific visual sensory modality (see also section 2.6, footnote 149).[38]

The debate, or debates, on mental representations have been touched upon rather briefly in this section, but not all of its intricacies and the arguments put forward are of our concern in this context.[39] Instead I will proceed to a field of research concerned with this issue which seems to be more—and even highly—relevant for achieving a deeper understanding of the functions and effects of mimetic representations, namely categorization research.

4.3 Categorization and Prototype Structures

COGNITVE PSYCHOLOGISTS HAVE, to a considerable extent, given attention to the capacity of humans and other living creatures to categorize objects and events. The external world consists of an incredible number of entities which may differ in innumerable ways, hence the ability to generalize or to find regularities in objects and events appears to be one of the most

36 Farah, Hammond, Levine & Calvanio (1988), p. 459.

37 Anderson (1995), pp. 117–119.

38 Lakoff (1987), pp. 445–446.

39 For more detailed discussions and reviews of the debate on mental representations, see e.g. Block (1990), Sterelny (1990 a, 1990 b), Tye (1991), Kosslyn (1995).

consequential cognitive activities. It seems unquestionable that this capacity is essential for organisms in order to survive and to improve their living conditions. The formation of categories enables us to apply previous experiences to new ones, to make inferences, to make predictions about the future, and they provide efficiency in communication—just to mention a few examples. Important questions, however, are how categories arise at all (i.e. whether, or to what extent, they are the result of environmental features or constructive processes on the part of the categorizer), and how they are represented in consciousness. Eleanor Rosch, one of the first cognitive psychologists to make categorization an issue, has outlined categorization research and its central questions as follows:

> "Categorization, the process by which distinguishable objects or events are treated equivalently, is one of the most basic functions of living creatures. Humans live in a categorized world; from household items to emotions to gender to democracy, objects and events (although unique) are treated as members of classes. There are three basic questions for categorization research: why do we have the particular categories that we do and not others; how are categories acquired, stored and used by the mind; and what is the relation between categories in the mind and the objects, cultural forms, and contingencies in the world?" [40]

Since Rosch's initial work (to which we will return below), cognitive psychology has devoted much research to this issue and, to be more precise, the possible role of mental representations of categories and how they are stored in long-term memory. Now, the concern with categories is by no means a new one. Philosophers have from Plato and Aristotle onwards discussed how we can acquire knowledge about categories, which ontological and semantic status they have, and which properties should be taken as their defining criteria. According to Plato, categories exist independently from the sensory world (as Forms); Aristotle, on the other hand, denies this and regards them as manifested in particular things which are definable in terms of genus and species, i.e. as the formal causes of things. Despite these different viewpoints, which in various versions have been defended and disputed by numerous subsequent philosophers, a common denominator is discernible. Category members are conceived of as having essential properties in common, that is, necessary

40 Rosch (1994), p. 513.

and conjunctively sufficient features which they must possess in order to qualify as members. These features specify the exact boundaries of the category. Moreover, any member of a category possessing these characteristics is as good a member as any other: either the properties are present or not, and only in the first case, but not in the latter, we may talk about category membership. This traditional view on categories has been quite persistent in the history of Western philosophy, but seems nowadays—partly due to Wittgenstein's later works—far too rigid. According to Wittgenstein, in his discussion of language games, there are numerous concepts which are not definable with reference to necessary and sufficient conditions. Referents of concepts (such as the category "game") may have no common properties, nevertheless they are used and understood in ordinary language. Instead of looking for common criterial features, Wittgenstein suggests, we should rather characterize concepts as being united by *family resemblances*. This means that an object may have at least one, perhaps several, properties in common with another object belonging to the same category, but no properties are shared by all category members (i.e. various category members may have the properties AB, or BC, or CD, or DE respectively, and so on).[41]

Wittgenstein's view has not only led to an extensive discussion about the nature of categories (not least regarding the category *art*) among philosophers, but has also played a part in giving inspiration to categorization research in cognitive psychology. In particular, the pioneer work done by Rosch and her colleagues has been influential and may be regarded as having given empirical support to Wittgenstein's philosophical reflections. The standpoint that categories have no fixed (or non-extendible) boundaries, that there are many unclear cases of category membership, and that there are better or worse (i.e. more or less representative) examples of a category member is nowadays shared by numerous cognitive psychologists, although there is no consensus with regard to the exact nature and cognitive function of categories.

Eleanor Rosch's Work

Let us take a closer look at the proposals made by Rosch et al. According to Rosch, there are two basic principles underlying the formation of categories.[42] First, category systems serve to give an organism sufficient information about the environment (depending on certain purposes or

41 Wittgenstein (1984), "Philosophische Untersuchungen", §§ 66–71.
42 Rosch & Lloyd (1978), pp. 28–30.

needs) while at the same time involving as limited cognitive efforts as possible. One task of categorization is "to reduce the infinite differences among stimuli to behaviorally and cognitively usable proportions."[43] Second, the perceived environment provides structured information which to some extent is non-arbitrary and predictable. The correlation of attributes may be more or less probable, or logically/empirically impossible. This means that categories "reflect" the actual structure of the world rather than being completely contingent. However, Rosch stresses that the properties attributed to categories are perceived from a species-specific point of view (i.e. bats, dogs, or humans have different functional needs, sensory equipment, or bodily constitutions which may lead to different modes of categorization). Moreover, pre-existing cultural and linguistic categories may influence a perceiver's category constructs. In this context it may be noted that the question as to whether constructive processes on the part of the categorizer, or empirical features of the world play the major role in categorization is a standing matter of dispute among cognitive psychologists—a question to which I will return below.[44]

The early research carried out by Rosch focused on colour categories. One source of inspiration was the work done by the anthropologists Brent Berlin and Paul Kay who claimed that, cross-culturally, there were "a limited number of basic color terms across languages and that while the boundaries of those color categories fluctuated widely between, and even within, both languages and speakers, there was a great deal of agreement (even between languages) on which colors were the good examples of those terms."[45] This means that speakers belonging to different language communities quite regularly chose a certain colour (sometimes called *focal colour*) as the best or most typical example of a colour category (although the exact boundaries of that category vary from language to language). Thus some members of the category *blue* (or a category which includes, for instance, blue as well as green) are usually regarded as better examples than others.[46] Rosch's own studies on Dani, a New Guinea language having only two basic colour categories, appeared to confirm this view. For example, Dani speakers remembered the best example colours better than others, despite the fact that their language didn't give them any special

43 Ibid., p. 29.

44 See the discussion in Malt (1995).

45 Rosch (1994), p. 515.

46 For a review of the research done on focal colours and a possible neurophysiological explanation, see Lakoff (1987), pp. 26–30.

status. These and other investigations lead successively to the hypothesis that "at least some categories form universally around perceptually salient areas of perceptual domains...", categories thus having "as their center a kind of physiological Platonic Form", but, on the other hand, "no analyzable criterial attributes, no formalizable definitions, no definite boundaries, and graded rather than uniform membership in the category."[47] In her later research Rosch extended this view to other kinds of categories as well. Not only perceptual categories, but also, for example, what she calls semantic (such as *furniture*), biological (such as *woman*), social (such as *occupations*), political (such as *democracy*), and ad hoc goal-derived categories (such as *things to take out of the house in a fire*) seem to fit in with her earlier assumption according to which categories have fuzzy boundaries and/or a graded structure.

> "[According to]...a core of empirical findings...all categories show gradients of membership...Reliability scores (subject's agreements with each other and consistency with themselves over time) range from the low .50s to the high .90s depending on the stimulus items, the instructions, and the statistics used. (For example, virtually everyone agrees that an apple is a better example of fruit than is fig but the ordering of pineapple and strawberry fluctuates.) What is robust and uncontrovertible is the rapidity, ease, and feeling of meaningfulness with which people make judgments of goodness of example for members of the most diverse kinds of categories..."[48]

Experimental Strategies

Rosch devised several experimental procedures in her research on categorization. In most of these experiments various groups of subjects, usually students of psychology, encountered different kinds of stimuli, such as words (nouns), sentences, outline drawings, or photographs. In other cases subjects had to "produce" examples of category members. Some of the methodological strategies used in her (as well as other researchers') investigations were designed as follows:[49]

(i) Direct rating: Subjects have to rate the typicality, or how good an example of a category, an item (such as words, pictures) are. In

47 Rosch (1994), p. 515.
48 Ibid.
49 See Lakoff (1987), pp. 41–42; Rosch (1994), pp. 515–517.

early studies on categorization carried out by Rosch subjects were asked to rate the typicality of category members (on a 1 to 7 scale where 1 is very typical and 7 very atypical). It turned out that the subjects quite consistently considered some members to be more typical than others. In the category bird, for example, a robin is judged to be very typical (with an average rating of 1.1), while a chicken (3.8) is not.[50]

(ii) Reaction time: Subjects have to press a button to indicate the experienced truth-value of statements (such as "An apple is a fruit"). Clear-cut and typical examples lead to shorter reaction times.

(iii) Production of examples: Subjects have to list or draw category members, which often prove to be members considered to be more typical.

(iv) Asymmetry in similarity ratings: Subjects are asked to make similarity judgements concerning category members. Astonishingly, they tend to regard less representative category members as more similar to more representative members than vice versa. For example, American subjects regard the USA—in contradistinction to Mexico—as a typical example of a *country*. The same subjects consider Mexico to be more similar to the USA than the converse.

(v) Asymmetry in inferential reasoning: Subjects who are involved in inductive reasoning tasks are more likely to make generalizations from representative to non-representative category members than in the reverse order. For example, subjects usually infer that robins (which are representative of the category *bird*) will spread a disease to ducks (which are less representative of the same category), while the converse is considered to be less probable.

(vi) Ease of learning: When subjects are confronted with artificial categories, they learn representative category examples more easily than others. Studies of children indicate that category names are first acquired for better category members. Moreover, categories can generally be acquired faster when typical examples are presented first.[51]

The results obtained from these experiments support, according to Rosch, the aforementioned assumption that categories, psychologically speaking, usually do not have clear-cut boundaries, but rather possess a graded structure.[52] This means that there are certain category members which are experienced as cognitive reference points (or the clearest cases of category membership), while other members gradually deviate from them, although they still belong to the category in question. Put in another way, categories are formed around their most representative instances, so-called *prototypes*. Moreover, Wittgenstein's notion of *family resemblances* may be treated as a general psychological principle of category formation: "...[M]embers of a category come to be viewed as prototypical of the category as a whole in proportion to the extent to which they bear a family resemblance to (have attributes which overlap those of) other members of the category. Conversely, items viewed as most prototypical of one category will be those with least family resemblance to or membership in other categories."[53] This hypothesis seems to have been empirically confirmed by various experiments where, for example, subjects were asked to list attributes for members which previously had been rated as very typical for the category in question. It was shown that the items with most attributes in common—which had to be specified by the subjects—and which had the least overlap with other categories were also considered to be the most representative category members. Likewise, studies with children have shown comparable results.[54]

In these cases the underlying assumption is obviously that there exists some kind of similarity relation, based on family resemblance, between category members and prototypes, or matches to a standard. The more attributes an item shares with other members in a category, and the fewer attributes it shares with members of contrast categories, the higher is its family resemblance and thus degree of typicality supposed to be. Cognitive

50 Anderson (1995), p. 157–158. Other examples are: (i) category sports: *football* (1.2), *weightlifting* (4.7); (ii) category *crime: murder* (1.0), vagrancy (5.3); (iii) category *vegetables: carrot* (1.1), *parsley* (3.8).

51 Rosch (1994), p. 516.

52 It should be pointed out, though, that there may be categories which actually reflect an all-or-none rule, that is, some entities belong, formally speaking, to the category in question in strict essentialist terms, while others do not. For example, the category *odd number* includes any number whatsoever that produces a remainder of 1 when divided by 2. All category members satisfy the rule equally. Still, despite the existence of exact formal criteria for category membership, it may be claimed that such a category has a graded structure, psychologically and cognitively speaking, due to the efficiency with which people establish membership of certain numbers, or due to the fact that they regard some numbers as more typical than others (say, 3 compared to 1057). Cf. Barsalou (1991), p. 8.

53 Rosch & Mervis (1975), p. 575

54 Ibid.

psychologists have, however, also been interested in other possible determinants of typicality. For example, it has been suggested that familiarity and frequency of exposure to an item determine typicality. While familiarity may be defined as someone's perceived knowledge of an item, frequency of exposure or instantiation may be defined as someone's subjective estimate of how often an item has been experienced, either as a member of a specific category or across all contexts in which it might occur. An apple, for instance, may be regarded as an often-experienced object in general, but as an unusual instance of a pizza topping.[55]

Category Levels

Now, the question as to whether there is a level of abstraction in category formation which has a special status as being psychologically more salient than others has not yet been discussed. According to Rosch, there is a basic level of abstraction in categorization at which objects, both biological entities and artifacts, are most "naturally" divided into categories.[56] The term *level of abstraction* is intended to refer to the degree of inclusiveness of a category, that is, "[t]he greater the inclusiveness of a category within a taxonomy, the higher the level of abstraction."[57] Each category in a taxonomic hierarchy, except for the highest level category, is entirely included within another category. It has been suggested that we may differentiate between at least three levels of abstraction, namely between a *superordinate*, a *basic*, and a *subordinate* level. Here are some examples:[58]

Superordinate	Basic level	Subordinate
furniture	chair	kitchen chair
		living-room chair
tree	oak	white oak
		red oak
vehicle	car	sports car
		jeep

55 This example is taken from Loken & Ward (1990), p. 113.

56 Cf. Rosch & Mervis (1975), p. 586.

57 Rosch & Lloyd (1978), p. 30. The term *taxonomy* is defined as "a system by which categories are related to one another by means of class inclusion." Ibid.

58 Most of these examples are taken from ibid., p. 32, and Rosch & Mervis (1975), p. 586.

The basic level seems to be psychologically different from superordinates and subordinates in several respects. In contradistinction to superordinates, which have relatively few cognitively salient attributes in common (according to experiments where subjects had to list these attributes), basic level objects are regarded as resembling each other to a much greater extent (more attributes are common to them). Subordinates, on the other hand, are also considered to have many features in common, though not notably more than basic level categories (for example, as Rosch remarks, many attributes of kitchen chairs overlap with those of other kinds of chairs).[59] Moreover, basic level categories seem to differ from other levels of abstraction in numerous other ways, both perceptually and functionally:[60]

(i) Their members have similarly perceived overall shapes.

(ii) Their members invoke similar motor actions, that is, the way we usually interact with the objects.

(iii) They are the first categories named and learned by children (and taught by adults).

(iv) Their members are most quickly identified by subjects as belonging to a certain category.

(v) They are identified from averaged shapes of members of the class (i.e. a single pictorial image may be taken as representing the whole class).[61]

(vi) A single mental image may be taken as representing the class as a whole.

(vii) They have perceptual priority, that is, objects appear to be first recognized as members of the basic level category (only after finer perceptual discrimination or conceptual exploration are they identified as superordinates or subordinates).

59 See, for example, Rosch & Lloyd (1978), p. 31–32; Rosch & Mervis (1975), p. 586–587.

60 Cf. Rosch & Lloyd (1978), p. 31–35; Rosch & Mervis (1975), p. 586–587; Rosch (1994), p. 518–519; Lakoff (1987), p. 46–47.

61 Averaged shapes were created by taking superimposed shapes of objects, from which an average outline of the overlapped figures was drawn. See Rosch & Lloyd (1978), p. 34.

The research done by Rosch and her colleagues indicates that basic level categories have special cognitive status compared to other levels of categorization. Although more specific subordinate categories are more informative (with regard to the quantity of applicable attributes) than basic level categories, this gain in informativeness is achieved at the cost of having to process more categories. Categorization at this level is thus more time-consuming and less efficient. Indeed, it seems that people prefer to use basic level categories as they provide some kind of compromise between informativeness and efficiency. Moreover, objects belonging to this intermediate level often appear to share a common shape (in contradistinction to objects at a superordinate level) which facilitates categorization and object recognition. For example, members of the category car usually have a similar shape which members of the category vehicle do not (such as bicycles, cars, carts, and sledges). In conclusion, then, it has been assumed that much of our knowledge is organized at the basic level. However, as noted earlier, most of the experiments have been carried out with subjects from Western, urban backgrounds. Do we have any evidence that basic-level categorization is a universal phenomenon and, at least to some extent, cross-culturally invariant? Anthropological investigations suggest that this indeed is the case. Actually Rosch et al.'s early work was inspired by the anthropologist Brent Berlin's research during the 1970s. Berlin and his associates studied folk classification of plants and animals in detail, mostly among speakers of Tzeltal living in the Chiapas region of Mexico. Their research revealed that for Tzeltal speakers categorization at a "middle" or genus level was psychologically basic in, for example, the following respects: (i) objects belonging to that level are more easily remembered; (ii) they are more readily named by people; (iii) things are primarily perceived at this level, as a single "gestalt", while identification at a lower level presupposes finer discrimination. Additional studies of Tzeltal language acquisition showed that (iv) children learn concepts at that level earlier.[62] Hence there seems to exist a level of classification for at least Tzeltal speakers which resembles the basic level proposed by Rosch et al. We shall return to the question as to whether category formation may be cross-culturally stable, but let us first take a look at another category of categories.

62 See Lakoff (1987), pp. 33–34.

63 See, for instance, Barsalou (1985).

64 Ibid., p. 631.

65 Barsalou (1985), p. 646. This of course does not mean that Americans construct accurate points of view for Chinese citizens. Rather, such studies are intended to demonstrate that people are capable of restructuring their category knowledge easily and rapidly, depending on the suggested context.

66 Ibid.

Goal-derived Categories and Ideals

In addition to the taxonomic categories studied by Rosch et al., another, to some extent quite different, types of category with more pragmatic or normative implications has been focused upon in relatively recent investigations. It has been claimed that people frequently employ and construct so-called goal-derived categories, where typicality, or a graded structure, is related to the value (or efficiency) for fulfilling a certain goal.[63] Items in these categories, such as *things to take from one's home during a fire*, or *foods to eat on a diet*, are more or less typical (or central for category membership) depending on their value for accomplishing the goal or ideal in question (in these cases, for example, *money* for the ideal *minimizing loss*, and *celery* for the ideal *minimal calories*). However, as Lawrence Barsalou has remarked, "[m]ost categories probably have more than one ideal. For example, *possible restaurants to eat at* may have the ideals of *lowest possible cost*, *highest possible quality*, and *closest possible proximity*. The most important ideal(s) on a given occasion may depend on the goal a person is pursuing. If the goal is to have a memorable experience, then *high quality* may be most important. But if the goal is to have a quick meal, then *high quality* may succumb to *close proximity* and *low cost*."[64] As regards *foods to eat on a diet*, people may consider multiple ideals, apart from *minimal calories*, such as *maximal nutrition* and *maximal taste* which serve the goals *staying healthy* and *enjoying food*.

