Ambiguous Artefacts:
Towards a Cognitive Anthropology of Art

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Submitted for the degree of
Doctor of Philosophy in Anthropology
Hilary 2012

Dedication

Pour mes parents, Robert et Marianne Jucker, avec amour et profonde reconnaissance.

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Abstract

This thesis proposes elements for a cognitive anthropology of visual art. Most works of art are human-made objects that cannot be approached in purely functional terms, and as such they frustrate important cognitive expectations that people have about artefacts. For this reason, it is hypothesised that art triggers speculation about the artist's intention, and that it is intuitively approached as a form of communication. By application of Bloom's (1996) theory of artefact categorisation, and Sperber and Wilson's (1986/1995) relevance theory of communication, a series of predictions are generated for art categorisation (or definition), art appreciation, and art cultural distribution. Two empirical studies involving more than 1,000 participants tested the most important of these predictions. In study 1, a relationship was found between how much a series of works of art were liked and how easy they were to understand. Study 2 comprised four experiments. In experiment 1, a series of hyperrealistic paintings were preferred when they were labelled as paintings than when they were labelled as photographs. In experiments 2a and 2b, a series of paintings were considered easier to understand and, under some conditions, were preferred, when they were accompanied by titles that made it easier to understand the artist's intention. In experiment 3, a series of artefacts were more likely to be considered "art" when they were thought to have been created intentionally than when they were thought to have been created accidentally. The results of studies 1 and 2 confirmed the predictions tested, and are interpreted in the framework of relevance theory. The art experience involves speculation about the artist's intention, and it is partly assessed as a form of communication that is constrained by relevance dynamics. Implications for anthropology of art, psychology of art, and the art world are discussed.

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Chapter 1

Introduction

This thesis proposes an anthropological approach to art that is informed by cognitive psychology, or "cognitive anthropology of art." In this introduction, I explain what such a cognitive anthropology of art could be, what it would be about, and what its limitations would be. I will begin with the two main claims of this thesis: firstly, the art experience involves speculation about the artist's intention; secondly, the artist's intention is intuitively thought to communicate something (section 1.1). If true, a cognitive anthropology of art, which I will define as an approach to art as a cultural phenomenon that is constrained by how the human mind works (1.2), has the potential to re-address a series of old questions in three domains of the art experience: art categorisation (or definition), art appreciation, and art cultural and cross-cultural distribution (1.3). I will then discuss two limitations of this thesis, and specify what type of art it targets (1.4). The chapter ends with a thesis outline (1.5).

1.1 Ambiguous artefacts

An iconic work of modern art, *The Treachery of Images* (1928-29) is a painting by Belgian surrealist artist René Magritte. It shows a single smoking pipe on a plain background. As one can see in figure 1, the pipe has been painted as realistically as possible. The shape, colours, and other attributes of a typical pipe have been faithfully reproduced in detail, as in a photograph or an illustration for an encyclopaedia. The pipe, however, is accompanied by a large caption that states in French that "This is not a pipe." Magritte's point, of course, is that this is just a *representation* of a pipe, and that no one, as he commented with humour

later, could stuff and smoke such a "pipe" (Torczyner, 1977, p. 71).[1] As the title of the work suggests, then, images can be misleading, because they resemble the things that they represent, but at the same time are not—and cannot be used like—those things.[2] From this point of view, art constitutes what the historian of art Ernst Gombrich has famously called an "illusion" (Gombrich, 1960/2002).

The figure originally presented here cannot be made available online for copyright reasons.

Figure 1
René Magritte, *The Treachery of Images* (1928-29), oil on canvas (original in colour). Works of art may resemble the things that they represent, but at the same time they cannot be used like these things. Even works of art that do not resemble the things that they represent (or that do not represent anything at all) cannot be used in purely practical or functional terms.

Magritte's pipe, of course, is an extreme example and it cannot be applied to all art. To begin with, not all representations in the arts resemble what they represent—Picasso's

[1] I use the American Psychological Association (APA) system of referencing in this thesis (*Publication manual of the American Psychological Association*, 2010). This departure from the conventional system of referencing used by anthropologists, usually that of Harvard, was approved by the Director of Graduate Studies at the School of Anthropology (personal communication, 3rd January 2011, copy of email available upon request). I provided three justifications for asking to use the APA system of referencing instead of that of Harvard. First, the APA system is similar to that of Harvard: it also uses author names and dates in the main text with full, unnumbered references at the end of the manuscript. Second, I cite a relatively large number of psychological publications in this thesis, and for this reason I considered that the APA system would be better adapted (especially for citing publications that have multiple authors). Third, the APA system provides guidance on how to report experimental methods and results. This thesis features two empirical studies (comprising four experiments), and I thought that the APA system would allow me to report them more clearly and consistently. That said, I use UK spellings in the entire thesis.

[2] Other artists made similar statements. Gombrich reports an anecdote about Matisse, who, "when a lady visiting his studio said, 'But surely, the arm of this woman is much too long,' . . . replied politely, 'Madame, you are mistaken. This is not a woman, this is a picture" (1960/2002, p. 98).

cubist paintings may represent an object or a human face, but do not resemble how these appear in reality, where everything can be seen from a single viewpoint only. Further, some art forms do not use representation at all—Rothko's multiform paintings do not seem to represent something in particular, but simply consist of a juxtaposition of two or three bands of colour that create a pleasing contrast "to the eye."

But maybe in another, more general sense, all works of art, and not only those that resemble what they represent, are ambiguous artefacts. Just as Magritte's pipe cannot be stuffed and smoked, most works in the visual arts cannot be used as functional artefacts. Paintings, sculptures, and installations cannot be readily manipulated, and are neither created nor used to achieve purely practical goals, which distinguishes them from tools, furniture, or dwellings. This is important, because there is psychological evidence that humans automatically approach artefacts in terms of possible use or function. For example, as all parents know, babies systematically manipulate novel objects, apparently as a way to discover their properties and to determine how they might be used—in psychological jargon, their "affordances" (J. J. Gibson, 1979; Rochat, 1989). Similarly, adults assess artefacts partly in terms of possible use and function. For example, they categorise artefacts according to how these might be used, and not only how they look (Keil, 1986; Rips, 1989). Further, this tendency to approach things in terms of function or purpose (both in children and adults) seems so strong that it applies not only to artefacts but also to natural objects. For example, children attribute purposes and functions to living and non-living natural objects (Kelemen, 1999a), and adults, too, favour so-called "teleological explanations" for natural phenomena when they have to make a quick judgement (Kelemen & Rosset, 2009).

If there is a natural[3] human tendency to approach artefacts in terms of manipulability, practical use or function, and purpose, then there is no reason to think that works of art constitute an exception. When confronted with a work of art, be it a painting, a sculpture, or an installation, people would intuitively wonder how it might be used or what it is for. But a work of art, precisely, cannot be approached in such terms. Although it is a physical object, it cannot necessarily be readily manipulated, has no affordances, and has no obvious practical use or function; and although it was intentionally created by a human agent (the artist) it is not clear why, or what its "purpose" might be. It is from this general, psychological point of view that all works of art are ambiguous artefacts, because as human-made objects they trigger functional expectations associated with artefacts, but at the same time frustrate these expectations.

If works of art are ambiguous artefacts, how are they approached by the human mind? In this thesis, I will argue that, first, *works of art trigger speculations about the artist's intention*. As a work of art has no obvious practical use or function, why did the artist create it? It is not possible to know why without speculating about the artist's intention. To illustrate, let us contrast a functional artefact, such as a tool, with a work of art. A tool will be recognised as such if it carries out a specific function; and if this tool carries out this function, we can directly infer that its maker intended it to do so. This tool, then, may be assessed without speculation regarding the maker's intention; recognising its function is sufficient to categorise it and use it. For a work of art, the contrary is true: as it

[3] Throughout this thesis, I use the term "natural" in McCauley's (2011) sense of "maturational naturalness." Maturational naturalness refers to the behavioural and cognitive abilities, such as walking and talking, that humans acquire through "normal" development, without need of specific instruction or training. In the case of artefacts, research suggests that children, over the course of their "normal" development, come to approach human-made objects in terms of purpose and function (I will return to this point in chapter 2, subsections 2.1.2 and 2.2.1). As Barrett (2011b, pp. 25-30) has rightly emphasised, the advantage of using the concept of maturational naturalness is that it does not imply that these so-called natural abilities would be "innate" or "hard-wired," or that either "nature" or "nurture" alone would constrain human behaviour and cognition.

carries out no obvious practical use or function, it cannot be assessed without speculation about the artist's intention. In other words, with functional artefacts the artefact maker's intention is "transparent," whereas with works of art it is not and requires "rumination." Second, I will argue that *works of art are intuitively perceived as acts of (non-verbal) communication*.[4] As the artist's intention is apparently not to create a functional artefact, it would be automatically assumed that the work of art "means something"—in other words, that the artist's intention is to "communicate something" or "convey a message" that would need to be "understood" by the viewer.

It is not difficult to see how this could influence the art experience. If art triggers speculation about the artist's intention, the perceived "quality" of a work of art would partially depend on how easy it is to understand that intention. And if the artist's intention is intuitively thought to communicate a message, the perceived quality of a work of art would also depend on how "interesting" this message is considered to be. Works of art are ambiguous artefacts, and for that precise reason people would want them to convey an unambiguous message. As a work of art cannot be used functionally, it would be expected to offer something else in exchange, which is symbolic value. Magritte's pipe cannot be stuffed and smoked, but it conveys an important message about the nature of images and how we deal with them.

That said, I need to clarify here in which sense I use two related terms that are important in this thesis. First, what do I mean when I write that a work of art involves *speculation* about the artist's intention in people (first claim of the thesis)? By "speculation," I do not mean that people engage in conscious, reflective, or theoretical thinking about the work of art or about the artist's intention (although of course they can

[4] In this entire thesis, I will write "acts of communication" for "acts of (non-verbal) communication" when I refer to works of art.

also do so). What I mean is that people will automatically, and not necessarily consciously, wonder what the work of art could mean or what the intention or goal of the human agent who created it could be, and that this might affect people's judgements of the work of art as a result. In other words, people's speculation about works of art would be less reflective than *intuitive*, which leads me to the second important term used in this thesis.

In fact, what do I mean when I write that people *intuitively* approach works of art as acts of communication (second claim of the thesis)? I refer to a distinction that is commonly made by psychologists between two cognitive systems of processing, and which have been called the "reflective" system and the "non-reflective" (or "intuitive") system (Barrett, in press; Kahneman, 2003; see also Sperber, 1997). Here is how Barrett (in press) characterizes these two systems:

> [The] "intuitive" or "non-reflective" [system] is characterized by rapid, automatic, reflexive, seemingly effortless, and often relatively emotional processing. The reflective reasoning system is slower, deliberate, effortful, and relatively affect-free. Importantly, the automatic deliverances of the intuitive system serve as default presumptions for the reflective system. (second section, para. 5)

In other words, when I write that people *intuitively* approach works of art as acts of communication, I mean that one of people's "default presumptions" about works of art is that these would be acts of communication. This does not mean, however, that people are *right* or *justified* to approach works of art as acts of communication. And this does not mean, either, that people *cannot* engage in more elaborate or reflective thinking about art, as art critics, art theorists, and anthropologists of art do. All I claim is that people have *intuitions* about art—as they have in many other domains—and that these intuitions probably impact the art experience. In the following sections of this chapter, I will have the opportunity to further clarify and illustrate what these art intuitions could be and what role they could play in how people approach works of art.

1.2 Towards a cognitive anthropology of art

To investigate the two main claims of this thesis—that art triggers speculation about the artist's intention, and that art is intuitively approached as a form of communication—I will use research in anthropology, philosophy, and psychology. This thesis, however, is neither an anthropological, or philosophical, or psychological approach to art; rather, it is an attempt to serve as a basis for what one could call a "cognitive anthropology of art." In the following sections I want to explain what such a cognitive anthropology of art could be and, therefore, what this thesis is trying—and, crucially, what it is not trying—to achieve. In fact, one of the difficulties inherent to an interdisciplinary approach such as cognitive anthropology is that the researcher has to convince scholars in two (or more) disciplines—that might disagree on important points—not only that the research is relevant to what they are both doing, but also that it is not the same thing, and therefore that it cannot be judged on the same basis.

As I understand it, current cognitive anthropology is a sub-discipline of anthropology that, to put it simply, *takes into account how the human mind works in its approach to cultural phenomena*.[5] Cognitive anthropologists believe that how humans naturally acquire, store and retrieve information affects the form and content of concepts that become widely shared, that is, cultural ideas (Sperber, 1996). Of course, cultural context impacts individual thought, but contrariwise features of human cognition that are more recurrent than any particular cultural phenomenon serve as selective filters for what is likely to become cultural. Ordinary human cognition informs and constrains cultural

[5] For a recent collection of studies in cognitive anthropology, see Kronenfeld, Bennardo, de Munck, and Fischer (2011). For a review of less recent forms of the discipline, see D'Andrade (1995). Cognitive anthropology can also be seen as a sub-discipline of "culture and cognition" studies (see, e.g., Knight, 2008, p. 3). For reviews of studies in the culture and cognition field see Carruthers, Laurence, and Stich (2006); and Nisbett and Norenzayan (2002). For current trends in culture and cognition studies, consult the website of the International Cognition and Culture Institute (http://www.cognitionandculture.net/).

expression. I consider that cognitive anthropology has been particularly successful in the analysis of religion and ritual (see, e.g., Boyer, 2001; Cohen, 2007; and Whitehouse, 2004), and I will sometimes use examples from cognitive anthropology of religion—and from cognitive science of religion, see Barrett (2011b)—in my attempt to lay the basis for a cognitive anthropology of art.

If cognitive anthropology is an approach to cultural phenomena that takes into account how the human mind works, what would a cognitive anthropology of art look like? At the most basic level, it would acknowledge that the way works of art are produced, appreciated, and circulated in a culture—the art experience—are at least partially constrained by the cognitive architecture and processes that are shared by humans. For example, the fact that works of art are artefacts has important cognitive consequences for how people deal with art. As I have argued in the previous section, it means that works of art activate functional expectations associated with artefacts, but at the same time frustrate these expectations. As this is the case, one may hypothesise that works of art trigger speculation about the artist's intention, and that as a result they are intuitively thought to "communicate" something, which are the two main claims of this thesis.

Throughout this thesis, it should become clearer what cognitive anthropology is, and what a "cognitive anthropology of art" could be. I want to say here, however, that this thesis, more modestly, proposes *elements* for a cognitive anthropological approach to art. I do not pretend that these elements are exhaustive or sufficient to constitute a cognitive anthropology of art. As the subtitle of this thesis indicates, my research is rather a first step *towards* the study of art in the culture and cognition context. That said, I will now present the research domains and questions that are relevant to such a cognitive anthropological approach to art, and then discuss its limitations.

1.3 Research domains and questions

As an approach to cultural phenomena that takes into account how the human mind works, a cognitive anthropology of art has the potential to address a series of exciting questions to investigate how people deal with art, both at the individual level and cultural level. In this section I discuss the three research domains and questions that are investigated in this thesis: (1) art categorisation: what do people intuitively consider to be "art"?; (2) art appreciation: what do people intuitively consider to be "good" art and "poor" art?; and (3) art cultural distribution: what art is likely to become "contagious" and therefore widespread within and between cultures? As these questions have long interested anthropologists, philosophers, and psychologists, they will constitute a first opportunity for me to illustrate the ways in which a cognitive anthropology of art relates to other disciplines and at the same time how it has the potential to challenge them.

1.3.1 Art categorisation: What is art? The first research question is that of what people consider to be "art." Although the question may sound "philosophical"—philosophers have long been interested in what should be called "art," and have proposed many definitions that have all been debated, see for example Crowther (2007), Davies (1991), or Harris (2010)—it seems that people have strong intuitions about what art is and what it is not, and that such judgements matter to them. When the Tate Gallery, in London, awards a prestigious prize to a work of art that appears to be an empty room with the lights going on and off, or when it purchases a can of faeces for $61,000,[6] laypeople strongly protest that these pieces are not works of art and that therefore they do not deserve institutional support (see figure 2). That people have intuitions about what art is or what art

[6] The empty room is Martin Creed's *Work no 227: The Lights Going On and Off* and it was awarded the Turner Prize in 2001. The can of faeces is Piero Manzoni's *Merda d'artista* (*Artist's Shit*, 1961) and it was purchased by Tate Gallery in 2002; for a discussion of *Merda d'artista* as an extreme case of Dada and more details (including excerpts of Tate's official response), see Dutton (2009, pp. 201-202) .

should be is also manifest when they use the concept not to deny something the status of art, but when they apply it to things that philosophers or other specialists would not call art; for example, when they claim that a popular TV show is "art," or that a footballer is an "artist."

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Figure 2
Creed's empty room (left) and Manzoni's can of faeces (right). For people who have no training in the visual arts, it is probably difficult to accept that these two candidates are works of art.

Confronted with the question of how people use the concept of art, philosophers may approach it in terms of whether these judgements are "right" or "wrong." For example, using an institutional definition of art (Dickie, 1974), they might argue that the empty room with the lights going on and off and the can of faeces are works of art, because both belong to an established tradition of modern art, that of conceptualism and Dada, and also simply because a majority of the art world consider that they are works of art. Using the same definition, they would argue that a popular TV show is not art and that a footballer is not an artist, because they do not belong to any art tradition, and because the art world has not recognised these as works of art or artists.[7] If so, then philosophers of art would conclude

[7] Note, however, that this does not mean that a popular TV show could never be art or that a footballer could never be an artist. If tomorrow a member of the art world declares—just as Creed did for his empty room and

that people are not justified to restrict or extend the use of the concept of art as in the cases above, and that this is probably due to a lack of "education" in the visual arts.

For a cognitive anthropologist, the main problem with such an approach is that it does not take into account the fact that people appear to have strong intuitions about what art is;[8] from this point of view, what is important is not whether people are "right" or "wrong" in their judgements, but just that they make judgements. In other words, a cognitive anthropologist is interested not in what people *should* think, but in what people *actually* tend to think. There may be good philosophical reasons to accept that the empty room with the lights going on and off and the can of faeces should be considered works of art, but the fact is that few people will accept them.

That there is a difference between what people should think and what people actually tend to think is well known by psychologists, and here I will use the first example from cognitive science of religion. An experimental psychologist, Justin Barrett has carried out research on how people intuitively think about the concept of God. In one study, Barrett and Keil (1996) asked university students whether they agreed that God possesses a series of characteristics such as omniscience, omnipotence, ubiquity, and so on. As expected, the participants provided answers that were "correct" from a theological point of view; for example, 94% considered that God can read minds and knows everything (p. 229), just as one would be taught in a religious education class. In the second part of the study, participants had to read a short story, and remember it after a short delay. In one of the stories, a boy in danger of drowning addresses a prayer to God for help; although God is answering another prayer, he responds and saves the boy. When they had to retell this

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Manzoni for his can of faeces—that a popular TV show is art or that a footballer is an artist, then they should be considered as such.

[8] There are, of course, exceptions. For example, philosopher of art Harold Osborne (1981) claimed that people intuitively know what a work of art is.

story, a significant percentage of the participants misremembered that God first stopped to answer the other prayer, then answered the boy, and then "returned" to the other prayer, a temporal succession that was not written in the original story. In other words, people who professed that God is ubiquitous and can perform several mental activities at the same time were now reasoning as if God were subject to the same kind of limitations as humans. It appears, then, that what people should think about God—what Barrett (1999) has called "theological correctness," see also Slone (2004)—is not the same as how they use the concept in real life situations, such as when they have to retell a story. Cognitive constraints (in this case that of memory) that are shared by humans mean that they "anthropomorphize" the concept of God.

Similar constraints may apply to how people conceptualise art. Just as theologians provide believers with a "theologically correct" definition of God, philosophers provide art lovers with a "philosophically correct" definition of art. These definitions "make sense" and believers and art lovers theoretically accept them, but in real life situations their intuitions can override them. That these intuitions are at least as strong in the domain of art as in the domain of religious beliefs is probable if one considers that they seem to apply not only to people who have no training in the visual arts but also to members of the art world. When the Tate awards, each year, its Turner prize, not only laypeople protest: "serious" journalists as well as professional artists such as the stuckists never miss the opportunity to raise their voices.[9] Similarly, not all art theorists easily accept that candidates such as Creed's empty room and Manzoni's can of faeces are works of art; when Marcel Duchamp exhibited a photograph of his signed urinal for art appreciation, it created controversy in the art world, and when Susan Vogel, an anthropologist, exhibited a Zande net in the

[9] See, for example, Brockes (2002, November 5), published in *The Guardian*. The stuckists regularly complain about contemporary art on their official website: http://www.stuckism.com.

Center for African Art (New York), Arthur Danto (1989), a famous art theorist, considered that it was not a work of art.[10] In other words, even art "specialists" seem to have some intuitions about what art is.[11]

For a cognitive anthropology of art, therefore, what matters is not what art should be, but just what people intuitively tend to think it is. What is it, then, that people intuitively consider to be art? It cannot be only what they were "taught" is art; if it were, then one could not explain why they refuse to apply the concept to Creed's empty room or Manzoni's can of faeces, and why they extend it to popular TV shows or football. In this thesis, I argue that one of the most basic intuitions that people have about works of art is that they cannot be functional artefacts.[12] If works of art could be approached in terms of practical use or function, then they would just be processed like other artefacts, and one could not account for the existence of the concept of art.

1.3.2 Art appreciation: What is good art? The second question that a cognitive anthropology of art has the potential to address from a fresh perspective is that of art appreciation. People not only have intuitions about what a work of art is, they also have intuitions about what a "good" or a "poor" work of art is. If it seems obvious that people make judgements of "goodness" or "quality" all the time and in many domains, including art, several approaches can again be used to investigate how and why. For example, a philosopher may approach the question of art appreciation in terms of "aesthetics" and "judgements of taste," and tackle the problem of the "objectivity" of such judgements (for a

[10] As Gell (1996) has shown, Danto's arguments to deny the net the status of art were similar to those of laypeople.

[11] This could be experimentally investigated. It is possible that art specialists, when they have to make a quick decision, would be less generous in their judgements about what art is than when they have the time to think about it.

[12] It is interesting to note here that readymades, such as Duchamp's bottle rack, snow shovel, or urinal, were first functional artefacts. This might explain why it is difficult to accept that they are works of art for people who are not art experts. I will return to this point in subsection 1.4.3 below.

recent introduction see Scruton, 2009). In contrast, an anthropologist or a sociologist may emphasise that art appreciation always occurs in a particular cultural context.

In his seminal book *Distinction*, sociologist Pierre Bourdieu (1984/2010) argued that art preferences have little to do with aesthetic factors but rather reflect social classes and how these interact with each other. Using an impressive set of quantitative data, Bourdieu showed that aesthetic preferences differ between classes, and that class is a statistically significant predictor of museum attendance (on the last point see Bourdieu, Darbel, & Schnapper, 1990). For Bourdieu, this means that judgements of taste are not based on the "intrinsic" qualities of a work of art—whether it is formally beautiful, whether it is emotionally moving, or whether it displays effort and skill, etc.—but on factors that need to be understood in the context of class struggle and in terms of symbolic violence. From this point of view, the "high" art and the "refined" taste of the privileged classes of the society are used to better establish their domination over lower classes and their "popular" art and "simple" taste, as a way to symbolically claim that their "distinction," hence the title of the book, is a sign of their "superiority."

Leaving aside what even well-disposed contemporary sociologists, such as Nick Prior (2005), may object to in Bourdieu's approach to art appreciation, it poses a problem that seems important to the cognitive anthropologist. If class alone were playing a role in aesthetic preference, then one could not explain why some artists and art forms are liked by all classes, and why other artists and art forms are disliked[13] by all classes. Furthermore, it

[13] "Dislike" may sound like a strong word, but here one has to remember that some works of art and art forms simply never become the object of art appreciation. There are plenty of artists that never emerge, and there are plenty of works of art and art forms that are not successful enough to be appreciated by a wide audience. Although it might be for a variety of reasons, that include objective quality, trends in the art world, and institutional support, the fact that some works of art and art forms are simply forgotten and never become "cultural" is another thing that a Bourdieusian approach to art appreciation does not take into account.

would not explain why within each class some artists and art forms are preferred over others.

A quick look at the descriptive statistics that are available in the appendices of Bourdieu's *Distinction* (1984/2010, pp. 503-553) illustrates that point. For example, in the main survey carried out between 1963 and 1968 in France, a sample of 1,287 respondents were asked who were their three favourite painters out of a list of fifteen.[14] Thirty-two percent of the participants representing the working classes reported that they preferred Raphael, whereas only 1% reported that they preferred Breughel; in contrast, 18% of the participants representing the upper classes preferred Raphael, and 27% preferred Breughel (p. 528), which shows that aesthetic taste can strongly differ between classes. Other artists received remarkably stable ratings across classes however. For example, Van Gogh was one of the preferred artists of 48% of the working classes, 47% of the middle classes, and 49% of the upper classes; and Utrillo was one of the preferred artists of 20% of the working classes, 18% of the middle classes, and 20% of the upper classes (p. 528). If class only were playing a role in aesthetic preferences, then one could not explain why Van Gogh did consistently better than Utrillo in all classes of participants. If Van Gogh is preferred to Utrillo by workers, shopkeepers, craftsmen, technicians, commercial employees, executives, engineers, secondary teachers, lawyers, and doctors—these are some of the class fractions that the sample comprised—then it must be for another reason, and it might simply be that Van Gogh's art is naturally more attractive to the human mind.

In the same survey, participants were also asked which subject would make a beautiful photograph. A sunset received 90% of the votes in the working classes and 64%

[14] The fifteen painters were: Braque, Breughel, Buffet, Dalí, Goya, Kandinsky, Leonardo, Picasso, Raphael, Renoir, Rousseau, Utrillo, Van Gogh, Vlaminck, and Watteau. The respondents were not provided with a sample of illustrations of these artists' works.

in the upper classes; on the other hand, the bark of a tree received 17% in the working classes, and 48% in the upper classes (p. 528), which again shows that aesthetic preference can differ between classes. However, some subjects did consistently better than others in all classes. For example, all classes considered that a little girl with a cat is a more promising subject (range across classes: 40-75%) than a metal frame (6-49%), cabbages (2-37%), and a car crash (0-17%). Is this really surprising? From a cognitive point of view, it makes sense that a representation of a human being and an animal offers more possibilities than materials and vegetables.

For a cognitive anthropology of art, therefore, the question of art appreciation cannot be reduced to purely sociological factors. If aesthetic preference were just an indicator of class membership, one could not explain why some artists and some art forms are preferred by all classes; in other words, why in some cases art appreciation does not allow a Bourdieusian "distinction" between classes to be made. A cognitive anthropology of art proposes that art appreciation is also constrained by how the human mind naturally works. For example, if there is a natural tendency to approach works of art as intentional acts of communication—because they frustrate functional expectations associated with artefacts—then the quality of works of art would intuitively be assessed on the basis of the clarity of the artist's intention and of the relevance of the message that is conveyed; to put it differently, art appreciation would depend on how easy it is to understand the artist's message, and how interesting that message is. That seems plausible at least in the case of the preferred aesthetic subjects mentioned above. Isn't it more difficult to understand why an artist would paint a car crash rather than a little girl with a cat? And isn't more interesting to look at a little girl with a cat rather than a metal frame?

1.3.3 Art cultural distribution: What art is contagious? As I have just suggested, some artists and some aesthetic subjects seem naturally more successful than others. The working classes like Raphael and consider that a sunset would make a beautiful photograph, whereas the upper classes prefer Breughel and the bark of a tree. At the same time however, all agree that Van Gogh is a great artist and that a little girl with a cat is one of the best subjects one can photograph. The success of some works of art and some art forms can be "contagious." They can be so appreciated that they become widely spread in a culture and even across cultures. For example, some form of realistic representation is used in the arts of almost every culture around the world; in contrast, abstract expressionism or futurism occurred in particular historical and cultural contexts. Of course, many factors constrain the success and the spread of art as a cultural phenomenon, but here I want to focus again on those that can be approached specifically by a cognitive anthropology of art.

Howard Becker's book *Art Worlds* (1982/2008) constitutes a famous example of a sociological account of how art forms spread—or fail to spread—in a culture. Discussing, in chapter 10, the rapid rise and fall of stereography in comparison with traditional photography, which succeeded internationally in the long term, he identifies a series of factors that seem to have little to do with the "aesthetic" qualities of these then competing art forms. For Becker, the success of any art world—of any art form—is dependent on factors such as technological innovation and resources, cooperation between the members of the art world that is based on a system of conventions, institutional and state support, as well as museum conservation. According to Becker, photography became more successful than stereography not because it was "artistically" better, but because it made a better use of the available resources and was better adapted to the cultural constraints of that time. For

example, Becker emphasised that photographers, led by Alfred Stieglitz, managed to distance themselves from the "commercial" forms of photography and to convince members of the "traditional" art world that they should be considered as artists; Stieglitz broke with the "amateur" tradition of local camera clubs, opened a gallery that exhibited both photographs and modern art, founded a "fine arts" journal, and married artist Georgia O'Keeffe (pp. 340-347).

More generally, Becker has criticized the idea that some art forms become culturally successful and widespread because they are naturally appreciated by a large number of people, which he called a "theory of universals" (p. 366). For Becker, "art works last for other reasons besides being universally appreciated" (p. 367). One of these reasons is that "art worlds engage in a continuous process of selection, looking over possibilities and incorporating some of them, weeding out some people and things formerly, but no longer, thought well of" (p. 367). In other words, members of the art world arbitrarily select what is art and what is not art, and what deserves to become culturally widespread, just as in the case of stereography vs. photography. As a result, many candidates are not selected on the basis of their "intrinsic" qualities:

> The process of selection through which art worlds operate and art reputations are made leaves out most of the works which might be, under other procedures of definition and selection, included in the corpus of what is recognized as art, good or competent art, and great art. The reevaluations of work which take place at other times or through the efforts of people from elsewhere show that the content of the "art" category is in fact contingent, not so because much because Shakespeare's reputation varies, as because most of the Ferdinand Chevals and Simon Rodias, the Conlon Nancarrows and other unheard composers, the quiltmakers and peasant cart decorators are left out; for everyone we eventually hear of, hundreds never come to anyone's attention and never get counted in. (p. 368)

The claim that there are plenty of artists who never emerge and many art forms that are not successful enough to be appreciated by a wide audience, no one will object to. But how can one be so sure that this is for "contingent" reasons? That some artists or some art forms are

culturally more successful than others does not prove that it is because they were arbitrarily selected. In fact, they could simply have been selected because they offered more possibilities to the members of the art world and their audience in the first place. In the case mentioned above, Becker himself acknowledged that stereography had some objective, including material and physiological, disadvantages in comparison with photography: stereographs require the use of a device, the stereoscope; they can be visually difficult to look at and necessitate "technical skill" from the viewers; they can provide only one type of artistic pleasure, that of the illusion of three-dimensionality (1982/2008, pp. 317-318); in contrast, photography involves none of these limitations.[15]

Another, more important problem with Becker's account is that it cannot explain why some art forms become *cross-culturally* successful. One of the founders of the anthropology of art, Franz Boas (1927/1955) wondered why several Indian tribes of the North Pacific Coast of America favour an art form that is known as "split representation." In split representation, see for example the Tsimshian painting of a bear in figure 3, the animal looks as if it had been cut in the back from head to tail and then "unfolded" on the sheet; as a result, it appears "flat" and one can see all its parts. Following Boas, Claude Lévi-Strauss (1958/1963, chapter 13) observed that split representation occurs in cultures that could not possibly have been in contact: there are instances of it in the art of ancient China, in Maori art (New Zealand), and finally in Caduveo (South America) art (see figure 3).[16] If culture and conventions only were constraining the spread of art forms, how could

[15] Becker has also shown that stereography received early and significant industrial support: "The industrialization of stereograph production took place in a relatively short time. . . . At the height of the stereograph's popularity, manufacturers were publishing as many as a million cards a year." (pp. 322, 324). If stereography failed to achieve durable success, it cannot be because it was less well "organised" than photography, then.

[16] It is interesting to note here that cubism could also be considered as a form of split representation. In cubism, too, all the parts of the subject (or several points of view on the subject) are represented, and as a result it also appears "flat" and "distorted."

one explain the remarkable recurrence, in very different places and times, of such a peculiar art form as split representation?

Figure 3
Cross-cultural instances of split representation. Clockwise from top left: Tsimshian painting of a bear (after Boas, 1927/1955, figure 223, p. 225); Kwakiutl painting of a beaver (after Boas, 1927/1955, figure 160, p. 188); Caduveo drawing of a painted face (after Lévi-Strauss, 1958/1963, plate 8); Maori drawing of a tattooed face (after Lévi-Strauss, 1958/1963, plate 7). How can one explain the recurrence of such a peculiar art form?

Boas proposed a technical explanation: split representation would simply result from an application of the methods of sculpture to flat surfaces (1927/1955, pp. 223-224). Because they are three-dimensional, sculptures allow representation of all the parts of a subject; to

achieve the same result on a flat surface, the only solution is to split the subjects in parts and then "reassemble" it on the sheet (in figure 3, the tail of the beaver is a good example of this). As for Lévi-Strauss, he interpreted split representation as an expression of the universal tension between the individual and society (1958/1963, chapter 13). In Caduveo society, a face painting symbolizes the social existence and status of the individual who wears it; by using split representation when they reproduce face paintings on flat surfaces, Caduveo Indians would indicate that the individual is subjected to society, because in split representation it is the human face (the individual) that is adapted to the pattern of the painting (to society), not the other way around.[17] In Lévi-Strauss's own terms:

> Split representation of the face . . . expresses a deeper and more fundamental splitting, namely that between the "dumb" biological individual and the social person whom he must embody. . . . Split representation expresses the strict conformity of the actor to his role and of social rank to myths, ritual, and pedigree. This conformity is so rigorous that, in order for the individual to be dissociated from his social role, he must be torn asunder. (1958/1963, pp. 259, 264)

If Boas and Lévi-Strauss have ultimately related art to society, they have also posed the question of possible cross-cultural determinants of art. How could a cognitive anthropology of art contribute to the discussion? Considering the case of split representation, a fact that strikes me is that it makes it possible to convey a larger quantity of information about the subject depicted than any other form of representation on a flat surface.[18] In split representation, all parts of the animal are represented, and this is why it appears "flat" and "distorted." In other words, it seems that it was important to the artist to convey a maximum amount of information about the animal, and that he did not hesitate to split it and distort it to achieve that result. That would make sense from a cognitive point of view.

[17] If another form of representation was used, such as perspective, that is indeed the pattern, not the human face, that would appear distorted.

[18] In fact, even the use of perspective does not allow achieving this. The use of perspective may better convey how the subject appears in reality, but it no case does it allow to represent all the parts of the subject.

If art is partially about communicating information, then all other things being equal (such as aesthetic quality), the more information conveyed in a work of art, the better the work of art. Although there is some psychological evidence that split representation is intuitively preferred for this reason (Deregowski, 1969, 1970),[19] and although I believe that similar cognitive constraints may explain the rise of cubism, I will unfortunately not be able to develop this idea in this thesis. I hope, however, that it gives a good example of how a cognitive anthropology of art could contribute to the question of the cross-cultural recurrence of some art forms. I will also discuss in more detail, in chapter 3 (subsection 3.2.1), another example of a possible cross-cultural determinant of art (the fact that in many cultures representations in the arts look like the things that they represent).

1.4 Limitations

It should now be clearer what a cognitive anthropology of art could be. It would first take into account that the art experience is at least partially constrained by how the human mind naturally works. Because works of art are artefacts that cannot be approached in terms of practical use or function, they would trigger speculation about the artist's intention, and the artist's intention would intuitively be assumed to communicate something. If so, then a cognitive anthropology of art has the potential to revisit a series of questions in three important domains of the art experience, that is art categorisation (or definition) or what people consider to be "art," art appreciation or what people think is "good" art, and art distribution or what art is likely to become culturally and cross-culturally successful as a result.

[19] Children, too, seem to consider that detailed pictures are "better" than vague pictures, perhaps because detailed pictures convey more useful information (Allen, Bloom, & Hodgson, 2010, experiment 1; DeLoache, 1995). I will return to this literature in chapter 2, section 2.3.

As I have shown, these questions are not new but have long interested anthropologists, philosophers, and sociologists. The attempts of these scholars might be described in terms of what art "should" be, or what art "really would be." For art theorists, some candidates such as Creed's empty room or Manzoni's can of faeces *should* be considered works of art, because indeed by application of the most recent "philosophically correct" definition of art, one has no reason to argue that they should be refused the status of art. For sociologists, it is *illusory* to think that works of art are appreciated for their "aesthetic" or "objective" qualities, because *in reality* aesthetic preferences only reflect "distinctions" between competing social groups, and because the spread of art forms is determined largely "conventionally" by the members of the art world. These approaches satisfy the cognitive anthropologist only partially. In practice, ordinary people do not always apply the "philosophically correct" definitions of art proposed by art theorists, and they do not let their social membership alone dictate what art they should prefer; in short, they have intuitions about art. As a result, art forms spread within and between cultures following rules that are not arbitrary, and which constitute the main topic of investigation of a cognitive anthropology of art.

In this section, I want to give two further examples of how a cognitive anthropology of art relates to and at the same time differs from other approaches. Although these two examples relate to the two main claims of the thesis, they illustrate what the thesis does *not* try to achieve, and therefore may be considered as limitations of a cognitive anthropology of art as I understand it. That said, the first example might interest the art theorist, and the second example might interest the psychologist.

1.4.1 Criticism. The first claim of this thesis is that art involves speculation about the artist's intention. As a work of art cannot be approached in terms of practical use or

function, people would intuitively wonder what else the artist intended to achieve when he or she created it. The idea that people approach works of art in terms of what the artist intended to do, to mean, or to communicate to the audience is highly commonsensical and here I will let a philosopher of art, Denis Dutton (2009), illustrate it for me:

> What could be more reasonable than the notion that authors and artists have purposes and intentions in producing their works and that understanding these is decisive in understanding their art? Common sense tends to take it for granted that the artist is to some degree a communicator and that whatever meaning the artist's work possesses—though not its quality—is largely determined by the artist. Artists tend to agree: how many painters or novelists have responded to bad reviews with the bitter complaint, "The critic didn't understand what I was trying to do"? According to this view, the work of art is a bridge to the mind of the artist, a public object that may unlock the secrets of the artist's inner life. And since the artist may be a man or a woman of special gifts and insights, those secrets will be well worth knowing. To get the most from a work of art, we will want to understand it "properly," in terms of what its creator intended. (p. 167)

As reasonable as these intuitions seem to be, the idea that the artist's intention is necessary to understand a work of art and to judge of its value has been highly debated by art critics and art theorists (for a review see Livingston, 2005). In an influential paper that dates back to 1946, William Wimsatt and Monroe Beardsley were the first to denounce what they called the "intentional fallacy."[20] For Wimsatt and Beardsley, an art critic commits the intentional fallacy when he or she confuses the types of "evidence" that are relevant to assess a work of literary[21] art (pp. 477-478). For example, a poem provides both "internal" and "external" evidence. The internal evidence is the poem in itself (the words it comprises, the meanings it conveys, the metre it uses, etc.), whereas the external evidence is anything that is not, strictly speaking, part of the poem (the statements the poet made about his or her intentions, the interpretations of the audience, biographical information or

[20] The phrase "intentional fallacy" may sound ambiguous; it refers not to a fallacy committed on purpose, but to the fallacy that consists of taking into account the artist's intention in art criticism; hence, it may have been more appropriately called the "intentionalism fallacy."