As Barsalou has argued and tried to demonstrate empirically, the formation of categories is a dynamic and flexible phenomenon. While ideals may determine typicality in one context, frequency of instantiation or perceptual similarity may be crucial in others. Moreover, best examples of the category *animals* are probably different from a forest-ranger's point of view than from a petshop-owner's standpoint. American undergraduates, when asked to rate the typicality of exemplars belonging to the category *bird*, mention frequently *robin* and *eagle*, though they regard *swan* and *peacock* as more typical from a Chinese citizen's point of view.[65] According to Barsalou,

> "...people have a highly creative ability to construct concepts, where concept refers to the information that represents a category (e.g. a prototype).[66] [...] In conclusion, it appears that the human conceptual ability is extremely dynamic...[P]eople incorporate various kinds of information into concepts..., such that different kinds of information determine typicality in different categories. Moreover people construct different concepts for the same category in different contexts,

> tailoring concepts to represent the demands of current situations...Not only do people represent well-established categories in a dynamic and context-dependent manner, they also construct new concepts for new categories that serve new goals...[T]hese observations suggest that a fundamental characteristic of the human cognitive system is its ability to construct context-dependent representations in working memory from a large knowledge base in long-term memory to meet the constraints of specific situations."[67]

This remark leads us to another feature of goal-derived categories worth mentioning, namely the fact that they are not necessarily established from people's previous experiences with certain exemplars.[68] Common taxonomic categories are acquired after encountering several instances of the category in question, after which relevant characteristics (or prototypical examples) are extracted and integrated into category knowledge. This kind of exemplar learning seems, however, to be less important for goal-derived categories. For example, the category *things to pack in a suitcase* is not constituted by having encountered particular shirts, toothbrushes, socks, and so on. Instead, the establishment of such a category is usually the result of private preferences, characteristics, goals, and how to optimize a certain plan (such as planning to go on a trip). Whether you intend to go to Australia or Greenland will influence category formation, as well as the length of time you will spend there, and your bodily strength or the means of transportation (in the latter case you might consider the ideal weight of your suitcase's content depending on, e.g. if you are old and weak, or if you are going to travel by aeroplane). Thus goal-derived categories are, at least to some extent, less concerned with how things are (or have been), but rather how they should be, i.e. reasoning about these things' ideal (or goal-efficient) properties plays a significant role.

An important ingredient in goal-derived categories may, as suggested by Barsalou, be called *conceptual combination*.[69] Quite frequently people construct new concepts by combining pre-existing ones in new ways. Such constructive processes are to a lesser extent passive and automatic, than the acquisition of taxonomic categories may be, but rather demand relatively active efforts on the part of the categorizer. In our example above it is obviously necessary to combine concepts for *things*, *pack*, and

67 Ibid., p. 648.
68 See Barsalou (1991), pp. 3–6.
69 For a detailed account of conceptual combination, see ibid., pp. 4–6; Barsalou (1992), pp. 168–170.

suitcase in order to establish the category in question. It seems quite clear, I believe, that conceptual combination is one of the most important elements in many kinds of creative—and artistic—activities. Mythological entities, such as centaurs or satyrs, may once have come into existence by manipulating knowledge about *animals* and *man*, and this is also frequently the case with regard to characters occurring in cartoons (such as Donald Duck), objects in surrealist art (such as Salvador Dali's melting clocks), and so on. Nowadays these entities are well-established as belonging to relatively common categories, but the unusual combination of existing categories is by no means an extinct phenomenon in artistic, and of course numerous further, contexts. As I will argue later on, Barsalou's account of goal-derived categories and conceptual combination may contribute to achieving a deeper understanding of the nature of mimetic representations of ideal types, such as outlined in Chapter 2.

Are There Constraints on Category Formation?

Despite the flexibility of category formation, not only intersubjectively but also intrasubjectively (the coherence of the same individual over time is not always, as Rosch remarks, quite perfect[70]), and the influence of context effects, categories are probably not established randomly in all cases and without relatively stable constraints. It may be admitted that (at least) goal-centred categories to some extent vary idiosyncratically and depend on particular and context-related human goals or needs (though, as we shall see, there may be constraints leading to some kind of intersubjective stability). Yet, there is still a remarkable number of psychological proposals which stress the constraining role of property clusters in the environment for establishing certain categories. It is of course true, in a somewhat trivial sense, "that there is no single objective reality to the world, because organisms with different bodies and different sensory systems will perceive the attributes of objects differently...", thus "[o]ne animal may perceive flowers in shades of gray, another in terms of the spectrum visible to humans, and a third in terms of colors beyond the human visible spectrum."[71] Although it is obvious that the world in principle may be structured in an infinite number of different ways, several psychologists have nevertheless stressed the primacy of structures inherent in the environment for category formation. While acknowledging possible higher-level influences on classification, such as

70 Rosch (1994), p. 520.
71 Malt (1995), pp. 98–99.

linguistic, cultural, or cognitive presuppositions, they still assume that evolutionary processes, in combination with environmental features, have had a major constraining impact on how categories are formed.[72] The non-arbitrariness and relative stability of certain categories seems also to have been confirmed by cross-cultural studies from anthropological research. Psychological findings are, to a considerable extent, based on studies with subjects from the Western hemisphere (for instance, American college students with an urban background), while a cross-cultural approach is usually disregarded.

Anthropologists, on the other hand, have studied classification in a variety of cultures and language communities. Interestingly, the categorization of household objects, kinship, colour, and especially plants and animals among different cultures is not always as diverse as one might expect. Just to mention one example from anthropological research, "both urban Americans and traditional Jívaroans from Peru perceive similar patterns of resemblance among a set of South American birds (familiar to the Jívaroans and unfamiliar to the Americans) and rely on similar features to sort the birds into groups."[73] Barbara Malt, from whom the last two quotations stem, maintains in a detailed discussion and comparison of psychological and anthropological investigations into classification that at least some biological categories are recognized as such with remarkable cross-cultural regularity. There is no doubt, she admits, that utilitarian, mythical, or symbolic considerations and varying degrees of expertise or knowledge may influence the formation of categories (i.e. top-down, constructive processes play an important role in this respect). However, numerous findings suggest that "some categories are salient to all observers", and that "[s]trong clusters of features exist in the world, and the human categorizer need only apply basic perceptual processes to extract these feature clusters and form categories".[74] According to Malt, it is also noteworthy that scientific classification systems of botany or zoology which attempt to "reflect phylogenetic (evolutionary) relatedness and/or current similarities among the objects being classified"[75], sometimes confirmed by DNA analysis, show substantial correspondence to folk classification of plants and animals, even in non-Western cultures. Thus one might "strongly...[argue] against the

72 See ibid. for a review and discussion of different psychological proposals stressing the role of either environmental features or of constructive processes on the part of the human categorizer in category formation.

73 Ibid., p. 129.

74 Ibid.

75 Ibid., p. 97.

possibility that folk biological categories are constructed in an unconstrained fashion from unstructured input. Instead, the nature and contents of the categories seem to be heavily influenced by the presence of structure in the input."[76] There are of course other sorts of categories besides biological ones, for example those classifying artifacts, emotions, kinship, profession, personality type, social class, and so on. Unfortunately, as Malt states, the existing research concerning these categories is not comprehensive and systematic enough to establish any decision as to whether top-down processes or actual property distributions play the most influential role. It might be assumed that not all categories are formed in identical or similar ways:

> "Some of the categories (e.g. mother) may be heavily perceptually given (e.g. by virtue of the salience of birth and nursing), while others (e.g. uncle) may be much less perceptually given and dependent in part on culture-specific social construction. Categories such as weed, pet, and enemy may not be perceptually obvious at all, but yet might be universally constructed (or nearly so) due to universal tendencies in the way that humans interact with their world. Still other categories (e.g. queen, king, martyr) may exist only in some cultures depending on the structure of the society."[77]

Thus Malt draws the following conclusion from the evidence discussed:

> "Some groupings may stand out given only the world and the human perceptual system, others may stand out given those plus universal human interactions with the world, and still others may stand out only given a particular system of knowledge and/or particular goals, needs, and interests...[O]bjective facts of nature...appears to dominate in cases when the world as filtered through the human perceptual system presents itself in discrete chunks. Such cases include biological categories at a middle level of abstraction. The...human intellect in its role as classifier...becomes more important when nature and perception do not by themselves deliver the world prepackaged into obvious chunks. Such cases include biological categories at higher, and to some extent lower, levels of abstraction, and potentially many common categories in other domains."[78]

76 Ibid., p. 129.
77 Ibid., p. 140.
78 Ibid., p. 141.

Still, as Barbara Malt claims, anthropological and other kinds of research, taken as a whole, indicate that folk classification systems have a psychologically salient level which, to a remarkable extent, remains invariant across different cultures. On the other hand, there may be some variation due to expertise: people with special training, knowledge or familiarity are more likely to treat a more specific level of a domain as basic than non-experts.[79] Furthermore, as Berlin suggests, there may occur a cultural underutilization of general human capacities for classification (e.g. the capacity for gestalt perception). Hence certain superordinates may, in some cultural contexts, be treated as basic (for example, in urban cultures *tree* instead of *oak* will be regarded as a basic category).[80]

Despite the fact that basicness in categorization has to some extent to do with higher-level cognitive processes, the findings referred to above suggest nevertheless that there are constraints on how much the most salient and basic levels may shift. Apart from a possible "substantial contribution of a structured environment"[81], these constraints may possibly be explained by the fact that human beings share some general capacities, such as ease of perception, motor movement, memory, learning, and so on.[82]

Now, what about goal-derived categories? Many of these are probably ad hoc, that is, derived in order to achieve novel goals in certain contexts. For example, the category *activities to do on a vacation in Japan with one's grandmother* would usually not come into existence before the occasion in question.[83] There are numerous ad hoc categories (such as *things to pack in a small suitcase*, or *ways to spend the weekend*) which arise idiosyncratically, depending on the individual's personal preferences, goals, and available means of realizing them. Thus, we might expect such categories, due to the fact that they are not acquired through exemplar learning or are based upon similarly perceived properties of their members (as in the case of taxonomic categories discussed above), to vary considerably with regard to different individuals' typicality ratings. Still, some goal-derived categories seem to be relatively stable when it comes to between-subject as well as to within-subject agreement. As experimental findings obtained by Barsalou and his colleagues have revealed, typicality ratings

79 Malt (1995), pp. 121–128; Lakoff (1987), p. 37.
80 Lakoff (1987), p. 37–38.
81 Malt (1995), p. 128.
82 Lakoff (1987), pp. 37–38.
83 Cf. Barsalou (1991), p. 1.

of members of goal-derived categories may sometimes be roughly as stable as those of common taxonomic categories. In several cases, including rather bizarre ones such as *ways to escape being killed by the Mafia*, goal-related categories have shown to exhibit prototype structures quite similar to those in common taxonomic ones.[84] Although people have never encountered or memorized members of such categories before, thus apparently lacking any basis for judging some of them as more typical than others, it is not the case that they are regarded as equivalent. In the last example mentioned, it may be admitted that *moving to South America* would be more efficient or even optimal for achieving the relevant goal than *moving to Copenhagen*, if one lives in Stockholm. However, in both cases one is basically assuming that *maximizing the geographic distance between oneself and the Mafia* should optimize the chance of goal success. Such a category member would thus have something like prototypical status within the category in question, with a relatively high degree of intersubjective agreement. According to Barsalou, this stability may at least partly be accounted for by taking underlying causal principles into consideration:

> "...[T]he causal principles that bear on goal achievement may often provide strong and salient constraints on the properties that can represent goal-derived categories. For example, causal principles relevant to human interactions specify that geographic distance is a relevant property for *ways to escape being killed by the Mafia*. Even though a given goal-derived category may only occur to a few people on a few occasions, the causal principles that constrain it may be obvious and well known, such that different people construct similar representations."[85]

Categories and Concepts

In this context it should be pointed out that the nature of the relationship between categorization and mental representations has not been considered yet. How exactly are categories actually stored in memory? Among cognitive psychologists it is usual to regard categories as being represented by concepts. The term *concept* may be defined—as, for example, in *The Blackwell Dictionary of Cognitive Psychology*—as follows:

84 Ibid., pp. 8–14.
85 Ibid., pp. 13–14.

> "A concept is a mental representation or idea that includes a *description of important properties of a class or term*. Concepts refer to categories, a category being a partitioning to which a certain assertion or assertions apply. Whenever a category includes two or more members, then classification involves treating multiple entities as in some way equivalent. An alternative contrast between categories and concepts, which we specifically wish to disavow, suggests that categories are classes of entities that are objectively in the real world and that concepts are mental descriptions of them. We believe that this distinction is misleading because concepts need not have real-world counterparts (e.g. unicorns), because the set of potential real-world categories is indefinitely large, and because people may impose rather than discover structure in the world. Concepts need some kind of anchoring, but we do not think it must take the form of apprehending pre-existing, organism-independent, real-world categories. Our definition of concepts is necessarily vague because the question of just what constitute 'important properties' is a matter of considerable debate."[86]

As we have seen already, there are several suggestions as to which properties should count as significant for the formation of categories. It seems also reasonable to assume that concepts do not always represent classes of real or existing entities. There is still the question, though, of how the term *description* should be understood in this context. Taken in a straightforward way, this term seems to imply some kind of propositionalist view on mental representations (at least with regard to concepts). However, there are findings which appear to make this view rather questionable. For example, in a series of experiments (on superordinates) carried out by Rosch, subjects had to judge the typicality of depictions as well as of nouns. Interestingly, the reaction time for making a typicality judgement decreased when the subjects were shown pictorial rather than verbal material. These results were interpreted as indicating that pictures have an advantage in categorization tasks and are closer to the underlying mental representations.[87] It should be mentioned, though, that Rosch herself in a later phase of her research stressed the point that a theory of categorization does not necessarily have to make any commitments to a propositionalist or pictorialist view on representation, at least not with regard to the representation of prototypes. First of all, she

86 Eysenk (1990), p. 77 (my italics).
87 Rosch (1975).
88 Rosch (1978), p. 40.
89 See e.g. Barsalou (1992), pp. 153–155.

states that "[t]o speak of a prototype at all is simply a convenient grammatical fiction; what is really referred to are judgments of degree of prototypicality...For natural-language categories, to speak of a single entity that is the prototype is either a gross misunderstanding of the empirical data or a covert theory of mental representation." Second, "[p]rototypes do not constitute any particular processing model for categories. For example, in pattern recognition...a prototype can be described as well by feature lists or structural descriptions as by templates. And many different types of matching operations can be conceived for matching to a prototype given any of these three modes of representation of the prototype." Third, "[p]rototypes do not constitute a theory of representation of categories...[D]ifferent theories of semantic memory can contain the notion of prototypes in different fashions...Prototypes can be represented either by propositional or image systems..."[88]

Generally speaking, then, concepts may be regarded as mental representations, whether propositional or pictorial, which provide us with information that enables us to distinguish members of a category from non-members. In addition to this quite widespread view, we may also, as suggested by Barsalou, think of concepts as having more pragmatic implications. Categorization by means of stored concepts is not an end in itself, but highly relevant for survival and for achieving particular tasks or goals. Thus people may conceive of categories in relation to certain goals, a process termed *conceptualization* by Barsalou. This means that people not only determine an object's category membership, but also draw inferences regarding its origins and general behaviour (dispositions, effects), make predictions concerning its future behaviour, and decide how to interact with it.[89] For example, a flea is not only identified as belonging to a certain category, but we almost immediately make assumptions concerning its origin, that there may be other fleas, that they probably will reproduce, and how they function in general. If fleas are recognized in our apartment, we may ask ourselves how they got inside (for instance, on a pet). Furthermore, we might conclude that the apartment is an ideal environment for reproduction, and that our family members or pets might suffer. Consequently, we might decide to take steps to see to their extermination. In a similar way people categorize and (quite spontaneously) estimate the goal-related value of all kinds of objects in their daily environment. Just recognizing kinds of objects is one thing; deciding (more or less rapidly) how to react when encountering them is another, which is equally important. Concepts, Barsalou claims, serve both of these cognitive activities.

Elsewhere Barsalou has suggested a related distinction between *primary* and *secondary* categorizations.[90] Whereas the former is considered to be someone's initial categorization (for example, an object may be categorized as a *chair*), a secondary categorization may occur afterwards focusing, for example, on an entity's relevance for current goals (for example, a chair may be categorized as *something to stand on to change a light bulb*). According to Barsalou (and several studies he refers to), basic-level and subordinate categories are most frequently identified in primary categorizations, due to diagnostic/perceptual clues which are common to the category members in question. Such clues may vary depending on the sense modalities involved (such as auditory or tactile ones), but when it comes to vision it seems that the overall perceived shape in particular functions as such a clue to determining category membership. In most cases this level of categorization is concerned with basic-level categories, though also sometimes with subordinates. Superordinates do usually not have any specific shape in common—as already mentioned in our discussion of Rosch's work—and shape is mostly not a distinctive feature of subordinates (different subordinate categories—e.g. *sports cars*, *taxi-cabs*, *convertibles*—share the same shape). However, there are cases where subordinates provide the primary categorization, namely when a category member markedly deviates from other members. For example, as Barsalou points out, a chicken is initially categorized as a *chicken*, not as a *bird*; it does not—to a sufficient extent—have the common shape which constitutes the latter category.[91] As already indicated, secondary categorizations are often concerned with goal-derived categories, though the categorization of superordinates may also arise at a secondary level. In certain contexts, Barsalou claims, basic-level categories and subordinates become integrated into superordinate categories. Thus it may sometimes—or even frequently—be reasonable to conceive of a chair, a screwdriver, an apple, and a shirt as instances of the categories *furniture*, *tools*, *fruit*, and *clothing* respectively (for example, in a large supermarket where one intends to purchase these things in question, but does not know their location). In any case, whether goal-derived categories or superordinates are arrived at, it seems that primary categorizations precede secondary ones: a chair, for example, is first recognized or conceived of as *a chair*, and only at a secondary stage as *something that can be stood on to change a light bulb* or as a piece of *furniture*.