[21] Much of what has been written on art and intention, indeed, has been in the field of literature. It is not difficult, however, to see how it can apply to the visual arts (see, e.g., Dutton, 2009, pp. 167-177).

anecdotes about the poet, etc.). For Wimsatt and Beardsley, the use or rather misuse of external evidence "leads away from the poem" (p. 479) and is therefore not justified in art criticism. This seems to be a fair point. In the case of biographical information, is it really justified to judge an artist on the basis of, say, his or her political opinions, or religious affiliation, or sexual orientation? Probably not, or at least not as the only basis for criticism; after all, a work of art should be judged first according to its "intrinsic" merits.

But for Wimsatt and Beardsley there is another, more important reason why the use of external evidence constitutes a fallacy: a work of art is not necessarily the same thing as the artist intended it to "be" or to "mean." In the case of literature, once the writer makes the work public, there is no guarantee that the readers will correctly understand what the writer wanted to do or to mean. As Wimsatt and Beardsley have put it, the work of art "is detached from the author at birth and goes about the world beyond his power to intend about it or control it;" in other words, the work of art "belongs to the public" (p. 470). Beardsley (1970, pp. 18-20, 1981, pp. 18-19) subsequently gave concrete examples of such discrepancies between "authorial meaning" (the meaning intended by the writer or external evidence) and "textual meaning" (the meaning conveyed by the text in itself or internal evidence): a word can acquire new meanings once the text has been written, and these new meanings are not those that were intended by the author; a typographical mistake can change the meaning of a sentence, but of course this meaning is not the one the author wanted to convey; and a word that the author meant to be understood metaphorically may be interpreted literally, or vice-versa.

In France, semiotician Roland Barthes (1968/1977) soon echoed the anti-intentionalist critique by demanding "the death of the author" in a famous (although

remarkably short) paper.[22] As Wimsatt and Beardsley, Barthes first criticized the common attempts to reduce a work of art to the life of its creator or other external considerations:

> The *author* still reigns in histories of literature, biographies of writers, interviews, magazines, as in the very consciousness of men of letters anxious to unite their person and their work through diaries and memoirs. The image of literature to be found in culture is tyrannically centred on the author, his person, his life, his tastes, his passions, while criticism still consists for the most part in saying that Baudelaire's work is the failure of Baudelaire the man, Van Gogh's his madness, Tchaikovsky's his vice. (p. 143)

Further, Barthes argued that the text or the work is "more" than the author or artist. "To give a text an Author is to impose a limit on that text" (p. 147). A text contains more layers and meanings than the author is aware of, it is a "tissue of quotations drawn from the innumerable centres of culture" (p. 146). From this point of view, the author is just a "copyist" or "scriptor," whose "only power is to mix writings, to counter the ones with the others, in such a way as never to rest on any of them" (p. 146). If true, then the author's intentions have little value to approach a text—and hence the author must die—because for the reader the text will always constitute something richer, and different, than what was possibly intended by the author.

In summary, it may not be reasonable to approach art in terms of the artist's intention. An artist is not his or her work of art, and there is no guarantee that we will ever understand what he or she really wanted to "achieve" or "say." Is this a problem for a cognitive anthropology of art? I consider that it is not, for a reason that illustrates both the originality and the limitations of this thesis. In subsection 1.3.1 above, I have argued that art theorists provide art lovers with a "philosophically correct" definition of art; art lovers consider that this definition is reasonable and theoretically accept it, but in real-life

[22] Michel Foucault (1969/1979), Jacques Derrida (1972/1982), and the postmoderns in general similarly echoed Wimsatt and Bearsdley's intentionalist critique. Earlier than this, one could also mention, of course, Proust and his *Contre Sainte-Beuve*. Further, Barthes (1968/1977, pp. 143-144) argued that one can find elements of anti-intentionalism in the works of Mallarmé and Valéry, as well as in surrealism.

situations they sometimes tacitly refuse to apply it, or on the contrary they extend it. I now argue that, just as there is a difference between what people should consider to be art, and what people intuitively think is art, there is a difference between how people should approach a work of art, and how people intuitively approach a work of art; in other words, what people should think and do is not the same as what they actually tend to think and do. There may be good philosophical reasons not to take into account the artist's intention when judging of the quality of work of art, but the fact is that people, as the anti-intentionalists have observed, are interested in biographies and anecdotes about their favourite authors; or judge a work on the basis of the author's sex, religion, or political affiliation; or, much more simply, do not understand what the author meant or understand what they want to understand. In short, people commit the intentional fallacy all the time, and as a result the author never dies.

In other words, a cognitive anthropology of art cannot provide the basis for an art "criticism." It cannot specify what people should consider is art or which elements they should take into account to judge of the quality of a work of art. All it can do is study people's intuitions in these domains, and ask how and why these intuitions naturally occur and therefore influence the art experience. By doing this, a cognitive anthropology of art is again taking into account the way the human mind works. It is probably not true, as Barthes claimed it, that the audience is "without psychology" (1968/1977, p. 148); if it were, it would not commit the intentional fallacy, which, from a psychological point of view, is not a "fallacy" but just a cognitive constraint.

It is ironical that the anti-intentionalists themselves seemed pretty aware that people have strong intuitions about art.[23] They also thought that denouncing the intentional fallacy

[23] In particular, Wimsatt and Beardsley have related the intentional fallacy to an "author psychology" (1946, p. 477) that people would use when they approach a work of literary art. They have also identified later

and demanding the death of the author would "free" the readers and audiences. Wimsatt and Beardsley wrote: "The poem is not the critic's own and not the author's . . . . The poem belongs to the public" (1946, p. 470). Likewise Barthes: "Classical criticism has never paid any attention to the reader" (1968/1977, p. 148). From a psychological point of view, however, it is the anti-intentionalists who do not pay attention to the readers, because they refuse them the right to use a strong intuition that they have concerning a work of art: that in most cases it can be (correctly) understood in terms of the artist's intention. To the intentional fallacy of the reader, then, corresponds the anti-intentionalism fallacy of the critic. From this point of view, a cognitive anthropology of art seems more democratic, because it does not say to the audience how it should approach art, but it only studies how it tends to approach art, and why it tends to approach it as it does; after all, the work of art belongs to the public. And if, as Barthes concluded, "the birth of the reader must be at the cost of the death of the author" (p. 148), then it must also be at the cost of the death of the critic.

1.4.2 Beauty. As I have just argued, people have intuitions about art, and an important one is that it can be approached in terms of the artist's intention, which is the first claim of this thesis. The second claim is that art is approached as a form of communication. When speculating about the artist's intention, people would intuitively assume that this intention is to "communicate something." But here one may want to stop me and object that, just like the critics mentioned in the previous section, I am not taking into account another, fundamental intuition that people have about art. This intuition is that works of art should first of all be appreciated for their aesthetic properties or beauty.[24]

(1949) the "affective fallacy," which similarly implies that strong psychological factors play a role in art criticism.

[24] In this thesis, I do not make a strict distinction between "aesthetics" and "beauty," just as in common usage. I use *aesthetics* as a "set of principles concerned with the nature and appreciation of beauty, especially in art,"

When people dislike a work of art, it is not necessarily because they do not understand what the artist wanted to say; it can simply be because they consider it not aesthetically pleasing. In fact, an audience can perfectly understand what a painting is about, but consider it ugly and therefore dislike it; on the contrary, an audience can like another painting not because it is "about" something—as I have already said, not all art is about something—but because it constitutes a harmonious arrangement of forms and colours, such as in an abstract painting or decorative pattern. In this section, I discuss the reasons for which I have decided not to focus on beauty in my cognitive anthropological approach to art. None of these reasons imply that intuitions about beauty in art do not exist or are not important—I believe they are. Rather, they reflect the originality of a cognitive anthropology of art, as well as the limitations inherent to any thesis.

A first set of reasons for not taking beauty into account has to be defended before philosophers of art; it relates to the simple fact that art is only one form of beauty. As I have mentioned above, people make judgements of beauty not just about works of art, but also about artefacts in general, as well as living and non-living natural objects—a piece of furniture, a car, a fruit, a flower, a human face, or a landscape can all be judged as more or less beautiful, but none of them are works of art (at least not until a Dada artist declares that they are). Further, some works of art and art forms seem little interested in the production of beauty. Ugly, disturbing, graphic works of art can be considered masterpieces (see some paintings of Goya, or some poems of Baudelaire); and conceptual art is primarily about ideas, not beauty. In other words, if art does not have a monopoly on

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and *beauty* as a "combination of qualities that delights the aesthetic senses" (both definitions Concise Oxford English Dictionary, 11th edition revised). The reasons for not making a strict distinction is that mainstream philosophers of art use these terms as synonyms since Kant (except, of course, when they call them into question), and that in this thesis I do not use these terms to critically discuss them, but just to contrast philosophical (or neurological, see below subsection 1.4.2) approaches to art with a cognitive anthropological approach to art.

beauty, and if art is not necessarily about beauty, then beauty does not need to be the main interest of a cognitive anthropology of art (although of course it might be one amongst others). A second, more important set of reasons has to be asserted before psychologists, who might approach beauty in terms of perceptual properties that are naturally pleasing to the eye, such as balance, symmetry, contrast, and so on, and who might be tempted to "reduce" the art experience to such properties. It will give me a first opportunity to explain in what sense my approach, although it takes cognition into account, is not a psychology of art.

The art experience necessarily involves physiological, neurological, and lower-level cognitive constraints (for an introduction that can also be used as a stimulating textbook, see Solso, 1994). The physiology of the human eye, the specializations of the visual cortex, and the way we process the forms and colours that compose a painting, all make possible and at the same time limit the art experience, that is, how art is produced by artists and how it is received by viewers. Experimental psychologists of art have long been aware of this (for a history of the psychological interest in art, see Funch, 1997), and have produced a large body of evidence which shows that "seeing" and "understanding" the simplest visual stimulus is anything but simple.

For example, the gestaltist psychologists have shown that the way we understand a painting is constrained by how we perceive and organise the visual units—any line, form, and pattern—that compose it (see, e.g., one of the most famous gestaltist and psychologist of art, Rudolph Arnheim, 1954). A series of so-called "laws," of which we are little aware, govern the way we perceive visual stimuli and therefore our experience of art. For example, the law of similarity means that we tend to group similar elements (e.g., on the basis of form, colour, or size), which allows us to distinguish patterns in a picture, and

therefore to recognise what it represents; similarly, the law of closure or continuity ensures that we automatically "fill in the blanks" (e.g., we perceive that a partial circle still is a circle), which allows us to understand a figure even on the basis of missing information; a more general law, that of *prägnanz* (German for "pithiness," or "pregnant with meaning," see Solso, 1994, p. 96), would make us prefer regular, stable, and harmonious forms and visual stimuli. From this point of view, the skilful artist is the one who is able to correctly use the gestaltist laws of perception—or play with them, as in op art, see Roger Shepard (1990)—in order to produce works of art whose *prägnanz* will please the viewers.[25]

The idea that art is first of all about beauty, understood as a set of formal properties such as balance, symmetry, contrast, and so on, is also implicit in the musings of famous neurologists such as Vilayanur Ramachandran and Semir Zeki. In his attempt to lay the basis for a "science of art," Ramachandran identified a series of "Eight laws of artistic experience," or a "set of heuristics that artists either consciously or non-consciously deploy to optimally titillate the visual areas of the brain" (Ramachandran & Hirstein, 1999, p. 15). Some of these laws (e.g., grouping) are directly borrowed from gestalt psychology, but Ramachandran argued that the "essence of art" is the "peak shift principle" (1999, p. 17). In animal behaviour, the peak shift principle means that a rat that has been "rewarded for discriminating a rectangle from a square . . . will respond even more vigorously to a rectangle that is longer and skinnier that [*sic*] the prototype" (p. 15); in other words, the rat will prefer "amplified" rectangles. For Ramachandran, art, too, is about "amplifying" forms. In many works of art, he argued, the forms and colours of things are not "natural" but are amplified and constitute "super-stimuli" for the human brain (2011, pp. 206-217);

[25] I have chosen to mention the gestaltist psychologists because they can be considered as the pioneers of "experimental aesthetics," but of course other schools have been interested in how we perceive and process visual stimuli, see, for example: Berlyne (1974); Crozier and Chapman (1984); Marr (1982). For a review of recent studies, see, too, Silvia (2006).

from this point of view, "all art is caricature" (1999, p. 18).[26] Why would the amplification of forms be so attractive however?

Another neurologist, Semir Zeki (1999) argued that "the function of art is . . . an extension of the function of the brain, [which is] the seeking of knowledge in an ever-changing world" (p. 12). For Zeki, a good work of art is a work of art that shows us the "essence" of things, because the brain is mainly interested in "knowledge about the *enduring* and *characteristic* properties of the world" (p. 5, my emphasises). That is from this point of view that the amplification of forms would be rewarding for the human brain: a caricature or an outline drawing discards all the redundant information and focuses on the essential parts of the subject, that is those which are unique to it (for a discussion see, too, Ramachandran & Hirstein, 1999, pp. 17-20, who gave the example of the amplification of differences between female and male figures in Chola art; see too footnote 189 in this thesis). Zeki has also shown that the visual cortex is specialized in at least five areas (V1 to V5), and that this probably influences the art experience (1999, chapter 9). A representational and an abstract painting activate different areas of the visual cortex, and constitute different experiences from this point of view; similarly, kinetic art is processed in the area V5, whose cells are insensitive to form and colour, and Zeki argued that this is precisely why artists such as Calder or Tinguely did not use colours in their mobiles and machines—they would have "felt" that this would be disturbing for the viewer (chapter 16).[27]

As interesting as these perceptual and neurological constraints may be, what do they tell us about the art experience? Well, first of all, that artists could not produce art and

[26] For reviews of recent studies in neurology of art, see De Smedt and De Cruz (2010), and Zaidel (2005).
[27] For a harsh, although well-informed critique of Ramachandran and Zeki, see Hyman (2010). See, too, the special issue on art and the brain edited by Goguen (1999) in the *Journal of Consciousness Studies*.

that viewers could not enjoy it if, say, we were unable to group similar elements in a meaningful form, or to distinguish between figure and ground; and that, say, a person suffering from achromatopsia could not enjoy colourful paintings but mobiles, whereas a person suffering from akinetopsia could enjoy colourful paintings but not mobiles. However, the problem is that these are only necessary, not sufficient conditions for the art experience. Once a figure has been recognised by a neurotypical viewer, it will trigger further thoughts, speculations, and interpretations; in other words, the art experience does not end, but merely begins with the perception of forms and colours (see also Donald, 2006, who has made a similar claim).

As I will report in chapter 3, social anthropologists have shown that art objects are not just beautiful forms and colours. They also convey a significant amount of information about the people who produce them—who they are and what is their role in society, what are their institutions and their myths, how they conceive of the genders and the sacred, amongst others. Historians of art, too, have shown how poor the art experience would be if it were just about processing more or less harmonious forms and colours. Introducing his famous distinction between iconography and iconology, Erwin Panofsky (1955/1970, chapter 1) observes that the understanding of an apparently simple[28] scene such as a representation of the Last Supper or an apparition of the Christ, requires in fact previous knowledge and familiarity with themes that are not "visible" in the work of art itself:

> While we believe that we are identifying the motifs on the basis of our practical experience pure and simple, we really are reading "what we see" according to the manner in which objects and events are expressed by forms under varying historical conditions. . . . Iconographical analysis, dealing with images, stories and allegories instead of with motifs, presupposes, of course, much more than that familiarity with objects and events which we acquire by practical experience. It presupposes a familiarity with specific themes or concepts as transmitted through literary sources,

[28] "Simple" in the sense that everyone could recognise what is represented in the work of art. In a representation of the Last Supper, everyone could recognise a group of men at a table.

> whether acquired by purposeful reading or by oral tradition. Our Australian bushman would be unable to recognize the subject of a Last Supper; to him, it would only convey the idea of an excited dinner party. To understand the iconographical meaning of the picture he would have to familiarize himself with the content of the Gospels. When it comes to representations of themes other than Biblical stories or scenes from history and mythology which happen to be known to the average "educated person," all of us are Australian bushmen [*sic*]. (pp. 60-61)

If this does not convince the perceptual psychologist or the neurologist, the case of forgery is another example of why works of art are not just beautiful forms and colours. As a (successful) forgery looks just like the original, it should involve the same perceptual and neurological processes, and as a result it should be considered as beautiful and worthy as the original. Most people would disagree however. When a famous painting is discovered to be a forgery, its economic value plummets and its owner feels he or she has been "duped." If art appreciation were only about processing more or less harmonious forms and colours in specialized areas of the visual cortex, there would be nothing wrong with a forgery, because aesthetically it does not differ from the original. For developmental psychologist Paul Bloom (2004, chapter 3; 2010, chapter 5),[29] we do not value forgeries as much as originals because they have different "histories" underlying their creation: "The original has a special history, as it came into existence through a creative process, far more impressive than the technical skill of a forger" (2010, p. 140).[30] In other words, people are not only sensitive to the formal qualities of a work of art; a painting that has good *prägnanz* or that excites just the right cells in the brain has no value if it were merely copied from another artist.

In conclusion, perceptual psychologists and neurologists have approached art in terms of what philosophers would call "beauty." Good works of art would display

[29] For a philosophical introduction to forgery, see Dutton (1983). Dutton (2009, pp. 177-189) has proposed a similar explanation as Bloom for why we do not value forgeries.
[30] Alternatively, originals may be more attractive by "positive contagion," that is because they were in contact with the "real" artist (p. 140). But that is just one element of their history amongst others.

harmonious forms and colours that would be attractive to the human brain. While this is evidently an important dimension of the art experience, it is not the main focus of a cognitive anthropology of art. Art does not have a monopoly on beauty, and not all art is interested in beauty; further, if the art experience necessarily involves perceptual and neurological constraints, it is not limited to them. A work of art also speaks about the artist who produced it and society; it requires knowledge of, and familiarity with themes that are beyond its visual content; and it triggers speculation about its history or how it was created. A work of art is more than just beautiful forms and colours.

1.4.3 Type of art under consideration. A final limitation of this thesis is that of what type of art it targets. From a cognitive point of view, three characteristics that many works of the visual arts possess seem particularly interesting: (1) works of art are *artefacts*; (2) they are *intentionally* produced by human agents; and (3) they lack practical utility or are *non-functional*. These three characteristics, however, should *not* be understood as a "definition" of art. As I have already said, a cognitive anthropology of art is little interested in what art should be, or could be, in terms of a finite list of necessary and sufficient conditions that would allow a decision in *all* cases whether a candidate is a "work of art." A philosopher might provide such a "bulletproof" definition—for example, if it were able to account for difficult candidates such as Creed's empty room or Manzoni's can of faeces—but to the cognitive anthropologist such a definition would not be very useful, because it would probably not take into account people's intuitions about works of art.

That said, for my purposes here works of art are first *artefacts*, that is, material objects or sets of objects, which have been made or put together by a human agent. In the visual arts, this includes not only drawings, paintings, and sculptures, but also installations. An installation may feature objects that were not made by the artist, but still it consists of

material objects, which were deliberately selected, arranged and displayed by the artist. I have already explained why the fact that works of art are artefacts interests the cognitive anthropologist. The way the human mind naturally works means that artefacts trigger expectations of practical use or function, which works of art frustrate. In the case of both a painting and an installation, it is not clear why the human agent created or put together these objects, because none of them can be used functionally.

Second, works of art are *intentionally* created. This may sound tautological, but it is to emphasise that works of art do not result from accidents. If works of art were just accidents, then no one would speculate about what they are for. One should not confuse, however, intention with technique of production. An artist may decide to create a painting by randomly dripping paint on a canvas, but this does not constitute an accident, because the artist intended to do that. The reason for insisting on the fact that works of art are intentionally created is again that this has important cognitive consequences. If the artist did not drip paint on a canvas by accident, why did he or she do that?

Third, works of art are *non-functional*, at least in the sense illustrated by Magritte's pipe. Works of art are not, and cannot be used as, the things they represent. Alternatively, they do not represent something in particular. In both cases, they cannot be manipulated and are neither created nor used to achieve purely practical goals, which distinguishes them from tools. A tool, of course, can be decorated, but it does not mean that its decoration is "functional" and that, as a social anthropologist might conclude (see, e.g., Overing, 1994, and chapter 3, subsection 3.1.4 of the present thesis), art objects cannot be distinguished from other artefacts. A decorative pattern on a knife does not make that the knife cut better, and a canoe prow figure does not make that the canoe sail faster. If a decorative pattern and

a prow figure have no functional value, then they must have another purpose, or at least this is what people would intuitively assume.[31]

There are a series of advantages to approaching works of art as non-functional artefacts.[32] First of all, one has to admit that this circumscription captures the bulk of what is commonly regarded as art. In fact, it captures it so well that it has no theoretical problem to consider that difficult candidates, such as found objects, are works of art. Marcel Duchamp's readymades were material objects; they were intentionally selected (and sometimes modified) by the artist; and, from the moment that they were exhibited (or photographed, as in the case of *Fountain*) as works of art, they could no longer be used functionally (see also footnote 31).

More importantly, this circumscription takes into account people's intuitions about art. That Marcel Duchamp's readymades could *theoretically* be considered works of art does not mean that people, as I have already said, will *intuitively* accept that they are works of art. And if people, as I argue, intuitively approach works of art as non-functional artefacts, then it is not surprising that candidates that are not artefacts, or that are functional artefacts, will not be considered works of art (or at least will be more difficult for people to accept as works of art). Think, for example, of Jackson Pollock's abstract paintings. Many people (including art critics and theorists, at least when these paintings were first exhibited, see Friedman, 1972) consider that they are not works of art, or that they are very poor works of art. This is perhaps because it is not clear that they were intentionally created by a

[31] One might similarly object that a functional artefact, such as a piece of ancient pottery, can become a work of art, and that as a result one cannot distinguish works of art and other artefacts on the basis of functionality. That is true, but from the moment that such a piece of pottery would be considered art, it would no longer be used functionally; it would be displayed in a museum, and people would look at it differently. The same thing can be said about found art: Marcel Duchamp's readymades were functional objects, but from the moment he declared them "works of art," they could no longer be used functionally.

[32] Remember that an artefact is a material object that was *intentionally* created by a human agent, and that the phrase "non-functional artefact," which I will use from now on, therefore includes the three characteristics described above.

human agent, or in other words that they are *artefacts*. As far as laypeople are concerned, Pollock's paintings could have resulted from accidents, or they could have been produced by a baby, a monkey, or an elephant.[33] Marcel Duchamp's readymades, such as a bottle rack, a snow shovel, or a urinal, constitute the reverse example. If it is not difficult to recognise that they are artefacts and that they were deliberately selected by a human agent, they were, however, originally designed to be used as functional artefacts. As this is the case, it is necessarily counterintuitive to think of them as non-functional artefacts, that is works of art.

Finally, this circumscription can be used to approach the arts of other cultures. If works of art simply are non-functional artefacts, then there is no difficulty to compare a Western abstract untitled painting with, say, a Trobriand canoe prow figure: both are material objects, both were intentionally created by human agents, and both lack practical functionality (remember that the prow figure does not make that the canoe sail faster, and that therefore it must have another purpose). Of course, the aesthetic features and the meanings of these art objects, as well as the social, political, and economic contexts in which they were produced, drastically differ. But the fact remains that, just as Magritte's pipe, they cannot be "stuffed and smoked," and that as a result they will trigger speculation about the artist's intention; from a cognitive point of view, there is no reason to think that people from different cultures will differ in how they approach non-functional, that is, ambiguous, artefacts.

In sum, a cognitive anthropology of art does not provide a "philosophically correct" definition of art, but focuses on three characteristics of works of art that seem important. These three characteristics are important because they involve cognitive processes that are

[33] For those interested in what it actually takes to paint a Pollock, see Yenawine (1991).

shared by humans, and also because they take into account how people intuitively approach art. That said, this thesis is limited to works of art that are artefacts and that lack practical functionality. Although I consider that my approach could be applied to other arts,[34] it is further limited to the visual arts only.[35]

1.5 Thesis outline

This thesis consists of two theoretical chapters and two empirical chapters, with a transitional chapter on hypotheses and predictions. In chapter 2, I develop the first claim of the thesis, that the art experience involves speculation about the artist's intention. Using psychological research in object manipulation and affordances, teleological reasoning, and agency detection, I build the case that artefacts necessarily involve expectations of practical use or function. As works of art frustrate such expectations, I then hypothesise that they trigger speculation about the artist's intention. To defend this claim, I use psychological literature in artefact categorisation. Bloom's (1996) research has shown that artefacts whose form or function is ambiguous are categorised following the artefact's maker intention. By application, works of art, which typically are ambiguous artefacts, should also be approached in terms of the artist's intention. I then briefly discuss Gell's (1998) anthropological theory of art, because it similarly emphasised the crucial role of agency—of intention—in how people experience art.

In chapter 3, I develop the second claim of the thesis, that art is intuitively approached as a form of communication. Using anthropological literature, I first underline that this is not a new idea. Anthropologists of the second half of the 20th century have shown that art can be fruitfully approached as a system of meaning and communication,

[34] Fellow (MSc) student Francis Nevard (2011), using a similar approach to music, has found similar results as those that I will report in chapter 6 (experiment 3, section 6.5). See also section 7.3 of this thesis.
[35] However, I will use the words "art" and "visual arts" as synonyms in this thesis, just as in common usage.

which teaches us a lot about the societies and cultures in which they are produced. I then argue, however, that this literature presents limitations that a cognitive anthropology of art could challenge. In particular, mainstream anthropology of art does not explain why some forms of art are cross-culturally more successful than others. If art is perceived as a form of communication, it might be better to approach it using Sperber and Wilson's (1986/1995) relevance theory—a theory of communication developed by a cognitive anthropologist (Sperber) precisely to capture cross-culturally recurrent tendencies in communication.

Chapter 4 serves as a transition between theoretical chapters and empirical chapters. By application of Bloom's (1996) theory of artefact categorisation, and Sperber and Wilson's (1986/1995) relevance theory of communication, I generate a series of hypotheses and predictions for art categorisation (what people consider to be art), art appreciation (what people consider to be good art), and cultural distribution (or epidemiology) of art (what art is likely to become culturally and cross-culturally widespread). The main prediction is that, all other things being equal (in particular, aesthetic quality), a work of art or an art movement that is easy to understand will be more successful than a work of art or an art movement that is difficult to understand.

Chapters 5 and 6 are reports of surveys and experiments that were carried out to test the two main claims of the thesis as well as more specific hypotheses and predictions. In study 1 (chapter 5), more than 500 Tate Gallery visitors rated 57 works of art for liking, familiarity, effort, skill, and understanding of the artist's intention. Significant positive correlations were found between liking and effort and skill, and between liking and understanding of the artist's intention, even when controlling for familiarity, which suggests that the art experience involves speculation about the artist's intention, and that works of art which are easy to understand tend to be preferred. A significant difference was

found between the ratings of participants who reported special expertise in the visual arts, and those who did not, which supports another hypothesis tested in study 1.

In chapter 6, the results of the four experiments of study 2, which involved a further 500 participants, are reported. In experiment 1, a series of 11 hyperrealistic paintings were rated for liking as either paintings or photographs, and received significantly higher ratings when rated as paintings, which suggests that perceived effort and skill positively influences art appreciation. In experiments 2a and 2b, a series of 12 paintings were accompanied by four types of titles, and rated for understanding and liking; they were considered significantly easier to understand, and in some cases of higher aesthetic value, when they were accompanied by elaborative titles, which suggests, again, that understanding the artist's intention positively influences art appreciation. Experiment 3 tested the hypothesis that people take into account the artist's intention when deciding whether an artefact is a "work of art." A series of 12 paintings were significantly more likely to be considered art when they were accompanied by stories which stated that they had been intentionally created.

In chapter 7, I re-examine the two claims of the thesis on the basis of the empirical evidence reported, I draw some implications for anthropology of art, psychology of art, and the art world, and I conclude with suggestions for further research. The appendices feature, amongst other things, the reproductions of all the works of art and stimuli used in studies 1 and 2.

Chapter 2

Works of Art as Ambiguous Artefacts

In this chapter, I develop the first claim of the thesis: the art experience involves speculation about the artist's intention. This claim is based on the fact that works of art, from a psychological point of view, present an ambiguity. On the one hand, the works of art that my approach targets are material things, and from this point of view there is no reason to think that people would approach them differently to other objects and artefacts. On the other hand, objects and especially artefacts are usually approached in terms of their practical uses or functions, and therefore works of art, which are human-made material things, should also trigger expectations of practical use or function. But works of art, typically, have no obvious practical use or function. As this is the case, I hypothesise that they frustrate expectations associated with objects and artefacts, and that as a result they trigger speculation about the artist's intention (e.g., why did the artist create an object that cannot be touched and used?).

I will propose three main reasons for why works of art would be perceived as ambiguous artefacts. First, as *objects*, and as I have just suggested, works of art trigger expectations of "affordances" and functions, but at the same time frustrate these expectations (section 2.1). Second, as *artefacts*, works of art involve the detection of "agency," but at the same time the purpose of that agency is not clear (2.2). Third, as *representations*, works of art have a "dual nature," which might be difficult to understand even for adults (2.3). (The terms "affordances," "agency," and "dual nature" will be defined in due time). Given that works of art are perceived as ambiguous artefacts for these three reasons, I will then argue, on the basis of Bloom's theory of artefact categorisation, that works of art may pose a "problem" to people, who may try to resolve it through

speculating about the intentions of the human agents who created them, that is, the artists (2.4). I will also briefly discuss Gell's (1998) anthropological theory of art, because it similarly emphasised the crucial role of agency and intention in how people experience art (2.5).

As the reader will see, the reasons why works of art would trigger speculation about the artist's intention are all linked with each other, and one might consider that I should have grouped or collapsed some of them. The literature that I use, however, belongs to different fields, each of which put the emphasis on different facets of artefacts and how people deal with them. For clarity, I have treated these facets separately. Further, doing so shows how, from several points of view, works of art may be said to be ambiguous artefacts.

2.1 Objects

From infancy, humans have the ability to recognise and categorise the things that are in their environment. For example, they easily distinguish between objects, animals, and other humans. They also intuitively know that these different things share some properties, and do not share other properties. For example, people think of a stone and of a dog as being both solid objects that have a specific location in space and time, but know that the stone, contrary to the dog, does not "eat," "mate," "die," and has no "goals." In psychological jargon, humans automatically categorise things into classes of being or "ontological categories" (Keil, 1979), such as "spatial entity," "solid object," "living thing," "animate," or "person" (Barrett, 2011b, pp. 65-66). These ontological categories are reasoned on the basis of "expectation sets" or assumptions that people automatically make about the different ontological categories (for a systematic, but accessible treatment of ontological categories and expectation sets, see Barrett, 2011b, chapter 4). In the example above,

people intuitively assume that the dog, an animate, needs to eat to survive, develops and dies, and can act on its environment. Some of the ontological categories and expectation sets are present in newborn infants (Valenza, Leo, Gava, & Simion, 2006), in some non-human primates (Santos, 2004), and do not seem to vary between cultures (Everett, 2005); for this reason, they have been said to constitute a "core knowledge" that people would naturally have about the world (Spelke & Kinzler, 2007).

As I have mentioned in the previous chapter (subsection 1.4.3), the type of art that my approach targets typically consists of material things. As such, there is no reason to think that people would approach them differently to other solid objects,[36] which constitute one of the ontological categories. If true, works of art should involve the same expectation set associated with solid objects. The expectations that humans, from infancy, intuitively have about objects are: cohesion (objects are "wholes;" if an object is moved, all its parts will move with it); boundedness (objects are rigid and have boundaries; two objects cannot occupy the same place at the same time); contact (objects do not move by themselves, but need to be contacted); and permanence (objects continue to exist even when they are out of view; for all these expectations see Baillargeon, Spelke, & Wasserman, 1985; Spelke, 1990; Spelke & Van de Walle, 1993).[37]

Works of art that are material things should, therefore, trigger the same kind of expectations as other solid objects and, from this point of view, do not differ from these. In other words, they should not pose a "problem" to human minds, in the sense that they can be approached in terms of boundedness, cohesion, contact, and permanence. Objects,

[36] In this section, I do not distinguish between natural objects and human-made objects or artefacts. I will make the distinction in the next section (2.2).

[37] I use the terminology of Spelke (1990). Other scholars have used other terms or groupings (see, e.g., Barrett, 2011b, p. 62, who lists "solidity," "cohesion," "continuity," and "contact"), and Spelke herself later limited these expectations to three principles: cohesion, continuity, and contact (Spelke & Kinzler, 2007, p. 89). The reason for which I use Spelke (1990) is that it constituted the first attempt to name and group these expectations as a coherent set.

however, involve further expectations that I claim works of art typically frustrate. These further expectations that people have about objects—and that works of art frustrate—are their *affordances* and their potential *uses or functions*, which I discuss in the next two subsections.

2.1.1 Affordances. People have intuitions about objects: they know that objects are rigid, that they cannot pass through walls or occupy the same space at the same time, and that they continue to exist when out of sight. However, people have other, perhaps more interesting, intuitions about objects, and they also actively engage with objects. People scrutinize, touch, and manipulate objects; they explore their properties (hard, soft, angular, round, etc.) and try to determine what these properties could offer for action (supporting? striking? throwing?). In other words, people approach objects partly in terms of their *affordances*, a concept that was introduced by perceptual psychologist James Gibson (1979, chapter 8; for a recent review of studies and critiques of the concept of affordances see Jenkins, 2008). Here is Gibson's definition of affordances: "The *affordances* of the environment are what it *offers* the animal, what it *provides* or *furnishes*, either for good or ill" (1979, p. 127, emphasises in original). The perceived properties of an object[38] define its affordances. For example, an elongated object affords wielding and hitting (club, hammer), pulling (rake), piercing (spear, needle), and leverage (lever); a graspable rigid object affords throwing (missile), but also playing (ball); an elastic object affords binding, lashing, and weaving (thread, thong, rope); and so on (all these examples are from J. J. Gibson, 1979, pp. 133-134).

[38] Objects are not the only things that provide affordances. For Gibson, everything in the environment provides affordances. Air affords respiration, a stable flat surface affords supporting and walking, and so on (1979, pp. 130-133).

For Gibson, the perception of affordances is "direct," and affordances constitute the "meanings" of things (1979, p. 127; for a development and a critique see Goldstein, 1981). In other words, people would automatically perceive the affordances that their environment affords, and would easily understand how these could be used for action.

There is empirical evidence that infants[39] and adults approach objects partly in terms of their affordances. As early as three days after birth, infants discriminate between rigid and elastic objects and adapt their actions to these properties: for example, they grasp and squeeze a rigid object more often than an elastic object, which they will be more likely to mouth and suck; in other words, they perceive the different affordances (graspability, suckability) of these objects on the basis of their properties (Rochat, 1987).[40] Between two- and five-month-old, infants actively explore their environment. They systematically lean to reach objects (Yonas & Hartman, 1993), and exploration becomes increasingly multi-modal: they grasp (with one or two hands), manipulate, finger, scratch, bang, and drop novel objects, apparently as a way to discover what action these objects could afford (Rochat, 1989, study 1). For example, they easily detect that an object cannot be mouthed,

[39] In this chapter, I will use a relatively large number of developmental studies. As this thesis concerns *adults*' intuitions about art, the reader may wonder why I take into account infants' and children's intuitions about objects and artefacts. There are two general reasons for this. First, across many domains of reasoning, psychological research has found that the way humans think as children serves as a basis or default or fallback for adult reasoning. I will give several examples of this in this chapter. One of these examples is that children are prone to teleological reasoning, or a tendency to attribute functions and purposes to a wide range of things (e.g., to say that a rock has a "function" or "purpose," see Kelemen, 1999a, who I will discuss in subsections 2.1.2 and 2.2.1 below in the main text). Although adults are more selective in their attributions of purposes and functions (i.e., they would not say that a rock has a "function" or "purpose") they do endorse teleological explanations when they have to make a quick decision (see Kelemen and Rosset, 2009), that is, when they have less time to think about it and cannot "prepare" their answer. The second reason is that cognitive anthropologists frequently used developmental research to partially account for features of adult reasoning (see, e.g., Knight, Sousa, Barrett, & Atran, 2004); the rationale of this might of course be discussed, but unfortunately such a discussion would be beyond the scope of this chapter. Finally, although I will use developmental studies, I will always put these in relation to similar studies that used adult participants, and contrast the results. I do not imply that developmental research can be automatically applied to adults, and on the contrary I will sometimes base my own argument on the differences between children and adults, as in section 2.3 on representations.

[40] For similar studies using rigid and elastic objects, but with one-year-olds, see E. J. Gibson and Walker (1984).

but affords noise through scratching, which they will repeatedly do once this has been discovered (Rochat, 1989, study 3). Older infants similarly adjust their actions to the properties of objects. Six- to twelve-month-olds will act differently depending on a novel object's size, weight, shape, and texture, with mouthing being gradually replaced by fine haptic exploration (Palmer, 1989; Ruff, 1984). Finally, infants and toddlers seem to detect the affordances of different surfaces for walking or crawling. For example, twelve-month-olds walkers take more time to decide whether to cross an unstable surface (in comparison with a stable surface), and if they decide to do so they will generally crawl (E. J. Gibson et al., 1987, experiment 1a). In other words, they detect that some surfaces are better for walking and others for crawling.

Adults, too, seem to perceive the affordances of their environment. A classic illustration of this has been provided by William Warren in the domain of stair climbing. Individuals of different heights can not only decide correctly, just by looking at them, which stairs will be climbable or unclimbable (as predicted by a biomechanical model scaling riser height against leg length), but they also know which riser height will require the less energy expenditure from them (Warren, 1984). The detection of affordances seems so effortless that it may not be conscious in some cases (Michaels, 1988; Tucker & Ellis, 1998, 2001). In one study, participants had to decide as quickly as possible whether a household object such as a saucepan, a teapot, or a knife was presented in the upright or inverted position (Tucker & Ellis, 1998, experiment 1; the participants had to make push-button responses with either their right or left hand; for example, an upright object required a right-hand response). In one condition, the handles of these objects were oriented to the right, and in the other condition they were oriented to the left. Results showed that the participants were quicker and made less mistakes when the responses required were

compatible with a reach-and-grasp movement (e.g., if an upright object required a right-hand response, participants responded quicker when the handle of that object was oriented to the right, that is, in a position that would make it more easily reachable and graspable). As Tucker and Ellis wrote elsewhere, this suggests that "components of the actions an object affords are integral to its representation" (2001, p. 769). In other words, just looking at an object would automatically trigger speculation about how it might be reached, grasped, and manipulated.