90 Barsalou (1991), pp. 46–50.
91 Ibid., p. 47.

Psychological theorizing concerning categories has by no means come to a standstill, and no stable agreement has been achieved as to which of the theories mentioned earlier should be regarded as most convincing. There are yet other suggestions as to which instance(s) of a category may serve as a standard to which other category members are compared (for example, instances first learned during childhood; salient instances being emotionally charged, concrete, meaningful, or recurrent; and most recently encountered instances).[92] On the other hand, it has also been admitted that the competing theories do not necessarily have to be mutually exclusive. Indeed, why should we expect the category *categories* to be different (psychologically speaking) from other categories? Could indeed any attempt to find essential conditions for the acquirement and nature of categories (or concepts) be fruitful? Perhaps it would be more reasonable to conceive of the category *categories* as having some members which are more (proto)typical than others. Thus there are categories which arise due to their frequency in daily experience, categories which are based on prototypical examples, goal-derived categories, and so on. These categories could then possibly be regarded as constituting something like a kernel within *categories* from which others deviate, such as idiosyncratic ad hoc categories or categories based on instances first learned during childhood.

Be this as it may, there is nowadays a strong conviction within cognitive psychology that the traditional view of categorization is untenable. Furthermore, a number of psychologists have proposed that perception and cognitive activities are hierarchically structured. New information is compared with and assimilated into broader schemata or categories which are necessary for object recognition, explanations, predictions, and communicative activities. Not only objects, but also events may be regarded as belonging to more general categories of action. For example, events such as *buying a ticket*, or *wearing a dark dress* may belong to categories such as going to the *cinema* or *going to a funeral* (which may be further categorized as instances of *an entertainment event*, or *an occasion*

92 For these and other proposals, see Rosch (1994), p. 517.

93 See Mandler (1984 b). Within cognitive psychology, a number of terms have been employed to refer to mental representations of (more or less) complex phenomena. Apart from *schemata* and *scripts*, psychologists have also made use of terms such as *mental models*, *causal mental models* (which imply explanations and justifications), *frames*, *situation models*, *episodic models*, and so forth. Several of these concepts seem to have the same core set of attributes, though perhaps a basic distinction can be made between (i) representations of pre-existing generic knowledge, and (ii) specific representations which are constructed at the time of use. For a discussion and comparison of the meaning of these terms, see Brewer (1987).

for grief). Sequences of such stereotypical and categorizable actions are commonly called *scripts* in cognitive psychology.[93] In the following section we will discuss the impact of categorization research on recent studies concerned with visual perception.

4.4 Visual Perception and Prototype Matching

BEFORE WE PROCEED TO MORE recent investigations carried out by experimental aestheticians, I shall review some findings and proposals made within cognitive psychology concerning pattern or object recognition, and visual perception in general. A basic problem in vision research has to do with our ability to identify objects or figures, or to recognize them as something previously experienced. We are able to recognize people or everyday objects despite the fact that we view them from different angles, or that they partly are occluded by other objects. Object recognition occurs swiftly, usually without any conscious effort, in an environment where shapes constantly change, partly due to our own movements.

Atomistic vs. Holistic Theories

There are several proposals which attempt to account for the ability to understand and classify visual patterns. First, we may differentiate between *holistic* and *atomistic* views on visual perception. Gestalt theory, already described in section 3.4, is a paradigmatic example of the former position. According to this theory, figures are perceived as whole entities with properties which are not determinable from (or reducible to) their components.[94] At the other extreme lie atomistic theories which claim that perception of whole figures is based on the concatenation of simpler perceptual elements. The act of visually perceiving something consists of several stages whereby, for example, (i) an object is segmented into basic subobjects, such as simpler features or geometric forms, (ii) a categorization of these subobjects takes place, and (iii) the object is recognized as a pattern composed of these segments (see e.g. figure 7).[95] In the middle ground between these positions are theories which stress the interaction between bottom-up and top-down processes, i.e. between

94 For an attempt to explain certain *Gestalt* effects by means of modern approaches within cognitive psychology, see Palmer (1992).

95 Anderson (1995), pp. 51–55, referring to Marr (1982), Marr & Nishihara (1978), Biedermann (1987). The illustration is taken from Anderson (1995), p. 52, adapted from Marr & Nishihara (1978).

96 For a much debated computational account of the processing of a 2-D image, with a 2.5-D sketch as an intermediate stage, into a 3-D model, see Marr (1982). For an outline and criticism of this theory, see e.g. Colman (1994), pp. 178–201.

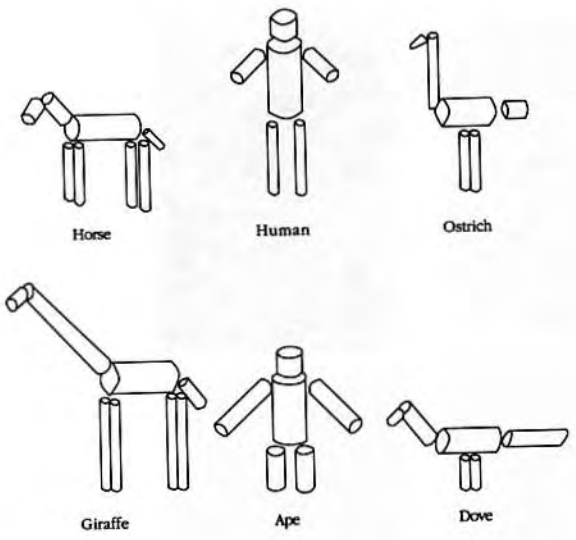


Figure 7. Segmentation of some familiar objects into basic cylindrical shapes.

plain feature analysis on the one hand, and object recognition by means of cognitive processes on the other. Now, visual perception begins when light rays enter the eye passing through the lens to the retina. The retina is a highly specialized neural tissue consisting of photoreceptor cells (rods and cones) which convert a two-dimensional image into electrical signals. These signals are then, at successive stages, processed by (different parts of) the brain, most notably by the visual cortex (where they are transformed into a three-dimensional model).[96] Something like a feature analysis takes place during image processing: as experiments have shown, there are visual cortical cells which only respond to horizontal forms, while others respond to vertical ones. Still others are sensitive to corners, light/dark edges, bars, etc.[97] Thus feature analysis seems to be a necessary stage before a higher-level pattern emerges. Moreover, we have empirical evidence that there are at least three distinct pathways in the human visual system for processing visual information. First, there is the magnocellular pathway, which is concerned with movement, spatial information, and stereoscopic depth, second, the parvocellular pathway, which handles static-form perception, and third, the blob pathway, which

97 Cf., for example, Solso (1995), p. 106; Gilman (1994), pp. 89–91. The first evidence for this relatively simple feature analysis was provided by the Nobel Prize-winning work of Hubel and Wiesel (1959), (1962).

Figure 8. Eye movements and fixations of subjects looking at pictures of a young girl and a gorilla.

is dedicated to colour perception.[98] In addition to these basic levels of visual perception, feature analysis may also occur at a higher level, namely with regard to the "meaningful" constituents of visual patterns. A number of experiments on eye movements and picture perception suggest that certain features in a visual pattern are usually given more attention than others, that is, more time is spent analyzing these features by a beholder. The Russian psychologist Alfred Yarbus, one of the pioneers in this field of research, studied the saccadic movements of beholders' eyes when encountering different kinds of visual stimuli, such as photographs or paintings.[99] Eye movements do not occur arbitrarily, but may rather be described as a systematic scanning process where the beholder fixes his attention on one feature at a time for a very brief period (about 300 msec.), and then moves on to focus on another feature. According to Yarbus, the more information a feature carries, the longer the eye fixates it. Figure 8 shows two pictures and the accompanying records of eye movements. Interestingly, much attention is given to the mouth, the

98 See Livingstone (1988), who also attempts to show how this segregation of functions in the visual system has been applied to the creation of works of art.

99 Yarbus (1967). Cf. also Solso (1994), pp. 134–138; Solso (1995), pp. 106–108.

100 Illustrations from Yarbus (1967), p. 180; p. 186.

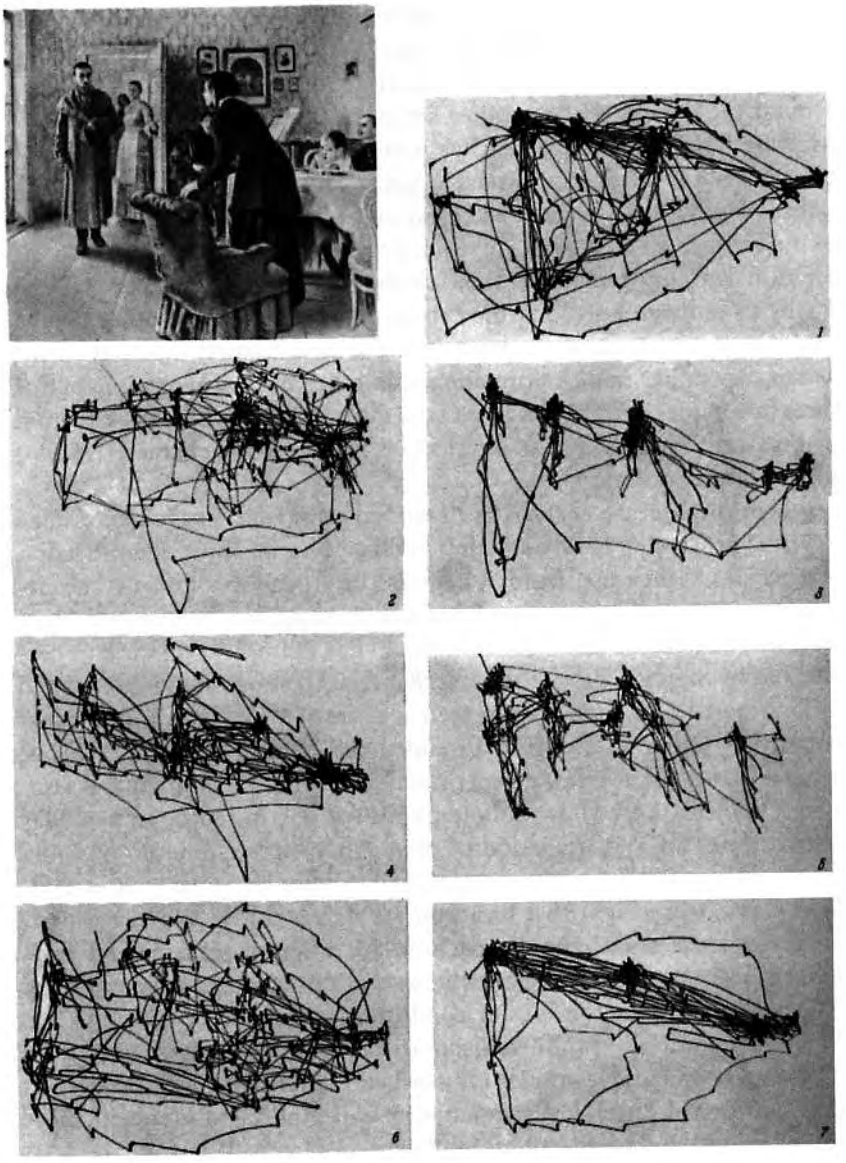


Figure 9. Records of subjects examining a picture by Ilya Repin.

eyes, and the general shape of the girl's face, and the records alone give us a rough hint of the original patterns' shape. In the gorilla's case, the subject has focused on the face (especially the mouth) as well as the area around the armpit.[100] In another series of experiments, Yarbus used a painting (by the Russian artist Ilya Repin) representing a group of people and, at an initial stage, asked subjects to look at the picture at will. Subsequently, the subjects had to estimate (i) the economic conditions of the people, (ii) their ages, (iii) their previous activities before the "visitor's" arrival, (iv) remember their clothing, (v) their locations, (vi) and finally to estimate how long the "visitor" had not seen the other people (the "family"?). As figure 9 shows, the eye (and feature) fixations varied widely depending on the information required. Thus the perception of features in complex patterns may also be influenced by a beholder's intention or purpose, not only by the physical or "meaningful" characteristics of the pattern in question.[101]

Obviously, feature analysis as described here is an unavoidable stage in visual processing before a higher-level pattern or object identification can occur. On the other hand, it may also be argued that under some circumstances the identification of features presupposes the recognition of a certain context, or an object as a whole. For example, experiments carried out by Stephen Palmer suggest that facial features are identified and differentiated more easily when seen as parts of a face than without that context.[102] Other studies have extended this context effect to environmental scenes. In a series of experiments by Irving Biederman and associates, subjects were shown photographs (of, for instance, an everyday street scene) for a short period of time. Afterwards a pointer appeared on the screen, and the subjects were asked to name the object (e.g. a mailbox) previously seen at that location (see figure 10). In another experiment the same scene, though cut into six different sections and rearranged, were shown to subjects who also in this case had to identify the objects seen. Under the former condition it was much easier, and less time was required, for the subjects to perform the task accurately.[103] These and comparable studies on word and letter identification suggest that contextual clues and the subject's expectation to a considerable extent influence the perception of objects.

101 Illustration from ibid., p. 174. This painting from 1884, entitled "They Did Not Expect Him", is supposed to show a prisoner or exile who unexpectedly returns home.

102 Palmer (1975). Cf. also Solso (1994), p. 112; Solso (1995), p. 99.

103 Illustration from Biederman, Glas & Stacy (1973)

104 Solso (1994), pp. 116–117. Cf. also Oatley, Sullivan, & Hogg (1988) for a theory of visual perception, influenced by Marr (1982), stressing the importance of schemata and prototypes for object recognition (or, to be more exact, for the interpretation of 2-D images as 3-D objects).

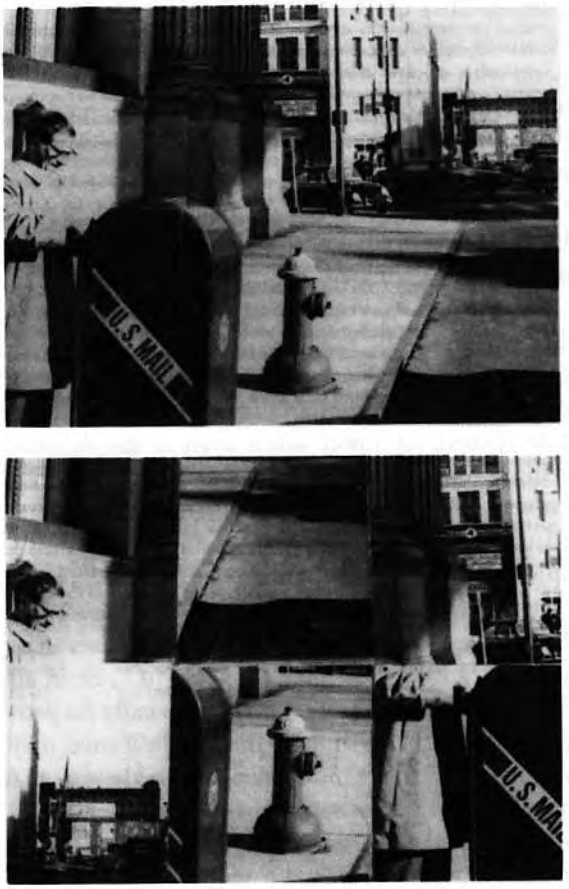


Figure 10. Scenes used in a study by Biederman et al.: (a) a coherent scene; (b) a jumbled scene.

The importance of prior expectations on perception and memory has also been shown by another set of experiments. In this case subjects were led into a college office where they stayed for 35 seconds. Afterwards they were asked to list all objects seen in this room. The interior of the room resembled to a certain degree a "typical" office, though it contained a bulletin board and a skull, but no books whatsoever. The non-typical objects were only recalled by a few subjects, and 30% of them falsely remembered they had seen books. Most of the subjects recalled the typical objects correctly. This experiment has been taken as indicating the influence of prior expectations—or, put in another way, mental schemata—on how we perceive objects and environments.[104]

Object Recognition: Templates or Prototypes?

Indeed, our ability to recognize anything seems to presuppose something like a mental representation with which sensory stimuli can be compared. We obviously need some kind of information stored in long-term memory that, when matched with external objects, leads to their recognition. One theory that might be put forward in order to account for object recognition is called *template matching*. A template may be defined as a mental representation, created by our past experience, which to a considerable extent resembles, or corresponds to, the neural pattern into which visual information has been transformed.[105] A strict version of this theory demands that a template has to have the exact configuration of the corresponding sensory information. A serious flaw with such a theory of template matching is that, if a strict 1:1 correspondence between template and external object is presupposed, an object which even to the slightest degree deviates from the inner representation would not be recognizable. Hence we should need a separate template for each visual pattern that we might encounter. However, this assumption seems to be highly implausible. For example, we are able to identify letters and words despite the fact that they may be instantiated in countless—and previously unseen—variations, i.e. for which no stored templates exist (e.g. the letter "A" may be instantiated as "a", "**A**", "A", "*A*", or in all kinds of handwriting). To take another example, we have usually no problem with recognizing familiar faces, although their appearance may change due to ageing, various facial expressions, different make-up, and so on—and even caricatures of real persons can be highly recognizable. If a separate template for each visual pattern were needed, we would have to store innumerable templates, which seems to be neurologically impossible (or, as the psychologist Robert Solso puts it, "our cerebrum would be so bulky we would need a wheelbarrow to cart it").[106] Moreover, the process of gaining access to a matching template would probably be enormously time-consuming, but object recognition usually occurs with remarkable ease and rapidity.

Within philosophy it is common to distinguish between *types* and *tokens*. A token may be defined as a particular specimen of any general class, i.e. a type. In a similar way the occurrence of letters (such as the A's above) may be regarded as particular manifestations or instantiations—tokens—of a letter *qua* general type (such as the letter-type "A"). Now,

105 Solso (1995), p. 99. For a more detailed discussion of template theories, see Palmer (1978).
106 Solso (1995), p. 101.

an alternative to template-matching theories is based on the assumption that we are able to store mental representations which have something like a type-character. These representations are thus some kind of abstraction stored in long-term memory with which external objects are compared. While templates, if defined as rigidly as above, necessitate exact matches, types—or *prototypes*—only demand an approximation to sensory patterns: there has to be some kind of (relevant) similarity between them. A prototype theory of object recognition has the advantage that it may explain our ability to recognize unfamiliar objects. Furthermore, the number of prototypical representations would be limited, hence access to them would be neurologically more economic and memory search-processes less time-demanding. Numerous experimental studies indicate in fact that something like prototypes are at work in visual perception and object recognition.

In some of these studies subjects encountered different geometric or other kinds of artificial patterns. These experiments were usually constructed as follows: as a point of departure certain visual configurations (such as a triangle or a letter consisting of dots) served as prototypes from which several permutations were created. Subjects were shown these distorted versions, though not the prototypes, and asked to categorize them. Interestingly, the permutations of each prototype were frequently (and accurately) classified as belonging to a common category. In a subsequent experiment the subjects had to classify stimuli which, in addition to those used earlier, also included the prototypical examples and new distortions. While the new distortions were less frequently classified in a "correct" way, the prototypes—which the subjects had not encountered before—were categorized accurately. These studies have been interpreted as indicating that prototypes are abstracted from stored information based on previous encounters with visual stimuli.[107]

Schematic outline drawings of faces were employed in another set of experiments. These faces, having otherwise undistinguished characteristics, differed in terms of eye placement, nose-length, forehead-height, and nose-placement. The subjects' task was, for example, to classify the faces into one or the other of two rows of additional faces. The conclusion reached was that the subjects formed some kind of abstract image or prototype from each row, and that the test patterns were classified according to their similarity to the two abstracted prototypes.[108]

107 Ibid., pp. 110–111.
108 Ibid., pp. 112–113.

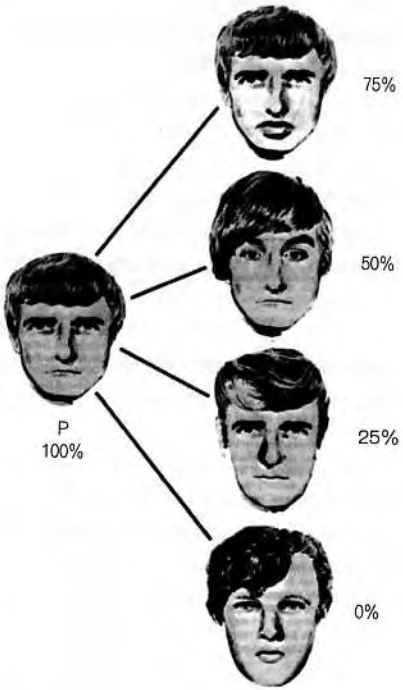


Figure 11. Prototype face and derived faces used in a study by Solso & McCarthy.

In an experiment by Robert Solso and Judith McCarthy more realistic pictures of faces were used, created with *Identikit*, a face identification device used in police work.[109] Some characteristics of the faces composed using this device, such as hair, eyes, nose plus chin, and mouth were varied systematically. At first three faces were composed and given status as prototypes, from which four levels of modified exemplars were derived. These exemplars embodied different degrees of similarity to the originals, that is, three, two, or one out of four features were common to the prototypes (see figure 11).[110] Subjects were shown the derived faces for a few seconds. Then they participated in a recognition test which, in addition to the previously shown faces, also included new ones and a prototype face. Afterwards the subjects had to decide which of the faces they had seen before and to estimate (on a five-point scale) their confidence in that decision. Most of the subjects not only—falsely—identified the prototype faces as previously seen, but also gave those faces

109 Solso & McCarthy (1981).

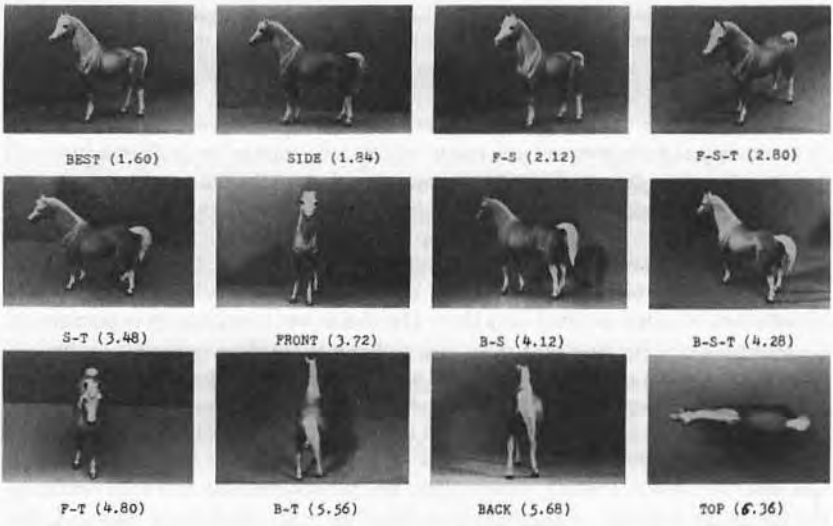


Figure 12. Examples from a picture set showing 12 perspective views of a horse together with perspective descriptions and mean goodness rating.

the highest confidence rating. Solso & McCarthy called this phenomenon "pseudo-memory", i.e. cases where "visual memories for complex stimuli formed from a synthesis of previous experiences...serve as a more salient representation of reality than do representations formed on the basis of previously experienced visual stimuli."[111] According to Solso et al., the formation and storage of prototypes is actually an essential component of human long-term memory.

Prototypical representations may also include the most representational view of objects. A series of experiments carried out by Stephen Palmer, Eleanor Rosch, and Paul Chase support the assumption that there is a privileged or canonical perspective for recognizing and imagining objects.[112] Various common objects (such as a horse, a shoe, a car, a clock, and so on) were photographed from different angles and shown to subjects who had to rate the perspectives for typicality and familiarity (for an example, see figure 12).[113] In a subsequent stage of the experiments

110 Illustration from Solso (1995), p. 114.

111 Solso & McCarthy (1981), p. 502. According to Solso (1994, p. 251), "[s]ince the original experiment the results have been replicated using differently composed faces, with young children, with a six-week delay between the presentation of original faces and test faces, and with students from Stanford University, the University of Nevada, and Moscow State University (Russia), all with very similar results." For a similar experiment with comparable results, see also Young & Bruce (1991).

112 Palmer, Rosch & Chase (1981).

the subjects had to identify the previously shown objects as fast as possible. The results achieved showed that objects photographed from the most typical perspectives were identified most rapidly, and the less typical the perspectives, the greater were the reaction times. Thus it seems that canonical perspectives are more intimately related to human's internal conceptions about objects. There are several possible explanations for the different reaction times: (i) some perspectives provide more relevant information about the object, (ii) they reflect underlying mental representations in memory, abstracted from previous encounters with the same class of objects, and (iii) they are the most commonly experienced perspectives.[114] Be this as it may, it was concluded that "people's concepts of objects contain at least implicit aspects of perspective."[115]

There are at least two possible suggestions as to how prototypes employed in object or pattern recognition emerge.[116] First, according to the *central-tendency model*, prototypes are conceptualized as representing the mean or average of features possessed by a set of objects. Second, the *attribute-frequency model* suggests that a prototype incorporates the most frequently experienced features occurring in a series of objects. As Solso, supporting the latter view, puts it,

> "The features...are the building blocks of the prototype. Each time a person looks at a pattern, he or she records both the features in the pattern and the relationship between the features. However, according to the attribute-frequency model, upon the introduction of a prototype (which incorporates many of the previously perceived attributes), an individual believes he or she has previously seen the figure because the attributes have been stored in memory. Since the relationships between the features have been seen fewer times than the features..., knowledge about the relationships of features is less well stored in memory than is the knowledge about features."[117]

Moreover, as Barsalou's proposal reviewed earlier seems to entail, prototypical representations may also consist of or imply certain ideals. Most studies have focused on descriptive features constituting categories and corresponding mental representations, while conceivable normative

113 Illustration from ibid., p. 139.
114 See Solso (1995), p. 96.
115 Palmer, Rosch & Chase (1981), p. 151.
116 See Solso (1995), pp. 115–116.
117 Ibid., p. 116.

aspects have usually been neglected. This is of course regrettable considering the importance which ideals have for human behaviour and thinking. As we may recall, ideals are conceived of as characteristics which exemplars within a category should have in order to best serve a goal associated with the category in question.[118] Ideals are thus important when categorization (and recognition) of a stimulus occurs in the context of achieving goals. For numerous reasons (such as survival, reproduction, finding food, improving one's standard of living, maximizing pleasure, and so on), the employment of ideals seems to be central to cognitive and perceptual processes. The borderline between prototypical representations in a descriptive or in a normative sense is, however, probably not very clear-cut in all cases. We may note, by the way, that in Immanuel Kant's "Kritik der reinen Vernunft" (1781), where one of the most influential philosophical attempts to disseminate the conception of an "ideal" was made, at least three notions occur, namely something (i) "being paradigmatic or archetypal..., (ii) being perfect and altogether flawless..., and (iii) being unreal, imaginary, accessible in idea alone."[119] While the first use to some extent corresponds to prototypicality in a descriptive sense, the second use entails a normative component and could perhaps be interpreted as something being "as perfect as is requisite for the immediate purpose at hand."[120] This interpretation thus bears some kind of resemblance to Barsalou's conception.

As we shall see in the next chapter, the idea of mental representations of categories, either in a descriptive or in a normative sense, seems to have a considerable bearing on giving the MRT tradition outlined earlier some kind of empirical plausibility. We shall begin our examination of this assumption by taking a closer look at some recent studies within experimental aesthetics which seem to be of considerable interest in this respect.

118 Barsalou (1985), p. 630.

119 Rescher (1987), p. 115, referring to Kant's "Critique of Pure Reason", §§ A568–B506, A578–B606.

120 Ibid., p. 116. The other interpretation suggested is "something that is 'as perfect as we can realistically expect to find' ". Ibid.

5. THE AESTHETIC RELEVANCE OF TYPICALITY

5.1 Experimental Aesthetics and Prototypicality

INFLUENCED BY THE COGNITIVE approach in contemporary psychology, experimental aestheticians have increasingly shifted attention from stimulus properties to cognitive issues, such as object recognition, mental representations, and schema theory. The previous lack of interest within experimental aesthetics in the meaningfulness of artworks, and the preoccupation with rather artificial and abstract stimuli, is commonly regarded as a deficiency. Moreover, the predominance of rather isolated investigations, insufficient for establishing a coherent theory (apart from Berlyne's proposal), seems to have led to a growing demand for a broader theoretical framework.[1]

Accordingly, a series of experiments have been carried out which explicitly deal with preference judgements concerning the meaningfulness or subject-matter of pictorial material. Some of these studies indicate, not surprisingly, that "naive" beholders (without any significant acquaintance with art) have a strong interest in object recognition and identification, thus a bias for "realistic" material. Trained subjects, on the other hand, are to a larger extent interested in formal or abstract properties and visual effects distinctive to the medium.[2] Other studies (with untrained college students) indicate that degrees of realism in art and the subject-matter are a significant determinant of preference judgements (the more realistic a painting is, the more it will be preferred).[3] There are still further investigations concerned with the relationship between personality (such as so-called sensation seekers) and preferences for subject-matter or realism in

1 Cf. Crozier & Chapman (1984), p. 20.
2 Cupchik & Gebotys (1988); Freedman (1988).
3 Kettlewell, Lipscomb, Evans & Rosston (1990).

artworks (indicating that sensation seekers tend to prefer more ambiguous and expressive paintings).[4]

In this chapter, however, we shall be concerned with the implications of psychological research on categorization and object recognition as outlined earlier for aesthetics. More specifically, we may ask whether this research can deepen our understanding of some basic mechanisms underlying our interest in pictorial representations and, further, may shed some light on the MRT tradition. As I will argue, the recognition of general and ideal types in pictorial representations can reasonably be assumed to enhance hedonic experiences. Thus the representation of types seems to be aesthetically relevant. This does not mean that such a function should be conceived as category-specific in a strict sense, that is, as solely applicable to "clear-cut" works of art. Indeed, as repeatedly stressed in this study, demarcations of one category from another in essentialist terms are highly problematic and, consequently, the categories "art" and "pictorial representations" should also be regarded as criterially and functionally overlapping. Encounters with pictorial renderings of types seem frequently to give rise to hedonic effects, though not exclusively in relatively distinct aesthetic contexts. Still, many works of art are as a matter of fact pictures, and, as I believe, the rendering of types is quite often one of their most important functions. Thus typicality in pictorial representations may be considered as being aesthetically relevant.

Preference-for-Prototypicality

Now, within recent experimental aesthetics, a number of attempts have been made to investigate the relationship between preference judgements and prototypicality. According to Colin Martindale, Berlyne's emphasis on collative variables in relation to aesthetic preferences is misleading in several respects. Apart from the fact that his theory cannot account for numerous anomalies (see section 3.6), empirical evidence has shown, Martindale claims, that meaningfulness is far more important than Berlyne's studies revealed. There is in particular one aspect of meaning in pictorial representations which should be taken into consideration, namely the typicality of the represented objects. Martindale mentions and reviews a host of evidence according to which a monotonic relationship exists between preferences and the experienced typicality of objects (e.g. furniture, faces, architecture, and colours).[5] Numerous

4 Zuckerman, Ulrich & McLaughlin (1993). Sensation seekers are, psychologically speaking, persons who have a dominant "...need for varied, novel, and complex sensations and experiences and the willingness to take physical and social risks for the sake of such experiences" (ibid., p. 563).

experiments carried out by Martindale and his colleagues using stimulus material such as random polygons, colours, and nouns seem to confirm his hypothesis that variables such as novelty or complexity influence preferences, though to a negligible degree compared to typicality.[6] According to Martindale et al., aesthetic preference is monotonically related to the experienced typicality of a pattern, i.e. the more typical it is, the more it will be preferred. The underlying assumption in Martindale et al.'s work is a theory of cognitive unit activation, that is, that "...the amount of pleasure elicited by a stimulus is a positive function of how activated the internal representations or cognitive units that code it are...The more strongly such stimuli activate mental schemata, the more pleasure they produce...[C]ognitive units differ in their strength—that is, in how activated they can become. Presumably, units coding more prototypical or more frequently encountered stimuli are stronger than those coding atypical or infrequent stimuli."[7]

Also noteworthy in this context are some findings concerning the estimated attractiveness of faces. Experimental studies which make use of computer-manipulated photographs of male and female faces indicate that facial attractiveness is related to its averageness.[8] Photographs of individual faces were digitized on a computer, and subsequently arithmetically averaged, thus resulting in a set of composite faces. These faces were not typical in the sense of commonly or frequently occurring in a population, but rather being close to the mean configuration of a population of faces.[9] Preference tests with individual as well as composite faces revealed that the subjects rated the composite faces as more attractive or

5 See, for example, Martindale, Moore & West (1988), p. 81. For a study supporting this hypothesis where (photographs of) furniture have been used as stimulus material, see Whitfield (1983).

Cf. also the influential paper by Humphrey (1973), according to whom aesthetic preferences may be regarded from a biological perspective or, more exactly, are based upon our desire to classify objects or events in our environment. "Beautiful" structures in nature or in art are hypothesized as being those which facilitate classification.

A recent study on product design may be taken as having given additional support to the "preference-for-prototypes" model. According to this investigation, where line drawings of existing products were employed as stimulus material, prototypicality strongly affected preference linearly and positively. Another aspect of product design—unity—proved to exert a superadditive positive effect on preference (unity was defined as "a congruity among the elements of a design such that they look as though they belong together or as though there is some visual connection beyond mere chance that has caused them to come together"). See Veryzer, jr. & Hutchinson (1998), p. 374.

6 Martindale, Moore & West (1988); Martindale & Moore (1988); Martindale, Moore & Borkum (1994).

7 Martindale & Moore (1988), p. 661.

8 Langlois & Roggman (1990); Langlois, Roggman, & Musselman (1994).

9 It should be pointed out, though, that the composites were created by averaging young, university students (including Hispanics and Asians) from the southwest of the USA, thus very old or young faces were not included.

beautiful than the individual ones. As we may recall, a prototype may be defined as possessing the mean or average value of the attributes of the category in question. Thus prototypicality with regard to faces may strongly contribute to their attractiveness. This does not exclude the possibility that age or facial expressions play an influential role in this respect. Still, when comparing young and smiling faces with others which have the same attributes, averageness seems to be the crucial determinant of attractiveness.

Objections Against the Preference-for-Prototypicality Model

However, there are several problems with the view that typicality determines or strongly influences aesthetic preferences. Frans Boselie, for instance, has pointed to inconsistencies in the empirical findings of Martindale et al.'s work and to the aesthetic irrelevance of the stimulus material used.[10] First, it is far from clear that prototypical material will always be preferred. Boselie refers, for example, to studies, including Martindale et al.'s, according to which the colour *yellow* is usually not preferred over *purple* (where the former is judged to be more typical than the latter). Moreover, it seems quite improbable that, for instance, prototypical metals (such as *iron* or *steel*) or emotions (such as *sadness*) will be preferred over less (e.g. *gold* and *silver*) or equally (e.g. *love*) prototypical members of these categories. Second, how should typicality be defined? As we saw earlier, Barsalou has pointed to the fact that typicality ratings at least sometimes depend on an object's value for accomplishing certain goals, that is, possessing certain ideal characteristics. In that case it could be claimed that typicality ratings are actually covert preference or value judgements. Thus there is a danger of circularity in Martindale et al.'s proposal. On the other hand, the studies on facial attractiveness are based on typical, i.e. mathematically averaged, faces which do not imply covert preference judgements. Third, there is still the question of whether typicality preferences have anything to do with the aesthetic functioning of an object. More generally, Boselie raises the following objection:

> "Another reason to question the claim that aesthetic preference will be a positive function of prototypicality is that intuitively just the opposite hypothesis seems plausible as well. Some of those who posit a positive relationship between prototypicality and aesthetic preference...do so on the assumption that classification, being of vital importance, is a

10 Boselie (1991).

> source of pleasure to the organism and has resulted in a preference for easy-to-classify, that is prototypical stimuli. No one will question the importance of classification to survival, but an exclusive preference for easy-to-classify stimuli that do not depart from existing knowledge structures would be counter-productive to survival. Survival will be best served by successful categorization of nonprototypical stimuli that challenge one's powers of assimilation, requiring new modes of responding...[P]reference will be maximal for those stimuli that produce a change in our way of classifying information. Prototypical stimuli will not satisfy that requirement." [11]

Now, in a response to Boselie's criticism several attempts have been made to defend the view that prototypicality effects should be taken into account when investigating aesthetic preferences. For example, as Paul Hekkert and Dirk Snelders have claimed, the danger of circularity may be avoided by using stimuli previously unknown to the subjects (such as Turkish words and Chinese characters which are unfamiliar to most Western subjects), thus having no affective value to them. Hence typicality would be estimated independently from possible preferences and be based on familiarity and frequency of instantiation within categories.[12]

Boselie himself has replied by questioning the relevance of such stimuli to specifically aesthetic appreciation.[13] By which criteria, however, should we distinguish aesthetic from other preferences? According to Boselie, "aesthetic preference refers to the preference to see, hear, read something for its own sake, not because it would be a means to another end. An aesthetic preference is the outcome of an aesthetic experience."[14] In this respect Boselie seems to adhere to the traditional view on the essential feature of the aesthetic (proposed by Hume, Kant, and so on), namely that it consists of something like "disinterested pleasure". However, as studies on category formation (already reviewed in section 4.3) have revealed, numerous concepts do not emerge due to necessary and sufficient conditions, nor are they definable by referring to such conditions. With regard to concepts such as "aesthetic" or "art", it may very well be questioned whether anything like disinterested pleasure (whatever this means) is either a necessary or a sufficient characteristic for

11 Ibid., pp. 102–103.

12 See Hekkert & Snelders (1995) where some experimental studies which make use of this strategy are referred to.

13 Boselie (1996), p. 101.

14 Boselie (1991), p. 96.

Although prototypicality may be considered as a strong determinant of preference, other variables, such as habituation and the need for novelty, can in the long run play a more significant role. As a matter of fact, if this were not the case, it would be difficult to explain changes of artistic practices or styles. Artists would simply stick to the prototypical patterns which had previously been discovered.[20]

There is yet another objection put forward by Boselie which deserves attention. According to Boselie, beholders can make numerous cognitive classifications resulting in likes or dislikes of an artwork. Which of these categorizations are most important for their evaluation is far from clear.