It also seems that mere words can trigger, or interfere with, expectations about the potential affordances of an object (Gentilucci & Gangitano, 1998; Glover, Rosenbaum, Graham, & Dixon, 2004). For example, participants who read the word "apple" (a relatively large object) had larger grip apertures when they subsequently had to grasp a wooden block, than participants who read the word "grape" (a relatively small object; Glover et al., 2004). In summary, it seems that children and adults have a strong tendency to approach the things in their environment partly in terms of their affordances.[41]

Returning to my topic of investigation, how do people perceive and reason about works of art? The works of art that my approach targets typically are objects and, from this point of view, do not differ from other objects in the environment. In other words, the default assumption that people would make about them is that they can be approached partly in terms of their affordances (especially if one considers that the detection of affordances is not necessarily conscious).[42] For example, when people see a work of art,

[41] There are also studies on the detection of affordances in non-human animals such as amphibians, insects and even molluscs (for a review, see Warren, 1984, p. 684). For example, frogs can determine which apertures will afford passage (Ingle & Cook, 1977); praying mantises know whether an object can be reached (Michaels, Prindle, & Turvey, 1985), and which is the optimal size of a prey for their grasp (Holling, 1964); finally, limpets seem to perceive the affordances of attack and retreat by adapting their strategy to the size of their predators (Branch, 1979).

[42] Works of art are also approached in terms of the expectations associated with solid objects (boundedness, cohesion, contact, and permanence), but as I have written above this seems less interesting because works of art do not violate such expectations.

they would automatically want to touch it and manipulate it, or wonder what it could afford for action. But a work of art, typically, cannot be readily touched and manipulated, and affords no action in the Gibsonian sense of the term. This may be because the work of art is too big or heavy to be grasped and manipulated, or on the contrary because it is too fragile to be touched without damaging it. Alternatively, it might simply be forbidden to touch it, as in a museum or a gallery, a point I will return to later. Finally, and more importantly, a work of art is not primarily intended to be touched and manipulated, but serves a purpose that is probably not functional. In sum works of art, as material things, trigger expectations of affordances associated with solid objects, but at the same time frustrate these expectations.

Claiming that works of art are not made to be touched and that they afford no possibilities for action, however, requires some clarifications. In fact, works of art *can* be touched, and *could* be used for their Gibsonian affordances. For example, one may decide to use a figurine as a bookend or as a missile, a painting as a support or as a partition, and a sculpture as a seat or as a coat rack. However, one has to recognise that such uses would largely miss the point of why these objects were created, at least in terms of the artist's intention. If true, one might further argue that other objects, sometimes considered as works of art, such as a decorated knife or a voodoo doll, *are* created to be manipulated or acted upon. That is correct, but here too one has to recognise that the "aesthetic" properties of these objects are not used in the Gibsonian sense of having a direct, "mechanistic" effect on the environment. When someone grasps the decorated knife to cut something, it is the object as a knife, not as a work of art, that affords cutting. (The decoration, contrary to the knife, cannot be "grasped" and "used" in itself; in other words, it adds nothing to the functional value of the knife. Further, if the knife ends up in a museum, it will simply not

be possible to touch it and use it anymore.) Similarly, a voodoo doll might be used with the intent to harm someone, but this is not done directly, in the sense that the sorcerer does not simply throw the doll at the victim, and from this point of view the doll has no affordances.[43]

That said, I want to give an example that illustrates nicely that works of art, as objects, trigger expectations of affordances, but at the same time frustrate these expectations. The art objects exhibited in Western museums and galleries are often protected, or it is explicitly forbidden to touch them. For example, they are displayed behind a glass or a barrier, or a sign warns the visitor that they should not be touched (see figure 4). This fact seems so typical of art objects that artists and art curators have used it as a conceptual basis for creating further works of art, or organising "alternative" exhibitions (figure 4). Now, if it seems necessary to prevent people from touching works of art, it is probably because this is exactly what people would, naturally, want to do (and what children and some adults, despite the warning signs, do).[44] In other words the visitors, who see a work of art first as an object, would automatically want to approach it, touch it and manipulate it to determine its potential affordances; but the barrier, or warning sign, would frustrate such an approach, and remind the visitors that the work of art only has

[43] A last counterexample that could be used to argue that works of art *do* have affordances is the case of Western works of art that were *deliberately* made to be touched or acted upon (and apparently for nothing else). For example, Vong Phaophanit's *What Falls to the Ground but Can't Be Eaten* (1991) consists of bamboo poles hanging from the ceiling of a room and that visitors are invited to cross over. First, one has to recognise that works of that type are rather exceptional, and that they were often created precisely as a critical reflection on the common rule in museums and galleries according to which art should not be touched (see next paragraph in main text). Second, it is unlikely that the affordances of Phaophanit's installation can be compared to those of Gibson. Phaophanit's work of art affords crossing over, it is true, but that affordance probably has no functional or practical value (at least in comparison with other artefacts affording crossing over, such as a bridge or a tunnel). In other words, Phaophanit's artefact does not "help the animals in their environment," as Gibson would say, and it is probable that the animals concerned in this case, the gallery visitors, would not even cross over it if this was not required from the artist. The "value" of Phaophanit's work of art is probably to be found somewhere else; it may be that it proposes a stimulating reflection on the fact that works of art cannot usually be touched, or that it provides "simpler" pleasures such as touching bamboo, or entering an installation in which one does not know what will be found.

[44] I will speak more about children grasping at pictures in section 2.3 below.

"false,"[45] or at least misleading affordances, because although it is an object it was neither made to be touched nor to be used in a practical sense.[46] Indeed most works of art, just as Magritte's pipe, cannot be "stuffed and smoked."

2.1.2 Functions. As I will now show, another expectation that people have about objects, and which works of art typically frustrate, is that objects should have *functions*. Saying that objects are intuitively thought to have functions is not so different from saying that they trigger the detection of affordances (affordances, after all, are the properties of objects that can be used to fulfil a function, such as walking, grasping, throwing, etc.). However, the "affordances" and "functions" of objects have been studied by different schools within psychology, and with different emphasises. For example, the scholars working on "affordances" have focused on perception and motor actions such as grasping and manipulating, whereas the study of the "functions" of objects has flourished in the domain of artefact categorisation and also in relation with the so-called "design stance." I have decided to treat "affordances" and "functions" separately not because they are fundamentally different things, therefore, but because different approaches have been used to study a similar phenomenon. Further, discussing these two approaches separately could show that, from several points of views, works of art can be said to frustrate the expectations that people naturally have about objects.

[45] The phrase "false affordance" is from Gaver (1991) who used it in the domain of technology. For more on affordances in technology and (poorly-designed) household objects, see the entertaining book by Norman (1988/2002).

[46] One might here argue that if it is forbidden to touch works of art, it is because the Western category of "art" was constructed as a separate domain that requires disinterested contemplation, and which has no cross-cultural equivalent (see, e.g., Bourdieu, 1984/2010, who I discussed in chapter 1, subsection 1.3.2; or Overing, 1994, who I will discuss in chapter 3, subsection 3.1.4). However, one has to recognise that even if it were not forbidden to touch works of art, people would probably not try to use them for their affordances (they would perhaps touch them, but they would also quickly realise that they offer no "direct" affordances). Similarly, as I have developed in the previous paragraph, it is unlikely that the decoration on a tool adds anything to the functional value of that tool, be it created and used by a Westerner or a non-Westerner.

The figure originally presented here cannot be made available online for copyright reasons.

Figure 4
Works of art are objects and as such probably trigger the detection of potential affordances. However, they cannot usually be touched (or even approached), either because this is explicitly forbidden (top left: warning sign in a park of sculptures, and top right: on the floor of a gallery), or more simply because they were not created for that purpose. This fact seems so typical of art objects that artists and art curators use it as a conceptual basis for creating further works of art, or organising "alternative" exhibitions (bottom left: *Please Do Not Touch the Artwork* (2004), a teapot made of metallic thorns by Thomas Muir; bottom right: an exhibition curated by Emma Stein in 2011 and that deliberately violated the rule according to which a work of art cannot be touched).

That said, people often speak of objects in terms of their functions or purposes. An object or a part of an object is said to be "for" something, or to have a specific "purpose." When children ask, as they often do, what an object is, they are apparently less interested in its name than in its function (Greif, Kemler Nelson, Keil, & Gutierrez, 2006; Kemler Nelson, Egan, & Holt, 2004; in these studies, pre-school children who were told the name of a novel object continued to interrogate the experimenters; they stopped to do so only when

the function of the novel object was demonstrated). This tendency in adults and children to approach objects and other things in terms of their functions or purposes has alternatively been called "teleological reasoning" (Kelemen, 1999a), "teleofunctional reasoning" (Knight, Leech, Burdett, Gregory, & Jucker, 2010), or the "design stance" (Dennett, 1987, 1990).[47] Teleological reasoning in adults and children has itself been studied in a variety of fields and with different goals. Some researchers have focused on its role in object naming and categorisation (e.g., Kemler Nelson, Russell, Duke, & Jones, 2000); others have proposed that it constitutes the "essence" of artefact concepts (e.g., Kelemen & Carey, 2007, in which case it is called the design stance).[48] Below I myself focus on the role of teleological reasoning in object naming and categorisation, and try to show what the implications of this field of research are for how people deal with art objects. I will deal with the design stance and the question of the "essence" of artefact concepts in the next section (2.2).

If people intuitively approach objects in terms of their functions, this should be apparent in how, amongst other things, they name and categorise objects. For example, if one decides to name an object following what it might be used for, rather than what it looks like, this might be because he or she considers that what really defines an object is its function, and not its form. This is at least the logic behind a series of studies by Deborah Kemler Nelson and collaborators, and which showed that children, from at least two years old, name and categorise objects following their functions (Kemler Nelson, 1999; Kemler Nelson, Frankenfield, Morris, & Blair, 2000; Kemler Nelson, Russell et al., 2000). In one of these studies, four-year-olds had to extend the name of a novel artefact to further novel

[47] Although "teleofunctional reasoning" sounds more precise and meaningful to me, I will use "teleological reasoning" because it is more common in the literature.
[48] Still others have proposed that it contributes to the credibility of religious beliefs, see, for example, Barrett (2011b, pp. 70-72).

artefacts (Kemler Nelson, Frankenfield et al., 2000, experiment 1). For example, the child was presented with a novel object called a "filsap," and the experimenter demonstrated that it could be used to throw balls in the air. The child was then presented with two further novel objects, and had to decide which one could also be called a filsap. One of these novel objects did not look like the original filsap, but could also be used to throw balls in the air, whereas the second novel object looked like the original filsap, but could not be used to throw balls in the air. Results showed that the children extended the name "filsap" significantly more often to the novel object that could be used like the original filsap (but that looked different), than to the novel object that looked like the original filsap (but that did not have the same function). For the authors of the study, this means that "preschool children categorize [objects] on the basis of function over overall appearance or shape" (Kemler Nelson, Frankenfield et al., 2000, p. 146).

This tendency to approach objects in terms of their functions (at least as assessed by object categorisation tasks) seems equally important in adults. In one of the earliest studies on the topic, Rips (1989) showed that adults, much like children, tend to favour function over similarity of form when asked to categorise an object. For example, Rips's participants considered that an object looking like an umbrella, but being used as a lampshade, is a lampshade (1989, p. 46). Likewise, Landau, Smith, and Jones (1998, experiment 1) asked adults to extend the name of a novel object to other objects that were similar either in shape or function. Results showed that the participants were more likely to extend the name of the novel object to the other objects that were similar in function, not in shape.

Taken together, the findings of research on object naming and categorisation, therefore, suggest that children and adults have a tendency to approach objects in terms of

their functions and purposes. As I will now show, this tendency seems so strong that it also applies, at least in children, to objects that *cannot* be approached in terms of functions and purposes. For example, contrary to the objects used in the studies mentioned above, living and non-living natural objects, such as a tiger, a plant, or a stone, are not "made for" something, and have no "purpose" in themselves (at least by comparison with artefacts such as the "filsap," that was *made for*, and could be *used as*, a ball-throwing device). However, this is exactly how children (and adults under some conditions) seem to approach living and non-living natural objects. In other words, teleological reasoning tends to be overused, or to be applied indistinctly to a wide range of things, and for this reason it has also been called "promiscuous teleology" (Kelemen, 1999b).[49]

Promiscuous teleology has been extensively studied by Deborah Kelemen and collaborators. In an often cited study, seven- to ten-year-olds were presented with a drawing showing an unfamiliar prehistoric aquatic reptile (*Cryptoclidus*) and a pointy rock, and were told that "all around where *Cryptoclidus* lived, there were these pointy kinds of rocks" (Kelemen, 1999c, p. 1451). Asked why they think these rocks were pointy, a significant percentage of the children favoured the following explanation: "They were pointy so that animals wouldn't sit on them and smash them" (p. 1451; this explanation was preferred over more "physical" explanations such as: "They were pointy because little bits of stuff piled up on top of one another over a long time;" a group of adults, who also

[49] The distinction between teleological (or teleofunctional) reasoning and promiscuous teleology seems important to me. I have noticed that some scholars, including Kelemen and collaborators (as in Kelemen & Rosset, 2009, p. 138), sometimes use these phrases as synonyms, and write "teleological reasoning" when they mean "promiscuous teleology." This does not sound justified to me. Teleological reasoning is the tendency to approach some objects (and not others), typically artefacts, in terms of their functions, whereas promiscuous teleology is the overuse of teleological reasoning, that is, its application to almost anything, including non-living natural things and natural phenomena (for this reason, the distinction has also been called "selective teleology vs. promiscuous teleology," as in Kelemen, 1999b). The main problem with equating the two phrases is that it may convey the idea that people are not "justified" in approaching artefacts in terms of their functions, which I think they are.

participated in the study, favoured these physical explanations). In other words, children considered that some properties of a non-living natural object, a rock, have functions and purposes, which constitutes an instance of promiscuous teleology. In another set of studies, Kelemen (1999b) demonstrated that children do not only reason teleologically about non-living objects such as a rock, but also about living things or parts of living things such as a tiger or a tail. Finally, further research suggests that even adults, under some conditions, are prone to promiscuous teleology. For example, a sample of American university students were more likely to endorse teleological explanations for natural phenomena (e.g., earthquakes and geysers) when they had to make a quick decision (Kelemen & Rosset, 2009), and non-schooled Romanian adults tended to attribute functions and purpose to natural non-living things such as a pond, sand, and stones (Casler & Kelemen, 2008).

Returning, as before, to my topic of investigation, what are the implications of teleological reasoning for how people approach art objects? Works of art, as material things, should trigger the same expectations of function and purpose as the stimuli used in the studies mentioned above. When people see a work of art, they should automatically wonder what it was "made for," and what its "purpose" is. This seems highly probable, as I have shown that teleological reasoning tends to be overused, or to be applied to a wide range of things (promiscuous teleology). But works of art, at least following my definition (see chapter 1, subsection 1.4.3), have no obvious "use" or "function," and it is not evident what their "purpose" might be. In other words, works of art, just as in the case of affordances, trigger and at the same time frustrate psychological expectations associated with objects.

To illustrate, let us reconsider Kelemen's (1999c) "pointy rocks" study. The children who participated in this study favoured the explanation that the rocks were pointy

to avoid the possibility that animals would sit on them and smash them, whereas the adults selected "physical" explanations (i.e., bits of stuff piled up on top of each other for a long time). What if Kelemen had used prehistoric humans instead of prehistoric animals, and unfamiliar art objects instead of pointy rocks? The children would likely have used promiscuous teleology to account for the properties of the art objects. For example, they could have said that a cave painting is white so that it can be seen in the dark, or that a graspable figurine was made so that it could be thrown at predators. How would the adults have responded however? They would probably not have provided the same kind of explanations as children, but at the same time they would probably not have been convinced by "physical" explanations (what is the "physical" explanation for an art object? the paint did not just "accumulate" on the walls of the cave, and the figurine was not sculpted by the wind). Of course, if the art objects had an obvious use or function (such as a tool has), the adults could have said that it was made to carry out that function; in other words they could have used teleological reasoning, which is perfectly justified in the case of artefacts. But cave paintings and figurines, as I have argued, have no affordances and practical functions, and then the only solution to account for their properties is to wonder what the people who made them had in mind (why did they apply paint on walls? why did they use white paint? was it the only colour available or did it have a symbolic value, and if it did what did it mean? etc.). In short, to speculate about the artists' intentions.

In this section, I have claimed that works of art, as material things, should involve the same expectations as other objects. I have then distinguished between several types of expectations that people have about objects. One of these types relates to the so-called "expectation set" associated with solid objects, and includes assumptions such as boundedness, cohesion, contact, and permanence (Spelke, 1990). Another type relates to

the tendency in children and adults to automatically approach objects in terms of their affordances (Gibson, 1979) and functions (Kemler Nelson, Russell et al., 2000). I have then argued that, if works of art pose no "problem" to human minds with regard to the former type of expectations, they probably frustrate important assumptions associated with the latter type. Works of art are objects, but they are not made to, or simply cannot, be touched and manipulated; from this point of view they have no, or only misleading, affordances. Further, works of art cannot be approached in terms of function or purpose; teleological reasoning, although it tends to be promiscuous (Kelemen, 1999b), fails to account for why they were created. Works of art, therefore, are ambiguous objects, because as material things they trigger expectations associated with objects, but at the same time frustrate some of these important expectations. As this is the case, I have claimed that the only solution for people to approach them and to understand them is to speculate about the intentions of the artists who created them.

2.2 Artefacts

In this section, I propose a second general reason for why works of art would trigger speculation about the artist's intention. Works of art belong to a specific category of objects, that of *artefacts*. Artefacts differ from other objects in that they are intentionally created by human agents. As such, they involve the detection of *agency*. When people see an artefact, they know that it did not result from an "accident," but that someone made it; in other words, people detect not only affordances and potential functions in artefacts, but also human agency. As I will show, under many conditions the detection of agency is automatic and hypersensitive, and it subsequently involves speculation about the mind of the agent who exercises that agency. That is, people not only easily detect that an artefact was made by a human, but they also wonder why the human agent made it (what did he or

she have in mind?). By application, as works of art are artefacts, they would also trigger the detection of human agency, and they would also involve speculation about the agents (the artists) who created them. Below I first discuss in more detail what distinguishes artefacts from other objects, and I then focus on the detection of agency in artefacts and works of art.

2.2.1 Artefacts' "essence." In the previous section (2.1), I have not distinguished between different kinds of objects. In particular, I have ignored the distinction between natural objects and human-made objects or artefacts. The reason for this is that natural objects and artefacts share important properties. For example, as material things, both trigger the expectation set associated with the ontological category of solid objects (boundedness, cohesion, contact, and permanence), and from this point of view there is no reason to think that people would approach them differently. The studies reviewed in the previous section provide a further indication that natural objects and artefacts are not fundamentally different things. In some of these studies, it is indeed probable that the researchers would have obtained similar results by using natural objects instead of artefacts, or artefacts instead of natural objects. For example, Rochat (1987) used rigid or elastic artefacts to test the hypothesis that newborn infants detect the affordances of their environment. In this study, the use of artefacts instead of natural objects was probably due to experimental requirements (that the stimuli had the same size, that they could be connected to an air pressure transducer, that they could be sterilized, etc.), rather than an assumption that artefacts and natural objects would trigger radically different behaviours in the newborn infants. Had Rochat used rigid or elastic natural objects, such as a stone or a piece of rubber, he would probably have obtained similar results. After all, Gibson's (1979) ecological approach to perception implies that natural and man-made objects, which are both part of the environment, potentially provide similar kinds of affordances.

That said, there are also important differences between natural objects and artefacts. A series of clues, both at the perceptual level and conceptual level, probably make children and adults think that artefacts constitute a special class of object, or even a "world apart" (Keil, Greif, & Kerner, 2007). At the perceptual level, artefacts are often more rectilinear and even than natural objects (Levin, Takarae, Miner, & Keil, 2001); the texture of artefacts is also usually smoother than that of natural objects, and two artefacts of the same kind can be highly uniform or look like perfect duplicates, which happens rarely with natural things (Keil et al., 2007). At the conceptual level, people know from childhood that artefacts, contrary to living natural things, do not "grow," "develop," and "die," and that they do not need to eat or drink to "survive" (Inagaki & Hatano, 1996). Further, people also know from childhood that not all the features of an artefact are essential to its functioning (e.g., the colour of a car does not affect its performance), whereas they consider that all the features of a natural living thing matter and make it what it is (e.g., is a tiger with zebra-like black and white stripes still a tiger?; for a study comparing machines and animals, see Keil, Smith, Simons, & Levin, 1998).

But there is another, probably more important reason for why people intuitively make a distinction between artefacts and natural objects. Artefacts do not result from "accidents" but are intentionally made by human agents, and their purpose is usually to serve a precise use or function. In contrast natural objects, by definition, are not human-made and cannot be approached in terms of "purpose" and "function." If this is an important difference, then it should have an impact on how people approach artefacts in comparison with natural objects. And, as I have shown in the previous section, empirical evidence suggests that indeed adults tend to approach artefacts in terms of their function (Landau et al., 1998), whereas most of the time they refuse to endorse functional

explanations for the properties of natural objects (Kelemen, 1999c). This tendency, of course, is teleological reasoning, and its role in conceptualising artefacts seems so important that some researchers have proposed that it constitutes the "essence" of artefact concepts.[50] In this context, teleological reasoning has been called the "design stance" (e.g., Kelemen & Carey, 2007, who borrow the phrase from Dennett, 1987, 1990). The concept of the design stance implies not only that people approach artefacts in terms of their function ("mere" teleological reasoning), but also that people assume that artefacts were *intentionally created by human agents* to carry out a function. In other words, the concept of the design stance emphasises the role of the detection of *agency* in how people deal with artefacts.

There is debate, however, as to whether the design stance constitutes "core" knowledge, and whether artefacts constitute a separate ontological category. The reader remembers here that "core" knowledge is the knowledge that humans, from infancy, intuitively have about the classes of being or ontological categories that are in their environment. For example, people know that solid objects are bounded and that they need to be contacted to move (see section 2.1 above). So, do people have "core" knowledge about artefacts as they do about solid objects, and do they categorise them in a separate ontological category as a result? Kelemen and Carey (2007; see also Matan & Carey, 2001) have argued that it is the case; children and adults would intuitively approach an artefact in terms of the design stance, and the "essence" of an artefact would therefore be that it was intentionally created by a human agent for some functional reason (2007, p. 214). In

[50] As it should become clearer below, psychologists are not interested in whether artefacts actually have an "essence," but just in whether people intuitively tend to think that they do. This is another instance of what I have called the difference between studying "what things are or should be" or studying "what things are thought to be" in chapter 1, and that should not be forgotten when assessing interdisciplinary approaches. For recent *philosophical* perspectives on the hypothetical ontology of artefacts, see Margolis and Laurence (2007, chapters 1-5).

contrast Keil, Greif, and Kerner (2007) have argued that for people artefact concepts have no essence. Artefacts are more varied (they can have any form and function) and complex (think here of electronic devices) than natural objects, and as such are probably more difficult to conceptualise. In other words, artefact concepts would need to be learned, and a good indication of this is that children, as Kelemen's own research has shown, are prone to promiscuous teleology, and do not seem to first make a difference between natural objects and artefacts. The development of artefact concepts might even continue to develop in adults when, for example, they consider that water (Bloom, 2007b), or genetically modified organisms (Sperber, 2007), are artefacts.

The differences between Kelemen's and Keil's positions, however, should not be exaggerated. On the one hand, Kelemen did not argue that the design stance and artefact concepts are innate, but that they naturally develop during childhood (Kelemen & Carey, 2007, p. 224); on the other hand, Keil did not reduce artefact concepts to cultural factors, and acknowledged that, at least for adults, the design stance seems to be what defines artefacts and sets them as a "world apart" from natural objects (Keil et al., 2007, p. 233). As this is the case, I will below consider that there is enough evidence to argue that at least adults process artefacts differently than other objects, and that their most basic intuition about them is that they were intentionally created by human agents for some functional purpose. As I have already dealt with the latter, functional intuitions in the previous section (2.1), I will now focus on the detection of agency in artefacts and works of art.

2.2.2 Agency. According to the design stance, therefore, people would automatically recognise that artefacts are created by human agents to fulfil some function. However, how do people recognise that an object was made by a human agent in the first place? If people could not recognise that a given object results from human agency, they

would probably not wonder what it might be used for, or at least they would not use the design stance to approach that object. It seems to me that there is a gap in the literature here. Although the concept of the design stance necessarily implies that people first have to recognise that an artefact was created through human agency, researchers have not really been interested in how this happens and what effects this could have on how people think of artefacts. To be fair, Keil et al. (2007, p. 234) mentioned some perceptual clues, such as rectilinearity, which probably indicate that an artefact was created by a human agent. To my knowledge, however, no studies have focused specifically on the detection of human agency in artefacts.

But what do I mean, first of all, when I say that artefacts involve the detection of human agency? I do not mean, of course, that artefacts have human-like agency, or agency in themselves, and that they can therefore "act" in their environment as humans, animals, and other agents can.[51] What I mean is that artefacts are created through, or result from, human agency. In other words, although artefacts have no agency in themselves, they perhaps constitute *traces* of human agency. Further, I argue that the detection of such traces of human agency in artefacts is probably easy to achieve and quasi automatic. When people look at an artefact, they can quickly tell that it did not result from a random accident, but that there is a human agent "behind" it. This is obvious especially in the case of complex artefacts, including works of art. What is, indeed, the probability that a car or a figurative painting was created "naturally" or by "accident"? Cars and figurative paintings look too "designed" and "deliberate" to have come into being from "nothing" or by "chance." One might here argue, of course, that people detect that cars and figurative painting have been created by human agents just because they knew in the first place that this is how these

[51] Anthropologist Alfred Gell (1998) has argued that, in a sense, artefacts do have agency in themselves. I will discuss this claim in the last section of this chapter (2.5).

things are created. But think here of an archaeologist discovering a new site containing unfamiliar objects. When the archaeologist has to decide whether an object is an artefact or not, he or she will probably rely on traces of human agency. It is not likely, for example, that he or she will consider that common single stones are artefacts, especially if they appear to have been brought here naturally or by accident. However, if the single stones are arranged in a symmetrical pattern, or are tied to another object, or are painted with motifs, it is likely that the archaeologist will consider that these objects are artefacts or parts of artefacts, and he or she will have formed that judgement on the basis of traces of human agency.[52]

Although the detection of human agency in artefacts has been little studied—probably because, as I said above, artefacts cannot be said to have human-like agency or agency in themselves—there is a large literature on the detection of human and non-human agency in general. I will briefly discuss this literature because it shows convincingly that the detection of agency seems to be a natural cognitive capacity that tends to be overused, and because this might help convince the reader that artefacts, too, could trigger the detection of (traces of human) agency.

In fact, cognitive scientists consider that the detection of agency and agents is part of the "core" knowledge that I have already mentioned several times above. Core knowledge is present in humans from infancy and it consists of ontological categories that are reasoned about following expectation sets. For example, people intuitively assume that solid objects (an ontological category) are bounded and need to be touched to move

[52] The identification of artefacts by archaeologists is obviously more complicated than what I suggest here, see, for example, Mithen (1996, chapter 9). Some objects that are apparently not artefacts may have been artefacts, and other objects that seem to be artefacts may not have been artefacts. Similarly, even if an object is correctly identified as an artefact, it might be very difficult to determine what it was used for (or what its "meaning" was if it has no practical use or function). The point here is that despite these difficulties archaeologists probably rely on traces of agency to determine whether an object was an artefact and what it was used for, especially if such traces of agency are salient.

(expectation set). But it is another ontological category in which I am interested here, that of *agents*. The ontological category of agents, which typically include animals and humans, is characterized (amongst others[53]) by the expectation of *agency*. The expectation of agency means that agents are thought to be able to move by themselves (contrary to solid objects), to have goals, and, at least in the case of human agents, to have mental states such as beliefs and desires (this last expectation is called theory of mind, and I will discuss it later).[54] The detection of agency seems effortless, largely automatic, and it is present in humans from infancy. For example, infants intuitively distinguish between so-called self-propelled and nonself-propelled objects, that is between objects that can or cannot move by themselves; the self-propelled objects, because they can move by themselves, are therefore thought to have agency, as well as intentions, goals, and even social intuitions such as reciprocity (Premack, 1990).[55]

Studies using adult participants show that the detection of agency tends to be overused or, as it has been called, "hypersensitive" (Barrett, 2000).[56] Mere geometric forms, such as moving circles, triangles, and rectangles can trigger the detection of

[53] These other expectations are spatiality, physicality, and biology (although in some cases not all of these need to be activated, see Barrett, 2011b, p. 67). Thus, the different ontological categories share some expectation sets, and do not share other expectation sets (for example, solid objects and agents share the expectation sets of spatiality and physicality, but do not share the expectation sets of biology and animacy).
[54] Scholars have proposed different categorisations of the ontological categories and the expectation sets. For example, Barrett (2011b, pp. 65-66) distinguishes between "animates" and "persons" within what I call "agents" (and between "animacy" and "mentality" within what I call "agency"). For my purpose here, which is not directly to discuss ontological categories and expectation sets, it seemed simpler to use just "agents" and "agency."
[55] See also: R. Gelman (1990), who showed that three-year-olds can make the distinction between self-propelled and nonself-propelled objects on the basis of photographs alone; Gergely and Csibra (2003), for an alternative to Premack's (1990) claim that goal-directed actions trigger attributions of mental states; Leslie (1995), for a similar treatment than Premack's (1990) but using the notion of "force;" and Rochat, Morgan, and Carpenter (1997), for similar studies as R. Gelman (1990) but comparing three- to six-month-olds with adults.
[56] Barrett (e.g., 2004, chapter 3) has further claimed that the hypersensitivity of the detection of agency might contribute to the credibility of religious beliefs. Because humans tends to over attribute agency, and that in some cases the agency thus detected does not seem to be that of a human or an animal (e.g., crop circles or apparently unexplainable events), then it might be that of a god or another "supernatural" agent. See also Guthrie (1993) who made similar claims but using the concept of anthropomorphism.

causality (Michotte, 1946/1963; White & Milne, 1999) and agency (Heider & Simmel, 1944; Kassin, 1982) in people. In a famous study that dates back to 1944, Fritz Heider and Marianne Simmel presented an animated display to a group of participants. The display featured a large rectangle, a large triangle, a small triangle, and a small circle (see figure 5). All these forms (except the large rectangle) were moving, and the participants were simply requested to describe what they saw. Results showed that, instead of just describing what they saw in terms of moving geometric forms, the participants anthropomorphised the forms and interpreted their movements as goals, intentions, and social interactions; in other words, they treated the geometric forms as agents. For example, one participant described the small triangle and the small circle as a human couple on a date, and the large triangle as a rival "courting" the small circle and eventually "fighting" with the small triangle. Another participant referred to the small triangle and to the small circle as "our hero and his sweet," respectively, and to the big triangle as the "villain" or "big bully" spying the "lovers" from his "house" (that his, from within the large rectangle; all these quotes are from Heider & Simmel, 1944, pp. 246-247).

As one can see in Heider and Simmel's (1944) original study, the detection of agency is not only hypersensitive, but it also involves *speculation about the perceived agents' intentions*. In fact, the participants mentioned above did not only described the forms as being able to move by themselves ("mere" self-propelledness), but also as having goals, desires, and even social interactions. In other words, the participants speculated about the perceived agents' minds to account for their movements (e.g., if the large triangle follows the small circle, it must be because it "likes" it and want to "court" it; and if the small triangle obstructs the large triangle's way, it must be because it is "jealous" or wants to "protect" the small circle). In psychological jargon, this capacity to reason about other

agents' goals, beliefs, and desires is called theory of mind.[57] Theory of mind gradually develops in children (Wimmer & Perner, 1983)[58] and is well established in adults of different cultures (Cohen & Barrett, 2011); non-human primates such as chimpanzees may have a rudimentary form of it (Call & Tomasello, 2008). Theory of mind is of crucial importance for humans. Without it, it would simply not be possible for them to communicate efficiently with each other (as in the autism spectrum, see, e.g., Baron-Cohen, 1995), or to acquire important social skills such as cooperation (Dunbar, 1998).

The figure originally presented here cannot be made available online for copyright reasons.

Figure 5
Sequence of displays similar to those used by Heider and Simmel (1944). When animated, the sequence follows the order left-right from top row. Participants who see this sequence tend to describe the big triangle as "chasing" the smaller forms, with the small triangle "protecting" the circle, and both eventually finding "refuge" in the rectangle or "house." After Scholl and Tremoulet (2000, figure 3, p. 302).

[57] Theory of mind, therefore, is part of the expectation set that people have about agents or at least persons, see above p. 70, and footnote 54.
[58] Theory of mind is typically assessed by so-called "false-belief tasks," in which the child is tested for his or her capacity to form a belief about someone else's belief (e.g., to understand that another child can mistakenly think that a toy is hidden in a box). In Wimmer and Perner's (1983) original study, three-year-olds did not pass that test, whereas six-year-olds did. For a review and a meta-analysis of false-belief tasks, see Wellman, Cross, and Watson (2001). For a collection of studies on theory of mind see the book edited by Carruthers and Smith (1996).

What are the implications of the literature on the detection of agency for the domain of art?[59] Most importantly, if artefacts trigger the detection of (traces of human) agency and the use of theory of mind, then the works of art that my approach targets, which are artefacts, should involve similar cognitive processes. In other words, when people see a work of art, they would (1) easily detect that a human agent created it, and they would also (2) wonder what the goals, thoughts, and emotions of that agent were when he or she created that work of art.

Concerning the first point, I have already explained why it is highly probable that artefacts trigger the detection of (traces of human) agency. Artefacts look too "designed" and "deliberate" to have come into being "naturally" or by "chance." Works of art, which can be very complex artefacts in comparison with simple tools, are typical in this regard. Some works of art require considerable time and effort to be planned and executed, and this is usually visible in the final product (and, as I will claim in chapter 4, subsection 4.1.2, this

[59] Before showing what implications this literature on the detection of agency and theory of mind could have in my main topic of investigation, art, I would like to open a parenthesis here. In fact, this literature might incidentally be used to support the view that artefact concepts have an "essence," and to further delineate what this "essence" might be. The reader remembers that scholars have different views as to whether artefact concepts are intuitively thought to have an "essence." On the one hand, Kelemen argued that they do, and that their essence is the design stance, or the intuition that artefacts are created by humans to fulfil some practical function; on the other hand, Keil argued that artefacts have no essence, and that the design stance has to be learned and might continue to develop in adults (see previous subsection, 2.2.1).

As I have myself argued, the design stance, be it "intuitive" or "learned," necessarily implies that people first have to recognise that an artefact was created by a human agent; from this point of view, it is surprising that the researchers in both camps have not really taken into account the detection of agency in how people deal with artefacts. The detection of (traces of human) agency in artefacts is highly probable, because artefacts usually look too "designed" to have come into being "accidentally." Further, as I have just shown, the detection of agency tends to be hypersensitive, and triggers speculations based on the theory of mind. In other words, the representation of artefacts involves not only the expectation set associated with the ontological category of solid objects (cohesion, boundedness, contact, and permanence), but also the expectation set associated with the ontological category of agents (agency and theory of mind), which are both part of "core" knowledge. Why is this important? Well, if artefacts automatically activate such "core" knowledge, one does not see why they would be less "ontological" than concepts of, for example, natural objects, and why people would not consider that they also have an "essence." The "essence" of artefacts would be that they are *objects with (traces of human) agency*; and it is from this point of view that artefacts would differ from objects and, perhaps, constitute a distinct ontological category. Of course, this basic intuition could later develop into more complex knowledge about artefacts. For example, as the concept of the design stance rightly suggests, that the intention of the agent who is behind the artefact was specifically to create a functional object.

is probably one of the criteria that people use to judge of the quality of a work of art). Further, the traces of agency detected in works of art are probably easy to recognise more specifically as traces of *human* agency. Complex works of art such as those just mentioned could not have been created by animals, even monkeys, and people probably easily detect this (see Hawley-Dolan & Winner, 2011, who showed that people can tell the difference even in the case of abstract art). Finally, as I have shown, the detection of agency tends to be hypersensitive, and there is no reason to think that this would not apply to works of art. On the contrary, the detection of agency might be even more sensitive in the case of art, and result in some kind of "essentialist" thinking. For example, it is well known that an original painting is more valued than a forgery, even if the forgery looks exactly like the original (see chapter 1, subsection 1.4.2). Why is this the case? Maybe it is partially because people think that the original contains "something" of the artist, or that it is "saturated" by the artist's agency. In other words, in the case of an original artwork people would detect not only traces of human agency, but the "real," "tangible" agency of the artist who created the artwork (see also Gell, 1998, who I will discuss in section 2.5 below).[60]

According to the second point, the detection of agency in works of art should also involve speculation about the goals, thoughts, and emotions of the artists who created them. This seems highly probable for several reasons. For a start, works of art typically are approached in such terms by people (even if this constitutes an instance of the intentional fallacy, see chapter 1, subsection 1.4.1). For example, when people approach a painting, they wonder what "ideas" or "thoughts" the artist had and wanted to convey, or in which

[60] For experiments along these lines, but with children and their attachment objects, see Hood and Bloom (2008); children tend to prefer their original attachment objects over perfect duplicates, as if the originals had an "essence."

"mood" he or she was while painting, or whether specific political or religious "views" or "beliefs" guided the work; in short, people use their theory of mind when they approach a work of art.

More importantly, works of art probably trigger speculation about the artist's intentions and states of mind because, to put it crudely, that is the only thing that they offer. In fact, as I have claimed in the previous section (2.1), a work of art has no direct affordances and no obvious practical use of function; all it offers, in a sense, is speculation about why an agent created it. To illustrate, remember here the example of the archaeologist who has to decide whether a novel object is an artefact. To reach a conclusion, the archaeologist will probably rely on traces of human agency. Once this has been done—and let us assume that salient traces of human agency were found and that the novel object is an artefact—our archaeologist will then try to determine more precisely what *kind* of artefact it is. To do so, he or she will probably use teleological reasoning and ask: what this artefact could be used for? At this point, if the archaeologist can find a practical use or function for the artefact, he or she will just stop to think about it; in other words, just recognising the function of the artefact has allowed our archaeologist to determine why a human agent created it. But think now of an art object. As it displays salient traces of human agency, our archaeologist should also consider that it is an artefact. However, the art object has no potential practical use or function, and therefore the archaeologist cannot ask what it could be "used for." In other words, it is not clear why the art object was created, and the only solution to know why is to speculate about the intentions of the human agent who created it.

In this section, I have proposed a second reason for why works of art would trigger speculation about the artist's intention. Works of art belong to a specific class of objects,

that of artefacts, and as such probably involve the detection of (traces of human) agency. Although there has been little research on the detection of agency in artefacts, there is a large literature on the detection of agency in general. This literature suggests that the detection of agency is part of "core" knowledge, that it tends to be hypersensitive, and that it also involves theory of mind. If, as I believe, artefacts (and not only humans or other agents) trigger the detection of agency, then works of art, which are artefacts, should involve similar cognitive processes. Works of art are "complex" artefacts, and it is very likely that people detect traces of human agency in them, or even the "tangible" agency of the artist in the case of originals. Further, people approach works of art in terms of the artist's goals, ideas, and intentions, just as they do when they approach human agents using their theory of mind. It is highly probable that such speculations occur in the case of art, because contrary to other artefacts works of art cannot be understood in terms of the design stance; the "purpose" of a work of art is unclear, and the only solution to understand it is to speculate about the artist's mind.

2.3 Representations

In this section, I propose a third, and last reason for why works of art, by comparison with other artefacts, would pose a "problem" to human minds. This reason is that many works of art are *representations*. As a representation, a work of art may be said to have a "dual nature," because it is a thing in itself, and at the same time it stands for something else. This ambiguity may be difficult to apprehend for people, and could trigger further speculation about the artist's intention. To defend this claim, I will begin with the developmental literature, which shows that children have trouble understanding the dual nature of representations such as pictures. I will then argue that adults, although they readily understand the dual nature of pictures, might also have a difficulty understanding

representations in the domain of art. I will also argue that so-called "non-representational" art is no exception, and poses similar (if not more accentuated) problems to adults.