> "Say, I see something: I see a painting, it is a woman, it is a cubist painting, it is predominantly brown, it is a girl with a mandolin, it is Picasso, it is lyrical, it is the painting I saw last year in New York, it is complex, it has a fine texture, it is unfinished, it is volumetrical and yet flattened up onto the picture plane, etc. Are these the relevant sensory, perceptual, cognitive categorizations? Say yes. The question then is, How prototypical is it: a painting, a woman, a cubistic painting, a brown painting, a girl with a mandolin, a Picasso, etc.? How to determine the regression of preference on this undefined set of prototypicality variables?"[21]

Boselie refers to an experiment where black-and-white slides of cubist paintings with different degrees of categorizability (i.e. recognizability) were shown to non-expert observers.[22] The results of this study suggested that complexity strongly influenced preference for the more abstract paintings, while the more representational works were preferred depending on the degree of prototypicality. In another study the same slides were used, but the participating subjects were senior art students.[23] The subjects had to rate the pictures with regard to style-prototypicality (typical or untypical for cubism) and content-typicality. While style-prototypicality received positive evaluations, content-prototypicality was evaluated negatively for both abstract and more representational paintings. Thus, Boselie concludes, these findings taken together reveal a lack of consistency regarding the relationship between preferences and possible typicality attribution.

Preference-for-prototypicality is probably of course a more complex

20 Martindale (1996), p. 111.
21 Boselie (1991), p. 102.
22 Hekkert & van Wieringen (1990a).

phenomenon than Martindale et al.'s investigations at first sight suggest. Expertise in a particular artistic domain may influence the number of possible classifications.[24] A work of art may be more or less prototypical as regards a certain style, culture, artist, or historical context. The capability to differentiate between and recognize various categories presupposes training and background knowledge. Nevertheless, there are constraints on which classifications should be applied to an artwork. A painting could, for example, be evaluated in accordance with its typicality as a windbreak, as a profit-maximizing object, as a flat object, as a blue or coloured object, and so on. These evaluations, however, deviate from socially and institutionally established practices regarding encounters with art. Thus there are rule-governed limits for our typicality attributions as regards works of art. Moreover, though typicality attribution can occur at many levels, this does not imply that typicality has no aesthetic relevance whatsoever. Indeed, as Martindale himself claims, typicality in many various respects, rather than in one or a few, may contribute to and enhance aesthetic preferences.

Preference-for-Differences

Apart from the preference-for-prototypes model, an alternative proposal which takes typicality into account deserves mentioning. According to A.T. Purcell et al., there are experimental findings suggesting that "preference (and affective experience generally) depends on differences from existing mental representations..."[25] Thus stimulus patterns which (moderately) deviate from existing representations may result in pleasurable experiences. Several investigations have been carried out in order to confirm the so-called preference-for-differences model. For example, in a series of studies, two groups of subjects from Sydney (Australia) and Padua (Italy) were shown two sets of colour slides with various environmental scenes (such as architectural environments and natural landscapes). The pictures were taken from the locations mentioned above, and both sets of slides were shown to each group. During the experiments, the participants were asked to make judgements of preference, familiarity, and typicality. Interestingly, no strong positive correlations between preference and typicality (nor between preference and familiarity) could be established. Instead, these studies seemed to give support

23 Hekkert & van Wieringen (1990b).
24 Cf. Hekkert & Snelders (1995), p. 154.
25 Purcell, Staats, Falchero, & Lamb (1998), p. 283.

to a preference-for-differences model, though it should be noted that the type of scenes also exerted a strong influence on preference (scenes which contained trees, water, and the absence of apparent human-induced changes were highly preferred).[26]

Another experimental study using Western paintings (which varied in the degree of realism) as stimulus material has to some extent led to similar results.[27] The subjects in this study were asked to make preference and typicality judgements (i.e. with regard to their typicality as members of the category "painting") of the shown material. While there was a high level of agreement among the participants concerning the estimated typicality of the paintings (typicality decreased with increases in abstraction or distortion, the latter being more salient in surrealist and pop art), preference did not generally increase with typicality. For most of the participants a high correlation between typicality and preference could actually be established, but for about 30% of them this correlation was lower. It was hypothesized that this difference could be explained by taking educational factors into account (such as art education or expertise). As Purcell claims, the latter group may, due to greater knowledge of artwork, have developed more differentiated representations, thus enabling them to comprehend and to appreciate less realistic paintings. In Purcell's view, then, aesthetic experience may be the result of "...a set of similarity-and-difference relationships between the physical characteristics of a particular instance and the mental representations of the range of previous experience with artworks and the relationships between these and mental representations of everyday experience."[28] However, as already suggested in the last chapter, it may very well be doubtful whether any attempt to demarcate the so-called "aesthetic experience" by referring to any essential set of characteristics is tenable; it might very well be the case that this troublesome notion rather refers to a number of mental (cognitive and emotional) states without any common features. Still, something like preference-for-differences may quite frequently play an important role in our encounters with works of art or pictorial representations. This hypothesis, though, deserves a more careful discussion, and we will begin by taking a closer look at contemporary psychological research and proposals regarding the nature of emotions.

26 Ibid. Similar results were also obtained with subjects from the Netherlands.
27 Purcell (1993).
28 Ibid., p. 235.

5.2 Emotions and Goals

SYSTEMATIC EMPIRICAL RESEARCH within psychology concerning the constituents, causes, and functions of emotional phenomena is of relatively recent origin. To be sure, there have been important pioneers, e.g. Charles Darwin, William James, and Sigmund Freud, who, at least on a theoretical level, have contributed to a growing understanding of those mental processes and their external manifestations which we are inclined to call "emotional". However, modern empirical psychology has usually tended to concentrate on cognitive issues such as perception, learning, thinking, memory, and so on. This focus of interest seems to have undergone a remarkable change during the last two decades, not only within cognitive psychology, but also in other disciplines as well (such as anthropology, sociology, and history).[29]

The Biological and Neurophysiological Basis of Emotions

Emotional phenomena may be investigated from several angles, e.g. from a linguistic and socio-historical perspective, in relation to personality characteristics, or by considering biological or neurophysiological enabling mechanisms.[30] Intuitively, we might suspect that emotions are entirely or chiefly culturally constructed, that is, that linguistic, socio-historical, or institutional presuppositions determine the ways in which people talk about, experience, evaluate, and manifest their feelings and moods. Moreover, the history of emotions seems to have become a growing field of research since the 1980s, dealing with processes of change (to some extent also continuities) in emotional standards and experience, or attempting to comprehend characteristic emotional styles in particular periods and cultures.[31] Still, on the other hand, numerous psychologists have come to suggest that emotions also have a strong biological and evolutionary basis, and that some fundamental aspects of emotional processes are cross-culturally stable and universal.[32]

Generally speaking, emotions seem to arise as the result of evaluations of events in relation to goals. For higher mammals, many of these events are related to socially significant individuals, for example, parents and offspring, rivals, mates, predators, rivals, cooperators in food acquisition, and so on. Acting and reacting adequately in social life has always been

29 Cf. Jenkins, Oatley, & Stein (1998), p. 1; Hamilton, Bower, & Frijda (1988), p. vii.
30 For an attempt to analyze "happiness" from these three perspectives, see Averill & More (1993).
31 For an overview and discussion of recent historical research on emotion, see Stearns (1993).
32 Cf. Jenkins, Oatley, & Stein (1998), pp. 81–83.

of crucial importance for adaptation and survival (and, consequently, human evolution). The basic emotional repertoire of humans appears to a considerable extent to have evolved within a social context where goals and plans of various kinds are strived for. Thus, most emotions have interpersonal aspects (the completely isolated individual would probably be significantly emotionally disabled), though these aspects may centre around needs and goals which are common to all humans, independent of a specific cultural environment. It has been argued, for example by Keith Oatley and Philip Johnson-Laird, that some basic emotions may have evolved at an early stage of human evolution, that is, in a human environment where our ancestors lived in nomadic tribes (consisting of 10 to 30 individuals).[33] The emotional mechanisms which were established at that stage, and which had to do with mutual and conflicting goals, significant relationships, threats, and so forth, are, according to Oatley and Johnson-Laird, much the same even today and in every known culture.[34]

What, however, are basic emotions? How many are there? And do such emotions exist at all? These questions have, not surprisingly, been a matter of some debate in the psychological literature during the last few decades. While some psychologists have argued for an infinite number of emotions (and thus denied the very idea of basic emotions), others have reduced the spectrum of emotions to basically two aspects, namely pleasure and pain, or positive and negative evaluations.[35] Still, several psychologists have suggested that we may distinguish between at least four basic emotions: happiness, sadness, anger, and fear (with disgust and surprise as two further candidates).[36] This assumption has been supported by cross-cultural studies, according to which people from various cultures have the same repertoire of facial expressions for these emotions.[37] Furthermore, they seem to have distinctive physiological accompaniments (for example, characteristic heart rates, skin temperatures, and skin resistance). Lastly, they also appear also to occur as "free-floating" phenomena (which will be explained below), without being related to particular objects or goals.

A common tenet among psychologists as well as philosophers concerned with the nature of emotions consists of the view that emotions have two

33 Cf. Jenkins, Oatley, & Stein (1998), p. 82; p. 86.

34 Oatley & Johnson-Laird (1987).

35 For arguments for basic emotions, see Oatley (1992), pp. 103–107; Stein, Trabasso, & Liwag (1993), pp. 280–281; Oatley & Johnson-Laird (1998), pp. 86–90. For arguments against basic emotions, see Averill (1994), pp. 79–82.

36 Cf. Stein, Trabasso, & Liwag (1993), pp. 280–281; Oatley & Johnson-Laird (1998), pp. 86–90.

37 Ekman (1989).

ingredients, namely a certain phenomenological tone and a cognitive element.[38] Usually emotions are about something; they are experienced in relation to someone or something. For example, being afraid consists of a bodily sensation (a felt quality), but also the attribution of this sensation to a threatening event. According to Oatley and Johnson-Laird, for example, emotions are mostly based upon so-called *control* and *semantic* messages experienced as a single event. The former are neurologically based, functioning as some kind of (non-propositional) alarm signals, which make us "capable of rapid and unified response, interrupting ongoing activity and causing transition to readiness for a new one, without parsing, interpretations, or other computations that could be lengthy and may not reach conclusion."[39] Semantic messages, on the other hand, convey information about the causes and objects of the emotion in question, that is, they "refer to addresses, to procedures by name, to states of affairs by calling patterns, to data, to representations, to results, or to elements for building new procedures."[40] To take another example, when feeling angry, we experience a particular sensation, but mostly we are also aware of who made us (caused us to be) angry and may direct our anger toward the person responsible in the form of aggressive plans.

As indicated above, these two parts of emotions are usually bound closely together, though this connection is not absolutely necessary. First, long-lasting moods (including those pertaining to certain personality types) may not always—in contradistinction to temporally occurring emotions—involve any awareness of initial conditions related to the emotional state in question. Second, certain drugs and hormones may lead people to experience emotions without knowing their cause or being able to relate them to something else. Third, emotions may be free-floating during epileptic seizures, or, to be more exact, in the auras (which precede these seizures) of temporal lobe epilepsy. In these cases feelings may arise without any semantic content, being entirely unattached to particular things or ideas. Now, according to Oatley and Johnson-Laird, due to the fact that happiness, sadness, anger, and fear can be experienced without any semantic content, thus being (in some sense) acausal and free-floating, they might be regarded as basic. However, as they concede, "the precise number of basic emotions is less important than the hypo-

38 For an original proposal on these lines concerning the nature of "art-horror" (a distinctive feeling which is supposed to arise in encounters with horror fictions, e.g. in the fine arts, motion pictures, theatre, and literature), see Carroll (1990).

39 Oatley (1992), p. 54.

40 Ibid., pp. 51–52.

thesis that each kind of emotion has specific functions and that mechanisms that evolved to serve these functions map diverse events into a small set of emotional modes."[41] In addition to these basic emotions, Oatley & Johnson-Laird have also proposed five further emotions which are quasi-basic in that sense that they seem to be based upon innate, biological/evolutionary presuppositions. These emotions are attachment, parental love, sexual attraction, disgust, and interpersonal rejection. They cannot be experienced as free-floating, but are always related to someone or something (for example, parents and offspring, sexual partners, members within a group, and so on).[42]

Be this as it may, despite the fact that we have a wide spectrum of emotions and emotional terms (as well as mixtures of emotions) related to all kinds of goals, ideas, objects, events, and so forth, it has quite frequently been claimed that many basic features of emotional states and processes are regulated and constrained by anatomical and physiological properties of the nervous system (which, of course, have an evolutionary background). Research within neuroscience has advanced remarkably over the last few decades, resulting in increasingly detailed knowledge about the role, function and effects of neurophysiological mechanisms related to emotions (for example, the role (i) of endorphins, serotonin, and other chemicals; (ii) of pleasure and aversion centres in the brain; (iii) of specialized circuitry in the left frontal lobe [apparently involved in positive emotional experiences]; (iv) of autonomic nervous system [ANS] arousal [cf. also section 3.5 on Berlyne's proposals], and so on).

In particular one neurophysiological account seems to deserve attention in our present context. According to Joseph LeDoux for example, we have a host of evidence suggesting that one area pertaining to the limbic system in the brain, the so-called *amygdala*, plays a central role in emotional processes.[43] The amygdala is regarded as something like an emotional computer evaluating the emotional significance of stimuli (though it probably is not *the* emotional centre, but rather a key structure within an broader emotional network). Studies on the *Kluver-Bucy syndrome*, a set of behavioural changes caused by damage to neurological structures including the amygdala, contributed to a growing understanding of this area's role in affective processes. Such lesions in primates have resulted, for example, in a loss of fear of previously threatening stimuli,

41 Oatley & Johnson-Laird (1998), p. 87. See also Stein, Trabasso, & Liwag (1993), p. 280, who likewise adhere to the view that these four emotions ought to be considered as basic.

42 Ibid., pp. 89–90.

43 LeDoux (1993).

attempts to copulate with members of other species and to eat things (e.g. faeces, meat, rocks) that are normally considered to be unattractive. Subsequent research has shown that the amygdala transmits non-semantic signals to other parts of the brain, thereby altering attention and initiating physiological responses to stimuli to which emotional significance has been assigned. Although it is well-known that the amygdala receives input from various sensory systems (such as the visual, auditory, somatosensory, and gustatory systems), the transmission of visual information has thus far been best understood. Briefly put, visual information reaching the retina is transmitted, via several intermediary steps, to the primary visual cortex and finally to the inferotemporal cortex, a necessary structure for object perception and recognition. From here, object information is sent to the amygdala and higher-order association areas (which, in turn, project information back to the amygdala). Once the amygdala is activated, it can initiate a number of activities, such as the release of hormones, changes in blood pressure, heart rate, general ANS arousal, and so on. Interestingly, lesions to the amygdala lead to symptoms characteristic of the Kluver-Bucy syndrome and, in animals, a decreased ability to learn to associate rewards and punishments with stimuli. Thus the amygdala is an essential structure for rapidly evaluating and calling attention to stimuli (involving thoughts associated with them). As LeDoux states, "the amygdala receives a wide range of inputs about immediately present, imagined, and remembered stimuli. Its anatomical connections suggest that it can be activated by simple features, whole objects, the context in which objects occur, semantic properties, images and memories of objects, and the like."[44] Moreover, "the quality of the emotional reaction (i.e. whether fear, anger, or joy is elicited by a given stimulus)...is a function of the forebrain evaluative systems involving the amygdala and perhaps other, less well-understood limbic areas. In other words, arousal occurs after, not before, evaluation."[45] In conclusion, then, due to the evidence suggesting that this neurological structure rapidly and spontaneously assigns affective significance to sensory events, and does not simply transmit such assignments from higher-order structures, it seems reasonable to assume that biological constraints, as outlined here, must be taken into account in any theory of emotion.[46]

44 Ibid., p. 112.

45 Ibid., p. 114.

46 Cf. also the important work by Frijda (1986) for an account of neurophysiological conditions involved in emotional phenomena (pp. 379–400) and especially the role of the amygdala (pp. 389–391). See also Mandler (1984 a), pp. 133–155; Gray (1994), pp. 51–52.