2.3.1 The "dual nature" of pictures. What is a representation? At the most general level, it seems fair to say that a representation simply is *something that stands for something else*. In the visual arts (Carroll, 1999, chapter 1), a prototypical example of a representation is an image that realistically depicts an object of the world (e.g., a painting of a tree that looks like a tree). As one can see, such an image is a representation because it stands for something else, which is the object it depicts (i.e., the painting stands for the tree). One has to note here, however, that a representation does not *need* to resemble what it represents, as in the case of symbolism (e.g., a sign that does not look like a tree can represent a tree). Further, a work of art does not *need* to use representation, as in the case of an abstract painting, which does not necessarily "stand for" something else. That said, I will focus here on representational art and its most common form of representation, that of images which look like what they represent, and which I will just call *pictures* from now on.[61]

What is a picture from a psychological point of view? In an important paper, William Ittelson (1996) suggested that pictures have a dual nature. On the one hand, pictures are simply "markings" or two-dimensional patterns on a surface, and therefore are "concrete" things in themselves. On the other hand, however, pictures do not "speak of

[61] Note that in psychology, too, a representation is something that stands for something else. For example, the concept or idea of a tree that an individual has in the mind stands for a tree (or trees) in the world. As I deal with works of art, that is, material representations, I do not use the word "representation" in this psychological sense of "concept" or "idea." This does not mean, of course, that one cannot form a representation of a work of art, that is, a mental representation of a material representation. In this case, the mental representation (the concept of image) stands for the material representation (the actual image), which itself stands for another object in the world (the actual thing depicted in the image). Further, one can form a mental representation of that mental representation (that is, have thoughts and ideas about the *concept* of image itself), such as when philosophising on art. Although I will unfortunately not be able to discuss further these "levels" of representation (or "meta-representations") that are necessarily involved in the art experience, I believe that they contribute to the perceived ambiguity of works of art.

themselves" but refer to something else, which is not present and which may not even have a material existence. In Ittelson's words, pictures "appear on a surface but they do not refer to the surface—their informational content is "decoupled" from its real-world source" (1996, p. 171). To take the same example as before, a picture of a tree does not indeed refer to the markings it comprises, but to a tree in the real world, which is "decoupled" from the picture. As Ittelson has further argued, the fact that pictures have a dual nature means that they are probably not processed as other objects and that they may require more effort to human minds. One, behavioural difference between how people approach pictures and other objects is, of course, as I have developed above (subsection 2.1.1) that "pictures do not provide affordances" (1996, p. 181). However, if people cannot approach pictures as other objects, how do they deal with them? And if pictures are markings on a surface that do not refer to that surface, what are they about? For Ittelson, pictures would necessarily be processed as "human expressive and communicative artifacts" (1996, p. 182); they would be about the thoughts, feelings, and other ideas that the human who made the picture had about the thing that is represented. I will myself develop the hypothesis that works of art are intuitively assessed as acts of communication in the next chapter of this thesis. For the time being, I will focus on the empirical evidence that suggests that pictures, as markings, pose a "problem" to human minds.

Why is it, therefore, that representational works of art such as pictures would be "difficult" to apprehend for people? First of all, it is *not* because people have trouble recognising what is represented in a picture (e.g., to recognise that a realistic painting of a face represents a face). Contrary to what one might think,[62] the recognition of pictured objects does not need to be learned, and the most sceptical about this should be convinced

[62] For example, anthropologist Robert Layton (1981) has argued that what is recognised in a picture depends on culture. I will discuss this claim in chapter 3, subsection 3.2.1.

by a famous case study by Julian Hochberg and Virginia Brooks (1962). Hochberg and Brooks prevented their child, from birth, from seeing any picture or depicted object. When it became too difficult to do so, the boy, at 19 months old, was presented with a series of pictures, which he readily recognised the common objects depicted such as a car, a shoe, a dolly, or keys (1962, p. 625).

The fact that children can *recognise* what is represented in pictures, however, does not mean that they *understand* the dual nature of pictures and other representations. For example, infants apparently fail to make the difference between a real object and its depiction; they tend to treat a picture of an object as if it were the real object. In a series of studies using American and Beng (Ivory Coast) infants, Judy DeLoache and collaborators showed that nine-month-olds from different cultures manually explore pictures and try to "grasp" and "pick up" the objects depicted, as if these were real. (DeLoache, Pierroutsakos, Uttal, Rosengren, & Gottlieb, 1998; see also Pierroutsakos & DeLoache, 2003). The fact that infants grasp at pictures suggests that they do not know yet that representations cannot be used in themselves, but stand for something else; as DeLoache and collaborators have nicely put it, children have to "learn to treat pictures as objects of contemplation and communication, not action" (1998, p. 209).

Older children similarly fail to understand the dual nature of pictures or other representations. This is suggested by further studies by DeLoache and collaborators in which two- to three-year-olds were unable to use a representation as a model to guide their actions. In one of these studies, 24-month-olds had to retrieve a toy that was hidden in a room (DeLoache & Burns, 1994, experiment 1). To prompt the children find the toy, a Snoopy doll, the experimenters showed them a photograph of the room and said while pointing at the appropriate place in the photograph: "This is where Snoopy is hiding in the

room; can you find him? . . . Snoopy's hiding in the same place as I pointed to in the picture" (p. 91). Despite these specific instructions, the children did not use the photograph to find the doll, but instead "randomly" searched the room. Similar results were obtained with 30-month-olds when using scale models instead of photographs (for a review of studies using scale models see DeLoache, 1995). If children cannot find a toy hidden in a room on a basis of a photograph or a scale model, it is probably because they do not understand yet that representations have a dual nature, that is, that there are things in themselves (a photograph or a scale model) while at the same time standing for something else (the room in which the toy is hidden).[63] In other words, children have to learn what pictures are and how they can be used.[64]

The implication of the literature that I have just reviewed is that works of art, as representations, should pose a "problem" to human minds, because representations such as pictures require that one thinks about them as both objects in themselves and objects standing for something else. However, the reader might make two objections that seem obvious here. The first one is that adults, contrary to children, have no problem

[63] This is also suggested by the fact that children have significantly less trouble finding a toy in a room when they are made to believe that the model is not a representation, but the actual room that has been shrunk (DeLoache, Miller, & Rosengren, 1997). In other words, when the model has no "dual nature" but can be thought of as just one thing.

[64] Children seem to begin to understand the dual nature of representations at about 30 months old for pictures (DeLoache & Burns, 1994; see also Preissler & Bloom, 2007) and 36 months old for scale models (DeLoache, 1995, who also argues that this difference is due to the fact that pictures are less "salient" as objects, and that therefore it is easier for children to understand that they might be used for something else than their affordances, p. 111). Later, from three years old, children gradually learn that detailed pictures are better at conveying information than vague pictures (Allen, Bloom, & Hodgson, 2010, experiment 1), and by four years old they also know what makes a picture useful to other people (Allen et al., 2010, experiment 2; for example they know that a vague drawing of a prototypical bird is more useful than a detailed drawing of a non-prototypical bird for someone who has never seen a bird). In contrast with the findings of DeLoache and collaborators reviewed in the main text, there is some evidence that children may have a rudimentary understanding of the dual nature of pictures before two years old. For example, 15- to 24-month-olds who are taught the name of a novel object on the basis of a picture will extend that name to the real object (Ganea, Allen, Butler, Carey, & DeLoache, 2009, study 1; Preissler & Carey, 2004, experiment 4). However, one has to recognise that the tasks used in these last studies were considerably easier than using a photograph or a scale model to guide actions, and that in any case children have to learn the dual nature of representations.

understanding the dual nature of pictures; they know that a depiction cannot be used as the thing it depicts, and they can easily use maps and other models to guide their actions. The second one is that not all works of art are representations, and that therefore even if adults had a problem with representations, this problem would not necessarily apply to all art.

Figure 6

Contrary to children, adults have no problem understanding the dual nature of representations. For example, they know that a map stands for an area in the real world, such as in this diagram of the London Underground (left), and that it can be used to reach a destination (hopefully!). In contrast, representations in the arts cannot be used for practical ends, and may be difficult to apprehend even for adults. Consider Simon Patterson's work of art *The Great Bear* (1992), showed on the right. It is identical to the official map of the London Underground, except that the names of the lines and stations have been replaced by types of professional occupation (e.g., engineers, journalists, footballers, musicians) and by names of people who famously illustrated these occupations (e.g., the stations on the "Musicians" line are Scarlatti, Vivaldi, Purcell, etc.). Patterson's map offers an intellectual, not physical, journey.

2.3.2 Representational art. Concerning the first objection, one has first to remember that adults have to deal, in the case of art, with representations that are far more complex than the pictures used in the studies mentioned above. DeLoache and collaborators used photographs (DeLoache & Burns, 1994) and simplified scale models (DeLoache, 1995) that needed to be used to retrieve a toy in a room; other researchers used line drawings representing "prototypical" objects that needed to be used to name the "real" objects

(Ganea et al., 2009; Preissler & Carey, 2004). Adults, of course, easily understand such representations, and this is apparent in their ability to use, for example, maps to guide their way in the environment (just as older children manage to retrieve a hidden toy in a room on the basis of the scale model of that room).

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Figure 7
Dalí's *The Persistence of Memory* (1931; left) and Hopper's *Morning Sun* (1952; right). Although one can easily recognise what these paintings depict, it is difficult to know what they really "stand for."
(Originals in colour.)

But what about works of art? These are not created to navigate in the environment or any other functional purpose (see figure 6), and also they are not necessarily "prototypical" representations of a "real" object (e.g., a painting may not look exactly like the thing it represents, as in cubism, or it can represent an object that exists only in imagination, such as in surrealism). In other words, adults may easily understand that a work of art stands for something else, but what this "something else" is might not be obvious in all cases. Think here, for example, of Dalí's famous painting *The Persistence of Memory* (1931). As it is a figurative painting, one can easily recognise that it stands for objects of the real world such as the sky, the sea, cliffs, a dead tree, ants, and pocket watches (see figure 7). However, some of these objects do not look like they usually do in reality (the pocket watches are "distorted" as if they were "melting"), and another object seems only imaginary (the

creature lying in the middle of the painting); overall it is not clear either what this assembly of disparate objects could "stand for" as a whole. In other words, simply understanding the dual nature of a representation does not mean that the representation is "easy" to understand. Dalí's painting stands for a landscape, pocket watches, and a creature, but these objects themselves stand for other things, and it is not clear at all, even for adults, what these other things might be or "mean."

One might think, however, that *The Persistence of Memory* is an extreme example, and that it does not prove that even adults might have a problem, in the case of art, with understanding representations. After all, Dalí's painting is not purely figurative, and people might fail to readily understand it just because it is "odd." But think here of the work of artists like Edward Hopper. For most of his life, Hopper has painted, in a highly realistic style, common places or common people in their daily life activities. For example, *Morning Sun* (1952) simply depicts a woman seated on a bed and watching through the window (see figure 7). There is nothing "odd" here. However, crucially, the art experience does not end, but merely begins, with recognising that this painting "stands for" a woman seated on a bed. In itself, a woman seated on a bed "means" nothing, but only triggers questions as to what Hopper wanted to "achieve" or "say." First of all, why did he paint a woman seated on a bed? Why is the room empty? Is this a hotel room? And if it is the morning, as the title suggests, why is the woman dressed in her bed? And why is her dress lifted? And what does she think of? A lover who just left? Or does she just enjoy the quiet morning? It is impossible to answer these questions without further information or without speculating about the artist's intention. In other words, Hopper's *Morning Sun* is not more "straightforward" than Dalí's *The Persistence of Memory*. In both cases, the adult viewer knows that the painting stands for other things (a landscape and pocket watches, and a

woman seated on a bed), but at the same time these other things themselves stand for other things or ideas, and it is unclear what these are (what does a melting watch represent?; and what does a woman seated on a bed mean?).

2.3.3 "Non-representational" art. The second objection is that not all works of art are representations, and that therefore even if adults had a problem with some representations in the arts, such as Dalí's and Hopper's paintings, this problem would not necessarily apply to all art. Some works of art, because they do not "stand for" something else in particular (or even nothing at all), would have no "dual nature," and therefore should pose no problem to human minds, because they could be approached just for what they are "in themselves" (e.g., as an aesthetically pleasing arrangement of forms and colours).

It is philosophers of art who have established the distinction between so-called "representational" and "non-representational" art (see, e.g., Carroll, 1999, chapter 1, which can also be used as a good introduction to theories of representation in the arts). Typical examples of non-representational works of art include, of course, modern abstract paintings, but also decorative patterns. Although this distinction turned out to be very useful to philosophers (e.g., to challenge Plato's famous claim that art just "imitates" reality, and to argue as a result that the concept of representation cannot be applied to all art), it might be less helpful to cognitive anthropologists. As I will argue below, there are only a few "purely" non-representational works of art (that is, works of art that stand for "absolutely nothing"), and people might still intuitively approach these non-representational works of art as representations (that is, wonder what they *could* represent, even if the artist did not intend them to represent something). Further, such non-representational works of art should not be easier for people to understand, but on the contrary trigger even more speculation about the artist's intention, than representational art.

First of all, then, few works of art can be said to be purely non-representational. For example, one cannot equate "modern art" or "abstract art" with "non-representational art." A modern abstract painting may indeed use symbols, and even if these symbols have arbitrary meanings (i.e., if they do not look like what they represent), they *do* stand for something else, and therefore *are* representations. The founder of abstraction, Wassily Kandinsky used geometric forms such as circles, squares, and triangles that all stood for other objects, or for concepts and emotions, and generally had a "meaning" (see figure 8).[65] Further, even "truly" non-representational works of art (works of art that are neither figurative nor symbolic) use representation in a sense. For example, Jackson Pollock's and Mark Rothko's paintings may not stand for a specific object in the real world, or even no "object" at all, but they are still *about* something, such as ideas, moods, and emotions (e.g., art critics have referred to the "expressivity" of Pollock's paintings, or to the "spirituality" of Rothko's multiforms; see figure 8).[66] Finally, and more importantly, even if an artist were able to create a painting that was really not representational, that is a painting that is not even "about" something, it is likely that people would still approach it in terms of what it *could* be about.[67] The reason for this is that paintings are *intentionally* created by human agents, and that it would be difficult, or at least psychologically counterintuitive, to accept that paintings could have "no purpose at all," or that they could be about "absolutely nothing." In fact, if a work of art had no purpose, and if it were about nothing, then one could not understand why the artist created it (especially since it has no functional value).

[65] Here is, for example, what the Grove encyclopaedia says about Kandinsky during his Bauhaus period: "Kandinsky used circles, squares, triangles, zigzags, chequer-boards and arrows as components of his abstract *vocabulary*. They became *meaningful* pictorial elements just as the abstract images of towers, horses, boats and rowers had carried connotations in his art in earlier years." Or: "For Kandinsky, the circle, the most elementary form, had *symbolic*, cosmic *meaning* . . . ." (Endicott Barnett, n.d., my emphasises).
[66] Danto (1981) championed the idea that art necessarily is *about* something, or has semantic content, which has been called the "neo-representational" theory of art.
[67] They might of course be wrong to do that, but remember that a cognitive anthropology of art is not about what people *should* think, but what they *actually* tend to think.

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Figure 8
Kandinsky's *Composition VII* (1913), left, and Pollock's *Number One* (1949), right. An abstract painting is not necessarily non-representational. Kandinsky used geometric shapes and other forms to represent specific things or ideas. Further, even a non-representational work of art may be said to be "about" something, or at least is perceived as being about something. Pollock's paintings represent nothing in particular, but people, including art theorists, tend to think that it is about concepts such as "expressivity," "energy," or "creativity." (Originals in colour.)

That said, I have still not answered directly to the objection that (the few purely) non-representational works of art may pose no "problem" to human minds, because they "stand for" nothing and therefore can be approached just for what they are in themselves (e.g., aesthetically pleasing objects that do not need to be "thought" but just "seen"). But the problem, precisely, is that even non-representational works of art cannot be approached for what they are in themselves, *because they did not come into being by themselves or by accident, but were intentionally created by a human agent*. In other words, from a psychological point of view, a work of art, even non-representational, is *always* about something; it is about, at least, the human agent who created it. Further, if that is correct, non-representational art should not be easier, but on the contrary more difficult to apprehend for people than representational art. In the case of a representational work of art, the things represented may themselves stand for other things (Dalí's pocket watches), or the symbols used to represent them may be arbitrary (Kandinsky's geometric forms), but still it is not impossible to understand them (e.g., to guess that melting watches may

represent the relativity of space and time, or to consult an encyclopaedia and find the "key" to Kandinsky's symbolism, see footnote 65 above). In contrast, a non-representational work of art provides no "clue" as to what it could "mean." As it resembles nothing, and represents nothing, all it offers to the viewer is further speculation about the only thing it stands for: the artist who created it.

In summary, many works of art are representations. As such, works of art are things in themselves while at the same time standing for something else. If adults, contrary to children, understand this dual nature of representations, it does not mean that they easily understand representations in the arts. A figurative work of art may refer to other things than the things it depicts; a symbolic or an abstract work of art may necessitate that the viewers know the meaning of the symbols used by the artists; and a non-representational work of art refers to nothing in particular, except the artist. In sum, works of art, as complex representations, may pose a problem to human minds.

2.4 Bloom's intention

I have now proposed three general reasons for why works of art would be perceived as ambiguous artefacts. These reasons have allowed me to *hypothesise* that works of art pose a "problem" to human minds, and as a result trigger speculation about the artist's intention. Is there, however, *evidence* that this might be the case? Although, to my knowledge, there is no such evidence specifically for works of art, findings in the field of artefact categorisation, which I have already mentioned above (subsection 2.1.2), suggest that artefacts in general (including non-artistic drawings) involve speculation about their maker's intention. In this section I present this evidence and argue that it might also account for how people approach art.

In subsection 2.1.2 above, I have mentioned a psychological field of research known as "artefact categorisation," which studies how people classify the (human-made) objects that are in their environment. I used some of the findings in this field of research because it shows that people approach artefacts in terms of their potential uses or functions (which they cannot do with works of art). The reader remembers, for example, that adults consider that an object looking like an umbrella, but being used as a lampshade, is a lampshade, as if the function of that artefact were more important than its form (Rips, 1989). In the next subsection (2.2.1), I further showed that this tendency to approach artefacts in terms of their function may be so strong that it constitutes what some have called the "essence" of artefact concepts or the "design stance"(Kelemen & Carey, 2007). However, I deliberately simplified the findings of this domain of inquiry. Artefact categorisation is a debated field with contrasting empirical results, so much so that some have proposed that "no coherent account of artifact categorization is possible, and 'categorization' is not a coherent field of inquiry" (Malt & Sloman, 2007a, p. 87, who also provide the most complete and up-to-date review of studies; see also Malt & Sloman, 2007b). In fact, people do not categorise artefacts following their functions alone, but also consider form (e.g., Gentner, 1978; or both form and function, see Malt & Johnson, 1992), particular features of the artefact (Ahn, 1999; some features, which "cause" other features of the artefact, are considered more important), and also accompanying information or background knowledge (Lin & Murphy, 1997). Further, artefact categorisation could not be reduced to a single paradigm as it involves different mental activities such as language and naming, planning and problem-solving, and also lower-level cognitive processes such as object recognition (Malt & Sloman, 2007a).

That said, developmental psychologist Paul Bloom (1996) has proposed a theory of artefact categorisation that I think overcomes most of these problems and that convincingly challenges Malt and Sloman's (2007a) general criticism. In fact, Bloom's theory acknowledges that artefact categorisation follows form, function, and other considerations, while at the same time accounting for why some of these considerations seemed crucial in some studies and only secondary in other studies. A typical example in this regard is the mixed findings concerning form and function, with some researchers reporting that form is more important (e.g., Gentner, 1978), others that function is more important (e.g., Rips, 1989), and still others that both form and function play a role in artefact categorisation (Malt & Johnson, 1992). Now perhaps the last solution is the one that makes more sense. If an object is identical in form to another object, and if it carries out the same function, it seems reasonable to assume that it will be categorised in the same class of artefact. That said, Bloom (1996) has shown the limitations of this model. For instance, artefacts can be highly dissimilar in shape, but still categorised under the same kind (e.g., chairs can have many forms, but they are still considered as belonging to the same class, that of chairs). Further, taking into account the function of an artefact does not resolve the problem, because two things can have the same function without being categorised as the same kind (e.g., other things than chairs may be used to sit on, but are not considered as belonging to the same class). Finally, an artefact that has ceased to carry out its function is not necessarily considered as belonging to a new kind (e.g., a broken chair is still, to a large extent, a chair).

Bloom (1996; see also 1998 and 2007a for answers to criticisms) then proposed a new theory of artefact categorisation, in which the decisive factor is claimed to be the

intention of the artefact's maker.[68] According to this theory, an artefact actually is categorised as belonging to a kind if, and only if, its maker intended it to belong to that kind (or, more precisely, if it is *recognised* that its maker intended it to belong to that kind). This does not mean, of course, that considerations of form and function play no role in artefact categorisation; most of the time, form and function actually constitute good *indicators* of what the intention of the artefact's maker was (e.g., if something looks and is used like a chair, then it must be because it was intended to be a chair). More simply, it means that taking into account the intention of the artefact's maker allows one to avoid some problems with classic approaches to artefact categorisation. As Bloom has shown, similarity of form and function are not sufficient for artefact categorisation, because two objects may be dissimilar in form, but belong to the same kind, and two objects may be similar in possible function, but belong to different kinds (see figure 9). If one considers the intention of the artefact's maker, categorisation appears to be less problematic: two things may be dissimilar in form, but made with the same intention (and therefore considered as belonging to the same kind), and two things may be similar in function, but made with different intentions (and therefore considered as belonging to different kinds).

[68] Bloom's (1996) theory of artefact categorisation is based on Levinson's (1979, 1993) "intentional-historical" theory of *art*, and therefore the reader might wonder why I do not use Levinson instead of Bloom in this section (that is, why I do not use directly a theory on art instead of using a theory on artefact categorisation based on a theory of art, to then re-apply it to art). There are two reasons for this. First, Levinson is a philosopher, and developed his theory in response to Dickie's (1974) institutional theory of art. This means that Levinson's theory is part of a specific field of philosophical inquiry, that of art definition. As I have argued in chapter 1 (subsection 1.3.1), this also means that Levinson's theory is concerned with what art critics and people *should* consider to be art, not what they *intuitively* tend to think it is, the latter being the priority for a cognitive anthropology of art. Second, as I will show in the main text below, it is Bloom who provided the evidence that some artefacts involve speculation about the artist's intention; Bloom also provides a basis or framework for further hypothesis testing, which I will use in study 2 (chapter 6).

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Figure 9
Form and function are not always sufficient for artefact categorisation. The two artefacts on the top do not resemble each other, but both are considered to be chairs. The artefact on the bottom right might be used as a chair, but it is not considered to be a chair. Finally, an artefact that has ceased to carry out its function or that was not designed to be used functionally, such as the giant *Broken Chair* (1997) by Daniel Berset, is still considered to be a chair. In all these cases, people successfully categorise artefacts partly following the makers' intentions.

Bloom's (1996) theory has been followed by a number of experimental studies that support the claim that intention plays an important role in artefact categorisation and appreciation. A first set of developmental studies, in which pictorial stimuli were used, seems particularly relevant to art. For example, Bloom and Markson (1998) have shown that, if similarity of form is somehow important in children's appreciation of pictures, it is neither necessary nor sufficient. In one of the tasks of this study, children were asked to draw objects similar in form, such as a balloon and a lollipop; after another task, they had to name their drawings. Given the age of the participants (three to four years old), the

drawings were very simple, and so similar that it was impossible to distinguish them on the basis of form alone. However, a significant percentage of the participants named the drawings correctly, suggesting that children distinguished their creations by reference to what they intended to represent. Some children also strongly protested when the experimenters named their drawings as something that they did not intend to represent (e.g., a balloon, when the children wanted to draw a lollipop).

In another study, Preissler and Bloom (2008, experiment 1) wanted to determine whether this appeal to intentions also applies to the appreciation of pictures that children did not draw by themselves. The participants (two-year-olds) were introduced to two novel objects, similar in form. The experimenter then placed these objects in two opaque boxes (one open, one closed), and drew a picture that could represent either of them. In one condition, the experimenter was staring into the open box while drawing; in another, she stared at the wall behind the closed box. The drawing was then labelled with a novel name, the two objects were removed from the boxes, and the children were asked to indicate which of them could be named as the object represented in the picture. In the first condition, the children significantly extended the novel name to the object that was in the open box; in the other condition, the novel name was not significantly extended to the object in the closed box. In other words, the children used the experimenter's intention (as indicated by where the experimenter was looking while drawing) to categorise a novel object.

If these results confirm that children take intention into account in order to understand representational displays, other studies investigated whether this also applies to their appreciation of actual artefacts. For example, S. A. Gelman and Bloom (2000) presented a series of nine objects to three and five-year-olds. The two conditions of these

objects were their "intentional" or "accidental" modes of production (e.g., a newspaper intentionally folded into the shape of a hat, or a newspaper that, following a random accident, appears to be shaped as a hat). Although the shapes of the objects were identical in the two conditions, the items presented as intentionally created were significantly more likely to be named as the "target" artefact (e.g., a hat), than the ones that were supposed to be accidental.[69]

What are the implications of these studies on artefact categorisation for how people deal with works of art? First of all, one has to note that in Bloom and colleagues' experiments, the participants used the artefact maker's intention *because the form or function of the artefact was ambiguous*. In the "balloon or lollipop" study, children used their intention to name their drawings because these could not be distinguished on the basis of form alone; that is, the forms of these drawings were ambiguous because they could represent two things at the same time. In the "newspaper or hat" study, the artefact was similarly ambiguous, because it could either be used (as a hat) or not be used (as an accident) for something. Had Bloom and colleagues used artefacts whose form or function was not ambiguous, the participants would probably not have used the artefact maker's intention to make a decision. For example, if the children had been asked to draw not a balloon and a lollipop, but a balloon (or any other rounded thing) and a house (or any other square thing), it is probable that they could have named their drawings on the basis of form alone, with no need to remember what they intended to draw. Similarly, if adults indeed recognise that chairs whose forms are dissimilar still are all chairs (on the basis that the artefact maker intended these artefacts to be chair), there probably is a "limit" to what

[69] For a study using similar "intentional" and "accidental" modes of production, but with drawings (and including a group of adults participants), see S. A. Gelman and Ebeling (1998, study 1). Finally, for a study showing that *intended* function seems to override both function bias and shape bias in children, see Diesendruck, Markson, and Bloom (2003, study 2).

people would consider to be chairs. For example, would people accept that a javelin-shaped "chair" is a chair? Probably not, even if the artefact maker strongly intended that artefact to be a chair.

In other words, form and function, as Bloom (1996) himself has acknowledged, are often sufficient to categorise an artefact. The intention of the maker is needed only when the form or function of an artefact is "unclear," and that wondering what it was "supposed to be" might help to categorise it. Why is this important for works of art however? Well, first because a work of art, contrary to a functional artefact, can have *any* form, and that therefore its form will *never* be sufficient do categorise it and understand it. A work of art can be a painting, a sculpture, an installation or, following Dickie's (1974) institutional definition, anything at all (e.g., an empty room or a can of faeces, see chapter 1 of this thesis, subsection 1.3.1). Similarly, the "function" of a work of art will never be sufficient to categorise it and understand it, for the simple reason that a work of art has no function. Therefore, works of art should involve more speculation about the maker's intention than (even ambiguous) functional artefacts, because their (infinite possible) forms and (nonexistent) functions mean that the only way to approach them is in terms of what the maker (the artist) intended to do or achieve.

There are therefore two main implications of Bloom's (1996) theory of artefact categorisation for how people deal with art. First, people would use the artist's intention to decide whether an artefact is a work of art or not. This would be needed because a work of art can have any form and has no function, and therefore the only way to determine that it is a work of art is to know that the artist intended it to be a work of art.[70] Second, people

[70] I will however nuance this claim in chapter 4 (subsection 4.1.1), arguing that even if a work of art can have any form, it is unlikely that people will accept that anything can be a work of art. I am here applying Bloom's (1996) theory of artefact categorisation to art objects, and at this point it seems fair to just show what this application implies without calling it into question.

would further use the artist's intention to determine what a *particular* work of art is "about" or "means." This would be needed because just recognising that an artefact was intended to be a work of art does not mean that this work of art will be "understood" as a result. (Contrary to a functional artefact, even ambiguous, which can be readily understood and used once the artefact maker's intention has been discovered). For example, recognising that Dalí's *The Persistence of Memory* is a work of art does not help to understand it; to achieve this, the viewer will have to treat is as a representation, and wonder what the artist wanted to convey or "mean" when he depicted melting watches (see previous section).

In this section, I have provided evidence that artefacts whose form or function is ambiguous are categorised partly following the intention of their maker's intention. As works of art are ambiguous artefacts *par excellence*—they can have any form, and have no function—speculation about the artist's intention should be at the core of how people approach works of art.

2.5 Gell's agency

I finish this chapter by briefly discussing Alfred Gell's (1998) ambitious theory of art.[71] Despite the fact that Gell was a social anthropologist, and that I will review the anthropological literature on art in the next chapter, I have considered that his theory should be mentioned here because it similarly emphasises the important role of speculation about the artist's intention in the art experience. Gell's theory, as I will show, is anthropological but it is based on a psychological concept, that of agency, and it might therefore serve as a transition towards the next chapter of this thesis. It is difficult to do

[71] Gell's theory, as with my own approach, is addressed to the *visual* arts only.

justice to such a discussed and controversial[72] theory as Gell's in just a few pages, however, and I will have to focus on a couple of points. I have chosen these points because I believe that they illustrate well how Gell's theory relates to my approach, and how psychology in general can valuably contribute to an anthropology of art. I will first briefly summarize Gell's use of the concept of agency in approaching art, and then discuss one of the most criticized aspects of his theory (that art objects may be said to have agency in themselves).

In section 2.2 above, I have used the psychological concept of agency to argue that works of art trigger speculation about the artist's intention. Recall that humans, from infancy, automatically make a distinction between self-propelled and nonself-propelled objects; they think of self-propelled objects, that is, objects that can move by themselves, as agents, and further attribute goals, intentions, and mental states to these agents. As works of art are human-made objects, I have argued that they probably involve the detection of (traces of human) agency, and therefore involve theory-of-mind-like thoughts about the artist. Now, it is a similar, *psychological* concept of agency that is at the core of Gell's theory of art (1998; all the following page and chapter numbers in this section are from this reference except stated otherwise). In fact, for Gell works of art are not only aesthetically pleasing objects (chapter 1), but above all they speak about the human agents who created them, and how these have a psychological effect on the viewers. Three terms are important in Gell's theory of the art "nexus" or network of relationships that constitute the art experience: "agent," "patient," and "index" (chapters 2 and 3). The *agent* is typically the artefact's maker or artist, who is defined as an "intentional being who exercises agency

[72] For example, compare these reviews of Gell (1998) by, on the one hand, Arnaut (2001), Hoskins (2006), Layton (2003), and, on the other hand, Bowden (2004), Morphy (2009), Winter (2007). See also the collections of essays edited by Pinney and Thomas (2001).

in a causal milieu" (p. 38). The "result" of that agency is the *index* or work of art; indeed, a work of art "indexes" the agency exercised by the artist (p. 23). The typical *patient* of the index is the "recipient" or viewer; the patient detects the artist's agency in the index and is "affected" by it (pp. 24, 31-32).

The typical situation of an agent or artist manifesting his or her agency in an index or work of art that will have an effect on a patient or viewer, however, is the simplest relationship in the art nexus. According to Gell, in some situations the agent or artist may be become a patient, and in others the patient may act as an agent. For example, the artist, as the first viewer of the index that he or she has created, is in a sense the "patient" of the work of art (the work of art affects the artist just as it would affect other viewers; pp. 45-47). On the contrary, a recipient who commissions a work of art, such as a patron or a gallery curator, may be said to act as an agent, because without him or her the work of art would not have been created (pp. 39-40). More importantly for Gell, often it is the index or work of art itself which acts as an agent (pp. 31-32). In fact, in most situations the artist does not exercise his or her agency directly on the viewer, but through the index or work of art that, from this point of view, may be said to have agency (or what I have myself called "traces" of agency in subsection 2.2.2 above). It is not difficult to find examples of works of art acting as "agents," or at least of viewers being affected by the artist's agency through works of art: the most common would be that of the viewer captivated by an art object or impressed by the effort and skill that went into it (without seeing the artist himself or herself, and perhaps revering the art object as a "person" as a result; this is, however, the most controversial point in Gell's theory and I will discuss it later).

Although the theory of the art nexus is based on a psychological concept, that of agency, Gell was a social anthropologist, and as such he focused on the implications of his

theory for art in society. For Gell, to say that art objects have agency means more precisely that they have *social* agency. In fact, when the artist manifests his or her agency in an art object, he or she engages in a social relationship with another human agent, the viewer (or an entire group of other human agents, the audience). And, as it is the art object that mediates the artist's agency (the artist does not communicate directly with the viewer), it can itself be called a "social agent" (pp. 17-19).

Gell gave many examples of art objects acting as social agents. Asmat (New Guinea) war shields and Trobriand canoe prows, which are indisputably recognised as "works of art" by anthropologists, were not created to elicit "aesthetic" responses in the viewers; instead, they were used as "psychological weapons" in some of the most important social interactions within these cultures (war before pacification and Kula exchange, respectively; pp. 5-7, 68-72; see also his article of 1992 for an earlier treatment of the Kula example). Asmat war shields and Trobriand canoe prows acted much as agents, in the sense that they had the same effect as human agents in the framework of social relationships—elicit terror in opponents, or impress economic partners to convince them to offer more valuable products during exchange. Another example of the agency exercised by art objects is that of a painting of an influential social agent (king, hero, or the famous artist; pp. 33-34; see also pp. 52-59 for a similar treatment of Reynold's portrait of Samuel Johnson). When a king commissions his portrait and makes it largely available, he "distributes his personhood" in the population, and therefore extends his social domination (on the concept of "distributed personhood," and the related concept of the "extended mind," see chapters 7 and 9). Idols and fetishes, of course, may also be considered as agents in the sense that they are believed to be able to play a direct role in social relationships (e.g., producing a positive outcome for the group, protecting or harming

someone, etc.; see also pp. 59-65 on nail fetishes; or the long discussion on sorcery and the cult of images—both further typical examples of treating objects as agents—in chapter 7).

Gell's claim that art objects have agency or act as social agents, however, has been strongly criticised by some anthropologists, and this is the second point that I want to discuss here.[73] For example, Morphy (2009) has criticised Gell for approaching not only artists, but also the art objects themselves, as social agents; for Morphy, this constitutes "a case of an analogy gone too far" (2009, p. 6). In other words, Gell would have suffered from what I have called the hypersensitive detection of agency (see subsection 2.2.2 above), and would have attributed goals, motives, and intentions to things that, by definition, are not agents. There are two arguments that can be used to counter Morphy here, and I think that they also show that Gell was basically right to say that, in a sense, art objects do have agency (or, more prudently, that they display what I have called "traces" of agency, and that they may be conceptualised as "agents" as a result).

First, as Morphy (2009, pp. 6-7) himself has acknowledged, it is not true that Gell claimed that art objects have agency in a literal sense. Gell (1998, all following quotations are from this reference) distinguished between, on the one hand, "primary agents," that is, intentional beings that can act on their environment, and, on the other hand, "secondary agents," that is, artefacts through which agency is exercised, and which are perceived as agents as a result (pp. 19-21).[74] Second, and it is here where, I think, the key to the problem

[73] It is not that Gell was the first to propose that objects play a social role, or in a sense may be considered as social agents, see for example the famous collection of studies *The social life of things* edited by Appadurai (1986). The issue, as I will show in the main text, is that of what *type* of agency objects may be said to have.

[74] In Gell's own words: "It is contradictory to assert that 'things' such as dolls and cars can behave as 'agents' in contexts of human social interactions, since 'things' cannot, by definition have intentions, and moreover, such causal events as occur in their vicinity are 'happenings' (produced by physical causes) not 'actions' referable to the agency exercised by the thing. . . . I am prepared to make a distinction between 'primary' agents, that is, intentional beings who are categorically distinguished from 'mere' things or artefacts, and 'secondary' agents, which are artefacts, dolls, cars, works of art, etc. through which primary agents distribute their agency in the causal milieu, and thus render their agency effective." (pp. 19-20)

lies, Gell used the concept of agency in its *very psychological* sense, which I think was not sufficiently acknowledged by both his admirers and critics, with the exception, perhaps, of Bloch (1999). I will say later why this is important, but first here is Gell's definition of agency and agents:

> Agency is attributable to those persons . . . who . . . are seen as initiating causal sequences of a particular type, that is, events caused by acts of mind or will or intention, rather than the mere concatenation of physical events. An agent is one who "causes events to happen" in their vicinity. . . . Whereas chains of physical/material cause-and-effect consists of "happenings" which can be explained by physical laws which ultimately govern the universe as a whole, agents initiate "actions" which are "caused" by themselves, by their intentions, not the physical laws of the cosmos. (p. 16)[75]

Although Gell unfortunately does not cite his source(s) here,[76] it would be difficult to find a more "psychological" definition of agency; as I have shown above, this is exactly how cognitive scientists would define it, that is, as an ability for something to self-initiate movement and action in its environment, and not merely to be acted upon. But why is this important however? It is important because a psychological approach to agency is not interested in what agency "really" is, or whether objects can actually have "agency," but just in how people *perceive* agency, and possibly *attribute* agency to objects (even if they are wrong to do so). In other words, Gell did not use the concept of agency in its philosophical sense (he did not make an "analogy"), and he put that very clearly in this passage:

> I am going to take seriously notions about agency which . . . philosophers would probably not want to defend, for example that agency can inhere in graven images,

[75] The way Gell defines the interaction between agent or artist and patient or recipient is also strikingly psychological. For Gell, the recipient's "causal milieu" is "vulnerable" to the "control and influence" of the artist through the work of art (p. 38). This is very similar to an aspect of Sperber and Wilson's (1986/1995) relevance theory, according to which communication occurs at the intersection of two cognitive environments (called "mutual cognitive environment," pp. 38-46), that of the two individuals communicating and trying to have an "effect" on each other.

[76] However, a quick look at the list of references of *Art and agency* shows that Gell has read the perceptual psychologists as well as the cognitive anthropologists. Amongst others are cited scholars such as Pascal Boyer, James Gibson, David Marr, Dan Sperber, and the gestaltists.

> not to mention motor cars . . . . I do so because, in practice, people do attribute intentions and awareness to objects like cars and images of the gods. (p. 17)

Gell, therefore, did not attribute agency to objects themselves, but just took into account the fact that strong psychological constraints mean that people easily detect, and attribute agency to a wide class of things, including some objects such as works of art. Further, he was probably right to do so. As I have shown above (subsection 2.2.2), humans do, from infancy, overdetect agency in objects that are as "simple" and "abstract" as moving geometric forms. Works of art, of course, have no agency in themselves. But as human-products, it is highly probable that they involve the detection of what I have called "traces" of agency, and it is possible that they may be conceptualised as "agents" as a result.

In sum, from a cognitive anthropological point of view, Gell's merit is to have shown that some probably pan-cultural psychological factors play an important role in the art experience and how it is received in society. When viewers see a work of art, they intuitively think of the human agent who is behind it, and perhaps tend to treat the work of art itself as an agent. As Gell has emphasised, this happens not only in the "head" of the viewer, but has direct consequences in society. Works of art can act as the "substitutes" of the social actors who created them or commissioned them, and, for example, inspire terror in opponents, or destabilize buyers, or remind the subjects of a ruler that he or she always "keeps on eye" on them. In all these situations, works of art "enchant" (another favourite term of Gell, see his article of 1992) people because they stand for the human agents who created them, and as such trigger thoughts, beliefs, and emotions that are at the core of the art experience.

2.6 Conclusion

In this chapter, I have defended the claim that, from a psychological point of view, works of art are ambiguous artefacts. As objects, works of art trigger expectations of affordances

and functions, but at the same time frustrate these expectations (section 2.1). As artefacts, works of art involve the detection of agency, but at the same time the purpose of that agency is not clear (2.2). As representations, works of art have a dual nature, and this might be difficult to conceptualise even for adults (2.3). These three reasons have allowed me to hypothesise that works of art pose a "problem" to human minds, and as a result trigger speculation about the artist's intention—what he or she wanted to "achieve" or "say," what was in his or her mind while creating the work of art, and so on. I have then shown that other artefacts, whose form and function are ambiguous, indeed involve speculation about the maker's intention, and that this probably also applies to works of art (2.4). I have finally discussed Gell's theory of art, which similarly claimed that speculation about the agents who are behind the creation of artefacts, plays an important role in the art experience, especially in how art objects are used or "act" in social relationships (2.5). That said, the reader might here think that I have answered few questions so far. If art involves such "speculations" in people, what do they "do" with them? How do they resolve the "ambiguity" of works of art? And how do they "understand," eventually, what the artist wanted to "achieve"? In the next chapter, I will argue that people intuitively assume that works of art are to be approached as *acts of communication*.

Chapter 3

Works of Art as Acts of Communication

In the previous chapter, I have marshalled psychological evidence to argue that the art experience involves speculation about the artist's intention, which is the first claim of this thesis. As a work of art cannot be approached in terms of practical use or function, people would intuitively assume that it has another purpose, and that the only way to understand this purpose is to speculate about the artist's intention—why did he or she create that object?

In this chapter, I further hypothesise that people intuitively assume that the artist's intention, at the most general level, is to "communicate something." This is the second claim of the thesis, and I will first show that it is not a new one in the history of anthropology (section 3.1). Mainstream anthropologists of the second half of the 20th century have approached the arts of other cultures as a form of communication, which teaches us a lot about the people who produce them. I will then argue that mainstream anthropology, however, presents a series of problems to cognitive anthropologists (3.2). For example, the conventions used in the arts are not necessarily arbitrary, but are also constrained by non-cultural factors, such as communication efficiency. More generally, mainstream anthropology cannot explain the cross-cultural recurrence and stability of some features of the arts. As this is the case, I will propose applying Sperber and Wilson's (1986/1995) relevance theory to art production and appreciation (3.3), which I believe constitutes a more efficient approach than that of mainstream anthropology (precisely because it has the potential to account for cross-cultural features of the arts). Sperber and Wilson claimed that human communication is constrained by cognitive relevance; if works of art are intuitively approached as acts of communication, then they may also trigger

expectations of relevance, and this might account for how they are produced, received, and distributed within and between cultures.

3.1 Anthropology of art as a form of communication

There are at least three reasons for reviewing the anthropological literature on art. First, it shows that art can be fruitfully approached as a mode of communication. Anthropologists of the second half of the 20th century have shown that works of art are not just "beautiful objects," but that they also convey a significant amount of information about the people who produce them and the society to which they belong. Second, the anthropological literature provides rich data on non-Western forms of art. Although these forms may differ drastically from those known in the West, they allow identifying, too, some recurrent features of art across cultures (in chapter 1, I have given the example of split representation, see subsection 1.3.3). Third, the anthropological literature may suggest directions for further research. Because they were mainly interested in the cultural determinants of art, mainstream anthropologists have put aside some questions that seem important to the cognitive anthropologist. If some forms of art are cross-culturally successful, it might be for reasons that are not only conventional and cultural (otherwise one could not explain why split representation occurred in cultures that were not in contact; or why in many cultures, as I will show in subsection 3.2.1 below, representations often look like the things that they represent).

Morphy and Perkins (2006, pp. 3-11) have divided the history of the anthropology of art into three periods. In the late 19th century, artefacts and art objects from non-Western cultures were well integrated in mainstream anthropology, and were approached in the framework of evolutionary theory. For example, anthropologists such as Frazer (1906/2009), Pitt Rivers (1906), and Tylor (1871/1929) analysed the "primitive" arts in

terms of sequences of development, with architectural features, pottery designs, and textile motifs moving from simple to complex forms. At the beginning of the 20th century however, (cultural) evolutionary theory was criticized and was gradually replaced by the functionalism of Malinowski (1922/2002) and the structural functionalism of Radcliffe-Brown (1952). As a result, art and material culture, which had been tightly linked to evolutionary theory until then, became "suspect" to anthropologists, and were no longer studied within mainstream anthropology.[77] Finally, in the 1960s, under the influence of new topics of investigation such as symbolism and exchange, anthropologists showed a new interest in art and material culture. During this last period, according to Morphy (1994), "the main focus of studies in the anthropology of art has undoubtedly been on art as a system of meaning and communication" (p. 664).

A cognitive anthropological approach, too, implies that art is a form of communication. As this is the case, a good starting point seems to focus on the anthropological literature of that last period, and this is what I will do in this section. As I will show, the anthropology of art as a system of meaning and communication may be summarized in three points: (1) art communicates information, (2) about the society that produces it, and (3) in a way that is constrained by that society. I will also discuss the cross-cultural validity of the concept of "art."

3.1.1 Art as a form of communication. According to several commentators, most anthropologists of the second half of the 20th century have approached art as a form of communication (Coote & Shelton, 1992, p. 4; Firth, 1992, p. 22; Forge, 1973a, p. xiv;

[77] It is interesting to note, however, that kinship, too, was tightly linked to evolutionary theory, but did not become "suspect" as a result. I thank Marcus Banks for bringing this point to my attention.

Morphy, 1994, p. 664; Morphy & Perkins, 2006, pp. 9-10).[78] Within this general trend, Forge has distinguished between "linguistic" and "symbolic" models (1973a, pp. xiii-xxii).[79]

Linguistic approaches (or iconics) explicitly compared art to language.[80] For example, Munn (1966) has shown that Walbiri (Australia) sand drawings and designs are composed of a discrete number of graphic signs that, just like words, encode meanings and follow quasi-grammatical rules when used in conjunction. Most of these graphic signs have what Munn called "discontinuous meaning ranges" (p. 940), that is, they can represent more than one thing depending on the context. For example, a straight line may represent a tree, a spear, a path, a tail, a backbone, and so on. These graphic signs can also be assembled to convey further meanings: a straight line accompanied by further lines may represent a particular type of tree. Similarly, the Buryat (Siberia) *ongon* pictures studied by Humphrey (1971/2004) are composed of a limited number of elements which are used following specific rules, and which have the potential to signify a great number of things, just as in a semiological system. Strathern and Strathern (1971), too, have analysed Hagen (New Guinea) body-decoration as a system of meaning similar to language. In Hagen art, however, the units that convey meanings are not graphic signs but three basic colours—red, white, and black. Just as in Walbiri art and in Buryat art, the meaning of these units depends on the context and their combination with other signifying units such as the texture of the body-decoration: for example, the meaning of a black design whose texture is dull

[78] Layton (1978, 1981, pp. 86-133), however, has underlined that approaching art objects as meaningful artefacts was not new. For example, in Durkheim's (1915) analysis of Aboriginal religion, the totems stand for the clans and therefore signify social affiliation and cohesion.
[79] Firth (1992) and Layton (1978) have made similar distinctions.
[80] As such, these approaches were influenced by Saussure's (1916/1983) semiology and Lévi-Strauss's (1958/1963, 1972/1982) structuralism. For a discussion, see Layton (1978).

(war) is not the same as the meaning of a black design whose texture is glossy (ceremonial exchange).

Other anthropologists, representing the symbolic approach, have argued that the analogy with language should not be pushed too far. If art communicates information, it seems that it does so in its own way (Layton, 1981, pp. 86-133), and that it cannot just be translated into words (Forge, 1979). An important difference is that many art objects, contrary to words, do not seem to convey precise meanings (Firth, 1992); either they do not represent something in particular, or when they do they have to be interpreted symbolically, that is, the things that are represented themselves represent other things (Layton, 1978). For example, the paintings and decorations found in Abelam (Papua New Guinea) ceremonial houses do not stand for objects in particular, but convey more general statements through a symbolism that associates men, ritual, and warfare (Forge, 1965). A second difference is that if art objects do not necessarily convey precise meanings or do so using symbols, they can be at the same time less "arbitrary" than words. In fact, Saussure's signifiers are arbitrary in the sense that they do not resemble to the things they signify; except in the case of onomatopoeia,[81] words do not sound like the things they represent, but their meaning is determined by convention. In contrast, as Layton (1978) has remarked, representations in the arts often *do* resemble the things that they represent, and therefore are not equivalent to words.

These differences between the linguistic and the symbolic approaches, however, should not be exaggerated. Many anthropologists of that period have held an intermediary position and would probably have agreed with Layton (1981) when he concluded that "behind the richness and diversity of cultural imagery lie some general principles of

[81] For example, the English word "crow" imitates the typical sound that this bird produces (as in other languages, e.g., *kâka* in Sanskrit, *karga* in Turkish, *kraai* in Afrikaans, *krähe* in German, etc.).

communication that are shared with language, but realized in forms peculiar to visual representation" (p. 133).

3.1.2 Art as a "portrait of society." If art is a form of communication, what does it communicate? On that point, it seems that virtually all anthropologists of art of the second half of the 20th century have agreed: art communicates information about the society in which it is produced or, as Guss put it, art objects are "portraits of the society that inspired them" (1989, p. 91). What facets of society does art portray, however?

A first group of anthropologists has shown that art signifies the differences and relationships between the genders, thus reflecting the structure or organisation of the society. For example, Bowden (1992) has shown that the architectural and aesthetic features of the Kwoma ceremonial houses (*korombo*) of the Sepik River region of Papua New Guinea, symbolize the position of men in society (that is, at the centre of social and ritual life), as well as the values traditionally associated with them (horticultural creativity and war aggressiveness).[82] Also in the Sepik, Forge (1973b) has noted that Abelam paintings are all composed of a limited number of motifs that consistently associate women with some domains (sexuality, maternity) and men with others (power, ritual). Similarly, Firth (1973) has shown that the great variety of Tikopia (Solomon Islands) headrests are related to the gender and social status of their owner: headrests with high wings are typically used by chiefs or men of rank. Guss (1989), too, has underlined the importance of artistry in defining gender identity amongst the Yekuana of South America: the making of baskets is traditionally reserved to men, and mastery of this craft is what makes a Yekuana a "real" man, eligible to marry.

[82] Forge (1965) has proposed a similar interpretation of Iatmul (also in the Sepik) ceremonial houses.

Art seems to reflect further facets of the structure or organisation of the society in which it is produced. For example, Strathern and Strathern (1971) have shown that Hagen (New Guinea) body-decoration is used to signify the structure of the relationships between Hagen sub-clans during exchange ceremonies. Similarly, Rosman and Rubel (1990) have related art to social organisation. The Kwakiutl year is divided in two periods, *baxus* (summer or "secular") and *tsetsequa* (winter or "sacred"), to which correspond two art styles: for example, during *tsetsequa* the features of the masks are "[exaggerated and distorted so as to] signify the realm of the supernatural" (p. 637).

If art reflects the *distinctions* that societies make between genders, sub-clans, or periods, it seems that it can also involve the *confusion* of the same categories. For example, Jonaitis (1982) has shown that Tlingit (Alaska) masks allow the shaman who uses them to assume several roles—man, woman, animal, spirit—which are considered as distinct in profane life.[83] Leach (1973) has similarly emphasised that art objects involve the confusion of categories: a Rurutu (Austral Islands) carving may represent both a human figure and a phallus, and a Iatmul (Papua New Guinea) mask may represent the face of both a man and a pig. For Leach, this ambiguity makes art objects sensory counterparts to taboos, as they confuse categories that should remain distinct. Oosten (1992), too, has underlined that asymmetric Inuit (Alaska) masks represent two things at the same time, such as an animal and the spirit or *inua* of that animal. According to Oosten, it seems that again art objects confuse or unite categories rather than making distinctions between them: "The mask . . .

[83] Jonaitis wrote: "During [ceremonies, the shaman] blurs the distinctions—so crucial to profane order—between complements: by becoming both man and woman, he confuses the differentiation between the sexes; by becoming both human and animal, he confounds the distinction between nature and culture; by becoming animals of the three cosmic levels, he obscures geographic separations; by becoming old and young he blurs linear time; by becoming malevolent and benevolent, he confuses personality-types. He does all this while wearing several masks which in themselves confound the distinctions between complements." (1982, p. 132).

appears to express a notion of encompassment. Contrasting principles are encompassed in the mask: male and female, man and animal, etc." (1992, p. 129).

A further dimension of society that art seems to reflect is religion, or religion-related concepts and practices. As the research mentioned so far shows, the arts of other cultures may convey information about the belief in spirits (Oosten, 1992), the distinction between a "sacred" and a "profane" sphere (Jonaitis, 1982; Rosman & Rubel, 1990), and the organisation of rituals (Bowden, 1992; Forge, 1965). One could find other examples however. In Jainism (India), the soul is conceptualised as a human body without substance, and Banks (1997) has shown that this is reflected in Jain art: for example, a *siddha* or "liberated soul" is represented as the outline of a human body without content. Other anthropologists have emphasised that art objects can be considered as receptacles or vehicles of supernatural "force" or "energy:" in West Africa, the Yoruba believe that the life force of various gods such as Shango is contained in sculptures (Fagg, 1973), and in Papua New Guinea, Malangan sculptures are considered to be the vessels of the souls of the dead (Küchler, 1992).

Art, of course, can convey information about many other facets of society, including cosmology (Munn, 1973), initiation (Biebuyck, 1973, 1969), kinship (Küchler, 1992), myth (D'Azevedo, 1973), social order (Bateson, 1973), and so on. However, I think that the literature reviewed in this subsection is sufficient to summarize the main point that was made by the anthropologists of art of the second half of the 20th century: art can be approached as a mode of communication, and such an approach has the potential to reveal important features of the structure and organisation of a society.

3.1.3 Art as a "way of seeing." Art does not just communicate information about the society in which it is produced; it does so in a way that is constrained by that society.

From this point of view, every art of every culture constitutes what Morphy and Banks have called a particular "way of seeing" (1997, p. 22; see also: Banks & Ruby, 2011; Baxandall, 1972; Berger, 1972/2008). In fact, many anthropologists of that period have claimed that the arts of other cultures can be understood only in their context of production; as Morphy and Perkins (2006) have put it: "Much unproductive discussion has come from a failure to recognise that different art objects, and different styles of objects that are produced, used, interpreted, and experienced in different social and cultural contexts, function in fundamentally different ways." (p. 325).[84] Why is this a failure however?

First of all, it seems that there are no such things as universal or even cross-cultural meanings in the arts. For example, both Forge and Munn have studied the symbolism of the circle, but in different societies. In Abelam (Papua New Guinea) art, the circle may represent an eye, a star, or a navel (Forge, 1973b), whereas in Walbiri (Australia) art, the circle may represent a hole, a nest, or the belly of a pregnant woman, (Munn, 1973);[85] as Forge has commented elsewhere (1973a, p. xvii): "There is virtually no overlap between the two ranges of meaning." Similarly, ethnographic evidence suggests that colour symbolism varies across cultures. For example, the ideas conveyed by the colours black and red in body decoration are not the same amongst Hagen people (Strathern & Strathern, 1971) and Umeda people (Gell, 1975), although both are New Guinea cultures.[86]

If the elements that feature in the arts mentioned above have no cross cultural significance, they do however convey precise meanings in their context of production. This

[84] There are similar claims in: Firth (1992, p. 15); Forge (1973b, p. 191); Geertz (1976, p. 1499); Layton (1981, pp. 108, 148, 150, 162-163); and Leach (1973, p. 223) .
[85] Alternatively, a circle may represent a circular path, a fruit, a tree base, and many other "rounded" or "enclosing" things, see Munn (1966).
[86] Anthropologists have argued that cultures also vary in the way they divide the colour range, see Layton (1981, pp. 136-138). However, this would need to be contrasted with psychological research on categorical perception (e.g., Bornstein, Kessen, & Weiskopf, 1976), which suggests that colour categorisation is not culture-dependent.

way of encoding meaning—through a system of signifier and signified, as in language—is not present in every art, however. For example, the Wahgi (New Guinea) body decorations studied by O'Hanlon (1989) do not convey particular meanings, but more general statements about the person who wears them, and aim to trigger emotions and feelings in the viewers.[87] Similarly, Coote (1992) has reported that although the cattle-keeping Nilotes (Sudan) have no visual arts, they show a remarkable aesthetic sensibility in their daily lives. Nilotic aesthetics conveys no particular meanings and seems to "have little do to with any social facts" (p. 266); rather, it focuses on some features of cattle that are appreciated from a perceptual point of view: for example, piebald cows are valued because they create a pleasing contrast in a herd of grey cattle.[88]

Further, even more "naturalistic" forms of representation might be influenced by society and its particular way of seeing things. For example Layton (1981, pp. 134-171), using ethnographic and psychological evidence, argued that even figurative art cannot be understood outside its cultural context: a drawing that realistically represents a map of the United States or a bearded face (see figure 10, and Rock, 1974)—as well as other ambiguous figures that are well-known by psychologists, such as the Necker cube or the duck-rabbit illusion—could not be understood by someone who was not socialised in the West, where "convention dictates that maps be drawn with north at the top of the page" (p. 140). From this point of view, art does more than just imitating reality, and constitutes what Gombrich (1960/2002) has famously called an illusion.

[87] For a similar interpretation of Wahgi war shields, see O'Hanlon (1995). Furthermore, as Morphy (1994, p. 665) has suggested, a similar analysis might be applied to Western abstract art.
[88] For a similar approach to Yolngu (Australia) art and ritual, see Morphy (1992).

The figure originally presented here cannot be made available online for copyright reasons.

Figure 10
Depending on its orientation, this image can represent two different things: a map of the United States (left) or a bearded face (right). Further, the viewer who does not know that maps are conventionally drawn with north at the top might simply not recognise what is represented in the horizontal orientation (after Rock, 1974; reprinted in Layton, 1981, p. 140, figure 33).

3.1.4 Is art a cross-cultural category? If every art constitutes a particular way of seeing, which is constrained by the society in which it is produced, is it even possible to compare the "arts" of different cultures? In other words, can art be used as a valid cross-cultural category of analysis? At the end of the 20th century, a majority of anthropologists tended to reply in the negative: a motion proposing that "aesthetics is a cross-cultural" category and submitted in 1994 at the University of Manchester to a group of 68 anthropologists was defeated after a vote (Weiner, 1994, p. 40).[89]

Anthropologists who argue against the idea that aesthetics is a cross-cultural category—not only in the Manchester debate—have generally claimed that art is a historical Western concept that has no equivalent in other cultures. For example, Hart (1995) has shown that *jyonti* paintings cannot be compared with Western works of art: the Hindu women who produce them do not consider themselves as "artists," and *jyonti* paintings do not belong to a separate domain of activity but are used in everyday life and include mythical and religious themes. Similarly, Overing (1994) has argued that the

[89] Although I do not equate "art" with "aesthetics" (see chapter 1, subsections 1.4.2 and 1.4.3), the rejection of this motion tacitly suggests that art, too, is not a cross-cultural category, and this is why it needs to be discussed here.

concept of art is a Western construction: since Kant (1952/2007), aesthetics constitutes a separate domain that requires disinterested contemplation and that conveys bourgeois and elitist values (see also: Bourdieu, 1984/2010; Gow, 1994; Price, 1989). What these anthropologists have described as the Western concept of art would contrast strongly with Piaora (Amazonia) aesthetics for example: "In the Piaora conception, beauty and its creation are not separable from everyday life. There is no such thing as the 'object' standing alone, over and above the everyday, to be contemplated as such. And there is no spectator" (Overing, 1994, p. 14). Vogel (1997), too, has claimed that Baule (Ivory Coast) "art" objects would be more appropriately described as religious objects, and that they are not created to be seen by a large audience, which distinguishes them from the works of art exhibited in Western galleries.

That said, it has to be underlined here that most of the anthropologists who approached art as a mode of communication—the anthropologists whose works were reviewed in the previous subsections—have argued that art and aesthetics are valid cross-cultural categories of analysis, and this is explicit in Morphy's and Coote's contribution in the Manchester debate (Weiner, 1994). For example, Morphy has claimed that aesthetics is an essential part of human life, and that for this reason it is likely not to be just a Western construction, even if its socialisation may affect the way it is experienced.[90] Coote, also, has shown that aesthetics is not only a useful cross-cultural concept from a heuristic point of view, but that some cultures, such as the Dinka (Sudan) and the Yoruba (West Africa),

[90] Morphy (e.g., 1992) has approached aesthetics as "gut" responses to forms and colours (a bit like perceptual psychologists, see chapter 1 of this thesis, subsection 1.4.2), therefore emphasising the importance of the senses in the art experience. Pinney (e.g., 2004) has similarly argued for a "corpothetics," or an "embodied" notion of aesthetics as opposed to more "intellectualist" approaches. I thank Marcus Banks for bringing this point to my attention.

do have a word for "beauty" and therefore some kind of aesthetics.[91] India, too, does have an indigenous concept of aesthetics (Banks, 1997).

A cognitive anthropologist would agree with Morphy and Coote here, and could provide further arguments to defend their position. For example, even if non-Western cultures have no word for "aesthetics" or "art," it does not mean that they do not produce non-functional artefacts (or artefacts that are not only functional, such as decorated tools, adornments, etc.), and that they have no words for these types of artefact. As I have argued in chapter 1 (subsection 1.4.3), what distinguishes art objects from other artefacts is that they cannot be approached in purely functional terms. From a cognitive point of view, there is no reason to think that people from other cultures will approach their non-functional artefacts differently than we approach ours, and here might be the "common experience" (if there is no common category).

Similar arguments could be used against the anthropologists who claimed that art is not a cross-cultural category because the "art" objects from other cultures have "no spectator," or because they do not constitute a "separate domain." The fact that works of art may not have a wide audience does not mean that they are not works of art. Think here of Western domestic art or the un-exhibited sketch book of a Western artist. People from other cultures may not exhibit their non-functional artefacts as we do (or put them in the museum), but it does not mean that they have another experience when they look at these objects.

Finally, from a cognitive anthropological point of view, even if "art" were not a cross-cultural[92] category, it would still be worth to study the psychological foundations of

[91] For a list of African terms for "beauty" and "art" related concepts, see Willett (1971).
[92] But remember, as Banks has rightly emphasised in the Manchester debate, that "to demonstrate that aesthetics is a cross-cultural category, Morphy and Coote would only have to show that there are at least two societies in the world that have a concept of aesthetics, and that they can be compared. And that would be

its recurrence within Western societies. In fact, within Western societies, art has managed to be successfully transmitted across languages, nations, and times. Why is it that it persists? And is there a common experience of it? These questions lead to the next section where I identify some limitations of mainstream anthropology of art.

3.2 Cognitive problems with anthropological approaches to art

For anthropologists of the second half of the 20th century, therefore, art (1) communicates information, (2) about the society in which it is produced, and (3) in a way that is constrained by that society (and to an extent that might prevent the cross-cultural use of the Western category of "art"). A cognitive anthropology of art, as I understand it, should obviously agree with the first claim. As I have argued in chapter 2, works of art are ambiguous artefacts, because as human-made objects they trigger expectations of purpose and function while at the same time frustrating these expectations. As a result, works of art would intuitively be approached as acts of communication. The viewers would assume that as the artist's intention was obviously not to create a functional artefact, then it must be that the artist wanted to "say" something or convey or "message." In other words, art objects would be thought to communicate information. A cognitive anthropology of art should have no problem, either, with the second claim. A work of art can,[93] of course, communicate information about society, just as it can communicate information about anything else. Finally, a cognitive anthropology of art should acknowledge that art is produced and received in different cultural contexts, and that this can influence both the meaning and the form of art objects. If it were not, it would not be possible to account for the great variety of art forms and traditions, even in the framework of a single society. The

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hard to deny" (oral contribution transcribed in Weiner, 1994, p. 31). In fact, "cross-cultural" does not mean "universal."

[93] *Can*, and not necessarily *do*, or *should do*; there is here an important nuance that some of the anthropologists reviewed above seem to tacitly ignore.

second and the third claim, however, also show the limitations of mainstream anthropology of art. If we are to believe some social anthropologists, art communicates information *only* about society, and it can be approached *only* in the context of that society.

In this section, I identify two cognitive problems with mainstream anthropological approaches to art. The first one, I believe, is that anthropologists have exaggerated the role of culture in determining the form and meaning of art objects. Cultures may have different "ways of seeing" things, and they may dictate what conventions should be used to depict a particular subject, but it does not follow that these conventions are arbitrary and that they are not constrained, too, by psychological factors. The second problem, I believe, is that mainstream anthropologists have largely ignored what their informants say about their own art. As I will show, anthropologists claim that their informants are "unaware" of the real meanings their arts convey, and that as a result the arts of other cultures need to be "interpreted." This involves the risk of overinterpretation, and constitutes an instance of not taking into account how the human mind naturally works.

3.2.1 Arbitrary conventions? To defend the claim that art can be understood only in its cultural context of production, anthropologists have often used the idea of "arbitrary convention." Let us reconsider the case of the symbolism of the circle studied by Munn and Forge in different societies. As I have reported above (subsection 3.1.3), in Abelam art the circle can represent an eye, a star, or a navel (Forge, 1973b), whereas in Walbiri art it can represent, amongst other things, a hole, a nest, or a belly of a pregnant woman (Munn, 1973). For Forge, this means that "there is no necessary cross-cultural connection in ranges of meaning of even the simplest graphic elements" (1973a, p. xvii). In other words, the ranges of meaning of the circle differ between Abelam art and Walbiri art because they are

conventional; culture arbitrarily "decided"[94] that a circle should represent an eye or on the contrary a hole.

Leaving aside the question of whether it is actually the case that "there is virtually no overlap between the two ranges of meaning" (Forge, 1973a, p. xvii),[95] I will make one general objection here. The fact that ranges of meaning are conventional does not necessarily mean that they are arbitrary, or, in other words, that they are determined by culture alone. Abelam people might have decided by convention that a circle will represent an eye, a star, or a navel, whereas Walbiri might have decided that the same form will represent a hole, a nest, or a belly of a pregnant woman; however, it also turns out that the shape of all these things actually is circular or rounded, which means that the convention is not merely arbitrary. If it were, both Abelam and Walbiri people could have used any other symbol to represent an eye or a hole. But they did not; to represent things that are circular or rounded in reality, they both used a circle, and not a square or a triangle (see figure 11). That many representations in the visual arts (including some symbols) look like what they represent, and that from this point of view are not arbitrary, is such a simple fact that one could be tempted to overlook it. And this would probably be a mistake, because the fact that in many cultures representations look like the things that they represent may indicate a possible cross-cultural determinant of art (as in the case of split representation, see chapter 1, subsection 1.3.3).

[94] But social anthropologists, unfortunately, did not discuss why, or more importantly how, this could have been decided.

[95] For example, Forge has reported that, in Abelam art, circles can also represent "breasts" (1973b, p. 186). This does not seem so far from the theme of "maternity" conveyed by circles in Walbiri art (Munn, 1973). Further, an omnipresent form in Abelam art, that of the pointed oval or *mbia*, covers almost exactly the same range of meaning as the circle in Walbiri art, that again of maternity and fertility. Circles and pointed ovals are similar forms, and from this point of view it does not seem that their ranges of meaning were arbitrarily selected.

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Figure 11
A series of graphical elements used in Walbiri (Australia) sand drawings (after Munn, 1966, figure 1b). Although the meanings of symbols may differ between cultures, within many cultures the symbols used broadly look like what they represent. For example, in Walbiri art all the things that the circle (far left) can represent, such as a circular path, a waterhole, or a tree base, are circular or rounded in reality (see Munn, 1973, for further meanings of the circle). Why did the Walbiri not use a triangle or a square to represent these things? Probably because this would have reduced communication efficiency.

In fact, from a cognitive point of view, it makes sense that Abelam and Walbiri people chose a circle to represent things that are circular or rounded in reality. If art, as social anthropologists have argued, is a form of communication, then representations that look like what they represent have an obvious cultural transmission advantage over those that do not. The advantage is that they aid communication efficiency. All other things being equal, such as aesthetic quality, a representation of an eye or a hole that, well, looks like an eye or a hole, will necessarily be easier to recognise, and convey more useful information, than a representation of an eye or a hole that, say, looks like a nose or a mountain. In other words, Abelam and Walbiri people have decided by convention that a circle represents an eye or a hole (respectively), but in both cases the convention is also constrained by communication efficiency. From a cognitive anthropological point of view, this suggests that

representations in the arts such as those of the Abelam and the Walbiri are neither "universal" nor "arbitrary." They are not universal, because their meanings can differ between cultures; but they are not arbitrary, because their meanings are also constrained by non-cultural factors.

I am not saying, of course, that all representations in the arts of other cultures are not arbitrary, or that representations which look like what they represent are automatically preferred over those which do not. In his doctoral dissertation, Morphy (1977, chapters 6-8) showed that two types of representation can coexist in a single society. The Yolngu (Australia) use both figurative and geometric representations in their art; figurative representations look like what they represent in reality (and their quality is judged on that basis, p. 178), whereas the meanings of the geometric representations are only arbitrary (pp. 165-182).[96] I believe, however, that social anthropologists have perhaps exaggerated the arbitrariness of representation in the arts. A single graphic element can have different meanings depending on its cultural context of production, but it does not mean that it can have *any* meaning; in the case of Abelam and Walbiri art, all the different things that the circle represents are circular or rounded in reality, and this suggests that psychological factors, as well as what people naturally expect from acts of communication, also play a

[96] Layton (1981, pp. 164-171) has used this example to argue that the coexistence of two modes of representations in a single society proves that art styles are not constrained by psychological factors. I disagree. If the Yolngu use two types of representations, that may be simply because these fulfil different functions. For example, Morphy has reported that in some cases (i.e., *likanbuy* paintings), the geometric style is used to protect the secrecy of the message that the painting conveys (1977, pp. 227-228); if so, the coexistence of two modes of representation does not prove that art styles are not constrained by psychology, but just that they are adapted to different functions (which, from a psychological point of view, would precisely explain why they coexist). Alternatively, and this is the reason I would favour to account for the coexistence of several modes of representation, it may also be that figurative and geometric styles do not represent the same *type* of things. In Yolngu art, the figurative style is mainly used to represent humans, animals, and objects, whereas the geometric style is typically used to represent clans and ancestral events. Maybe it is because clans and ancestral events are not material objects, but "concepts," that their representations do not need to look like them (a clan and an ancestral event, indeed, do not look like anything in particular, which would explain why arbitrary conventions have to be used to represent them). On this last point, see also Chase (1991), who proposed a useful distinction between "icons" and more "arbitrary" symbols.

role. Social anthropologists have emphasised that the analogy between art and language should not be pushed too far (Forge, 1979; Layton, 1981, pp. 86-133), and I am heeding their advice here. Contrary to letters and words, the visual elements that compose a work of art are not necessarily arbitrary.

That social anthropologists have exaggerated the arbitrariness of conventions—or the role of culture in determining conventions—is also clear in how some of them approached figurative art. Considering the use of the circle or other simple graphic elements in Abelam and Walbiri art, one has to recognise that, even if they globally look like what they represent, they cannot, however, be readily understood without further information about the society in which they are used, and from this point of view anthropologists are right to emphasise the role of culture and convention in understanding art.[97] What about, however, works of art that use figurative representation? These do not just look globally like what they represent, but convey faithfully, and in detail, how the subject appears in reality. As this is the case, one would expect that conventions and cultural "training" are not needed to recognise what they represent and therefore understand them. This is not what some social anthropologists have argued however. The understanding of figurative works of art would also be constrained by culture and conventions. For example, according to Layton: "It seems unlikely that even the most naturalistic of styles will always be comprehensible cross-culturally" (1981, p. 148).

Layton (1981, chapter 4) gave two main reasons for why even figurative works of art cannot be understood outside of their cultural context of production. First, following

[97] In fact, as mentioned above (see footnote 85), in Walbiri art the circle may represent not only a hole, a nest, or a belly of a pregnant woman, but also a circular path, a fruit, a fire, a tree base, a hill, an egg, a womb, and so on. If all these things, again, are circular or rounded, this does not mean that the meaning of a particular circle can be understood outside its context or outside the work of art in which it appears. Its meaning has to be determined on a case-by-case basis, for example, depending on the other graphic elements that accompany it.

Gombrich (1960/2002), works of art are not just imitations of reality. In fact, the figurative artist does not merely copy all he or she can see, but carefully selects the distinctive features that need to be conveyed to depict the subject.[98] How does the artist decide which features have to be selected however? For Layton, it is culture that dictates which features are important and should therefore be represented; in other words, the production and understanding of a work of art is again determined by convention:

> We have seen how fundamental a characteristic it is of cultures to select and organize experience into characteristic patterns of meaning and there is every reason to suppose that this will take place with form in the construction of artistic styles. To understand another culture's use of a style one would need to know the range of subjects depicted, the elements that have been abstracted from the "incalculably large" information yielded by visual inspection, and the manner of organizing these elements into formal compositions. (p. 150)[99]

The second reason for why the understanding of even figurative art would be based on convention is that a single work of art can look like several things at the same time. Layton used here psychological literature on optical illusions and more generally on how people perceive and organise visual elements (Bartlett, 1932; and selected papers in Held, 1974; see also chapter 1, subsection 1.4.2 of this thesis). In the case of an optical illusion, such as with the Necker cube or the duck-rabbit figure, in fact a single visual stimulus can trigger two alternative interpretations (i.e., the cube can be seen from either above or below, and the figure can represent either a duck or a rabbit). For Layton, the ambiguity of optical illusions applies to representation in general, in the sense that *any* work of art can trigger

[98] This is apparent in the fact that many figurative works of art do not represent all the details of the subject (and yet one can still easily recognise it), and also that there are many ways to "realistically" depict a subject (compare, e.g., Protodynastic Egyptian art with Italian Renaissance art, which both used "realistic" representation, but in very different styles).

[99] Layton has also written: "It is frequently culture that defines what are the "characteristic" features of an object and one can suppose that artistic styles will be directed, at least in part, toward uncovering and revealing these in tangible forms" (1981, p. 163).

different interpretations.[100] If so, how do we know that a work of art represents a particular thing and not another? Layton argues that it is culture or convention that decides which is the "correct" interpretation, and that as a result people from different cultures will "see" different things in the same work of art. In his own terms: "It seems likely that when members of different cultures look at a particular work of art, they will form a different mental interpretation of it, according to how best its features may be "locked in" to a familiar configuration" (p. 162). In the case of the Rock's (1974) drawing mentioned above (subsection 3.1.3), it is culture that would tell us that we have to see a map of the United States, not a bearded face, when the drawing is presented horizontally.

For Layton, therefore, even figurative art is conventional, because (1) culture decides how "reality" has to be represented in a work of art, and because (2) culture provides the "correct" interpretation of the work of art. As I have shown, the premise of the first reason is that even a figurative representation is not the same thing as what it represents, but that it constitutes a selection of some distinctive properties that the subject possesses in reality. This is something that a cognitive anthropology of art has no problem in accepting (on the contrary; remember Magritte's pipe and the notion of ambiguous artefacts). However, the idea that it is *culture* that dictates which properties of reality have to be represented in a figurative work of art does not seem obvious at all. If some properties were selected by the artist, and others discarded, it may be simply because these properties were considered more efficient at conveying reliable information about the subject depicted. In other words, the "convention" may not have been arbitrarily determined by culture, but based on communication efficiency. Furthermore, the convention may even

[100] This is at least what Layton tacitly suggests. If he were not, then one could not explain how it is possible to apply the case of optical illusions to works of figurative art that are not visually ambiguous, which is exactly what Layton does.

have become cultural *because* it was efficient at communicating reliable information in the first place (especially if art, as anthropologists have argued, is a form of communication).

The second reason for why all art is conventional—that culture would provide the correct interpretation of even figurative works of art—is equally dubious to the cognitive anthropologist. Its premise is that a single work of art can trigger different interpretations. Although this is apparent in the case of optical illusions, it is more difficult to see how this could apply to the huge majority of figurative works of art that do not rely on visual ambiguity.[101] In fact, most works of figurative art are not visually ambiguous, and one does not need "cultural conventions" or "learning" to recognise what they represent (Hochberg & Brooks, 1962; see also chapter 2, section 2.3 of this thesis).[102] And, most of the time, the range of possible interpretations is not infinite or even very large, and is constrained by "pre-cultural" cognition. For example, I am curious to know how Layton would explain how people from different cultures could form "different mental interpretations" of a realistic painting of, say, a human face. Most of the time, a figurative work of art is aimed precisely at reducing visual ambiguity, and if art is a form of communication, then it is reasonable to think that this is done to increase communication efficiency (and that this will be valued by the viewers). Layton has here the same problem as with which distinctive properties need to be portrayed in a figurative work of art. In most cases, do people

[101] Nor is it evident that, even in the case of optical illusions, it is culture which provides the correct interpretation. Is it culture that makes that we see either a duck or a rabbit in the duck-rabbit illusion? And is it "incorrect" to see a duck rather than a rabbit, or vice versa? Probably not. The point of an optical illusion is precisely that one does not have to choose, and that all interpretations are correct. To give Layton (1981) the benefit of the doubt however, he may have used the case of optical illusions as a mere analogy (although the phrase "people from different cultures will form a different mental interpretation of a singular work of art," p. 162, suggests it has to be understood literally). But even so the problem is that he does not explain how this analogy can be applied to figurative works of art that are not visually ambiguous.

[102] This does not mean, however, that representations in the arts are necessarily "easy" to understand. As I have argued in chapter 2 (section 2.3), although adults readily recognise what is depicted in a figurative work of art, this does not mean that they understand what the thing depicted "stands for" or "means." The point here is that Layton argued that without cultural "training" people could not even *recognise* what is represented in a figurative work of art.

recognise a realistic depiction of a face because culture told them it has to be interpreted as a face, or simply because it looks like a face?[103]

In conclusion, conventions in art may not be so arbitrary, and may not be constrained by culture alone. In the case of geometric art, cultures can decide that a circle will represent an eye or an hole (and as a result the meaning of the circle will differ between cultures), but at the same time it is unlikely that they will use it to represent an object that is squared or triangular (and as a result the ranges of meaning of the circle will not differ randomly between cultures). And in the case of figurative art, cultures can select which properties of reality need to be represented (and as a result the artistic styles will differ between cultures), but at the same time it is unlikely that the selection will not consist of at least some distinctive and recognisable properties of the object depicted (and as a result different artistic styles follow similar rules). In other words, a cognitive anthropology of art proposes that conventions are also constrained by non-cultural factors. If art, as anthropologists have argued, is a form of communication, then one of these additional factors may be communication efficiency. Different cultures communicate different messages in different ways, but all probably aim their messages to be easily understood and maximally relevant to the people who will receive them.