Schemata and Discrepancies

However, in addition to the role which underlying neurophysiological mechanisms (or, in Oatley & Johnson-Laird's terminology, control messages) may play, emotions usually involve or are directed toward objects. Numerous scholars have adhered to a view which may be called "conflict theory of emotion".[47] According to this position, emotions arise in situations where progress toward or away from some goal is hindered, when there is a conflict among goals, when a plan of action is interrupted, when the probability of achieving a goal has changed, and the like. An underlying assumption consists of the idea that humans constantly monitor the status of goals and preferences which are supposed to lead to states of well-being. Generally speaking, people are assumed to have preferences to be in certain states (e.g. pleasure) or to avoid other states (e.g. pain), and when they are in unpleasant states, they attempt to change them. Emotions are assumed to occur when expectations regarding ability or probability in attaining or preserving valuable states, objects, or activities (or avoiding or escaping from things that are regarded as undesirable) are violated. For example, fear may arise when goals of self-protection or of avoiding pain are violated (e.g. when encountering a predator in a forest, or an armed robber), disgust when deviations from gustatory goals occur, sadness in situations of loss (e.g. the death of a relative or losing one's wife after a divorce), and so on. In all these cases, ongoing plans may be interrupted, a re-evaluation of the situation has to be made, and appropriate measures taken. Emotions are processes which arise as a part of the solution necessary to straighten out discrepancies between one's expectations (or goals) and an event.

People may of course have multiple goals (and thus can make more than one cognitive evaluation) at the same time, and consequently mixtures of emotions may occur. Furthermore, people may not always be aware of their goals; they can be ill-defined or exist at an unconscious level, and there may be conflicting goals. We also frequently have to coordinate our actions with other people who may have competing wishes. Lastly, we often have limited resources (of, for example, strength, time, skill, and movement) and imperfect or unreliable knowledge to achieve what we want. All these obstacles to the making of plans have to be compensated for by being able to respond flexibly to current circumstances, that is, by making (more or less successful) continual attempts at ad hoc

47 For a review of the history of conflict theories on emotion, see Mandler (1984 a), pp. 38–46. Cf. also Frijda (1986), pp. 265–267; Oatley (1992), pp. 46–48, pp. 174–175.

problem solving. Changes in evaluations of plans occur frequently, and at such junctures emotions arise. An important function of emotions is, at least according to Oatley, to compensate for the obstacles mentioned above and to set the cognitive and bodily systems into certain modes of readiness for appropriate actions.[48]

However, how are conflicts or disruptions involved in positive emotions, such as happiness? Well, it may be argued that the experience of happiness also depends on the recognition of discrepant information, though in terms of progress toward (or an unexpected maintenance of) goal states. Several conditions seem to be crucial with regard to happiness, as suggested by Nancy Stein, Tom Trabasso, & Maria Liwag.[49] First, some aspect of an event has to be experienced as novel (i.e. as violating one's expectations) in relation to the ability to achieve or maintain (or avoid aversive) states. Second, one has to believe that the possibility of achieving, maintaining, or avoiding a state has changed. Third, inferences have to be made about the certainty of state achievement, maintenance, or avoidance. Last, the outcome of the goal state has to be considered enjoyable. This account of happiness is, of course, to some extent superficial. For example, it may be claimed, as also Oatley admits, that happiness may arise "where there is no pressing overall goal, in states where the mind is full as in listening to music, in creative activities, in play, or when social participation is more important than any end result."[50] Moreover, the achievement of enjoyment can be a goal in itself, not a by-product.[51] Much more could, not surprisingly, be said about happiness and the nature of emotions in general, but not all of the topics and intricacies in the current discussion of the subject concern us here.

Still, as already indicated, there is one tenet which is quite prevalent in recent theories of emotion which deserves our attention, namely that emotions usually involve expectations. Put in another way, we employ mental models or schemes when we perceive our environment, make inferences and predictions, and evaluate the conditions for attaining, maintaining, or avoiding certain states. Accordingly, the object of an emotion may be conceived of as being mediated via (partial and sometimes

48 Oatley (1992), pp. 31–36.

49 Stein, Trabasso, & Liwag (1993), p. 288. Cf. also Stein & Levine (1991), p. 305.

50 Oatley (1992), p. 48. Cf. the objections against a conflict theoretical account of emotions, and particularly with regard to happiness, put forward by Averill (1994), pp. 85–88. According to Averill, we should further consider impulsive and transcendental emotions, the latter resulting from meditation, neurological damage, sensory deprivation, and the like. The former, though, is reminiscent of Oatley & Johnson-Laird's notion of control signals (which Averill himself points out).

51 Oatley & Johnson-Laird (1998), p. 87.

erroneous) mental models of external subjects, objects, or events.[52] Numerous scholars, such as Stein, Trabasso, & Liwag, have adhered to a conflict (or match-mismatch) theory of emotion, according to which

> "...a distinguishing characteristic of emotional experience is an effort to assimilate some type of new information into current knowledge schemes...We contend that people constantly monitor their environment in an effort to maintain preferred states. In order to succeed at this task, procedures analogous to pattern-matching and assimilation are used to analyze and compare incoming data to what is already known. When new information is detected in the input, a mismatch occurs, causing an interruption in current thinking processes. Attention then shifts to the novel or discrepant information. Along with the attentional shift comes arousal of the ANS and a focus on the implications that the new information has for the maintenance of valued goals. Thus, emotional experience is almost always associated with attending to and making sense out of new information."[53]

Now, let us return to the main issue of this section, that is, the relationship between experienced typicality and affect or preference. As we may recall, a common view within cognitive psychology consists of the idea that we acquire mental representations (mental images, schemata, scripts, frames, and so on) due to repeated exposure to regularities in the environment. While some schemata are more concrete (such as the schemata for my living room, my cat, and my car), others are generic (such as schemata for living rooms, cats, and cars in general), centring around prototypical examples. According to George Mandler, another influential proponent of a conflict theory of emotion, encounters with external objects, situations, or environments may more or less match pre-existent schemata, and, depending on the degree of discrepancy, result in different emotional states and changes in arousal.

> "Schemas organise and interpret our world. Their activation proceeds automatically from the most concrete to the most abstract schemas relevant (a process referred to as bottom-up processing). At the same time, and also automatically, activated high-level schemas pass activation to lower schemas (top-down processing) which constrain further

52 Ibid., pp. 90–92; p. 94.
53 Stein, Trabasso & Liwag (1993), p. 281.

> perception. Expectations are those elements of schemas activated by top-down processing which are not directly supported by input evidence. Expectations influence what will be attended to by influencing the ease with which particular new evidence may be interpreted...When a discrepancy between expectations and available evidence is found, autonomic (sympathetic) arousal results, which will potentiate emotional experiences, in addition to alerting the organism and providing resources for coping with the unexpected." [54]

Schemata create expectations, and if deviations occur, active cognitive processes become necessary. Referring to Jean Piaget's notions of *accommodation* and *assimilation*, Mandler claims that encounters with events that do not fit in with one's schematic representations necessitate modifications of (or adaptations to) the latter. Accommodation is defined as "the case in which a new experience is such that existing structures (schemas) cannot accept the new information; structures must be changed in order to take account of it...In the case of assimilation, on the other hand, existing structures remain unchanged, but the interpretation of the world is changed in order to deal adequately with a slightly changed situation—for example, when meeting somebody at a party and finding the initial conversation about a painting puzzling because the other person talks about shadings when we see brilliant color. We might accommodate these new opinions to a new structure, but simply assimilate when we discover that the other person is colorblind—no change in our existing mental organization is needed."[55]

Such adaptations are said to give rise to affective experiences, or, to be more exact, to arousal changes in the autonomic nervous system (ANS). Events or stimuli which are extremely congruous with prior expectations or schemata are easily identified as such, but may also result in a relatively low level of positive experience. Various degrees of incongruity, however, will lead to more or less intensive emotional experiences (see figure 13).[56] In the case of slight incongruity, which only demands assimilative processes, the affective experience is intensified and positively varied, as well as in some cases of severe incongruity where the stimuli have been successfully accommodated. Unsuccessful as well as some successful attempts to accommodate new information will, though, result in

54 Gaver & Mandler (1987), pp. 265–266, where emotional responses to music in particular are discussed from this perspective.

55 Mandler (1984 a), p. 63.

56 The illustration is taken from ibid., p. 202.

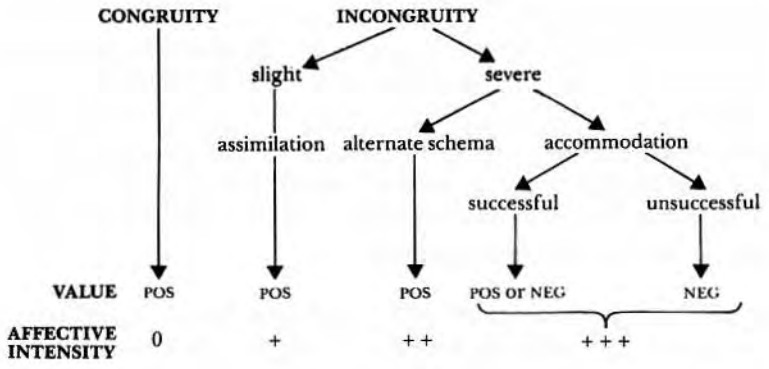


Figure 13. Several possible outcomes of schema congruity and incongruity in terms of values and affective intensity. The resultant value is shown as positive (POS) or negative (NEG); degree of affective intensity is shown as varying from zero to +++.

negative experiences. Events which, after cognitive processing, can be adapted to an alternative schema, that is, occasions of delayed congruity, are generally experienced as positive.[57]

According to Mandler, these are some fundamental mechanisms of positive (or negative) evaluative judgements dependent on schematic (in)congruity. Undoubtedly our encounters with various kinds of stimuli, people, or events may give rise to manifold emotions; still, all other things being equal, likes or dislikes may actually be explained with reference to this model. Mandler is of course aware of the existence of a diversity (or even infinity) of emotions, thereby denying the idea of a limited number of basic emotions, although it nevertheless seems that he basically distinguishes between positive and negative evaluations or emotions, at least when it comes to those which arise due to arousal changes based upon schematic (in)congruity.[58]

It has sometimes been argued that Mandler's view is somewhat simplifying in that it appears to reduce affects to the mechanisms outlined above. As Andrew Ortony, probably correctly, has claimed, schemata or representations in themselves frequently include affective information. I may, for instance, hear unfamiliar noises in my apartment in the middle of the night, at which point schematic expectations of an *intruder* or even

57 Ibid., pp. 201–204. See also Mandler (1982). For an interesting study on consumer behaviour and product evaluation based upon, and consistent with, Mandler's hypothesis, see Meyers-Levy & Tybout (1989).

58 For a denial of the idea of basic emotions, see Mandler (1994), p. 243, p. 244; (1997), pp. 81–82. Cf. Frijda (1986), who seems to regard positive and negative evaluations as primitives.

armed burglar may be activated. It is doubtful, first, whether the confirmation of my expectation would lead to any positive affect. Furthermore, the schema of an armed burglar would presumably also include negative attributes, according to which such a person is unpleasant, ruthless, dangerous, and so on (cf. Barsalou's proposals on goal-derived categories and secondary categorizations as outlined in section 4.3).[59]

Still, as Mandler himself has pointed out, no *general* claims are made with regard to evaluations of events or stimuli. Rather, we should be aware of the multiplicity of values that are part of our daily interactions: "Most of our more complex values are dependent on the 'meaning' of the valued object, on its relation to other knowledge and other valued objects and events."[60] For example, we may face an aggressive colleague daily, and thus have become familiar with his hostility. Still, this does not lead to a net positive evaluation; the negative experience due to his hostility will overwhelm any positive aspects.

As should have become apparent, Mandler's model bears some kind of affinity to Berlyne's proposal, despite the fact that the latter did not take the occurrence of mental representations into account.[61] Both Mandler and Berlyne share the conviction that various degrees of familiarity with external stimuli will lead to arousal-changes in the autonomic nervous system and correlated (positive or negative) emotional experiences. Both suggest that moderate degrees of novelty or discrepancies from one's expectations may be enjoyable. Berlyne's behaviourist and information-theory approach is probably inadequate for psychological studies of our encounters with art, but interestingly a basic tenet in his line of thought still seems to deserve attention.

5.3 Another Look at the MRT Tradition

IT IS NOW TIME TO SUM UP and reconcile some of the threads reviewed and discussed in the previous chapters. This study began with an overview of some of the historically most influential positions concerning mimesis as the representation of types. As should have become obvious, certain concepts or ideas prevalent within the MRT tradition bear some affinity to concepts or ideas occurring in recent or contemporary psychology.

59 Ortony (1991), pp. 340–341, p. 350. See also Fiske (1982) who likewise has argued for the incorporation of affective information in schemata.

60 Mandler (1984 a), p. 207.

61 Cf. also Mandler (1982), pp. 24–25.

According to this tradition, the models for mimetic representation are conceived of as types, defined as general or idealized conceptions of particular phenomena which may be imagined (i.e. mentally represented). The recognition of type-characteristic features of external objects represented in mimetic works of art is more or less thought of as giving rise to pleasurable experiences, though of course also cognitive or moral effects are stressed. Both Plato and Aristotle, for example, give considerable attention to the moral significance of mimetic objects, but they differ as to the extent to which these objects may contribute to genuine knowledge or legitimate pleasure. According to Aristotle, there is no real conflict between type-recognition (as some kind of cognitive activity) and a (justified) pleasurable experience being the result of the former. The views from Classical Antiquity concerning mimetic representations have had numerous subsequent adherents, which are more or less concerned with the moral, cognitive, and/or hedonic aspects of art.

A common tenet deserves mentioning, though, namely that the proper function of mimetic works of art consists of the rendering of type-characteristics, not a neutral copying of particular, empirical things. Baxandall's and Gombrich's works fit to some extent into this tradition. Baxandall mainly focuses on artistic practices during the Renaissance, although his study is obviously based on more general (though somewhat sketchy) ideas on aesthetic appreciation. The comprehension and enjoyment of artworks presupposes that they are adapted to our background knowledge and expectations and thus give us opportunity to exercise our interpretative and discriminative skills. The objects for pictorial representations have frequently, so Baxandall seems to claim, something like a type-character so that they may be comprehended and enjoyed by larger groups of beholders. Gombrich is more explicitly concerned with theoretical and psychological questions, though he frequently makes use of and discusses concrete historical examples. For Gombrich, the rendering of type-characteristics seems to be an inevitable component of pictorial representations: there is no innocent eye, thus we have to employ pictorial and mental schemata in order to perceive, describe or depict reality. Some of the problems with Gombrich's account have already been discussed, but there is yet one issue which deserves consideration.

Affect and Cognition

Basically there seem to be two alternative views within the MRT tradition regarding the proper function or goal of mimetic representations. While some of its proponents accentuate the hedonic effects which type-repre-

sentations give rise to, still others stress the cognitive implications of such renderings (sometimes linked to moral considerations). Gombrich appears to adhere to the latter view; no notable attention is given to the capacity of pictorial representations to evoke pleasurable experiences. Artistic changes, as well as our general interest in such representations, are quite obviously explained by reference to cognitive concerns. For example, in a discussion of Constable's work, Gombrich writes:

> "We may here gain a glimpse of the deep sources that fed his dissatisfaction with ready-made idyllic schemata, his wish to go beyond them and discover visual truth....The truth Constable was after he has often explained: 'Lights—dews—breezes—blooms and freshness, not one of which has yet been perfected by any painter in the world.'...When old Fuseli made the famous remark that Constable's landscapes made him call for his greatcoat and umbrella, he showed he understood the kind of truth the master was aiming at."[62]

The striving for visual truth is a central tenet in Gombrich's approach, but any emotional effects which pictures (experienced as more or less realistic by various beholders) may give rise to are not discussed. As already mentioned in section 1.1, numerous normative theories within philosophical aesthetics have taken the hedonic aspects of art into account. Still others have emphasized the moral or cognitive value of art.

A relatively recent proposal stressing the cognitive aspects of art has been put forward by Goodman. According to his view, works of art are essentially symbols and stand in a referential relation to external things. The question of aesthetic merit, so Goodman maintains, has nothing to do with the capacity of artworks to evoke (aesthetic) pleasure or any other emotions. Rather, we should judge art as any kind of symbol system, namely by how well it serves cognitive purposes (whatever this means). In this respect there is no difference between art and, say, a scientific theory or proof. As Goodman claims, "[t]he primary purpose [of art] is cognition in and for itself; the practicality, pleasure, compulsion, and communicative utility all depend upon this."[63] Accordingly, there is no clear difference between getting satisfaction from a scientific proof or from an work of art. The only way of distinguishing the former from the latter consists apparently of the fact the artworks not only draw attention to

62 Gombrich (1977), p. 325.
63 Goodman (1976), p. 258.

what they refer to, but also to themselves *qua* symbols by means of exemplification (i.e. by being regarded as a sample of the properties they possess). Basically, though, works of art have to be evaluated for their cognitive efficiency:

> "Symbolization, then is to be judged fundamentally by how well it serves the cognitive purpose: by the delicacy of its discriminations and the aptness of its allusions; by the way it works in grasping, exploring, and informing the world; by how it analyzes, sorts, orders, and organizes; by how it participates in the making, manipulation, retention, and transformation of knowledge."[64]

Goodman's proposal is unfortunately quite sketchy, and no criteria for distinguishing cognitively efficient from less efficient works of art are mentioned (nor do any examples illustrate his claim). Moreover, his emphasis on the cognitive rather than any emotional or hedonic aspects of art appears to be too rigid. How could we explain our interest in works of art if no emotional gratification is involved? Why don't we just stick to scientific proofs? Proofs as well as art may give us enjoyment, but this is treated as a secondary aspect of their function and value. Is it really the case, as Goodman states, that works of art do not differ from, for example, scientific theories in this respect? To a considerable extent, Goodman's view is rather counter-intuitive.

Still, there seems to be some kernel of plausibility in Goodman's account. Goodman insists that no strict demarcation between art and other categories or activities is rationally defensible, and it seems reasonable to adhere to that opinion. Although his concern with the cognitive function of art is somewhat one-sided, he does not deny that encounters with art have no emotional ingredients whatsoever. Instead, emotion and cognition are said to be interrelated: "...the cognitive...does not exclude the sensory or the emotive, that what we know through art is felt in our bones and nerves and muscles as well as grasped by our mind, that all the sensitivity and responsiveness of the organism participates in the invention and interpretation of symbols."[65] The question arises, however, as to how exactly cognitive and emotional processes are related to each other. Some suggestions concerning this issue have been touched upon in the preceding sections, and it appears thus that recent research

64 Ibid.
65 Ibid., p. 259.

from psychology may help us to clarify this issue (which, by the way, may be mentioned as a further example illustrating how empirical studies might contribute to and improve philosophical reflections).

General Types

Encounters with pictorial representations demand cognitive processing which may be experienced as rewarding or pleasurable. Matches or moderate mismatches between pictures and a beholder's mental representations seem to evoke hedonic effects which occur spontaneously and, so I believe, constitute some of the basic motivating factors for our concern with pictorial representations. This does of not, course, exclude the possibility that there are other needs which pictures might fulfil (such as giving us concrete knowledge of various kinds), but recognition, or the striving for recognition, should be regarded as an important component. There are, as I have argued earlier, no clear borderlines between aesthetic and non-aesthetic pictorial representations. Numerous pictorial works of art are of interest due to this relatively basic function, but so are also other kinds of pictures (such as advertising posters, cartoons, photographs, and so on). When it comes to mimetic representations of types, it may be assumed that the pictorial content in these cases corresponds to mental representations which are shared by a relatively large group of beholders. As Baxandall convincingly has claimed, artists have usually adapted their work to the general cognitive demands and presuppositions of the intended beholders. These presuppositions can of course vary considerably among different individuals. An important task of artists, however, appears to be able to abstract and visualize those types of subjects which can be recognized and appreciated by a larger public, that is, which provide some kind of common denominators among individual beholders' mental representations. Such renderings occur presumably, to use Rosch's terminology, mostly on a basic or subordinate level. As we may recall, it seems that the overall perceived shape frequently functions as a cue for determining category membership. In cases of categorization based upon shape-cues, mostly basic-level categories are established, though also sometimes subordinates (cf. Barsalou's suggestions on these lines reviewed in section 4.3). Superordinates do usually not have any specific shape in common; still, we should not exclude the possibility that mimetic representations also quite clearly exhibit or imply such higher-level categories. For example, a picture showing an Utopian landscape can contain various objects, such as naked men and women, lions, goats, sheep, and so on. *Lions*, *goats*, *men*, and *women* are

probably basic level categories and at first sight recognized and categorized as such. According to Barsalou, this would be an example of a primary categorization. However, as he has suggested, at a subsequent stage secondary categorizations may arise, either goal-derived categories (which will be discussed in the next subsection) or superordinates. In our example such a secondary categorization could occur by distinguishing between (and contrasting) the superordinates *humans* and *animals* (which, additionally, might be conceived as living in harmony together—i.e. a situation which also could be considered to be ideal and goal-related in some sense). I shall leave it to the imagination and expertise of the reader to find other examples where superordinates may arise in pictorial representations, and, moreover, seem to be recognized as such beyond mere coincidence, that is, as (with a high degree of probability) intended by the artist and/or recognized by the intended group of beholders.

Now, another important question concerns the cross-cultural and historical stability of categorization and recognition. Although categorization in many cases appears to be highly affected by contextual or subjective circumstances, there is still a host of evidence according to which (perceptually given) characteristics of the environment in combination with general presuppositions of humans (concerning perception, motor movement, needs, memory, and so on) constitute constraints on category formation. As, for example, Malt has claimed (cf. section 4.3), after having discussed numerous psychological and anthropological studies, biological categories have shown an astonishing cross-cultural regularity, sometimes even corresponding to scientific classification systems and DNA analyses. Moreover, even other categories, such as household objects, kinship, colour, enemy, etc., are not as variable as one intuitively might suspect. There remains of course much more (not the least empirical) work to be done in order to understand how, why exactly, to which extent, and at which category levels the categorization of the world is relatively invariable or variable. Nevertheless, as I believe, we have sufficient reason and evidence to assume that a radical denial of cross-culturally quite stable categories is untenable.

While the possible conformity of category formation is one thing, the possible conformity of pictorial representations of categories is another. As I have argued earlier (cf. section 2.6), pictorial conventionalism in its most radical form is a rather unconvincing position. We have evidence suggesting that the creation and comprehension of pictorial representations is not at all as socio-historically dependent or variable as conventionalists have come to claim. Thus renderings of, for example, humans,

animals, trees, and landscapes made within the most shifting cultural contexts show quite often a remarkable degree of cross-cultural comprehensibility. Put in another way, many pictures, whether they occur as Paleolithic cave paintings, Chinese ink paintings, or Mayan tomb paintings, are highly recognizable, without any previous training, as representations of identifiable types of objects—despite any stylistic variations. This is especially notable, so I believe, when it comes to biological types, such as humans, animals, vegetation, and landscapes, perhaps also architectural motifs and certain tools or weapons. Is this relative conformity a pure coincidence? I don't think so; rather, we should be prepared to assume that there are (basic level) types of objects which have a general human significance, the rendering of which is constrained by our biological-perceptual presuppositions and, indeed, perceptual-physical characteristics of the represented objects. Such constraints may have emerged due to our evolutionary background; the ability to rapidly and without effort distinguish animals from humans, predators from grass-eaters, trees from rocks, shelters from open landscapes may be assumed to have been vital for survival and adaptation. Moreover, if we recall the earlier discussion of emotions, there seem to be basic needs and goals common to all humans, having to do with sexual partnership, social co-operation, conflicts with other group members or groups, and so on. These social ingredients in our evolutionary background may very well have lead to some kind of cross-cultural conformity concerning the ability to comprehend and represent pictorially different types of humans (men, women, or children), facial features (such as the eyes and the mouth), facial expressions (e.g. sorrow or anger), bodily gestures (e.g. various kinds of movement or threatening gestures), and different kinds of social interaction or hierarchies.[66] These assumptions are admittedly somewhat speculative, and further thorough research remains to be done in order to achieve a deeper understanding of the occurring conformity of pictorial representations of types.

Furthermore, although such a conformity may exist to some extent, typicality is, of course, mostly determined by personal and/or sociohistorical presuppositions. Pictorial representations of all kinds of objects or subjects will be conceived as more or less typical, depending on one's previous experience and background. Not only objects, but also events, actions or action sequences may of course vary with regard to typicality (cf. the comment on stereotypical events as scripts in section 4.3). Such

66 For an interesting cross-cultural overview of renderings of eye patterns, see Koenig (1975).

representations of actions may be rather general in nature, e.g. representing sexual or erotic activities, dying, killing, walking, running, and so on. Moreover, certain types of actions may only be comprehensible within a highly culture-specific background, thus typicality ratings of pictures representing such events presuppose a high degree of previous knowledge or expertise on part of the beholder. For example, Christian scenes such as the Annunciation, the Crucifixion, or the Last Judgement demand such an expertise, and so do scenes from ancient Greece showing sequences from the Odyssey, or Persian miniatures illustrating events in the life of the prophet Mohammed.

Typicality ratings of pictorial representations can occur in many different respects. First, apart from any visual characteristics of the represented objects or events as such, also perspectival aspects may vary with regard to their experienced typicality (cf. Palmer, Rosch, & Chase's studies referred to in section 4.4). Second, stylistic features and pictorial conventions more or less familiar to the beholder may strongly influence his experience of typicality. Third, as already indicated in section 5.1, we may rate the typicality of pictorial representations on various levels. For instance, we can regard a picture as (i) an (a)typical picture (e.g. due to its degree of realism or abstraction), (ii) an (a)typical item in our everyday environment, (iii) an (a)typical item in art-specific contexts (e.g. museums or galleries), (iv) an (a)typical Christian painting, (v) an (a)typical Late Renaissance painting, (vi) an (a)typical Mannerist painting, (vii) an (a)typical Spanish painting, (viii) an (a)typical painting by El Greco, (ix) an (a)typical rendering of a male human body, (x) an (a)typical rendering of Christ, (xi) an (a)typical rendering of the Trinity, and so forth.[67]

Thus typicality ratings are possible in numerous respects and, I believe, occur actually quite frequently and spontaneously in our encounters with pictorial works of art, as well as pictorial representations in general. Moreover, matches and (especially) moderate mismatches between manifold such aspects and our expectations (or mental schemata) may indeed contribute to and enhance the felt pleasure, satisfaction, or the like.

Still, all kinds of objects or events may be judged in accordance with their experienced typicality on many levels. Mimetic-pictorial representations, on the other hand, tempt us to make such judgements on the basis of the *perceived visual similarity* between (pictorially exhibited) types of objects or events and our mental representations. Put in another way,

67 The painting I had in mind when constructing this example is "The Holy Trinity" by the Late Renaissance/Mannerist painter El Greco, c. 1577/79 (Madrid).

they immediately draw our attention to and focus upon these aspects. Although our mental representations of course depend more or less on our socio-historical and personal background, the very principle of gaining pleasure through pictorial representations as here described is, I believe, quite ahistorical in nature. Generally speaking, depictions of types are adapted to our cognitive-perceptual presuppositions, and discrepancies from our existing schemes necessitate cognitive processing, which, in turn, may lead to pleasurable experiences. There is a further, quite basic, mismatch which also should be taken into account, namely between the picture experienced as resembling something else *and* the simultaneous awareness that this something else does not exist (that is, only as a picture, not as a real object). It may very well be assumed, so I think, that this fundamental aspect of mimetic representations demands cognitive adaptation and thus can have hedonic effects.

Ideal Types

Now, apart from describing or prescribing mimesis as the representation of general types, numerous adherents of the MRT tradition have recommended the rendering of idealizations of things, persons, or events. A conceivable explanation of this demand could take into account the role of mental representations as implying goal-related ideals (such as, for example, outlined by Barsalou). However, let us first return to some of the basic tenets among art theorists concerning the rendering of ideals. As we have seen, numerous scholars have come to suggest that ideal objects (most notably perhaps the ideal human body) are something like composite examples constructed by having collected the perfect parts of many different individuals. Many anecdotes and suggestions on these lines have been put forward by writers such as Xenophon (referring to Parrhasius), Pliny (referring to Zeuxis), Dürer, Bellori, and so on. Another way of thinking about the ideal, as sometimes indicated by Reynolds, for example, is to regard it as the result of an averaging process, some kind of 'middle form' abstracted from the observation of manifold particulars. This latter interpretation amounts then to the construction of general types, which already has been discussed in previous sections.[68] The distinction between general and ideal types should perhaps not always be taken in a too strict sense, but probably rather seen as a matter of degree than as a matter of kind. Hence clear-cut ideal types can

68 For a distinction between two kinds of idealization as here described, see Clark (1984), pp. 9–11. See also Reynolds (1975), pp. xix–xx.

perhaps be conceived as explicitly manifesting beauty or otherwise valuable characteristics, while general types are more indirectly connected to something like beauty or truth (cf., by the way, also the studies referred to in section 5.1 according to which facial attractiveness is related to its averageness). Sometimes these latter notions have even been defined by referring to the general, and not all scholars have been attentive or sensible to a strict demarcation of the ideal from the general. There is a third possibility of thinking about the ideal in pictorial representations, namely by considering something like goal achievement or wish fulfilment. This interpretation exceeds, though it also, as I believe, to some extent includes, notions such as beauty and truth. In this section I shall focus on this latter version of idealization, which, then, seems to overlap with the others.

Beauty is a very broad and elusive concept, and I do not intend to discuss its possible meaning(s), constituents, or causes at length. Some brief remarks, though, seem to be appropriate. First, we may note that beauty is a notion which not only has been applied to physical or sensory properties of objects, but at least since ancient Greece also has involved moral and cognitive values, virtues and truth, character and political systems, and so on.[69] Second, beauty has at the same time been conceived as depending on mathematical ratios, order, proportions, symmetry, measure, harmony of parts, and the like. Third, objects have sometimes been considered to be beautiful due to the technical skill of the artist or perfection of workmanship. Fourth, and in some sense related to the former conceptions, beauty has also been understood in terms of appropriateness, suitability, and the adjustment to purposes and ends. Thus an object may be regarded as beautiful in the sense that it is constructed or has properties which are efficient for achieving certain goals. Such a view has been put forward explicitly during antiquity (by, e.g. Socrates [as recorded by Xenophon], Aristotle, and Cicero), the Middle Ages (by, e.g. St. Augustine and perhaps Thomas Aquinas), and also in subsequent periods, though the goals specified (whether moral, cognitive, hedonic, or straightforward pragmatic) may have varied.[70]

Now, the notions of beauty, utility, and the ideal have quite frequently been intertwined, and this is, as I think, hardly any coincidence. If we

69 See, for example, Tatarkiewicz (1970 a), pp. 113–114.

70 For ancient views on these lines, see Tatarkiewicz (1970 a), p. 98, pp. 102–103, pp. 151–152, pp. 207–208. For an overtly pragmatic conception of beauty, cf. Socrates' view (according to Xenophon); objects or subjects are "beautiful in relation to those purposes for which they are well adapted, bad and ugly in relation to those for which they are ill adapted" (ibid., pp. 109–110). Thus even a golden shield may be ugly and a dung basket beautiful if the former is badly and the latter well adapted to its purpose.
—For medieval views on these lines, see Tatarkiewicz (1970 b), pp. 16–17, p. 51, p. 62, pp. 255–256.

disregard any formalistic approaches and metaphysical or religious speculations concerning the nature of beauty or the ideal (e.g. seen as unanalyzable properties, Platonic Forms, or ideas residing in the divine mind), it is possible to give an account of ideal beauty, and the ideal in general, in goal-related and (more or less) pragmatic terms.

Let us return to the main subject of this study, namely pictorial representations. Numerous pictures throughout history show what we are inclined to call idealized men and women, actions, warriors, landscapes, and so on. In which way, first, have male and female bodies been idealized? Well, idealized presentations of the human body may very well be thought of as corresponding to ideals having an evolutionary basis, that is, concerning reproduction or choice of possible sexual partners, strength, power, and protection. Thus women may be rendered with "ideal" attributes such as youth, health, pronounced buttocks, hips, and breasts, while "ideal" men are characterized by health, broad shoulders and strong, muscular bodies (see figures 14 and 15).[71] Youth is perhaps not always as important for the ideal manhood as it is for womanhood due to men's longer period of fertility. However, there are of course numerous renderings of young men which may be regarded as general allusions to ideals of health and youth, but in a narrower sense also as manifestations of (overt or latent) homoerotic fantasies and wishes (which, for exempel, sculptures from ancient Greece seem to bear witness to).[72] Moreover, the ideal human body has since antiquity frequently, especially when it comes to sculpture, been depicted as a free-standing individual, as a sovereign and free subject not disturbed or constrained by a surrounding environment or other individuals.[73] In such renderings, then, goals such as freedom or the absence of threats and constraints seem to play an important role.

While some goal-related ideals manifested in pictorial representations seem to be the result of phylogenetic adaptions characteristic for humans as a species, others are of course dependent on culture-specific circumstances.[74] For example, humans rendered as persons practising a profession (which may be typical or well-known within a certain cultural context) may be idealized in that respect that they are given attributes (such as tools, clothes, gestures, and facial expressions) considered to be suitable,

71 Illustrations from Rentschler, Herzberger, & Epstein (1988), pp. 40–41.

72 Cf. Potts (1994), p. 91, pp. 123–127, for a discussion of Johann Winckelmann's and his generation's homoerotic apprehension of Greek sculpture.

73 Cf. ibid., pp. 145–146.

74 Cf. Rentschler, Herzberger, & Epstein (1988), pp. 36–49.

Figure 14. Human males emphasizing their shoulders in dress. Top: Yanomami Indian; center: Kabuki actor (Japan); bottom: Alexander II of Russia.

or indicating suitability, for activity-related goals. Thus, as already mentioned in section 2.3, Homer may be represented *qua* poet, such as "an inspired man in deep contemplation" or as "benevolent, dignified, removed"[75]. In the same way, we may think of all kinds of idealized (in a wide sense) "professionals": muscular, proud, fierce warriors; proud, autocratic, powerful kings and politicians; humble, respectful, contemplative priests and eremites; caring, tender, protective mothers, and so on.

Apart from idealizations of single individuals, we could also take the occurrence of ideal environments or activities into consideration. Ideal landscapes, for instance, may be related to goals such as fruitfulness (in the context of agriculture and farming), the absence of threats, optimal weather conditions, and the like. If we look at landscape paintings made by Annibale Carraci, Nicolas Poussin, and Claude Lorrain in the 16th and 17th centuries (which actually have been conceived as a specific art-historical genre called "ideal landscapes"), we may discern a number of goal states implicitly or explicitly manifested in their paintings.[76] First, we have ancient Mediterranean architectural and natural settings

75 Richter (1965), pp. 47–48, in an analysis of two portraits from the Early Classical period representing Homer.

76 For a discussion of the term "ideal landscape" as referring to the works by Carracci, Poussin, and Lorrain, see Rossholm Lagerlöf (1990), pp. 17–21.

77 See, however, ibid., which is an impressively detailed and thorough study of this genre.

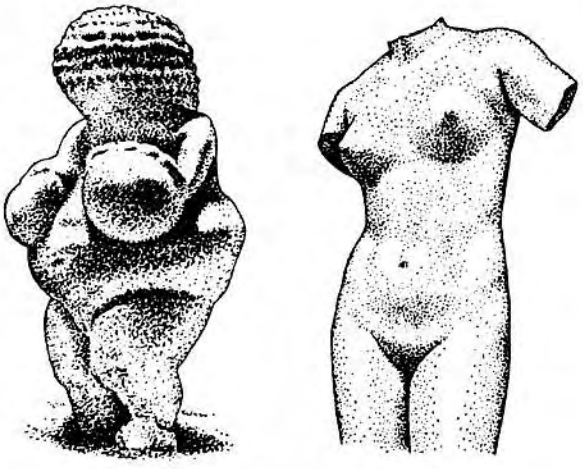


Figure 15. Left: Venus von Willendorf (Austria, c. 25,000–20,000 B.C). Right: Aphrodite of Cyrene (1st century B.C.)

reminding the beholder of a cultural dream, namely an Arcadian or Roman world. Second, we have human actors within these settings behaving in ways considered to be morally desirable (or being indicative of high morals). Third, these paintings, like many other landscape paintings, have a distinct visual order, that is, three different depth levels (foreground, middle ground, and background) as well as picture plane levels (with two framing side sections and a middle section). Much more can of course be said about the goals and wishes hinted at within this genre, but generally speaking they provide something like an ideal antithesis to reality.[77] In these Utopian worlds, social inequalities are at least reduced, nature is organized and less threatening, people behave in a morally admirable way, and so on. To take an example, Claude Lorrain's painting "Acis and Galatea" from 1657 might, as suggested by Margaretha Rossholm Lagerlöf, be interpreted as follows:

> "[This painting]...appears to us like a response to the most fundamental dreams of earthly happiness: youth, shared love, nature in pleasing and inviting mood, warmth without heat, evil and threat reduced to a mere reclining figure far away. There is neither violence nor shame to mar the delights of love...The shifting colours of ...[the] sea suggest a pleasing warmth alternating with bands of refreshing coolness." [78]

Well, what more could we wish for in life than this? Considerably more, of course; pictorial representations have throughout history been concerned with the rendering of all kinds of ideals, some of them fundamentally human and cross-culturally stable, while others are more or less related to socio-historical circumstances.