3.2.2 What do *they* think? The second limitation of mainstream anthropology, I believe, is that it teaches us little about what the members of other cultures *themselves* think of their arts. Although anthropologists claim that the arts of other cultures can be understood only in their context of production—because art production and interpretation is constrained by cultural conventions and "ways of seeing"—they do not seem to really

[103] Of course, a face could *symbolize* different things in different cultures, but the problem is that Layton implies that even *visually* members of different cultures would not necessarily all recognise a face. This is not what common sense and experimental research suggests: newborn infants can detect and recognise faces, and they can also imitate some facial expressions, see, for example, Meltzoff and Moore (1983).

take into account what their informants say (and, crucially, do not say) about their own art. One of the risks of not taking into account what people say or do not say is "overinterpretation" (Cohen, 2007, chapter 4); in the literature mentioned above, a common overinterpretation is that art would *necessarily* communicate information about society. For example, Firth wrote: "From an anthropological standpoint, even the simplest naming of an object—as mask, or anthropomorphic figure, or funeral song—indicates an awareness of a social, ritual, and economic matrix in which the object has been produced" (1992, p. 15). Maybe, but from a cognitive anthropological standpoint, such an assumption poses a problem because it constitutes an instance of not taking into account how the human mind naturally works, and how this could impact cultural phenomena. It may be true that a work of art always reflects the social, ritual, and economic matrix in which it was produced; but it is not evident that the people concerned will intuitively approach and judge that work of art in these terms, and certainly not necessarily reflect any genuine "awareness" of a "social, ritual, and economic matrix."

Anthropologists themselves have recognised that their informants were reluctant to speak about or interpret the meanings of the works of art they produce—or at least in the anthropologists' terms. Here is Forge (1979) on New Guinea art:

> Informants tend to restrict themselves to naming totalities and bits of designs, using class names: "this is a cassowary," "this is a hornbill beak," "this is a man." If pushed, they may give further names—either secret names, as many everyday things have special names in ritual contexts, or specific names to the actual example under discussion. . . . Questions such as "Why do you use a hornbill's beak here?" or "What does a cassowary mean in this position?" rarely, if ever, get an answer that satisfies our idea of an explanation, although the answers seem perfectly satisfactory to those who are giving them: they see no problem and often regard the question as meaningless. . . . Verbalizing about art, in short, is not a feature of New Guinea cultures. (p. 279)

For Forge, therefore, the informants "restrict" (note that this verb already implies some kind of denial, or even judgement, of how the informants think of their art) themselves to

naming the things depicted in the works of art they produce, and the problem is that he also considers that this constitutes "virtually no information at all," and that the anthropologist "can do better than just recording names" (p. 280). But it is here, precisely, that the anthropologist runs the risk of overinterpretation. As it seems not acceptable that a representation of a cassowary may be *first of all* about a... cassowary (and that this is why the informants say that it is a representation of a... cassowary),[104] the anthropologist has to find other meanings that need to be "interpreted," and these other meanings, unsurprisingly, constitute "fundamental assumptions about the bases of society" (p. 285). From this point of view, interpretive anthropologists are like the art critics and theorists who I mentioned in chapter 1 (subsections 1.3.1 and 1.4.1). They speak of what art *should* be considered to be (a set of messages about society), but not of what their informants say or do not say it is (because this constitutes "virtually no information at all"). In other words, the anthropology of art as a form of communication is not about what art communicates to the members of the society in which it is produced, but about what art communicates to the anthropologists who study them.

To defend the idea that the arts of other cultures have to be "interpreted," anthropologists have used the idea of "unawareness" (Firth, 1992; Forge, 1965, 1973b; Leach, 1973).[105] If there is no need to take into account what the informants say or do not say, it is because they would be largely unaware of the meanings that their arts convey. The meanings with which Forge is concerned are "not overt or easily accessible" (1979, p. 282), but "depend on nonconscious structures" (p. 284), and this is why the anthropologist

[104] Of course, Forge would probably not have denied that a representation of a cassowary is first of all about a cassowary; the problem is that he considered that this constitutes "no information at all."
[105] The term "unawareness" is from me. These authors would say that the informants are "not aware of," or "non-conscious of," or that they cannot "verbalize," the meanings conveyed in their arts. They did not develop a systematic concept of "unawareness" in the arts of other cultures.

has to "interpret" them. A cognitive anthropology is well-disposed to the idea that meanings in the arts may be constrained by psychological factors. But this does not mean that what the informants say constitutes "no information at all," or that the "non-conscious" meanings are necessarily about society. Informants sometimes say clearly what a good work of art is to them, thus providing important information about its meaning and (non-social) significance. Morphy (1977) provided an illustration of this in Yolngu art:

> When a particular schema encodes distinctive features which are intended to be characteristic of a particular species it is inappropriate to include them in a representation of a different species. The best example of this that I recorded occurred at Gadji . . . . Magani a Mildjingi man in his seventies began to do a painting belonging to his mother's clan . . . . The theme of the painting is the two water goannas and the *yulungurr rangga*. Mangani's [*sic*] outline of the goanna was rejected by the three Djinang men present. The reason for this rejection was quite explicit; the figure looked too much like a crocodile, a Yirritja moiety species. I was told that Magani shouldn't have drawn the transverse lines across the body of the figure as this was the way one showed the markings on the back of the crocodile. In the case of a goanna only the backbone should be represented by a line through the centre. When the goanna was redrawn by Djarrabili, one of the Marrangu men, it was drawn without the transverse lines. (p. 177)

In Yolngu art, therefore, the informants have a clear idea of what a particular work of art should mean, and how it should mean it, and also they do not hesitate to say it to those who are ready to listen to them. In this case, what the informants say is that a painting of a goanna has to look like a goanna, not a crocodile (see figure 12). Does this constitute "no information at all"? I do not think so. It means that a painting of a goanna is first of all about a goanna, and that it could not convey hypothetical "non-conscious meanings" about society if it were not first recognised as a painting of a goanna in its culture of

production.[106] If some psychological constraints are at play here, they may not necessarily be on "hidden" meanings, but just on communication efficiency.[107]

Acknowledging that the "non-conscious" meanings conveyed in New Guinea art may be his overinterpretations, Forge (1979) thus concluded one of his papers:

> It may well be objected that this is all highly speculative. Since no informants say this is what the art means, how can we prove that it operates in the way I have suggested or conveys messages of the type outlined above? For someone who believes that if he is told something it may be right, but that if he is not told, it cannot be right, there is no proof. The proof I would offer to more open minds is the power of the hypotheses to explain observed facts, the principle of elegance also called parsimony or Occam's razor. (p. 286)

The cognitive anthropologist could not agree more here. If the principle of parsimony needs to be used, let us begin by taking into account what the informants say or do not say about their art. Even if what they say is that a painting of a cassowary is first about a cassowary, or that a painting of a goanna first has to look like a goanna. Another important thing to remember is that people communicate messages to each other before communicating messages about society to the anthropologist. It may be that art reflects society to the observer, but it is first created by individuals of a given society for other individuals of that society. Think here of how Westerners approach a Western work of contemporary art. When they do so, they do not wonder whether the work of art conveys a hidden meaning about their society (although of course it might do); they assess the work of art depending on what message they think the artist wanted to convey to them, and on

[106] Forge himself has recognised that this is important: "Style is maintained because it is necessary for style to be maintained, within fairly restricted limits of variation, if the art is to function as a system of communication. . . . Art systems have to look right (be recognisable) before they can start communicating" (1979, p. 281).

[107] Of course, one could not use the same argument for symbolic art (for representations that do not look like what they represent). But the crucial point here is that not all art is symbolic and conveys "non-conscious" meanings; in the case of the cassowary and the goanna, informants are probably right to "restrict" themselves to naming what is represented. One could similarly object that "what a goanna should look like" is conventional, and therefore cultural. It may be true, but as I have shown in the previous section, conventions are not necessarily arbitrary. When Yolngu artists reject a painting of a goanna that looks like a crocodile, they do so on the basis of what a goanna and a crocodile look like in reality.

how they could "use" this message for themselves (although of course this might be considered an instance of the "intentional fallacy" by the art critic, see chapter 1, subsection 1.4.1).[108]

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Figure 12
Yolngu painting of a goanna (left) and a crocodile (right). The figure in the middle, intended to represent a goanna, was rejected because it looked too much like a crocodile (after Morphy, 1977, appendices, plates 30 and 31, p. 36; redrawn in Layton, 1981, figure 39, p. 166). Contrary to what some anthropologists have claimed, informants sometimes say clearly what a "good" work of art is to them, and what it is about.

Concluding the entire section, I reiterate that anthropologists have shown that art can be fruitfully approached as a mode of communication. Contrary to what a perceptual psychologist may think (see chapter 1, subsection 1.4.2 of this thesis), works of art are not just beautiful forms and colours, but teach us a lot about the people who produce them and their society. The arts of other cultures cannot be understood outside of their context of production, but it does not follow that the art experience is constrained by cultural factors alone. Conventions in the arts are not necessarily arbitrary, and the messages that the arts

[108] To be fair, Forge's work should also be situated *historically*. Forge and his contemporaries were writing during a period that was heavily influenced by Lévi-Strauss's structuralism, and it would be unfair to criticize them just because their approaches were "intellectualist." Such historical considerations, however, are unfortunately beyond the scope of this chapter.

convey are not necessarily about society. The risk of reducing art to messages about society that are constrained by society is overinterpretation and also "particularisation." If the arts speak only about their cultures of production, then it becomes impossible to compare them, as a majority of anthropologists have claimed in the Manchester debate (see subsection 3.1.4 above). If art conveys messages, then it could also be subject to non-cultural constraints that are shared by other acts of communication, such as in language. One of these constraints is communication efficiency, and it could explain why conventions in the arts differ, but at the same time are not arbitrary. It could also explain why similar art forms, such as split representation, can occur in different cultures.[109]

3.3 Sperber and Wilson's relevance theory of communication

In this section, I propose that if art, as anthropologists have argued, is a form of communication, then it might be better approached using Sperber and Wilson's (1986/1995) relevance theory. As I have argued in the previous section, the conventions that cultures use in their arts are not necessarily arbitrary, and works of art are not necessarily about society. An obvious feature of many art forms, especially figurative art forms, is that they are constrained by communication efficiency. A circle is probably better than a square or a triangle at conveying information about a circular or rounded thing, and a painting of a goanna that looks like a goanna probably conveys more reliable information than a painting of a goanna that looks like a crocodile. These are, of course, trivial examples, but they illustrate well that art production and appreciation cannot be constrained by culture alone. If art is a form of communication, it might also be subject to constraints that are shared with other forms of communication, such as language. When we

[109] In fact, split representation—or the impossibility to account for why some art forms do *not* differ between cultures—illustrates the third limitation of mainstream anthropology of art (in addition to what I have written in this chapter about "arbitrary conventions" and "overinterpretations"). I have not mentioned it in this chapter as I have already discussed it in the introduction, see subsection 1.3.3.

speak with someone, we also expect that what he or she says "makes sense," or that it will constitute useful information for us. If we ask someone to give a description of a goanna, we assume he or she will not mix the goanna's properties with those of the crocodile. In verbal communication, Sperber and Wilson call that the principle of relevance, and I will now argue that it also applies to how people produce and appreciate art.

Relevance theory, as formulated by cognitive anthropologist Dan Sperber and linguist Deirdre Wilson, essentially constitutes a development of the Gricean "maxim of relevance" (Grice, 1975), and has been applied first in the field of pragmatics. That said, Sperber and Wilson presented their theory as a general model of human communication, and Yus Ramos (1998) has shown that it was successfully applied in other fields such as media discourse, translation, and humour. Further, cognitive anthropologists Brian Malley and Nicola Knight (2008) have argued that relevance theory could account for why some properties of cultures are systematic.

According to relevance theory (Sperber & Wilson, 1986/1995), to communicate is to make explicit an intention (the intention to communicate, and the intention to communicate something in particular), and successful communication occurs when this intention is correctly inferred from the evidence, that is, from the utterance or behaviour in question (pp. 54-64). However, as most of the time a number of different inferences may be drawn from the evidence, communication is also constrained by the principle of relevance (pp. 155-163). According to the principle of relevance, communicating goes along with an expectation of relevance: people pay attention only to information that may have an effect in a given context or, in cognitive terms, to information that is "worth processing."[110]

[110] Strictly speaking, this is the first, "cognitive" principle of relevance. In the postface of the second edition of *Relevance*, Sperber and Wilson (1986/1995) distinguished a second, "communicative" principle of relevance, according to which "every act of ostensive communication communicates a presumption of its own optimal relevance" (p. 260). In other words, people would not only attempt to maximise the relevance of acts

Furthermore, according to Sperber and Wilson, there are degrees of relevance (pp. 123-132), and these may be described in terms of a cost-benefit relationship: the most relevant propositions in a given discourse are those that (a) have the greatest cognitive impact in the context, and (b) are the easiest to process. In Sperber and Wilson's words, relevance is geared to "the processing of information which is likely to bring about the greatest contribution to the mind's general cognitive goals at the smallest processing cost" (p. 48).[111]

This relationship might be illustrated as in table 1. If the relevance of an act of communication is constrained by cognitive investment and cognitive return, then at least four degrees of relevance can be identified. At one end of the spectrum, some acts of communication would require little effort to be processed, and at the same time would bring a high cognitive contribution in return; these would constitute a cognitive optimum, and therefore would be considered highly relevant. At the other end of the spectrum, some acts of communication would require a high cognitive investment, and at the same time would bring a low contribution in return; these would be considered as lowly relevant or even irrelevant, and could not be processed at all. The remaining acts of communication might be categorised in two intermediary positions of relevance. On the one hand, some acts of communications would be easy to process, but would also bring little contribution in return; these could be considered as "trivial" information. On the other hand, some acts of communications would be difficult to process, but would also have the potential to bring

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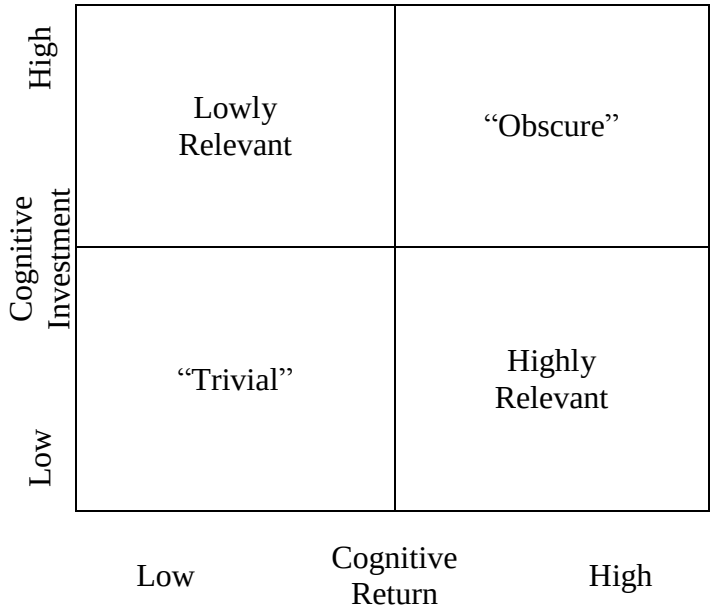
of communication, but they would also *expect* that any act of communication is relevant, as if they were giving the "benefit of the doubt" to the communicator that what he or she communicates is worth processing.

[111] Sperber and Wilson wrote elsewhere: "Human cognition . . . is aimed at improving the quantity, quality, and organization of the individual's knowledge. To achieve this goal as efficiently as possible, the individual must at each moment try to allocate his processing resources to the most *relevant* information: that is, . . . information likely to bring about the greatest improvement of knowledge at the smallest processing cost" (1987, p. 700, italics in original).

a high cognitive contribution in return; these could be called the "obscure" acts of communication.[112]

Table 1
Four theoretical degrees of relevance



Note. Scott-Phillips (2010, p. 587) created a similar table, but using six degrees of relevance.

Relevance theory is supported by empirical evidence. It has been shown that degrees of relevance, which can be manipulated through contextual information, affect participants' performance at riddles (Politzer, 1996), spatial reasoning problems (Van der Henst, 1999), and the Wason's (1966) selection task (Hardman, 1998; Sperber, Cara, & Girotto, 1995; Sperber & Girotto, 2002). Relevance theory also seems to predict which types of non-figurative utterance (e.g., metaphor, irony) will pose a problem of understanding to autistic children (Happé, 1993). These studies are important first to scholars in pragmatics, but I would like to give one example that shows well the potential of relevance theory in other

[112] Of course, in reality most acts of communication do not fall neatly in one of these four categories, and it would be more appropriate to speak of a "continuum" of relevance. For presentation purposes, however, distinguishing four theoretical degrees or positions of relevance might be helpful.

domains, including real-life situations. This might help convince the reader that relevance theory may be applied to art appreciation.

Why is it that most people, when asked what time it is, generally round it to the nearest multiple of five minutes? Van der Henst, Carles, and Sperber (2002) proposed that this is a way of maximising relevance; people asked what time it is would provide "an answer from which hearers can derive the consequences they care about with minimal effort" (p. 457). To test this hypothesis, they conducted a series of three experiments in real-life settings (strangers were asked the time in public spaces). Experiment 1 was devised to control first that people do not round the time just by laziness; in fact, it may be that the wearer of an analogue watch, on which only multiples of five minutes are indicated or clearly visible, rounds the time to minimise his or her own effort, not that of the hearer. Van der Henst et al. therefore compared the answers of people wearing an analogue watch with the answers of people wearing a digital watch; if rounding results from laziness, then people wearing a digital watch, which always indicates the precise time, should not round the time (because that would constitute an extra effort for them). The results showed that if people wearing digital watches rounded the time significantly less often (66%) than people wearing analogue watches (98%), they also rounded it significantly more often than in comparison with a theoretical distribution (20%[113]). In other words, rounding cannot be explained by laziness alone, and for the authors it means that "speakers spontaneously tend to minimise their audience's effort, even at the cost of an extra effort to themselves" (p. 462).

[113] That is, if people were always giving the precise time, their answers should correspond to a multiple of five only 20% of the time—there are 12 multiples of 5 (20%), and 48 non-multiples of 5 (80%), in 60 minutes.

The results of the second and third experiments also supported the hypothesis that people follow at least partially the principle of relevance when telling the time. If one can generally assume that the rounded time will be more useful to the hearer (there is no big difference between 3:08 and 3:10, and the latter is easier to process), in some cases the *precise* time may be more relevant (if the hearer has an appointment at 4:00 and it is 3:58, or 4:02). In experiments 2 and 3, Van der Henst and colleagues showed that participants (all wearing analogue watches) were rounding the time significantly *less* often when they were told that the hearer had an appointment soon (in less than 15 minutes), or that he had to set his own watch; in both cases, they assumed that the precise time would be more useful to the hearer. Thus, relevance theory has the potential to account for why people round the time in some cases, and do not round it in other cases, and it would be because they automatically try to maximise the relevance of their communication to the hearer.

Taken together, the results of this study show that the principle of relevance has a strong influence on how people communicate, maybe even stronger than the Gricean principle of "truthfulness" (Wilson & Sperber, 2002). To say that it is 3:10 when it is 3:08 does not indeed correspond to the strict truth. For most people and in most cases however, to say that it is 3:10 when it is 3:08 is cognitively more relevant, or at least this is what would intuitively be assumed.

Given the power of relevance theory to account for a diverse range of communicative phenomena, I propose to apply relevance theory to art appreciation. First of all, I suggest that works of art, much like utterances, are intuitively assessed as acts of symbolic communication: these particular artefacts, being intentionally created through human agency, but lacking ordinary functionality, typically would be thought to "mean something." According to relevance theory, human communication carries an expectation

of relevance; in our domain of interest, that would mean that works of art are expected to communicate something that is relevant or, in other words, worth processing. Furthermore, according to relevance theory, successful communication occurs when the speaker's intention is correctly inferred from the utterance. Understanding the artist's intention would, therefore, be a crucial factor in assessing the relevance of a work of art.

It is easy to see the implications of such a model in the domain of art appreciation. Some works, in which the artist's intention is too difficult to understand, would not be recognised as following the conventions of relevant communication, and therefore would not be highly appreciated. We might hear a viewer exclaim, "I just don't get it," suggesting frustration with a failure of communication.[114] Other works may present an easily understood "message" but the message may fail to have much cognitive impact, contributing little inferentially. Finally, works that strike a good balance between cognitive processing effort and cognitive impact would be naturally more appreciated and successful. Generally, one would also expect that the artist will try to maximise the relevance of his or her work of art (just as the "rounders" in the time study mentioned above) and that the viewers will expect the work of art to be relevant to them.

In the next chapter, I will generate further, more precise predictions of relevance theory for art appreciation, but here I would like to conclude with two general clarifications. The first one concerns what one might call the "process of determination of relevance." According to relevance theory, people pay attention only to information that may bring to them a cognitive contribution in return, or that is "worth processing." But how do people know that a piece of information will realise that potential until they have

[114] Art critic Saltz (2000, January 18) has called this the "I-don't-get-it aesthetic," and noticed that most people are "pissed off" or at least "embarrassed" by the art they don't understand. For a positive evaluation of works of art we don't understand, see Sheets (2000, September 1).

processed it? There may be no guarantee about this, and as a result one could not explain why people bother to process any information at all. The answer to that problem, I believe, is that cognitive processing in general is not an all-or-nothing-proposition but, precisely, a process. In the case of the visual arts, a viewer might have a first quick look at a painting (even accidentally), and consider that there is "something going on here," which would trigger further processing. The viewer could then look closer at the painting, or at the title of the work or the artist's statement on the wall, and consider that these constitute useful information, which would themselves trigger further processing. Finally, the viewer could buy the exposition catalogue, or a representation of the work, or get more information about the artist by any other means, which again would constitute further processing. At each of these stages, it is likely that the cognitive effort invested in the work of art will bring a cognitive contribution in return; if not, the viewer may alternatively decide to stop the processing at any time.[115]

The second clarification concerns a more general problem. If art simply communicates messages that can be approached, as I believe, using relevance theory, in which sense does it differ from language? Why do people send each other all these "messages" through art, instead of simply conveying them in words, or by having a conversation about them? This seems to be an important problem. As I have argued in the discussion of the anthropological literature (section 3.2), the analogy between art and language should not be pushed too far; furthermore, Sperber (1975, 1985) has criticized the idea that symbols convey messages in the semiological form. I believe, however, that there are a series of reasons that justify an approach to art as a *non-linguistic* form of

[115] Sperber and Wilson's second principle of relevance (see footnote 110) could similarly account for why people process information before knowing that it is worth to do so: people would *expect* acts of communication to be relevant (perhaps because they assume that the communicator would not communicate if the communication was not relevant).

communication. There is first, of course, the aesthetic element. Works of art may not only be "beautiful forms and colours" (see chapter 1, subsection 1.4.2), but it is evident that they are partially enjoyed for their material and aesthetic properties, and this alone could explain why they could not just be replaced by words and discussions. Another reason is that understanding art as a system of communication is not the same as understanding *why* people communicate through art instead of language. People may be "wrong" to use art to communicate instead of just speaking with each other, but this is a judgement that does not need to be made by cognitive anthropologists, who know that people often do things they do not need to do and do so in several domains.[116] What is interesting from a cognitive anthropological point of view is that art seems to be used partially as a system of communication (be it "needed" or "not needed" to use it so), and that many people approach works of art in terms of meaning (be they "right" or "wrong" to do so). To put it differently, the question of why art would be used as a system of communication is not addressed in this thesis, and therefore constitutes one of its limitations.[117]

3.4 Conclusion

In this chapter, I have developed the second claim of this thesis, according to which art objects are intuitively approached as acts of communication. As a work of art cannot be manipulated or used functionally, the viewers would automatically assume that the artist who created it wanted to "say" something or convey a "message." If not, why would the artist have created an object that apparently has no purpose?

[116] Similarly, people could even be "wrong" to *think* that a work of art is an act of communication, as when they ask what a Rothko's multiform painting is "about." But this is again not a problem from a cognitive anthropological perspective. What is interesting is that people *intuitively* think these things, and that this can affect the form and spread of cultural representations.

[117] A similar question is that of *what* art conveys, but relevance theory makes no precise prediction about the content (in the sense of "this and this, but not that and that") of acts of communication. All it says it that whatever is communicated will be constrained by the principle of relevance.

I have first shown that this claim is not new in the history of anthropology. Mainstream anthropologists of the second half of the 20th century have approached art as a form of communication. They have shown that art objects convey a significant amount of information about the societies in which they are created. Mainstream anthropologists, however, have probably exaggerated the "arbitrariness" and "particularity" of the arts of other cultures. The conventions used in the arts differ between cultures, but this does not mean that they are arbitrary: for example, representations and symbols often look like what they represent, probably because this increases their communication efficiency (split representation, discussed in chapter 1, subsection 1.3.3, is another example of this). Mainstream anthropologists have also limited the arts of other cultures to a form of communication that conveys information only about society, and which needs to be "interpreted" (with the risk of overinterpretation). They were less interested in how art communicates information between the social agents themselves. This is a significant problem, because if art is a system of communication, it should first be studied for how it communicates information between the people who created it and use it, not for what information it could communicate to the interpretive anthropologist.

I have then proposed applying Sperber and Wilson's (1986/1995) relevance theory to art. If works of art communicate information between the social agents who create them and those who receive them (rather than to the anthropologist), they may be subject to similar constraints as other forms of communication between individuals, such as language. According to Sperber and Wilson, one of these constraints is that of the relevance of the communicative act. When communicating, people expect that the effort they have to invest in order to understand a message will bring them something in return, a relationship that defines the relevance of the message. Works of art, as acts of communication, would also

be subject to the general constraint of relevance. Viewers would expect that a work of art strikes a good balance between cognitive processing effort and cognitive impact, and this would influence art appreciation. Contrary to mainstream anthropology, a relevance theory approach may also account for some similarities between the arts of different cultures (such as the fact that in many cultures representations look like what they represent). If some works of art, art movements, or forms of representation, are better at conveying "relevant" information than others, then one would expect that they would be more successful and widespread within and between cultures.

Chapter 4

Art Categorisation, Appreciation, and Cultural Distribution

It is now time to summarize what I have proposed in this thesis so far. Works of art are ambiguous artefacts. As human-made objects, works of art trigger expectations of practical use or function, but at the same time frustrate these expectations. Paintings, sculptures and installations are material objects, but they are neither created nor used as functional objects, such as tools, furniture, or dwellings. There is evidence that people intuitively approach artefacts in terms of practical use or function, and that people use the maker's intention to categorise artefacts whose form or function are ambiguous. As this is the case, works of art probably trigger speculation about the artist's intention: why did he or she create this artefact that cannot be used?

Further, people probably automatically assume that the artist's intention is to communicate something; from this point of view, art is a form of communication. Anthropologists, too, have approached the arts of other cultures as systems of meaning and communication. Works of art are not only beautiful objects, but teach us a lot about the people who produce them and the society to which these people belong. Mainstream anthropologists, however, have put aside some questions that seem important to the cognitive anthropologist. The conventions used in the arts are not merely arbitrary, and the messages that the arts convey are not only about society; other factors, such as cognitive processes shared by humans, probably also play a role in the way works of art are produced, received, and transmitted. If the preceding is true, relevance theory may be a fruitful way to approach art as a form of communication. According to relevance theory, communication is constrained by cognitive relevance. If works of art are intuitively

approached as acts of communication, they could also be constrained by the principle of relevance in how they are produced, received, and transmitted.

In this chapter, I assume that I have gathered enough evidence to approach art as a form of communication that is constrained by expectations of cognitive relevance. On the basis of Bloom's (1996) theory of artefact categorisation, Sperber and Wilson's (1986/1995) relevance theory of communication, and my own hypotheses, I will generate a series of predictions for art categorisation, appreciation, and cultural distribution (section 4.1). I will then briefly discuss how I have chosen the predictions that will be tested in the two following chapters (4.2).

4.1 Hypotheses and predictions

A cognitive anthropology of art has the potential to make a series of empirically testable predictions for how people intuitively deal with art. These predictions are of three types. First, Bloom's (1996) theory of artefact categorisation allows one to predict which artefacts people will consider to be "works of art." Second, Sperber and Wilson's (1986/1995) relevance theory of communication allows one to make predictions for art appreciation, or what people will consider to be "good" art or "poor" art. Third, Sperber's (1994, 1996) epidemiology of representations theory allows one to predict which art forms or art movements will be culturally and cross-culturally more successful and widespread.[118] In this section, I will systematically generate these predictions (for the complete list, see appendix 1), but first I explain why I believe it is important to do so.

There are in fact not only pedantic reasons for generating such "predictions." The first one is that the core of this thesis is an application of relevance theory to a new domain, art, and thus it is important to show clearly the possibilities and limitations that this

[118] These three types of predictions therefore reflect the three research domains and questions presented in chapter 1 (section 1.3).

application involves. It is easy to establish "loose" associations between relevance theory and how people approach art (e.g., to say that a work of art has to be "interesting" to the viewer), but it is another thing to determine exactly how relevance theory could (and could not) be applied to specific domains of the art experience. The second reason for generating predictions is that this is what makes the approach to art that I propose empirically testable. From a cognitive anthropological point of view, it would not be very useful to apply relevance theory to the art experience if the heuristic value of that application could not be tested in the real world. In other words, empirical testing requires precise predictions that this chapter provides, and that will be tested in the two studies that were conducted for this thesis (chapters 5 and 6). The third reason for generating predictions is that this exercise could suggest directions for further research. The cognitive anthropological approach to art that I propose is new, and it seems fair to try to show its potential through a series of predictions, especially in the framework of a thesis dissertation.

I also have to make a comment about the use of the word "prediction" itself. Psychologists may tend to use "hypothesis" instead of "prediction," but it appears that this constitutes a misuse of the term (McPherson, 2001). One source of the confusion is that "hypothesis" and "prediction" do not have the same meaning in deductive logic and inductive logic (Murray, 2004), and in scientific hypothesis testing and statistical hypothesis testing (A. E. Lawson, Oehrtman, & Jensen, 2008). As I understand it, a hypothesis is a proposed explanation for a phenomenon, whereas a prediction is a deduction on the basis of a hypothesis; a prediction specifies what is expected to happen when the hypothesis is tested (A. E. Lawson et al., 2008; McPherson, 2001).[119] Following

[119] A useful way to distinguish between hypothesis and prediction is to think of the first as an "if," and the second as a "then" (A. E. Lawson et al., 2008, pp. 411-413). For example, *if* works of art trigger (cause) expectations of cognitive relevance, *then* a work of art whose message is cognitively relevant will be more appreciated than a work of art whose message is cognitively irrelevant. Two things should be noted here

this definition, the predictions that I will make below are not hypotheses. I have to say, however, that I myself use these terms loosely. Another, more pragmatic reason for using the word prediction is that this is the one relevance theory scholars (including psychologists) seem to favour in their experimental papers (e.g., Happé, 1993; Hardman, 1998; Jorgensen, Miller, & Sperber, 1984; Politzer, 1996; Sperber et al., 1995). That said, I will also mention the hypotheses on which my predictions are based.

4.1.1 Categorisation. As I have argued in chapter 2, works of art are ambiguous artefacts, because as human-made objects they trigger expectations of purpose and function, but at the same time frustrate these expectations. As this is the case, I have hypothesised that works of art trigger speculation about the artefact maker's intention. This hypothesis is supported by the findings of Bloom and colleagues, who have shown that artefacts whose form or function are ambiguous, are categorised following the artefact maker's intention (Bloom, 1996; Bloom & Markson, 1998; Preissler & Bloom, 2008). The most direct implication of this for my research is in the domain of art categorisation, or what people intuitively consider to be "art." As works of art are *par excellence* ambiguous artefacts, their categorisation should also depend on the artefact maker's intention (and on whether this intention is recognised by the viewer). The first prediction for art categorisation therefore is:

P1. The categorisation of an artefact as a "work of art" will depend on whether or not the artefact's maker intended the artefact to be a work of art, and on whether or not the viewer recognises this intention.

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however. First, a hypothesis may contain further hypotheses that are not explicitly stated. In my example, the hypothesis that cognitive relevance causes "liking" or "pleasure" is tacit. Second, hypothesis and prediction are often mixed in a single sentence, as in my example. I believe that these two facts might constitute another source of the difficulty to distinguish between hypothesis and prediction.

This general prediction has to be nuanced however. If people were taking into account the artist's intention alone when deciding whether an artefact is a work of art, then one could not account for a phenomenon that I have discussed in chapter 1 (subsection 1.3.1). The fact is that people sometimes refuse to accept that an artefact that was intended to be a work of art is a work of art, or they insist that an artefact that was not intended to belong to the art category actually is a work of art. In other words, people have intuitions about art, and these have to be taken into account. One has to remember, here, that Bloom's (1996) theory of artefact categorisation is based on a *philosophical* approach to art, that of Levinson's (1979). I have shown earlier that from a cognitive anthropological point of view philosophical definitions of art involve some risks; one of them is that they may not take into account what people intuitively tend think about art (chapter 1, subsection 1.3.1).

Although I do not call into question Bloom and colleagues' findings (Bloom & Markson, 1998; Preissler & Bloom, 2008), I am in slight disagreement with Bloom (1996) when it comes to applying his theory of artefact categorisation to art (as he partially did in sections of his popular books, i.e., 2004, chapter 3; and 2010, chapter 5). A reconsideration of the "balloon or lollipop" study (Bloom & Markson, 1998) may help to make my point here. The reader remembers that, when children had to name a drawing they had drawn earlier and that could represent either a balloon or a lollipop, they used as a criterion what they intended to draw rather than the shape of the drawing; this is what allowed Bloom and Markson to conclude that intention plays a crucial role in artefact categorisation. I believe that one should not overestimate the role of intention on that basis alone, however. Had Bloom and Markson asked the children to draw a balloon (or any other round thing) and, say, a building block (or any other square thing), it is less likely that the children would have used their intention to name their drawing. In other words, it is because it was not

possible to distinguish their drawing on the basis of form that the children used their intention.

I suggest that judgements in the arts are similarly not constrained by intention alone. Most of the time, the artefact maker's intention is probably an efficient indicator of whether an artefact is or is not a work of art (prediction 1). But people also have intuitions about art (just as children have intuitions about balloons and building blocks), and it is unlikely that they will always follow the artist's intention, especially when it runs counter to their intuitions. One of these intuitions, as I have argued in chapter 1 (subsections 1.3.1 and 1.4.3), is that works of art are non-functional artefacts that have been intentionally created by humans, and that would explain why people refuse to readily categorise a functional object (or an object that appears to have been created "accidentally"), as a work of art, even if the artist intended it to be so. My second prediction therefore is:

P2. The categorisation of an artefact as a "work of art" will also depend on "art intuitions;" an artefact that is non-functional will be more easily categorised as a work of art than an artefact that is functional, independently of the artefact maker's intention.

This second prediction also needs to be broken down however. People may intuitively categorise non-functional artefacts as works of art (especially if the intention of the artefact maker was to create a work of art), but artefacts are rarely *either* functional *or* non-functional. Let us take here the example of familiar objects such as a chair or a car. Both are first functional objects, but if they were *only* functional, one could not explain why they come in such a striking diversity. Chairs and cars can have many designs, shapes, colours; they can be decorated, or display features that add nothing to their functional value. In

other words, there are degrees of functionality, and it is probable that this will have an impact on how people categorise artefacts as works of art.

Figure 13
A jumble of artefacts. Left to right from top row: a chair; sunglasses; a compact disc player; a watch; a fountain pen; a writing desk; a personal computer; a bow tie; and a vase. The common point between all these artefacts is that they are functional but at the same time display non-functional properties; or that their designers took into account considerations that were not only functional when they created them.

There are, similarly, degrees of "intentionality" or "deliberateness" in artefacts. Another important intuition of people about works of art is that they were intentionally created, but

works of art may have been more or less carefully planned and/or executed. Compare here an abstract expressionist painting with a figurative work from Italian Renaissance. Whereas it may not be certain that the first one does not result from an accident (at least to the non-specialist), it is obvious that the second one was deliberately created and carefully executed by a human being (especially to the non-specialist, who may not know that these artists had patrons and assistants).[120] The prediction that one can deduce from these last two points is the following:

P3. The categorisation of an artefact as a "work of art" will further depend on its *degree* of functionality and deliberateness; for example, an artefact that is clearly non-functional and that is highly deliberate will be more easily categorised as a work of art than an artefact that is only partly non-functional and that is minimally deliberate.

This last prediction illustrates vividly the potential of a cognitive anthropology of art, and I give a further example here. If there are degrees of functionality and deliberateness, then my approach could account not only for judgements about what is commonly regarded as art, but also for what is considered as an "alternative" form of art—in other words, why people sometimes extend the concept of art to things that philosophers would not consider as such. I have used the example of familiar objects such as chairs and cars above. Think now of what we call a "designer" chair or an "elegant" car. These artefacts are first functional, but at the same time display non-functional properties (see figure 13). As a result, it is probable that people will consider that these objects are "art-like." This might explain, therefore, the use of "alternative" concepts of art. In fact, many so-called "minor" arts mix functional and non-functional properties; think here of: architecture and interior

[120] Remember that this section concerns predictions for art categorisation, not appreciation, and that therefore there is no judgement of value implied here.

decoration; crafts and applied arts; industrial design and graphic design; press photography; fashion design and jewellery or watchmaking; figure skating and fencing as Olympic sports; and so on.

As I have argued in chapters 1 and 3 (sections 1.3, 1.4, and subsection 3.1.4), anthropologists, art historians, and sociologists would probably suggest that if these art forms are called "minor," it is for reasons that are "exterior" to them. They would say that the concept of "minor" art is opposed to that of "high" art, and that both are historical and have been "constructed;" or that "high" arts and "minor" arts only serve to make a "distinction" between social classes; or that the very concept of art, be it "high" or "low," is "ethnocentric" and has no equivalent in other cultures, which have their own aesthetic "conventions." I propose an alternative hypothesis here. All artefacts would fall along a continuum of functionality. At one end of the continuum, one would find highly functional artefacts such as a surgeon's scalpel or a rocket engine. At the other end of the continuum, one would find purely non-functional artefacts, such as an abstract painting or a music score. When a particular artefact would tend towards this second end of the continuum, people would intuitively categorise it in a specific class of things, that we call "art" in Western societies. This would explain both why laypeople, in contrast with specialists, refuse to apply the concept of art to some objects, and extend it to others. Duchamp's readymades were first highly functional artefacts, and therefore they cannot be easily considered as works of art. And although a luxury watch, a fashion bag, or an Apple device have functions, they also display non-functional properties, and therefore can be considered, in a sense, as works of art (but probably not "high" art).[121]

[121] It is sometimes difficult for designers to take into account both function and "style." Often "stylish" objects are less "functional" as a result; one might think here of some "designer" pieces of furniture that are not very useful or comfortable (see, e.g., the chair in figure 13). The difficulty of combining function and style is also apparent when manufacturers congratulate themselves for having achieved this feat; one might

4.1.2 Appreciation. Once an artefact has been categorised as a work of art, it becomes the object of an appreciation judgement: is it a good or a poor work of art? As a work of art cannot be judged on the same basis as other artefacts, because it has no obvious practical function, I have argued that it is intuitively processed as an act of communication. If true, Sperber and Wilson's (1986/1995) relevance theory of communication should allow one to make a series of predictions for art appreciation. All these predictions are based on the hypothesis that works of art trigger expectations of cognitive relevance.