Now, the occurrence of ideal types in pictures may be considered from a psychological angle, more specifically by taking recent categorization research into account. As we have seen in section 4.3, people often construct and employ goal-derived categories. Such categories imply expectations or inferences as to how efficient (i.e. ideal) certain items or properties are for achieving desired goals. According to Barsalou, goal-derived categories may arise as the result of a secondary categorization (whereas the preceding primary categorization simply consists of the identification of an item as belonging to a certain category). Moreover, these categories can be established by conceptual combination, where pre-existing concepts are combined in new ways. Lastly, although the construction of such categories may be highly flexible, depending on the context and the categorizer's personal preferences and characteristics, there are nevertheless cases where interpersonally shared beliefs concerning underlying causal principles (in terms of goal-efficiency) have a constraining effect such that different people may establish similar categories.

It seems also reasonable to assume, as I believe, that there may be additional constraints on category formation due to the fact that people can share the same needs and wishes. Thus, if we recall the discussion about the nature of emotions in section 5.2, we may suspect that most people have pretty much the same goals concerning self-protection, avoiding pain, prolonging the lives of loved ones, and sometimes—at least with an intact amygdala—even gustatory sensations (perhaps not all of us regard ants as a delicacy, but hardly anyone would appreciate rocks or faeces). There are still further fundamental human needs such as youth, health, wealth, power, sex, and so on, which can be assumed to have constraining effects on manifold goal-derived categories. Apart from such basic interpersonally and cross-culturally stable goals, we may likewise conceive of other shared goals, though with a more limited range of acceptance due to, for example, specific historical, ideological, or religious conditions.

Pictorial representations of ideal types are, like those of general types, adapted to the cognitive demands and presuppositions of the intended

78 Ibid., p. 179.

beholders, although the mental representations referred to in these cases involve goal-related ideals. By means of conceptual combination applied to pictorial components, pictures of all kinds of ideal objects, subjects, activities, and environments may be constructed. As, for example, envisaged by Xenophon, Dürer, etc., ideal bodies can be rendered by combining good-making anatomical features, and in a similar way ideal landscapes, warriors, artifacts, and so on, are created.

What kind of function(s) do such renderings fulfil? Well, encounters with visual representations of states associated with the satisfaction of wants, dreams, and desires may of course be considered as rewarding in itself. However, we should probably not exclude the possibility that slight discrepancies from the beholder's conceptions of the ideal may contribute or perhaps even enhance the hedonic effects caused by a pictorial representation. Such moderate mismatches suggest or hint at states of perfection, and this, metaphorically speaking, "unfulfilled promise" seems to demand cognitive processing. Unfortunately no empirical research has been carried out in order to confirm this hypothesis, at least not to my knowledge; thus such an assumption must be regarded with some caution.

There is still a further function which the visualization of ideal and goal-related categories might have. Emotions are, as suggested in section 5.2, supposed to occur when expectations about the ability or probability to attain or avoid desired or undesired states, objects, or activities are violated. An interesting proposal taking emotional responses concerning fiction (in literature, the visual arts, film, and so on) into account has been put forward by Kendall Walton.[79] According to Walton, encounters with all kinds of fictitious events or things represented in the arts may give rise to something like quasi-emotions. When, for example, encountering representations of desired states, we do not actually feel happy as we would if such states had occurred in real life; rather, we perform some kind of make-believe or pretend activity. Quasi-emotional responses arise when we enter into a game of make-believe where the work is used as a substitute for real-life events, i.e. as a "prop". Thus, in our imagination, we can pretend that we are afraid, angry, sad, and so on (which we actually would be if the represented events were real). Imaginary fictional plays such as these are, as suggested by Walton, important as they "...serve to clarify one's feelings, help one to work out conflicts, provide an outlet for the expression or socially unacceptable feelings,

79 Walton (1978).

prepare one emotionally for possible future crises by providing 'practice' in facing imaginary crises" and generally helps us to come to terms with our actual feelings.[80]

Walton's account has been much debated and criticized for several reasons, a discussion of which, though, would fall outside the scope of this study.[81] Still, it seems unquestionable, I think, that encounters with pictorial representations may give rise to manifold complex and mixed emotions, which have to do with our imagination, empathy, and ability to project ourselves into other, even fictional, people's situations. Hence, we may feel happy when we recognize idealized environments, events, etc. as if we were there, as if in some kind of daydream triggered by a picture.

Some remarks concerning negative emotions seem to be necessary in this context. In this study I have mainly focused on the rendering of ideal types in pictorial representations. What about anti-ideals? Indeed, art history abounds with representations of things which have to be taken as negative rather than as general or ideal types. Poverty, ugliness, cruelty, sorrow, anger, despair, fear, suffering, hopelessness, and, not least, death and violence—well, these are only some examples of negative attributes which can be ascribed to numerous objects, subjects, situations, etc. represented in visual works of art. Interestingly, the rendering of anti-ideals appears, historically, to have received quite limited attention among scholars theorizing about the arts (cf., however, Plato's view on art which has morally bad content, which is said to be sometimes morally defensible; section 2.3, note 48). For this reason, a thorough discussion of the anti-ideal has been left aside in this study, which of course is somewhat unfortunate. It is possible, however, to conceive of the representation of negative types as employing and appealing to a broad spectrum of negative emotions on the part of the beholders (such as fear, anger, sorrow, and so on), perhaps as some kind of invitation to participate in a make-believe game of emotions in Walton's sense. But this assumption also deserves more detailed discussion, of course.

5.4 Concluding Remarks

IN CLOSING THIS WORK, some final remarks seem to be appropriate.

First, as we have seen, categorical distinctions in strict essentialist terms must be regarded as highly problematic, not only because of the philosophical arguments put forward by Wittgenstein and others, but

indeed because of a host of empirical evidence from categorization research. The view that categories are formed around prototypical examples and have a graded structure may have consequences for our understanding of a variety of domains such as (i) art (vs. non-art/pictorial representations); (ii) aesthetics (vs. empirical research); (iii) philosophy (vs. empirical research), (iv) cognition (vs. emotion), and (v) perhaps even regarding categories as such. An important thesis argued for in this book is that a rigid separation of philosophical aesthetics from empirical studies, such as envisaged by analytic aestheticians in particular, is untenable. Moreover, it seems unreasonable to defend a strict demarcation of the aesthetic from the non-aesthetic and, accordingly, aesthetic from non-aesthetic preferences or evaluations. Is typicality aesthetically relevant? Yes and no; it is often relevant for our preferences and evaluative judgements of numerous objects commonly classified as "aesthetic objects" (or "art"). On the other hand, it is probably also an important determinant of preferences in other contexts.

Second, we could ask in what way the research into category formation and object recognition outlined in this study has a direct bearing on the perception of pictorial representations. Well, first of all, in numerous of the experiments carried out pictures (such as outline drawings, photographs, and so on) have actually been employed as stimulus material (and subjects have sometimes even been asked to draw pictures). Thus the general conclusions or hypotheses reached are to some extent based upon the use of pictorial representations, though, as we may recall, the use of artificial categories or linguistic entities (e.g. nouns or statements) frequently occurs. Moreover, a number of studies—referred to at the beginning of this chapter—which take these hypotheses into account have of course explicitly investigated people's reactions and preferences towards pictorial material and motifs. Finally, as I believe (and as Gombrich and Baxandall have argued), artists or other producers of pictures have usually taken the cognitive—or schematic—presuppositions of their intended audience into consideration (which for economic or other reasons has been crucial for allowing them to practice their profession).

Third, I have chiefly stressed the importance of taking empirical/psychological research into account, but we should of course be aware of the possibility of incorporating yet further empirical disciplines (such as anthropology or sociology) into aesthetic inquiries. Although I have

80 Ibid., p. 24.

81 However, see e.g. Neill (1991), Carroll (1990), pp. 68–79, and the literature referred to.

decided to focus upon psychological research (with ingredients from neurology and anthropology), other approaches are undoubtedly conceivable and likewise relevant for achieving a deeper understanding of aesthetic phenomena.

Fourth, this study has not been intended to elaborate any *method(s)* for estimating the capacity of mimetic representations of types to evoke hedonic effects, nor has it anything (explicit) to say about the value of such representations. Rather, it has been an attempt to sketch underlying *principles* concerning the enjoyment we frequently gain from encounters with mimetic pictures. Still, it may be argued that a strict demarcation of preference judgements from value judgements is difficult to uphold (perhaps we should rather think about them in terms of differences in degree than differences in kind). Moreover, value judgements might be given further strength and plausibility by considering investigations concerning people's preferences.

Fifth, we may further ask to which domain this study, taken as a whole, belongs. As a matter of fact, I work at a department of art history; still, this is not an art historical work. Neither is it a psychological, a philosophical, or an aesthetic work, at least not in a prototypical sense. Its interdisciplinary character exceeds to some extent these classifications. Such a cross-disciplinary approach might be considered to be fruitful, though with the disadvantage that some subjects have been treated in a too superficial way, or are superfluous, at least for some readers. My intention has been to present a study that is of some concern to psychologists and philosophers interested in aesthetics as well as for clear-cut aestheticians and art historians. Most notably perhaps, I would be satisfied if this work were regarded as relevant by art historians. Generally speaking, I believe that art history, with its methodological difficulties and its elusive field of inquiry, demands a considerable theoretical awareness and competence by its practitioners. A rigid demarcation of art theory from art history is probably untenable; both fields should be regarded as mutually interdependent. Thus the questions asked and suggestions made in this rather theoretical study might hopefully be of some importance for (prototypical) art history research.

Unfortunately, concrete art history examples are largely absent, and it would of course have been a substantial improvement if this not had been the case. Any efforts to incorporate a variety of pictorial representations from different cultures and historical periods would, however, have been enormously time-consuming. Still, numerous examples which might illustrate some of the proposals made can be found in Ernst Gombrich's

impressive work "Art and Illusion". Furthermore, I would like to direct the reader's attention to the reproduction on the front page of René Magritte's painting "Les valeurs personelles" (Personal Values) from 1952. This quite naturalistic picture shows a bedroom containing a magnified comb, wine glass, matchstick, shaving brush, and bar of soap. Other items, such as the wardrobe, bed, and rugs are of normal size (compared to the size of the room). The room is to some extent a normal room, though its walls seem to be transparent, showing a sky filled with clouds. Most of the items are easily identifiable, indeed very typical for contemporary beholders from the Western Hemisphere. However, other beholders stemming from remote cultural environments, say, relatively isolated tribes in the Amazon rainforest, might regard these objects as highly unusual, if they are recognized at all. Even contemporary "normal" beholders would perhaps not experience all of the items as extremely typical (personally I have never seen such a bar of soap, and the shaving brush is a rather anachronistic item, at least in Sweden in 1999). Thus, although I am convinced that a radical form of relativism with regard to category formation and experienced typicality seems to be problematic (for reasons already discussed), we should nevertheless also stress the historicity and culture-dependence of typicality ascriptions. Now, these items are particularly atypical due to their relative sizes. The magnification of usually small, everyday objects is disturbing, and the room appears to some extent congested. On the other hand, it is a very atypical room because of the seemingly transparent walls which create a freeing impression of breaking out, thereby contrasting with this congestion as well as the usual sheltering function of such an intimate room. These deviations from our expectations, this interplay with typical and atypical aspects creates some kind of cognitive/affective tension and may result in hedonic effects on the part of the beholder.

The title "Personal Values" is of course also significant. If we recall our earlier discussion of goal-derived categories and goal-achievement, the rendered objects may additionally be interpreted as ideal types for realizing certain goals regarding personal care (presumably of a man), forms of amusement (such as smoking or drinking wine), perhaps even indicating a social life, as well as ambivalent goals regarding the safety of a private room and at the same time the longing for freedom and contact with the outer world. We may further note that the represented items are in a state of perfection in the sense that they are clean (they have no stains or the like), seemingly untouched, undamaged, the bed is perfectly made, and so on (there are, interestingly, some deviating cracks

in the ceiling). Thus the objects seem also to hint at goals of functional efficiency and cleanliness. I think that this picture perfectly illustrates some of the most important ideas put forward in this study.

Numerous issues touched upon in this book would deserve further discussion and elaboration, not least in order to give us a thorough understanding of people's interest in pictorial renderings of types. Research into visual perception, object recognition, and cognitive as well as emotional processes has made impressive progress over the last few decades, and we have no reason to doubt that additional progress will be made. This should, I believe, also have implications for theoretical discussions about the arts which certainly would profit from taking empirical/psychological findings into account. In consequence, then, this work must be regarded as an unfinished proposal, as most works in this field probably are, though in this case (and, I believe, also in others) to a considerable extent due to the empirical research which has yet to come.

something to be an aesthetic experience (or, put in another way, an essential category-specific experience resulting from encounters with members of the category "art"). Although it may be admitted that the functioning of artworks sometimes may involve this kind of pleasure, one should at the same time be aware of the possibility that further characteristics play a significant role in this respect. An artwork's capacity to evoke pleasure because it depicts typical phenomena could be such a characteristic. Accordingly, preference-for-prototypes may very often, though not necessarily, constitute (or participate in constituting) common experiences or feelings of pleasure caused by works of art. Prototypicality may thus be regarded as an important ingredient of aesthetic experience, but it is by no means *all* that matters. It should be pointed out, then, that the production of prototype-related pleasure should not be taken as the essential function of art, nor does it seem reasonable to assume that any other effects (such as "disinterested pleasure" or Beardsley's "aesthetic experience) may serve as possible candidates in this respect. Thus "aesthetic experience" should probably be conceived of as a cluster concept (as perhaps concepts in general), including various forms of experience or emotion, though some of them may be thought of as *more* essential or typical than others.

Furthermore, although not all visual works of art depict or portray something else, numerous objects which fall under the concept "art" have as a matter of fact a mimetic function. Mimetic representations may perhaps be taken as prototypical and "best" examples of the category "art" (at least in the Western hemisphere), whereas non-figurative art may belong to the same category by means of family resemblance.[15] Now, with regard to mimetic works of art, it would not be implausible to assume that the type-character of the depicted objects is aesthetically quite relevant. Because of the salient recognizability of the subject matter, the identification and classification of the motif would probably occur as an immediate and spontaneous act. If typicality actually plays a role in aesthetic preference, a mimetic work of art could be appreciated due to the depicted object's position within a category, i.e. whether it is prototypical (or—as we shall see—to some extent atypical) of that category.

As we have seen, Boselie doubts whether prototypical or easy-to-classify stimuli actually are a source of pleasure for higher organisms (due to the limited survival value of being able to grasp such stimuli). Rather,

15 For a study indicating that a high degree of realism is correlated with typicality judgements of the category "painting", see Shortess, Clarke, Richter & Seay (1998).

less prototypical patterns should be more pleasant because of the fact that they "challenge one's powers of assimilation, requiring new modes of responding."[16] Indeed, it may be claimed that a certain preference for prototypicality does not exclude the possibility of striving for deviations, thus a subjectively experienced interaction between typicality and novelty may affect our likes or dislikes. In reply to Boselie's objections, Martindale admits that the relationship between prototypicality and preference not always is monotonical, but may J or U-shaped.[17] Typical as well as atypical exemplars may be preferred over moderately typical exemplars. Interestingly, then, if the relationship between prototypicality and preference has a U-form, Boselie's circularity argument fails, because they are obviously logically independent variables. Anyhow, preference judgements concerning typical or atypical exemplars involving ideals do not necessarily have to be circular. Subjects may admit that something is typical, that is, valuable—or rather efficient—for fulfilling a certain goal. On the other hand, the subjects may dislike (or be indifferent to) the goals in question or the category taken as a whole. In the latter case a preference for an exemplar, previously rated as typical, would be different from preferring the exemplar due to its ability to realize certain goals. At least in principle it is possible to design experimental studies that take account of the various relationships between the subjects' judgements of typicality, of goal-achieving efficiency, of goal-value, and of preference. Furthermore, as pointed out by Hekkert and Snelders, subjects participating in experiments can be given explicit instructions according to which typicality ratings should be made independently from personal likes or dislikes.[18] Actually, such instructions have been used in numerous studies on category structure, starting from the seminal work by Rosch.[19]

16 Ibid., p. 103.

17 Martindale (1996), p. 110.

18 Hekkert & Snelders (1995), p. 153.

19 In one of Rosch et al.'s studies, these instructions were formulated as follows: "This study has to do with what we have in mind when we use words which refer to categories. Let's take the word *red* as an example. Close your eyes and imagine a true red. Now imagine an orangish red...imagine a purple red. Although you might still name the orange-red or the purple-red with the term *red*, they are not as good examples of red (as clear cases of what *red* refers to) as the clear 'true' red. In short, some reds are redder than others. The same is true for other kinds of categories. Think of dogs. You all have some notion of what a 'real dog', a 'doggy dog' is. To me a Retriever or a German Shephard is a very doggy dog while a Pekinese is a less doggy dog. *Notice that this kind of judgment has nothing to do with how well you like the thing; you can like a purple-red better than a true red but still recognize that the color you like is not a true red. You may prefer to own a Pekinese without thinking that it is the breed that best represents what people mean by dogginess*...[D]on't worry about whether it's you or people in general who feel that way. Just mark it the way you see it." Rosch & Mervis (1975), pp. 588–589 (my emphasis).

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This index does not include names or subjects mentioned in the notes.

ERRATA

p. 56: Even a passage as early as that quoted above ~~**the passage quoted above**~~ indicates that the so-called theory of imitation is far from as simple and uncomplicated as numerous descriptions in various textbooks on aesthetics or art history suggest.

p. 95: Most of this debate's intricacies and the arguments used for and against ~~**are**~~, however, do not concern us in the present context.

p. 124: (ii) Beauty is intimately connected with, or even defined as, the experience of pleasure.

p. 145 (note 102): Berlyne (1971), **p. 82**

p. 277: SOLSO, Robert L.: "Cognition and the Visual Arts", Cambridge, Mass.: MIT Press, 1994

p. 281: Baumgarten, Alexander Gottlieb 86

p. 284: Ortony, Andrew **240**

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