In fact, according to relevance theory, any act of communication is constrained by the principle of relevance, and the main implication of this for art appreciation is that:

P4. The appreciation of a work of art will depend on the perceived relevance of the message that it conveys; the greater the perceived relevance of the message, the greater the appreciation of the work of art.

Further, I have shown that relevance might be defined as the outcome of a relationship between cognitive investment and cognitive return. In the domain of art appreciation, this means that:

P5. The relevance of the message that a work of art conveys will depend on the cognitive investment it requires and the cognitive contribution it brings in return; at an equal cognitive investment, a work of art that brings a high contribution will be preferred over a work of art that brings a low contribution; and at an equal

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think here of Steve Jobs presenting new Apple devices, or Apple fans claiming that these devices are "user-friendly" and "beautiful" at the same time. I have noticed that car manufacturers, too, frequently use the argument of "functional-and-beautiful-at-the-same-time" in their advertising campaigns. See for example this Mercedes, which is supposed to be "innovative in form and function:" http://www.emercedesbenz.com/autos/mercedes-benz/concept-vehicles/mercedes-benz-f-800-style-research-vehicle-innovative-in-form-and-function/. Or this video on an Audi, in which "form and function [are] in perfect harmony." Retrieved from: http://www.youtube.com/watch?v=lRobKc o966Q. Car reviewers also frequently use that language. Here is Stephen Bayley: "With the E-Type Jaguar, form and function [are] united as never before . . . in an automobile . . . that became a work of art." Retrieved from: http://www.high50.com/ archives/life-times/simply-the-best).

cognitive contribution, a work of art that requires a low cognitive investment will be preferred over a work of art that requires a high cognitive investment.

Predictions 4 and 5 constitute general applications of relevance theory to art appreciation, and they need to be split into further predictions to facilitate empirical testing. In fact, some elements of prediction 5 seem more interesting and less complicated to investigate than others. Perhaps the influence of cognitive investment on art appreciation is particularly promising. It could be easily translated in terms of "understanding" the work of art or the artist's intention. It is not rare to hear that someone does not like a work of art because he or she "just doesn't get it," or because it "doesn't mean anything" (see, e.g., Saltz, 2000, January 18), and this could be empirically tested. The corresponding prediction would be that:

P6. All other things being equal (such as aesthetic quality), a work of art whose artist's intention is easy to understand will be preferred over a work of art whose artist's intention is difficult to understand.

What causes the message conveyed in a work of art to be perceived as "relevant," or makes the artist's intention "easy to understand," however? I propose that a series of factors facilitate or on the contrary make the understanding of the artist's intention more difficult—in relevance theory terms, they decrease or increase the cognitive investment that is required to process the work of art—and therefore have a positive or a negative impact on art appreciation.

A first factor that influences the understanding of the artist's intention is the amount and type of information that accompany the work of art. In the visual arts, these could by titles, captions, artist's statements, or interpretative texts provided by gallery curators. Many laypeople have experienced that such information influences their judgement of a

work of art: an abstract painting may seem meaningless until its title is taken into account; and a minimalist sculpture may seem effortless until an expert explains what it took to actually make it.[122] It is likely that such information has a *positive* effect on art appreciation,[123] or at least this is what relevance theory predicts, as in fact it reduces the cognitive effort required to understand the artist's intention. On the contrary, the absence (as in an untitled work) or irrelevance (as in a work whose title is itself obscure) of such information should negatively impact art appreciation, as it does not help the understanding of the artist's intention, or even confuses it. Further, it is very likely that the effect of information on appreciation will be stronger in the case of abstract and "non-representational" art (see also subsection 2.3.3 of this thesis). Though it might help little that a realistic depiction of an apple is titled "Apple," it might be impossible to understand the message conveyed in an abstract work of art without further information about the artist's intention. To summarize, the corresponding prediction is that:

P7. The information—title, caption, artist's statement, expert's interpretation—that accompanies a work of art will have an effect on appreciation; information that facilitates understanding the artist's intention will have a positive effect on appreciation, whereas a lack of information or irrelevant information will have a negative effect on appreciation; these effects will be stronger in the case of abstract and non-representational art.

If titles have the potential to positively influence art appreciation, it is because they constitute useful information for understanding the artist's intention or message when it is not clear. But of course titles are only one type of information; previous knowledge or training in the visual arts might equally help the viewer to understand the artist's intention

[122] On this last point, see Yenawine (1991).
[123] I will review and discuss the empirical evidence for this in chapter 6 (experiment 2a, section 6.3).

or message, and this leads to the related prediction that art appreciation will differ between art specialists and art non-specialists. Because of their knowledge of art history and art theory, and their training in interpreting work of arts, art specialists can understand more easily what a work of art is about, even when the artist's intention is obscure. Similarly, art specialists are better equipped to assess other elements that play a critical role in art appreciation, such as the amount of effort and skill that went into a work of art. For example, art specialists will know that an apparently mediocre piece actually required a lot of effort and skill, whereas a non-specialist would be more inclined to say that "a child could have done that." As a direct consequence, art specialists will tend to be more "generous" in their judgements than non-specialists.[124] In relevance theory terms, art specialists can get more cognitive contribution from difficult works, because their knowledge and training decrease the cognitive effort that they have to invest to process these works; as a result, art specialists may like a broader range of art (as previous research suggests, see, e.g., Winston & Cupchick, 1992).[125] To summarize, the prediction is that:

P8. Art appreciation will differ between art specialists and art non-specialists; art specialists will be more generous in their judgements and like a broader range of art than art non-specialists.

[124] Using a Bourdieusian approach to art appreciation, one might here argue that the differences between specialists and non-specialists only reflect social classes (there are probably more visual arts specialists in the upper classes than in the working classes). As I have shown in chapter 1 (subsection 1.3.2), however, this would not explain why some works of art are liked by all classes, and why other works of art are disliked by all classes. My alternative hypothesis is that members of the upper classes may simply have more *information* about art than members of the working classes. Upper classes are indeed more likely to benefit from higher education than lower classes. In other works, members of the upper classes are more likely to receive information on art (I would say, especially on subjects like art), which, following relevance theory, will decrease the cognitive effort they have to invest to understand a work of art.

[125] It is probable that expertise influences not only art appreciation, but also art categorisation or what people consider to be art. Because of their knowledge and training, art specialists are less "rigid" in their definition of art than non-specialists. For those who know Marcel Duchamp's *Fountain* and regard it as an iconic work of modern art, there is no problem with considering more recent, but similar candidates, such as Tracey Emin's *My Bed*, as works of art too; on the contrary, for those who have never heard about readymades and their meaning in modern art, it will be difficult to see more in these two works than a urinal and an unmade bed.

A third factor that probably influences art appreciation is the perceived amount of effort and skill that went into a work of art. It is commonsense that people naturally admire displays of effort and skill. In the visual arts, it makes a difference to know that a painting was not achieved in one day, but that it required several months of hard work. It also makes a difference to realise that the same painting could not have been made by anyone—even with more time at their disposal—but only by a talented artist.[126] But why is this the case? Dutton (2009) has proposed an evolutionary account: skill and virtuosity would be admired because they function as fitness indicators. Others, such as Kruger, Wirtz, and Van Boven (2004) have argued that perceived effort is used as a heuristic for quality.[127] Still others have linked the positive appraisal of effort and skill to moral excellence (Algoe & Haidt, 2009) and authenticity (Bloom, 2010).

A relevance theory approach suggests a different, although not contradictory reason for why perceived effort and skill would influence art appreciation. To begin with, the effort that went into a work of art could intuitively be perceived as an *indicator of relevance*. For example, if a painting was allocated a lot of time and energy, the viewer may assume that it is because the artist thought that the message mattered enough for this high degree of investment. In contrast, a sketch or an unfinished painting may tacitly suggest that the components of the painting are not all that important or deliberate, and that the message is less relevant. Further, if the effort that went into a work of art acts as an indicator of the relevance of the message, the skill that was conjointly required probably conveys the precise nature, or content of that message, and makes it easier to understand.

[126] Of course, the effort and skill may also be intellectual, as in contemporary conceptual art. However, as intellectual effort and skill are probably more difficult to assess, I would predict that non-specialists may not necessarily take them into account. See also chapter 7, subsection 7.2.2.

[127] In one study, two abstract paintings were considered better when they were thought to have required more time to be created (Kruger et al., 2004, experiment 2). I will discuss this study in chapter 6, experiment 1 (section 6.2).

As many beginners in art have bitterly experienced, there is an important gap between intending to paint something and actually painting it. The skilled artist, on the contrary, has the capacity to convey exactly what he or she intends to convey, as if each brush stroke were supporting and clarifying his or her precise message. In sum, perceived effort and skill may indicate that the message conveyed by the artist is "important" and "unambiguous," which would both encourage the viewer to process it and decrease the cognitive investment required to do so, and therefore positively influence art appreciation. The corresponding prediction is that:

P9. Perceived effort and skill will influence art appreciation; all other things being equal (such as aesthetic quality), a work of art that is thought to have required a lot of effort and skill will be preferred over a work of art that is thought to have required little effort and skill.

4.1.3 Cultural distribution. By application of Sperber and Wilson's (1986/1995) relevance theory of communication, the appreciation of a work of art will depend on the cognitive relevance of the message it conveys. When the viewer gets a high cognitive return for a low cognitive investment, he or she intuitively considers the message to be relevant and as a result values the work of art. Art appreciation, however, does not only concern the individual. Some works of art or art movements can become culturally successful and widespread, or on the contrary trigger little interest and fall into oblivion. Similarly, it is attested that some art forms—such as realistic representation—have been consistently used across times and cultures, whereas others—such as abstraction—occurred under particular historical and cultural conditions. Like other human representations, such as ideas, concepts, and beliefs, works of art and art forms may or may not be "contagious," and therefore may or may not become cultural.

The idea of an epidemiology of cultural representations or so-called "memes" (by analogy with genes) was introduced and popularized by the biologist Richard Dawkins (1976; see also Blackmore, 1999); in a somewhat different form, it was extensively used and discussed by anthropologists such as Atran (2001; Atran et al., 2002), Boyer (1994, 2001), Guthrie (1993), Sperber (1994, 1996; Sperber & Hirschfeld, 2004), and Whitehouse (2004; Whitehouse & McCauley, 2005).[128] These anthropologists have defended the idea that the spread of representations is constrained by the way the human mind naturally works or processes information. Some ideas, being cognitively more efficient than others, are more likely to be memorized and passed on, and therefore become widely-shared cultural representations and concepts.[129] This approach has proven to be efficient in explaining the cross-cultural recurrence of some cultural phenomena, such as religious beliefs and practices. Scholars in the cognitive science of religion have shown that religious ideas typically constitute one of these classes of "contagious," that is, naturally successful, representations (Barrett, 2004, 2011a, 2011b; E. T. Lawson & McCauley, 1990; McCauley & Lawson, 2002).

Thus defined, the idea of an epidemiology of representations can be applied to art as a cultural phenomenon. If cognitive processes constrain the success and spread of representations, then the most general prediction that one can make for the cultural epidemiology of art is that:

P10. The cognitive factors that constrain art categorisation and art appreciation at the individual level will have an impact at the cultural level; a work of art, an art form,

[128] For a recent account of cultural transmission from a cognitive point of view, see also the book published in French by cognitive scientist Olivier Morin (2011).

[129] Of course, this does not mean that these ideas are necessarily "correct" from a philosophical, logical, theological, or moral point of view. Remember that cognitive anthropologists are interested not in what people should think, but in how people tend to think.

or an art movement that is cognitively easy to categorise as such (following predictions 1-3), and whose cognitive relevance is high (following predictions 4-9), will be culturally more widespread and successful than a work of art, an art form, or an art movement that is cognitively difficult to categorise as such, and whose cognitive relevance is low.

Again, it is possible to focus on particular elements of this general prediction. For example, the influence that the cognitive constraints on art *categorisation* might have on cultural or widely shared ideas about art has explanatory purchase. In Western art, artists and art theorists have regularly triggered public debate about what art is. One might think, here, of Duchamp's *Fountain* and the tradition of so-called "readymades" that followed this iconic work of modern art. If art specialists, applying Danto's (1964) or Dickie's (1974) approaches to art, might have no theoretical problem in considering such artefacts as works of art, readymades are generally met with scepticism in the general public. In fact, readymades violate several expectations that people, from a cognitive point of view, have about works of art: that they should be mainly non-functional artefacts, that they should be created and not just "presented" by the artist, that they should require effort and skill that are not only intellectual, and that they should convey a relevant message that is worth to processing.[130] If true, a corresponding prediction would be that:

P11. A work of art, an art form, or an art movement that is cognitively difficult to categorise as such will generate public debate about what art is, and its

[130] To some extent, even art specialists' judgements are constrained by intuitive ideas about what art is. It took time, discussions, and theoretical adjustments before a majority of art theorists accepted that readymades are works of art. Similarly, Gell (1996) has shown that art theorists are less confident when it comes to apply their counterintuitive definitions of art to other cultures. In cognitive science of religion, this difference between "theoretical" definitions and "cognitively constrained" definitions has been called "theological correctness" (Barrett, 1999; Slone, 2004). See also chapter 1 (subsection 1.3.1) of this thesis.

appreciation will be polarized; following prediction 8, the debate will typically oppose art specialists and art non-specialists.

The second element of prediction 10 that seems particularly interesting is the influence that cognitive constraints on art *appreciation* might have at the cultural level. People do not just have intuitions about what art is; they also have intuitions about what "good" art is. As a result, art forms or art movements that are cognitively highly efficient will be culturally more widespread and successful than art forms or art movements that are cognitively less efficient. This prediction might be applicable both within a culture (as in prediction 10) and cross-culturally. I have already argued that some art forms seem more appropriate for communicating particular information than others, and that this might explain their cross-cultural recurrence. Boas (1927/1955) and Lévi-Strauss (1958/1963) were both interested in the fact that split representation is used in a number of cultures that could not possibly have been in contact, and others suggested that some aesthetic properties of art objects, such as brilliance and symmetry, have a cross-cultural appeal (Coote, 1992; Morphy, 1992). I have also shown, in chapter 2 (subsection 3.2.1), that in many cultures representations look like the things that they represent. Maybe the cross-cultural recurrence of these properties of the arts is due to their cognitive efficiency. In other words:

P12. Following prediction 10, the cognitive constraints on art categorisation and art appreciation will also influence the *cross-cultural* distribution of art forms; art forms that are cognitively efficient at conveying relevant information will be more likely to occur cross-culturally than art forms that "deviate" from cognitively optimal ways of conveying information.

4.2 Predictions tested

In chapters 5 and 6, I will report the results of two studies that tested five of the predictions mentioned above. Study 1 (chapter 5) used a correlational design and tested predictions 6, 8, and 9. Study 2 (chapter 6) consisted of four experiments and tested predictions 1, 6, 7, and 9 (see also a summary of these studies in appendix 2). Thus, four predictions tested concerned art appreciation, one concerned art categorisation, and none concerned cultural distribution or epidemiology. In this section I want to briefly explain why I have decided to test these five predictions and forego the others in this thesis.

The main reason for deciding to focus on art appreciation rather than cultural distribution as a starting point is that my approach is based on a Sperberian definition of culture. According to that definition, a culture consists of the set of mental representations (beliefs, concepts, ideas, etc.) that are widely shared in a given population (Sperber, 1985, 1996). And if these mental representations became widely shared, it is because they were naturally more attractive to the human mind, or, using Sperber's epidemiological metaphor, because they were "contagious" ideas. To give but one example, cognitive anthropologists of religion and cognitive scientists of religion argued and provided some evidence that a type of ideas they called "minimally counterintuitive"[131] are particularly memorable, and that this could partially account for the cross-cultural spread of religious beliefs (Barrett, 2008; Barrett & Nyhof, 2001; Boyer, 2001; Boyer & Ramble, 2001; Gonce, Upal, Slone, & Tweney, 2006; Gregory & Barrett, 2009; Norenzayan, Atran, Faulkner, & Schaller, 2006).

[131] To put it simply, counterintuitive ideas violate the natural expectations that we have about things such as objects or persons. For example, we intuitively expect that objects and persons are solid, and that they have a single location in space and time. If so, a concept of an object that is not material, or a concept of a person who is ubiquitous, would constitute counterintuitive ideas. Note that god concepts (or other religious concepts) typically are counterintuitive from this point of view.

Using this approach to culture, the art that should count as "cultural," by application, is the one that is widely shared in a given population. And if some works of art and art forms became cultural, it should also be because they were cognitively more attractive than others to the human mind. In other words, from the point of view of a Sperberian approach to cultural phenomena, art appreciation comes before, or explains, cultural distribution. What makes that some artists, works of art, or art forms became widely successful in a population is that they were appreciated in the first place (they were "contagious;" people liked them, spoke about them, reproduced them, etc.). A cognitive anthropology of art, therefore, should focus on art appreciation as a starting point, because it is art appreciation that will (theoretically) influence cultural distribution.

This does not mean, of course, that the predictions for cultural distribution do not need to be empirically tested. I had to make choices however, and for the reason mentioned above I have considered that it was more important to begin with the predictions for art appreciation. That said, in chapters 5 and 6, it will become apparent that the studies reported could be easily adapted to include predictions for cultural distribution. For example, the measure of liking used in studies 1 and 2 could be replaced by a measure of "contagion potential" (i.e., "How likely would you be to buy/reproduce/support/include in an exhibition/pass on to your children this work of art?") to test prediction 10. Other studies could use measures of spread of a work of art or an art movement in a population.[132] A relevance theory approach would predict, amongst others, that a work of

[132] Here are two examples for possible studies of that kind. Example 1: prerate three art schools (e.g., romanticism, symbolism, and futurism) for aesthetic value and cognitive relevance. Count the number of mentions of the artists' names representing these schools in a newspaper database. Statistical prediction: cognitive relevance will significantly predict the number of mentions in the newspaper database, even when controlling for aesthetic value. Example 2: create and prerate 10 works of art for aesthetic value and cognitive relevance. Share the works of art on a social networking website. After a couple of months, count the number of times that these works of art were shared with further people. Statistical prediction: cognitive relevance will significantly predict the number of shares, even when controlling for aesthetic value. Of course, in both studies additional measures and control variables could be included.

art that is easy to understand will be more spread (or spread more easily) in the population tested.

The studies reported in chapters 5 and 6 could also be adapted to non-Western forms of art as judged by non-Westerners participants. Although some anthropologists have argued that non-Western societies have no concept of "art" or "aesthetics" (see chapter 3 of this thesis, subsection 3.1.4), I believe that the measures used in studies 1 and 2 could be readily adapted to non-Westerners. For example, the word "work of art" could simply be replaced by "painting" (or the noun for any other medium used). Similarly, I do not believe that it would be too difficult to find equivalents for concepts such as "liking," or "understanding what the artist wanted to do" (think here of the of the Yolngu artists who rejected a painting of a goanna because it did not look like a goanna, therefore clearly stating what is a good work of art in their terms, and that the artist's message has to be easy to understand, see chapter 3 of this thesis, subsection 3.2.2). More generally, cognitive anthropologists have shown that their hypotheses and predictions can be tested cross-culturally. For example, Cohen and Barrett (2008) used a variety of controlled studies to test the hypothesis that cognitive processes constrain the form and spread of Brazilian concepts of spirit possession; similarly, Knight, Sousa, Barrett, and Atran (2004) used the false-belief task with Maya children and provided evidence for cross-cultural attributions of beliefs to humans and God.

4.3 Conclusion

In this chapter, I have split the two main claims or hypotheses of this thesis into a series of predictions to facilitate empirical testing. These predictions are based on Bloom's (1996) theory of artefact categorisation, on Sperber and Wilson's (1986/1995) relevance theory of communication, and on Sperber's (1994, 1996) theory of epidemiology of representations.

Further, these predictions concern three domains of the art experience: (1) art categorisation, or what people will intuitively consider to be "art;" (2) art appreciation, or what people will intuitively consider to be "good" art or "poor" art; and (3) art cultural and cross-cultural distribution, or which art forms or art movements will become culturally more successful and widespread. I have also explained on which basis I have selected the predictions that will be tested in the next two chapters of this thesis.

Chapter 5

Study 1

In this chapter, I report the results of the first study that I carried out to test the two main claims of this thesis, as well as three specific predictions for art appreciation.[133] As the reader already knows, the two main claims (or hypotheses) of the thesis are that: (1) art triggers speculation about the artist's intention, and that (2) art is intuitively approached as a form of communication, which triggers expectations of cognitive relevance. The three specific predictions tested were the predictions 6, 8, and 9. As I have shown in the previous chapter, prediction 6 states that, all other things being equal (such as aesthetic quality), works of art whose artist's intention is easy to understand, will be preferred over those whose artist's intention is difficult to understand; prediction 8 states that art appreciation will differ between art specialists and non-specialists, with specialists being more generous than non-specialists in their judgements; and prediction 9 states that, all other things being equal, works of art that are thought to have required a lot of effort and skill to be created, will be preferred over those that are thought to have required little effort and skill to be created.

For this first study, my aim was to use works of art whose status of "art" is widely accepted. I also used actual works of art, not reproductions. Finally, I wanted a wide range of art and a varied sample of participants, and wanted these participants to rate the works of art in real-life settings, not in the laboratory. The rationale behind these choices was to increase the external validity of the potential findings, especially as this was a first, general test of a new approach to art. To meet these aims, the Tate Britain gallery in London was an ideal place to conduct the study. Tate Britain displays a variety of historic, modern, and

[133] An earlier version of this chapter was published by Jucker and Barrett (2011).

contemporary works of (mainly British) "high" art; its entry is free and it attracts visitors from very different ages, backgrounds, and nationalities (44 in this study).

I selected the first predictions to test based in terms of relative importance for a general cognitive anthropological approach to art. Prediction 6, according to which people will like the art they understand, seems crucial if one wants to approach art as a form of communication that is constrained by cognitive relevance (because understanding the work of art would decrease cognitive processing effort, which would in turn positively influence appreciation). It seems difficult, too, to avoid taking into account perceived effort and skill (prediction 9) in how people judge a work of art. Prediction 8, according to which art appreciation will differ between specialists and non-specialists, is directly linked to prediction 6: if specialists are more generous in their judgements, it is because they have more information (knowledge) about the artist's intention (this would decrease the effort required to process the message, and thereby increase its relevance). Some predictions were not selected not because they are not interesting or important, but because it seemed difficult to test them in gallery settings. For example, testing prediction 7 (that also derives from prediction 6) would necessitate that the titles of the works of art are manipulated, which was obviously not possible at Tate Britain.

5.1 Method

Study 1 used a mixed (within-between) correlational design: I selected a series of works of art that were all rated for goodness, effort, skill, and intention, but by different groups of raters. As the predictions were of two types, either the works of art (predictions 6 and 9) or the raters (prediction 8) were used as the unit of analysis.[134]

[134] This design presents some unusual aspects that I will discuss below (subsection 5.1.4).

The figure originally presented here cannot be made available online for copyright reasons.

Figure 14
Six of the 57 works of art used in study 1, which illustrate the diversity of the sample. Left to right from top row: Benjamin West's *Cleombrotus* (1768); Lawrence Alma-Tadema's *Portrait of Paderewski* (1891); George Stubbs's *Couple of Foxhounds* (1792); Henry Moore's *Recumbent Figure* (1938); Damien Hirst's *The Acquired Inability to Escape* (1991); and Simon Patterson's *The Great Bear* (1992). For the complete set of illustrations see appendix 5.

5.1.1 Works of art. Fifty-seven works of visual art were used as the first units of analysis. Most of them belonged to the collection of Tate Britain, and were part of its permanent

exhibitions in the Millbank building, London.[135] The works selected covered a span of more than four centuries (from 1575 to 2008); they were paintings and drawings (n = 39), sculptures and reliefs (n = 11), as well as installations and mixed types (n = 7). Both figurative and abstract works were included; a wide range of genres (e.g., portrait, landscape, still life, history painting) and styles or schools were represented (e.g., baroque, romanticism, modernism, conceptual art). The artists represented, most of them British, included famous ones, such as Bacon, Constable, Hirst, Millais and Turner, but also lesser known ones by the wide audience, such as Des Granges, Dion, Gennari, Jasinski and Vézelay. Seven works were from female artists. As it seemed unreasonable to ask the raters to rate the total number of works selected, these were divided into four sets (3 sets of 15 items and 1 set of 12 items); these sets were arranged by chronological order, following a three-period scheme traditionally used by Tate Britain to organise its exhibitions; 2 sets of 15 items were in the Historic period (Sets 1 and 2), 1 set of 15 items was in the Modern period (Set 3), and 1 set of 12 items was in the Contemporary period (Set 4). For the list of works selected and their arrangement in sets, as well as illustrations, see appendix 3 and 5, respectively (see also figure 14).

5.1.2 Raters. Five hundred and fifty-two Tate Britain visitors agreed to rate one of the four sets of works. However, 10 questionnaires were returned blank and seven were not returned. Furthermore, seven raters under 12 years of age were not included in the analyses. The resulting sample size was 528. More than two-thirds of the questionnaires were complete (all works rated and all additional questions answered). At least 37 (up to 48) raters rated the totality of works in each set and on each variable. Fifty-four percent of the raters were female. The mean age of the raters was 40.5 years (range: 12-83; SD = 16).

[135] Entry to Tate Britain is free, except for some temporary exhibitions. All the works selected were displayed in free admission rooms.

Forty-four nationalities were represented, with a majority of British raters (48%), followed by Americans (9%), Australians (7%), Germans (6%), and French (5%); more than two-thirds of the raters were native English speakers. Finally, almost one-third of the raters reported some special training or expertise in the Arts, more than two-thirds of those being visual arts specialists.[136]

5.1.3 Measures. The works of art were rated for (a) Goodness[137] ("How much do you personally like this work of art?," 7-point scale anchored at 1 (*not at all*), 4 (*neither like nor dislike*), and 7 (*very much*); (b) Effort ("How much effort do you think went into making this work of art?," 7-point scale anchored at 1 (*practically no effort*), 4 (*moderate effort*), and 7 (*extreme effort*); (c) Skill ("How much skill do you think went into making this work of art?," 7-point scale anchored at 1 (*practically no skill*), 4 (*moderate skill*), and 7 (*extreme skill*); (d) Intention I ("How easy is it for you to understand what this work of art is about?," 7-point scale anchored at 1 (*not at all easy*), 4 (*moderately easy*), and 7 (*very easy*); (e) Intention II ("How successful do you think the artist was in conveying what this work of art is about?," 7-point scale anchored at 1 (*not at all successful*), 4 (*moderately successful*), and 7 (*completely successful*).[138]

It has to be noted here that the measures Effort, Skill, Intention I, and Intention II were designed as a global measure of the artist's intention, which I will call

[136] Valid statistics are reported. Missing values were: sex: $n = 26$; age: $n = 30$; nationality: $n = 25$; native language: $n = 29$; expertise in the arts: $n = 26$.

[137] In chapters 5 and 6, I use initial capitals for variables (but not for the corresponding concepts), which is conventional in psychological research (*Publication manual of the American Psychological Association*, 2010, p. 104).

[138] The measures (as well as the protocol) were tested in a pilot study *in situ*. The questions used for the actual survey were those that had been the most successful amongst the pilot raters. For example, the pilot raters clearly preferred the question "How much do you personally like this work of art?" over "Do you consider that this is a good or a poor work of art?" for the Goodness measure. A few pilot raters reported "embarrassment" with assessing the effort and skill that went into a work of art, and during the actual survey this was a general trend amongst visual arts specialists. Other pilot raters reported "boredom" with the Intention measures, especially in the Sets belonging to the Historic period ("It's always easy to understand!"), but no similar reactions were observed during the actual survey.

"deliberateness." As I have argued in the previous chapter (section 4.1.2), effort and skill may constitute an indicator or a clarifier of the artist's intention, respectively. If a lot of time and energy was dedicated to a work of art, and if it was carefully planned and executed in detail, the viewer might assume that the message mattered enough to the artist for this high degree of investment (or that the creation of the work of art was more "deliberate").

The works of art were also rated for Familiarity ("How familiar are you with this work of art?") on a 4-point scale anchored at 1 (*never seen it or a picture of it before*), 2 (*have seen it or a picture of it once before*), 3 (*have seen it or a picture of it a few times before*), and 4 (*have seen it or a picture of it many times before*). The reason for including this measure is that there is strong evidence that "mere exposure" or familiarity with a work of art influences its appreciation (Cutting, 2003; Houston-Price et al., 2009; Maslow, 1937; Temme, 1984; Zajonc, 1968). I therefore measured familiarity to control for the possibility that any positive findings (e.g., that understanding the artist's intention has a positive effect on appreciation) would be due to familiarity effects (i.e., that a work of art is preferred just because it is more familiar to the raters).

Table 2
Correlational design

	Group of raters											
Set of works	1	2	3	4	5	6	7	8	9	10	11	12
1	G, F	E, S	I, II	-	-	-	-	-	-	-	-	-
2	-	-	-	G, F	E, S	I, II	-	-	-	-	-	-
3	-	-	-	-	-	-	G, F	E, S	I, II	-	-	-
4	-	-	-	-	-	-	-	-	-	G, F	E, S	I, II

Note. G = Goodness; F = Familiarity; E = Effort; S = Skill; I = Intention I; II = Intention II.

5.1.4 Design. To ensure independence of observations, a mixed (within-between) correlational design was used: each of the four sets of works was rated on each of the seven variables, but by different groups of raters. A first group rated Goodness and Familiarity, a second group Effort and Skill, and a third group Intention I and Intention II. As there were four sets of works, the total number of groups of raters was 12. With such a design, represented in table 2, it was not possible for the raters to guess that I was looking for possible correlations between the dependent variable (Goodness) and the main predictor variables of interest (Effort and Skill and Intention I and II).

This design presents two (relatively) unusual aspects that may require further explanation. The first unusual aspect is that it is the works of art, not the people who rated them, which were used as the main unit of analysis.[139] From this point of view, the humans involved in study 1 served as "measurement instruments," not subjects (hence the use of the word "rater" rather than "participant" in this chapter). Humans have served as measurement instruments in a variety of studies, particularly those that require coding of stimuli or cultural materials (in cognitive anthropology and cognitive science of religion, see, e.g., Barrett, Burdett, & Porter, 2009; Lisdorf, 2004; Norenzayan et al., 2006, experiment 2; Tweney, Upal, Gonce, Slone, & Edwards, 2006).

In study 1, the participants were used as measurement instruments to avoid serious demand characteristics. If participants had been used as the unit of analysis, each of them would have rated both the dependent variable (Goodness) and the predictor variables (Effort, Skill, Intention I, and Intention II). This would have left open the (highly probable) possibility that they would have adjusted their judgements as a result. For example, imagine a visitor being asked how much he or she likes a work of art, and then how easy it

[139] Remember, however, that the visitors were used as the unit of analysis to test prediction 8.

is for him or her to understand it. It is very likely that the visitor will give "consistent" ratings between these two measures to avoid what psychologists call "cognitive dissonance" (Festinger, 1957). Similarly, such a design could also suggest to the visitor that the researcher is looking for correlations between goodness and understanding, and he or she could adjust his or her rating in an attempt to confirm, or on the contrary sabotage, the researcher's hypothesis.

The second unusual aspect of the design used is that the sets of works of art were not rated by the same groups of raters (e.g., the goodness of historic, modern, and contemporary works was rated by three different groups of raters). The problem with this particularity of the design is that it leaves open the possibility that the different groups of raters did not use the scales consistently (e.g., one could imagine that the different periods attracted different visitors, although this is not what the additional data gathered in the study, such as demographics and art expertise, suggested[140]).

This risk was accepted on the pragmatic grounds that it would not have been reasonable to ask walk-in volunteers to rate as many as 57 works of art, in almost all of the rooms of the Tate gallery, during their visit. Further, although this dividing the works of art in such a way may be a weakness of the design, I have tried to minimise the possible differences between the groups of raters by using a large number of raters in each group (pooled ratings with at least 37 raters—up to 48—in each set and in each variable; a lot of raters considering that coding studies typically use two to three coders). Finally, one has to

[140] For example, the mean age of the raters for the Historic I, Historic II, Modern, and Contemporary periods were 39.4, 40.5, 41.8, and 40.4, respectively. A one-way ANOVA found no significant main effect of Set of works on age of raters, and contrasts showed that none of these differences were significant. I conducted further analyses for sex and nationality and found similar non-significant results. Finally, the percentages of visual arts specialists were also similar between the Historic I (17%), Historic II (20%), and Modern (21%) periods. It is true, however, that the Contemporary period attracted significantly more visual arts specialists (30%), and this is why I will always distinguish between periods and expertise of participants in the analyses below.

remember that if the different groups of raters differed in how they rated the different works of art (which does not seem to have been the case, see footnote 140), the result would be additional noise in the data, which would therefore increase the risk of a Type 2 error—a failure to find the predicted patterns. In other words, the design decision of using different groups of raters for each of the four sets of works would make the tests used in the regression analyses below more conservative, not more liberal.

5.1.5 Procedure. As the design of the study required three groups of raters for each of the four sets of works, at least twelve types of questionnaire were needed. Originally, I intended to counterbalance the order of presentation of all works, which would have given 24 types of questionnaire. However, it was not possible to counterbalance Sets 3 and 4, because these were part of "one-way" exhibitions (participants could visit them in one direction only, and it seemed inappropriate to provide them with a "reversed" questionnaire). Sets 1 and 2 were counterbalanced and hence the final number of questionnaire types used was 18. Each questionnaire contained an introductory sheet with instructions; the list of works (with small black-and-white illustrations to help accurately identify the works) arranged by rooms that the participants were asked to rate (the questions were repeated for each item); and three final sheets with additional information, such as age, sex, involvement with the arts, and so on (as requested by Tate Britain, a couple of questions used in their satisfaction polls were added). The questionnaires were anonymous. For an illustration of a sample questionnaire, see appendix 6.

The questionnaires were distributed at two times, over a total of seven days. Except Wednesday, when Tate Britain hosted a special event, each day of the week and each opening hour were represented. The distribution of the different questionnaire types followed a randomised plan. The visitors were approached by myself (wearing an official

Tate badge) at one of the entrances of a given set of works, and asked whether they would agree to participate in a survey on art. If agreed, it was briefly explained what was expected, and the participants were provided with a questionnaire, a clipboard, and a Tate corporate pencil that they could keep at the end of the survey. The participants took this material with them, and rated the works during their visit. They could take as much time as they wanted, and returned the completed questionnaires at one of the gallery information desks.[141]

5.2 Results

Either the works of art (predictions 6 and 9) or the raters (prediction 8) were used as the unit of analysis, and three batteries of statistical tests were used. First, I looked for possible differences between the works of art (e.g., whether the historic period to which they belong had an effect on how they were rated) and between the raters (e.g., whether art specialists' and non-specialists' ratings differed). Second, correlations and partial correlations were run for the works of art. Third, the data for the works of art were introduced into a multiple linear regression model.

5.2.1 Works of art. Ratings for the first unit of analysis, the works of art, were coded in the numbers 1 to 7 (variables Goodness, Effort, Skill, Intention I and Intention II) and 1 to 4 (variable Familiarity), high ratings indicating high appraisals or high familiarity, respectively. In order to carry out the tests, the ratings were averaged by work of art (N = 57): each work of art provided one score for each variable, an average of the ratings it received for Goodness, Familiarity, Effort and Skill, and Intention I and II. In each variable, the data were roughly normally distributed, although I observed high means,

[141] Permission to conduct the survey was obtained from Tate Britain (see appendix 16), and the protocol was approved by the Research Ethics Committee of the University of Oxford (reference: SSD/CUREC1/09-029; see appendix 17).

which I attributed to the quality of the Tate Britain collections. The variables Effort and Skill, and Intention I and II, were averaged as global measures; this was done because these two pairs of ratings had been designed as such, and also because they highly correlated (Effort and Skill: $r = .84$; Intention I and Intention II: $r = .96$, both two-tailed, both $p < .0001$). The resulting means for Effort and Skill (collapsed), and Intention I and II (collapsed), were 5.21 ($SD = 0.71$), and 4.99 ($SD = 0.89$), respectively.[142] As mentioned above (subsection 5.1.3), Effort and Skill, and Intention I and II had themselves been designed as a global measure of the artist's intention that I call "deliberateness." Now, as expected, the means for Effort and Skill (collapsed) and Intention I and II (collapsed) significantly correlated in each group of raters (see tables 3 and 4). This justified their use a global measure in analyses, Deliberateness (construct of Effort and Skill collapsed, and Intention I and II collapsed), whose resulting mean was 5.1 ($SD = 0.71$).[143] Means for Goodness and Familiarity were 4.61 ($SD = 0.60$), and 1.50 ($SD = 0.36$), respectively. For the complete list of means and standard deviations by work of art, see appendix 4.

A series of two-tailed independent-samples *t*-tests detected no significant effect of order of presentation of the works in Sets 1 and 2 on any of the scales; this was reassuring as Sets 3 and 4 had not been counterbalanced (see subsection 5.1.5 above). I also looked for possible differences between the works that belong to the Historic period (Sets 1 and 2, $n = 30$) and those that belong to the Modern-Contemporary period (Sets 3 and 4, n = 27). The Historic period means (with standard deviations in parentheses) for Goodness, Familiarity, Effort and Skill, and Intention I and II were 4.77 (0.52), 1.50 (0.35), 5.58

[142] The means and standard deviations before averaging were: Effort: $M = 5.25$, $SD = 0.72$; Skill: $M = 5.18$, $SD = 0.77$; Intention I: $M = 4.95$, $SD = 0.94$; Intention II: $M = 5.02$, $SD = 0.85$.

[143] I did not calculate alpha scores for scale consistency, and I did not carry out an exploratory factor analysis. As explained above (subsection 5.1.4), the ratings were provided by independent groups of raters, and as a result the assumptions of such tests would have been violated.

(0.43), and 5.40 (0.73), respectively, while those of the Modern-Contemporary period were 4.43 (0.64), 1.49 (0.38), 4.80 (0.75), and 4.52 (0.83), respectively. A series of two-tailed independent-samples *t*-tests (with a Bonferroni correction of $p < .0002$) found these differences to be significant for Effort and Skill, $t(55) = 4.85$, $p < .001$, 95% *CI* of the mean difference 0.45 to 1.10, $d = 1.31$; and Intention I and II, $t(55) = 4.24$, $p < .001$, 95% *CI* of the mean difference 0.46 to 1.29, $d = 1.12$.[144] In other words, the Historic works were considered to have required more effort and skill, and to be easier to understand, than the Modern-Contemporary works.[145]

5.2.2 Raters. To carry out the tests for the second unit of analysis, the ratings were averaged by raters ($N = 528$): each rater provided one score, an average of his or her ratings of the works of art for either Goodness, Familiarity, Effort and Skill, or Intention I and II (depending on the measures to which the rater had been assigned). Just as for the works of art, the variables Effort and Skill, and Intention I and II, were averaged as global measures. The data were approximately normally distributed in all variables. For each variable (Goodness, Familiarity, Effort and Skill, and Intention I and II), a series of two-tailed independent-samples *t*-tests found no significant effect of sex and native language on the participants' ratings, and a series of one-way ANOVAs found no significant effect of age group and nationality on the participants' ratings.[146]

[144] The use of effect size statistics is relatively new in psychological science; there is no general agreement yet as to which effect size statistics should be calculated and reported depending on the test that is used. In this thesis I have used the effect size statistics that I have been taught in a course on quantitative methods at the School of Anthropology and Museum Ethnography during the academic year 2009-2010. These effect size statistics were: *t*-tests: Cohen's *d*; ANOVAs (main effect): Eta squared (η^2); ANOVAs (planned contrasts and multiple comparisons): *r*. I thank Emily Reed-Burdett for advice on this matter.

[145] The difference between the Historic and the Modern-Contemporary periods for Goodness, with Historic rated more positively, did not reach significance after Bonferroni correction (uncorrected $p = .03$).

[146] The groups compared were: sex: male vs. female; native language: English vs. non-English; age: 12-25, 26-40, 41-55, and 56-83; nationality: English, American, and other.

To test the hypothesis that expertise influences art appreciation (prediction 8), three groups of raters were compared: those who reported no expertise in the arts (n = 352, hereafter Non-specialists), those who reported expertise in the visual arts (n = 104, hereafter Visual arts specialists), and those who reported expertise in other arts (n = 46, hereafter Other arts specialists). A series of one-way ANOVAs found a main effect of Expertise on Familiarity ratings ($F(2, 157) = 7.718$, $\eta^2 = .089$), on Effort and Skill ratings ($F(2, 163) = 8.224$, $\eta^2 = .091$), and on Intention I and II ratings ($F(2, 173) = 10.068$, $\eta^2 = .104$), all $p < .001$. Planned contrasts were run with a Bonferroni correction of $p < .0001$. As expected, the predictor variables were rated higher by Visual arts specialists (Familiarity: $M = 1.80$, $SD = 0.67$; Effort and Skill: $M = 5.78$, $SD = 0.87$; Intention I and II: $M = 5.33$, $SD = 0.79$) than by Non-specialists (Familiarity: $M = 1.41$, $SD = 0.46$; Effort and Skill: $M = 5.00$, $SD = 0.90$; Intention I and II: $M = 4.72$, $SD = 0.88$). These differences were significant for each variable (Familiarity: mean difference = 0.39, 95% *CI* 0.58 to 0.19, $t(157) = 3.92$, $r = .29$; Effort and Skill: mean difference = 0.78, 95% *CI* 1.15 to 0.39, $t(163) = 4.03$, $r = .30$; Intention I and II: mean difference = 0.61, 95% *CI* 0.93 to 0.29, $t(173) = 3.77$, $r = .27$; all two-tailed, all $p < .001$).[147] In other words, the Visual arts specialists were more familiar with the works of art, and considered that these required more effort and skill to be created and were easier to understand, than the Non-specialists. Visual arts specialists' ratings did not significantly differ from Other arts specialists.

5.2.3 Correlations. Significant positive correlations were found between the dependent variable, Goodness, and the predictor variables Familiarity ($r = .435$), Effort and Skill ($r = .559$), and Intention I and II ($r = .533$), all two-tailed, all $p < .01$. Since a significant difference had been found between the groups of raters, correlations were also

[147] Visual arts specialists' ratings did not significantly differ from Other arts specialists' ratings on any of the scales.

run separately for Non-specialists and Specialists (this last group including Visual arts specialists and Other arts specialists, who did not significantly differ). As presented in table 3, the correlations between Goodness and each of the predictor variables provided by the Non-specialists group remained strong (Intention I and II: $r = .514$), or became stronger (Familiarity: $r = .453$; Effort and Skill: $r = .571$), all two-tailed, all $p < .01$, whereas those from the Specialists group decreased, but remained significant (Effort and Skill: $r = .444$, $p < .01$; Intention I and II: $r = .288$, $p < .05$), apart from Familiarity ($r = .210$, $p = .116$).

Table 3
Pearson correlations between the main variables of the study

	Raters											
	All				Non-specialists				Specialists			
Var.	G	F	E-S	I-II	G	F	E-S	I-II	G	F	E-S	I-II
G	-	.43**	.55**	.53**	-	.45**	.57**	.51**	-	.21	.44**	.28*
F	.43**	-	.20	.34**	.45**	-	.30*	.36**	.21	-	.13	.13
E-S	.55**	.20	-	.57**	.57**	.30*	-	.53**	.44**	.13	-	.44**
I-II	.53**	.34**	.57**	-	.51**	.36**	.53**	-	.28*	.13	.44**	-

Note. Var. = Variable; G = Goodness; F = Familiarity; E-S = Effort and Skill; I-II = Intention I and Intention II. $N = 57$. **$p < .01$, *$p < .05$.

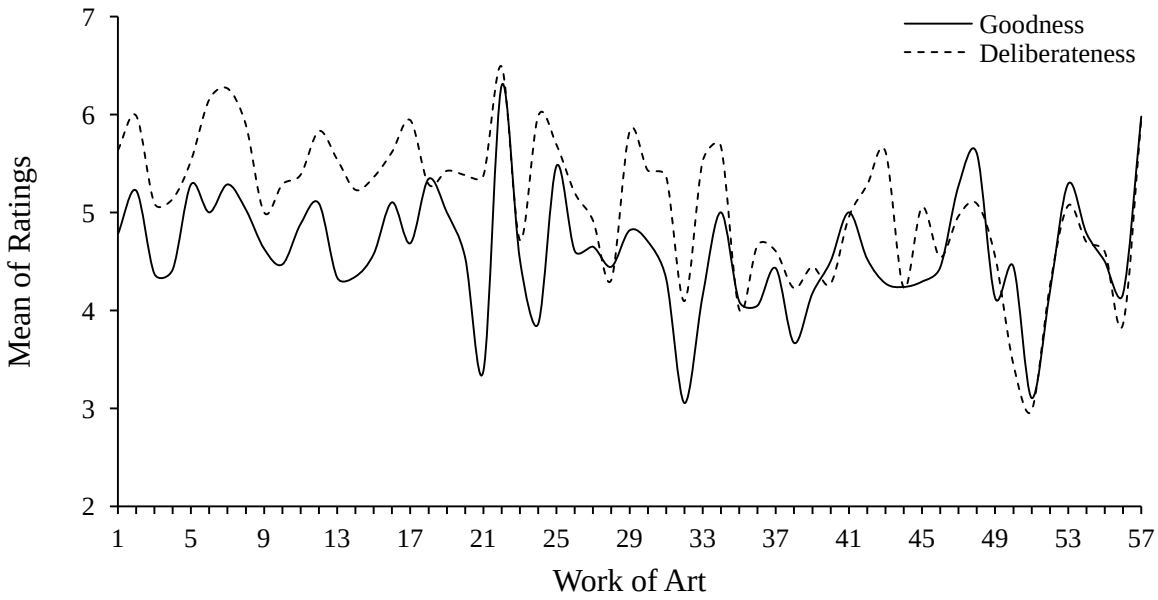
Table 4
Partial correlations between the main variables of the study

	Raters								
	All			Non-specialists			Specialists		
Variable	G	E-S	I-II	G	E-S	I-II	G	E-S	I-II
G	-	.53**	.45**	-	.51**	.41**	-	.42**	.26*
E-S	.53**	-	.54**	.51**	-	.47**	.42**	-	.43**
I-II	.45**	.54**	-	.41**	.47**	-	.26*	.43**	-

Note. G = Goodness; F = Familiarity; E-S = Effort and Skill; I-II = Intention I and Intention II. Control variable: Familiarity. $N = 57$. **$p < .01$; *$p < .05$.

To test that the significant correlations between Goodness and the main dependent variables of interest, Effort and Skill, and Intention I and II, were not due to the effect of Familiarity, partial correlations were calculated. As presented in table 4, when controlling for Familiarity, the correlations between Goodness and Effort and Skill (r = .534), and between Goodness and Intention I and II (r = .453) were still significant (both two-tailed, both p < .01). Partial correlations were also run separately for Non-specialists and Specialists. Much like before, these decreased in strength but remained significant (Non-specialists: Effort and Skill: r = .510; Intention I and II: r = .419, two-tailed, p < .01; Specialists: Effort and Skill: r = .429, two-tailed, p <.01; Intention I and II: r = .267, two-tailed, p <.05).

Figure 15
Mean of ratings for Goodness and Deliberateness by work of art

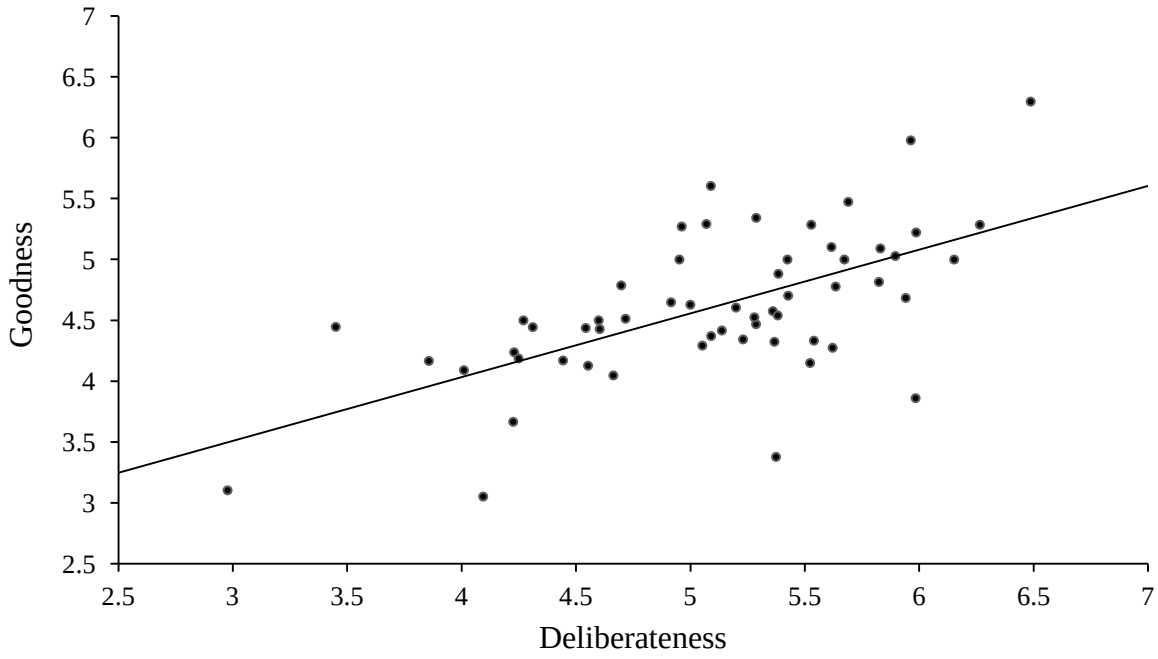


Note. All groups of raters (Non-specialists and Specialists) are included.

Correlations were finally run between Goodness and Deliberateness (a construct of Effort and Skill collapsed, and Intention I and II collapsed, see subsections 5.1.3 and 5.2.1 above).

Strong significant positive correlations were found between Goodness and Deliberateness in each group of raters (Non-specialists and Specialists: r = .614; Non-specialists: r = .614; Specialists: r = .420), as well as when controlling for Familiarity (Non-specialists and Specialists: r = .534; Non-specialists: r = .534; Specialists: r = .400), all tests two-tailed, p < .01 (see also figures 15 and 16).

Figure 16
Linear correlation between Goodness and Deliberateness



Note. All groups of raters (Non-specialists and Specialists) are included. N = 57; R^2 = .377.

5.2.4 Multiple linear regression. Familiarity and Deliberateness were finally introduced simultaneously into a multiple linear regression model. As showed in table 5, Deliberateness was the strongest predictor of Goodness (β = .529, t(55) = 4.92, p < .001), followed by Familiarity (β = .268, t(55) = 2.49, p < .05), this model significantly accounting for a moderate proportion of the variance in Goodness ratings (R^2 = .441, p <

.001). Deliberateness remained the strongest predictor of Goodness when multiple linear regression was run separately for Non-specialists and Specialists, Familiarity losing significance as a partial predictor in the latter group.[148]

Table 5
Regression analysis for Deliberateness and Familiarity predicting Goodness

Predictor Variable	Raters								
	All			Non-specialists			Specialists		
	B	SE_B	β	*B*	SE_B	β	*B*	SE_B	β
D	.451	.091	.529***	.473	.102	.516***	.390	.121	.396**
F	.443	.177	.268*	.500	.221	.252*	.195	.164	.148

Note. D = Deliberateness; F = Familiarity. $N = 57$. *$p < .05$; **$p < .01$; ***$p < .001$.
All $R^2 = .441$, $p < .001$; Non-specialists $R^2 = .431$, $p < .001$; Specialists $R^2 = .444$, $p < .01$.

5.3 Discussion

The results clearly support the three tested predictions. To start, Goodness—an indicator of how much a work of art was liked—significantly correlated with Effort and Skill and with Intention I and II, even amongst Specialists. As the partial correlations revealed, these relationships cannot be reduced to the influence of Familiarity, and it therefore seems that works of art that are thought to have required a lot of effort and skill, and whose artist's intention is easy to understand, tend to be preferred (predictions 6 and 9). Similarly, a general measure of the accessibility of the artist's intention, Deliberateness, which combined Effort and Skill and Intention I and II, was a stronger predictor of Goodness than was Familiarity, both for Non-specialists and Specialists.

[148] An alternative could have been to introduce first Familiarity alone in the regression model, to control how much of the total variance it explained. I have considered, however, that it was more justified to introduce it simultaneously with Deliberateness, because this study does not allow to determine whether familiarity contributes to deliberateness, or vice-versa, or both. People can think that it is easier for them to understand a work of art with which they are familiar, but a work of art that is easy to understand (or highly relevant to the viewer) might also appear more "familiar." In other words, there is no strong reason to believe that familiarity operates prior to or independently of the perceived deliberateness of a work of art.

Regarding prediction 8, a significant difference was found between Non-specialists and Specialists, the latter tending to rate Familiarity, Effort and Skill and Intention I and II higher. This finding is consonant with the idea that visual arts specialists, because of their training, are better equipped to understand the artist's intention and to determine how much effort and skill went into a work of art. As a result, they probably get more cognitive contribution from difficult works, and may like a broader range of art.

A last result has to be discussed here. The works from the Historic period (Sets 1 and 2) were rated significantly higher than the works from the Modern-Contemporary period (Sets 3 and 4), and this in all dependent variables (Goodness was not significant after a Bonferroni correction, but there was a trend in the same direction). Initially, I had no hypotheses concerning artistic periods: there is nothing that would "prevent" a work from the modern period from displaying a lot of effort and skill, from being easily understandable, and, therefore, from being appreciated as much as a work from the historic period. As a matter of fact, however, many works of modern and contemporary art are abstract and conceptual. In other words, the artist's intention is generally more difficult to understand than in historic art, and if one takes that into account, the difference between periods makes sense.[149]

A limitation of study 1 deserves mention. As I have shown in chapter 3 (section 3.3), Sperber and Wilson (1986/1995) defined relevance in terms of a relationship between cognitive cost and cognitive impact. In my domain of interest, this means that understanding the artist's intention is not sufficient to appreciate a work of art. For example, a work of art whose artist's intention is easy to understand, but which has little or

[149] This difference may also be due to the place where the survey was conducted. Although Tate Britain displays historic as well as modern and contemporary works of art, one might argue that it attracts fewer visitors who like modern and contemporary art, especially in comparison with Tate Modern, also located in London.

no cognitive impact, should not be highly appreciated under the relevance model. In contrast, the results of study 1 suggest a linear relationship between understanding the artist's intention and appreciating a work of art—the more the works of art were considered easy to understand, the more they tended to be liked. This is probably the case because the works of art selected at Tate Britain belong to carefully vetted "high art." In other words, these works of art have already surmounted the triviality barrier, and they all have the potential to bring a significant cognitive contribution in return of the cost required to process them. This is why prediction 6 emphasised that, *all other things being equal*—in this case, at an equal potential cognitive contribution—works of art whose artist's intention is easy to understand should be preferred over works of art whose artist's intention is difficult to understand, and this is what the findings suggest.

I finally acknowledge that these findings may be consistent with several interpretations. For example, one may argue that the visitors had already reached an appreciation judgement when they rated Intention I and II (as well as Effort and Skill). In other words, they would have considered that some works of art are easy to understand just because they liked them in the first instance, as a post-hoc justification to reduce cognitive dissonance. This is possible, although the design of the study was aimed at avoiding such post-hoc constructions: Goodness and Intention I and II were rated by different groups of visitors, and it was therefore not possible for them to be aware that I was looking for a relationship between these variables, nor were those rating Intention I and II or Effort and Skill primed to consider the goodness of the work. Further, this interpretation would not be able to account for the difference that was found between periods. If some works of art were considered easy to understand just because they were appreciated in the first instance,

one could not explain why the works of art from the Historic period tended to be preferred over those of the Modern-Contemporary period.

5.4 Conclusion

With the results of study 1 in mind, it might now be useful to summarize the approach to art that I propose in this thesis. Works of art are ambiguous artefacts. As objects they trigger expectations of practical use or function, but at the same time frustrate these expectations. As human-made products they are assumed to have a purpose, but this purpose is not clear. As this is the case, works of art are probably assessed as intentional acts of communication. If true, Bloom's (1996) theory of artefact categorisation and Sperber and Wilson's (1986/1995) relevance theory of communication allows generating similar fruitful predictions for the appreciation of works of art.

According to Bloom, understanding the maker's intention matters in the assessment of artefacts, especially when presumptions about their form, function, or mode of production are ambiguous (Bloom & Markson, 1998; S. A. Gelman & Bloom, 2000; Preissler & Bloom, 2008). As works of art typically are artefacts that lack practical functionality, understanding the artist's intention should play an important role in intuitive art appreciation judgements. According to Sperber and Wilson (1986/1995), intentional acts of communication bear a greater or lesser cognitive contribution at a higher or lower processing cost, a relationship that constrains their relevance and their success. If works of art are intuitively represented as acts of communication, their appreciation should also be constrained by the principle of cognitive relevance. For example, the artist's intention—assumed to be represented in the work of art and to communicate something—should be perceived as more or less worthy of attention, and understanding it should be more or less easy to achieve, both things influencing the appreciation of the work of art.

The results of study 1 support these predictions. First, there was a correlation between how much the works of art were liked and how easy they were to understand, which suggests that intuitive art judgements involve speculation[150] about the artist's intention. Second, works of art whose artist's intentions were easier to understand tended to be rated more favourably, which suggests that works of art are at least partly assessed in terms of cognitive relevance.

The factors that influence art appreciation are not limited to understanding the artist's intention and certainly are numerous. Aesthetic appraisal, personal preferences and cultural trends to name a few (as well as mere exposure, expertise, and lower-level cognitive processes[151]) all play a role in people's judgements of works of art. Moreover, intentionalism in art appreciation—or the idea that considering the artist's intention is necessary to understand and judge a work of art—has been criticized by art theorists such as Wimsatt and Beardsley (1946; see chapter 1, subsection 1.4.1 of this thesis for discussion). I think however that *perceived* understanding of the artist's intention is at the core of art appreciation, as far as one does not misread what I mean by this. For example, I do not pretend that all art is meaningful (what is the "meaning" of a Rothko's multiform painting?), and many contemporary artists would deny that their works convey a precise "message" that would need to be "understood." All I say is that works of art, because they cannot be approached in terms of practical use or function, will be automatically assessed as acts of symbolic communication and, therefore, will trigger speculation about the artist's intention ("Why did he or she make that?")—whether speculating about the artist's

[150] Remember that such "speculation" does not mean that people engage in conscious, reflective, or theoretical thinking about the work of art or about the artist's intention. As I have explained in chapter 1 (section 1.1), people's speculation about the artist's intention is probably automatic, not necessarily conscious, and therefore more "intuitive" than "reflective."
[151] On this last point, see chapter 1 of this thesis, subsection 1.4.2.

intention is justified or not, and whether the artist actually intended to communicate something or not. The results of study 1 suggest that such a constraint is strong, and that taking it into account has the potential to shed light on how people deal with works of art.

Chapter 6

Study 2

The aim of study 2 was to test the same (or closely related) predictions for art appreciation as study 1 but under experimental conditions. It also tested a new prediction, but this one regarding art categorisation. Study 2 comprised four experiments. Experiment 1 tested prediction 9, according to which the perceived effort and skill that went into a work of art will have an effect on the extent to which it is appreciated. Participants rated (for how much they liked it) a series of hyperrealistic paintings that were labelled as either paintings or photographs. Experiment 2a tested prediction 7, according to which the information that accompanies a work of art and that helps the understanding of the artist's intention will positively influence art appreciation. Participants rated a series of works of art for how much they understood it and how much they liked it with different types of titles (some titles being more "elaborative" or "helpful" than others—these two adjectives to be explained below). Experiment 2b, a follow-up study, also tested prediction 7, but using a different design (participants rated the works of art with more than one type of title). Experiment 3 tested prediction 1, according to which works of art are categorised as such following the artist's intention. Experiment 3, therefore, did not test a prediction for art appreciation but for art categorisation, or what people consider to be art. Participants saw a series of images that were said to have been created either intentionally or unintentionally, and had to decide whether these images were instances of "art."

This chapter begins with a description of the general method that was used for study 2 (section 6.1). I then report the specific methods and the results of the four experiments separately (sections 6.2 to 6.5). These last four sections also contain short introductions explaining the rationale behind each of the experiments, a review of previous research

when such research exists, as well as a discussion. The chapter ends with a general discussion (6.6).

6.1 General method

In this section, I describe the general method that I used in study 2. I do so because the experiments of study 2 were carried out at the same time (except experiment 2b) and used similar methods and procedures. This way of reporting multiple related experiments, which is conventional in psychological research,[152] has one main advantage: as the methods that are common to all the experiments are grouped under one section, repetition can be avoided in the subsequent sections, in which the specific methods used in each experiment are described.

6.1.1 Recruitment of participants. Contrary to study 1, study 2 did not involve participants who had special training or expertise in the visual arts. There were three reasons for this decision. First, the main claims of this thesis concern people who are not art specialists. This thesis, as explained in chapter 1, is interested in *most* people's *intuitions* about art. It is less interested in reflective, or theoretical, or philosophical ideas that some people may have about art, such as those developed by art critics, philosophers of art, or other art specialists. The second reason was more pragmatic. Although it would have been possible, of course, to include art specialists in the experiments of study 2 (in order to compare them with the non-specialists), that would have meant recruiting a considerably greater number of participants. As I had estimated that conducting the three main experiments of study 2 (and perhaps follow-up experiments) would already require approximately 500 non-specialists, I considered that it was not reasonable to include a further sample of art specialists. The third reason was that the results of study 1 supported

[152] See the *Publication Manual of the American Psychological Association* (2010).

my main prediction for art specialists (prediction 8), who apparently tend to be more "generous" in their judgements than non-specialists, probably because they have to invest less effort in order to understand works of art and therefore can get a higher cognitive contribution in return (see previous chapter, sections 5.2 and 5.3; and chapter 4, subsection 4.1.2 for discussion). In other words, there was no objective reason to think that art specialists would behave markedly differently in study 2.

A second general criterion used for recruitment was that of the native language of the participants. All the participants in study 2 were English native language speakers. I considered that this was necessary for the following reason. Contrary to study 1, study 2 featured relatively more complicated instructions, and also most of the manipulations used were words or short texts. For example, in experiments 2a and 2b the participants rated a series of works of art with different types of title. Some of these titles consisted of just one word, and therefore if that single word were not understood, the manipulation could not fulfil its purpose properly. Experiment 3 used longer texts, artists' statements, which differed between the experimental conditions. These differences between conditions, however, were based on nuances that I believed a non-English native speaker may not fully understand, and which may have biased or obscured the findings as a result.

That said, the participants were recruited in the Oxford student population (undergraduates and graduates) as well as in the general public in the United Kingdom and in the United States. The study was advertised as an "online survey on art," which was open to "English native language speakers who have no special training or expertise in the visual arts." The advertisement also stated that upon completion participants would be given the opportunity to enter a draw to win an electronic voucher worth £30 or $50 (and to be used on any of the amazon.com websites). These advertisements were sent by email to

41 of the colleges and halls constituent of Oxford University and were posted on Oxford University department websites (e.g., Department of Experimental Psychology, http://www.psy.ox.ac.uk) and online experiment websites (e.g., Hanover College's Psychological research on the net, http://psych.hanover.edu/research/exponnet.html). Further advertisements were published on classified ads websites (e.g., http://www.dailyinfo.co.uk). The advertisements all contained the hyperlink that directed to the online questionnaire (see subsection 6.1.3 below).[153]

6.1.2 Works of art and fictitious artists' names. One main criterion guided the selection of the works of art used in study 2: these works of art were not known by the greater public. As previous research has shown (Cutting, 2003; Maslow, 1937; Temme, 1984), as well as study 1 of this thesis (see previous chapter), familiarity with a work of art positively influences its appreciation. If such familiarity effects can be controlled for in correlational designs such as the one used in study 1, it is not possible, or at least more difficult to do so in experimental designs that use the participants, not the works of art, as main unit of analysis.[154] I have, therefore, decided to use works of art that are relatively unknown for the wider audience. I found most of these on the Internet, and others were created by visual artist Sherry Barrett especially for study 2. To ensure that the participants were genuinely not familiar with these works of art, they indicated whether they had previously seen any of them before. The data of the participants who indicated so were

[153] No advertisement was emailed or posted on a website without written authorisation from the relevant institution or contact. For example, I emailed the advertisement to a university department or college, which if agreed would then forward it to its students; or I contacted a website administrator, who if agreed would then post the advertisement. Most of my contacts were presidents of common rooms of Oxford University colleges, and most of the time they included the advertisement in their weekly email newsletter.

[154] As in a between-participants design the data are averaged by participants, the greater or lesser familiarity of these with some of the works of art rated would be "lost" when averaged. One possibility would be to prerate the works of art for familiarity, but this would complicate the procedure and also require more participants. Another possibility would be to use only one work of art (and use familiarity as an independent or grouping variable), but this would limit any positive findings to the specific type of art to which that work of art belongs.

excluded from the analyses (I will indicate in the relevant sections how many times this happened in each experiment).

All the works of art rated in study 2 were accompanied by an artist's name and a year of production.[155] The reason for including such information was to approximate the conditions under which works of art are usually presented to and judged by the public in real-life situations, and therefore increase the external validity of study 2.[156] However, as it was not always possible to identify the real artist's name and the real year of production (some of the works of art were found on the Internet and were obscure), and as using the real artist's name when it was known may have triggered demand characteristics (many works of art were created by the same artist, Sherry Barrett, and one was created by myself), fictitious artist's names and years of production were used. I fabricated the artist's names using an online random name generator (http://www.fakenamegenerator.com). I programmed this generator to randomly pair 36 first names (half of them female) and 36 surnames taken from a database that compiles public domain sources such as recent American and British censuses. To ensure that these pairs of first names and surnames would be credible as names of real people, they were prerated by four graduate students (age: $M = 26.25$, $SD = 3.59$; two females; two Americans and two British) naive to the rationale of the task.[157] These preraters read each of the 36 pairs and were asked to judge whether it constituted "a fake name or a real name" on a five-point scale anchored at 1 (*fake name*), 3 (*it could be both*), and 5 (*real name*). Out of the 36 pairs thus rated, the 12 (6 male, 6 female) that received the higher ratings (range of average ratings: 3.75 to 4.75)

[155] The works of art used in experiment 1 were accompanied by an artist's name but not by a year of production.
[156] This also probably helped to make some of the manipulations more "credible" to the participants. For example, experiment 3 used artist's statements as the main manipulation. Using names was not only necessary but also made these statements sound more "real."
[157] None of these preraters participated in any of the actual experiments.

were selected to be used in study 2. An example of a male name was Michael Hirschman, whereas an example of a female name was Sarah Hurst (for the complete list of names, see appendix 11). These fictitious artist's names were then quasi-randomly[158] assigned to the works of art in each of the experiments.

A simpler method was used to generate fictitious years of production. I first decided of a range of years, 1990 to 2010 (I judged that all the works of art used in study 2 may reasonably have been produced in that period), and then randomly assigned each of the 20 years comprised in that range to the works of art in each of the experiments.[159]

6.1.3 Procedure and online questionnaire. All the participants who were recruited as described above completed the study online. Once they had clicked on the hyperlink contained in the advertisement, they were directed to a website that hosted the study (http://www.surveygizmo.com). They were then automatically assigned to one of the experiments and, within each experiment, to one of the experimental conditions (and, if the experiment included more than one variable, to one of the variables).[160] The assignment of the participants to the experiments and to the conditions was quasi-random. Once I had reached the number of participants (24 to 30) that I needed in one condition, the questionnaire corresponding to that condition was no longer accessible by new participants, who were redirected to another questionnaire (corresponding to another condition, in which further participants were still needed). Similarly, once I had reached the total number of participants needed in one experiment, this experiment was closed and new participants were redirected to another experiment. I repeated this until the total number of participants

[158] That is, I ensured that one name would not be assigned to more than one work of art in each experiment, and also that an equal number of male names (n = 6) and female names (n = 6) would be assigned in each experiment.
[159] Contrary to what I did for fictitious names, I did not ensure that one year would not be assigned more than one time to the works of art in each experiment. Further, as the number of years included in the range was bigger than the number of works of art used in each experiment, not all years turned out to be assigned.
[160] The participants of experiment 2b, a follow-up study, were recruited separately.

required in all conditions and in all experiments was reached. The reason for using such an assignment method is that a fully random assignment may have significantly increased the time needed to collect the data. It may also have resulted in group sizes (i.e., number of participants in each condition) that would have been too dissimilar to be compared without violating some statistical assumptions.

In all experiments and in all conditions, the online questionnaires were organised as follows. The first webpage contained general information about the study and an informed consent form (the participants who wished to participate after having read that information indicated their consent by checking a box; the survey would not continue if that box was not checked). The second webpage contained the instructions relevant to each experiment and to each condition to which the participants had been assigned. For example, in experiments 2a and 2b the participants were told that they were about to see a series of works of art and that they would be asked how much they liked them or how easy it was to understand them.

The next webpages (nine to twelve depending on the number of works of art used in the experiment) contained the actual items of the questionnaire. In most cases, these items consisted of: (1) at the top of the page, a large colour illustration of the work of art to be rated; (2) below the work of art, a caption that included the artist's name and the title and year of production of the work (or any other relevant manipulation, such as an artist's statement in experiment 3); (3) below the caption, the questions and the rating scales (e.g., "How much do you like this work of art?" rated on a seven-point scale anchored at 1 (*not at all*), 4 (*neither like nor dislike*), and 7 (*very much*). Only one work of art was displayed by webpage, and the questions and rating scales were repeated for each work of art. For a

sample of one of these webpages, see appendix 12. In all the experiments and in all the conditions, the works of art were rated in an order that was randomised for each participant.

The second to last webpage of the questionnaire was again identical in all experiments and in all conditions. The participants were asked to provide demographic information such as age, gender, nationality, occupation, and so on; they were also asked to indicate what their native language was and whether they were art specialists, and they could also leave feedback if they wished. The last page of the questionnaire (also identical in all experiments and conditions) contained contact information and provided the participants with the opportunity to enter the draw and/or receive debriefing information. Most of the participants took approximately 10 minutes to complete the entire procedure.

The participants who had signed up for debriefing were sent an email at the end of the collection of the data, when the study was finished. The winner of the prize, determined by random draw, was contacted separately and later acknowledged that the electronic voucher had been delivered. [161]

6.1.4 Flux of participants, discarded data, and preliminary analyses. The total number of people who accessed study 2 online was exactly 900. The data of 193 participants who did not complete the study entirely (most of them leaving the questionnaire after only one or two pages) were discarded from the analyses. Further, the data of 82 participants who indicated that they had special training or expertise in the visual arts, as well as the data of 120 participants who indicated that their native language was not English, were not included in the analyses (see the justification for doing so in section 6.1.1 above; remember too that the advertisement clearly stated that I was looking for art novices

[161] The protocol used in study 2 was approved by the Research Ethics Committee of the University of Oxford (reference: SSD/CUREC1A/10-135), see appendix 18.

whose native language was English).[162] The resulting sample size therefore consisted of 505 volunteers who all fulfilled the conditions for participation and completed the study entirely. I will describe the sample characteristics (sex, age, nationality, etc.) in each relevant section of experiments 1, 2a, 2b, and 3 below.[163]

Preliminary analyses showed that in all experiments, variables, and conditions the data were roughly normally distributed, as assessed by descriptive statistics, histograms and Q-Q plots as well as Kolmogorov-Smirnov tests. Further, for all experiments, preliminary analyses found no significant effect (after Bonferroni corrections when multiple comparisons were made) of sex, age, nationality, and type of student within any of the conditions and on any of the scales.[164] For this reason, these variables will not be discussed below.

6.2 Experiment 1

Experiment 1 tested prediction 9, according to which works of art that are thought to have required a lot of effort and skill to create will be preferred over works of art that are thought to have required little effort and skill. To my knowledge, there is only one previous

[162] However, *all* the participants who wished so and who provided an email address were included in the draw (even if their data were incomplete or if they did not fulfil the conditions for participation).

[163] I finally ensured that no participant had completed the study more than once (in the same condition, or in another condition, or in another experiment) using the following method. First, I collected IP addresses and checked for duplicates. When I identified one, I checked that the participants who completed the study from the same IP address provided different personal data (e.g., age, occupation, email address, etc.). Although this of course left open the possibility that some participants fabricated fake identities, excluding all the participants who completed the study from a same IP addresses seemed too conservative (many of the participants were students, and presumably some of them would complete the study on the same computer, e.g., in the common room of their college). The second precaution I took is that the study was protected against multiple participations through the use of cookies (cookies are associated to a user profile, so that if the same computer can be used several times to complete the study, the study cannot be completed several times by the same user). This, again, does not constitute a perfect protection against multiple participations (the users may still delete their browsing history and therefore the cookies), but I considered that it was a sufficient one. Using that method, I identified no multiple participations, at least for the participants who fulfilled the conditions for participation and completed the study entirely.

[164] The groups compared were: sex: male vs. female; age: 13-18, 19-25, 26-40, and 41-64, as well as younger than 25 years old vs. older than 26 years old; nationality: American, British, and other; type of student: graduate vs. undergraduate, as well as student vs. non-student.

experiment that tested the hypothesis that perceived effort influences appreciation specifically in the domain of art. Kruger, Wirtz, Van Boven, and Altermatt (2004, experiment 2) asked adult participants to rate two abstract paintings for liking, quality, and economic value. Half of the participants were told that the first painting took four hours to create, and that the second painting took twenty-four; the other half of participants received the opposite manipulation. In both groups, the participants preferred the painting that was said to have taken longer to create; they also considered that it was of better quality, and that it was worth more money. Kruger et al. (2004) concluded that perceived effort (as assessed by the amount of time invested by the artist) is used as a heuristic to judge the quality of a work of art and other artefacts (such as an armour, see experiment 3).

The aim of experiment 1 was to extend the findings of Kruger et al. (2004, experiment 2) by using a different manipulation of effort and a different design. The reason for using a different manipulation was that the inclusion of information about time to create might have prompted participants to use this information when they may not normally do so. In Kruger et al.'s study, the participants received explicit information about the effort that went into the two paintings, as indicated by how many hours these took to be created. But maybe people use the effort heuristic even when they receive no explicit or precise information about the effort that went into a work of art; after all, in real life situations a work of art is not necessarily accompanied by such specific information, and in spite of this people might still use the effort heuristic to judge its quality, perhaps on the basis of some clues that are directly visible in it. To find out, in experiment 1 the participants were not provided with any explicit or precise information about the effort invested in the works of art selected, and I used a more "subtle" manipulation of effort. This manipulation was that of the *type* of art that the participants were told to be judging. One type of art, that of

hyperrealistic paintings, indicated a high effort invested by the artist; another type of art, that of photographs that were visually identical to the hyperrealistic paintings (indeed: these photographs were simply the same hyperrealistic paintings, but labelled as photographs), indicated a lower effort invested by the artist. Presumably participants generally would expect a realistic photograph to take less effort to produce than a hyperrealistic painting.

Hyperrealism is a school or style of painting that emerged in the United States in the 1960s.[165] Hyperrealistic paintings reproduce faithfully and in detail the objects that they depict, and some of them achieve this so successfully that they can be mistaken for photographs (hence the other name for hyperrealism, which is photorealism; see figure 17 for an illustration). Hyperrealistic paintings are created using complex techniques; to the non-specialist, they are probably thought to require a significant amount of time, investment, and special skills from the artist, at least in comparison with other types of art. To illustrate, contrast a hyperrealistic painting with a visually identical photograph. To the non-specialist, it is highly probable that the difference between these two works of art is not their "aesthetic" quality (they look identical), but the effort that they required to be created: if it took only a fraction of a second for the photographer to push the button of the camera, the painter had to patiently and carefully reproduce the minute details of the object or scene depicted.[166] In other words, a hyperrealistic painting would be thought to have required more effort and skill than a visually identical photograph. And, following the

[165] See, for example, the Grove encyclopaedia of art (Photorealism, n.d.). Representative artists of hyperrealism include Robert Bechtle, Chuck Close, Richard Estes, Audrey Flack, and Franz Gertsch.
[166] Of course, some photographs can require more effort than some paintings, and in general one cannot say that a type of art requires "more" or "less" effort than another type art. The point here is that most people would probably tend to say that a hyperrealistic painting required more effort than a visually identical photograph, even if they are wrong to do so. Here again, what is interesting to the cognitive anthropologist is not to determine whether a work of art actually required more effort than another work of art, but just that people tend to think that some works of art required more effort than others, and how this could have an effect on art appreciation and cultural distribution.

effort heuristic, I predicted that a hyperrealistic painting would also be preferred over the same image regarded as photograph. In sum, if this prediction were confirmed, experiment 1 would extend the findings of Kruger et al. by showing that viewers use the effort heuristic in art even when they receive no explicit or precise external information about how much effort went into a work of art.

The second difference between experiment 1 and Kruger et al.'s (2004, experiment 2) study was that of the design used. Kruger et al. used a mixed design in which the participants saw one painting in the "high effort" condition and the other painting in the "low effort" condition (with another group of participants receiving the opposite manipulation). In other words, as the participants received both conditions, one cannot exclude the possibility that they may have noticed that effort was the variable of interest to the researchers (especially because the amount of effort largely differed between conditions, and also because the participants were instructed to actively compare the paintings, p. 93). To avoid such potential demand characteristics, I used a between-participants design in experiment 1: the participants saw the works of art in only one condition, that is, either as paintings or photographs.

The advantage of using a different manipulation and a different design to Kruger et al. is that any positive results found would be more "robust," because they would apply not only to works of art that are accompanied by specific information about the effort invested in them (external validity), and because they would not be mitigated by possible demand characteristics (internal validity). However, such a design also involves at least one potential weakness. In fact, one might argue that if hyperrealistic paintings actually turned out to be preferred over identical photographs, it might be simply because the viewers consider that painting in general is a "higher" or more "noble" art than photography,

perhaps because it has been culturally sanctioned as such for a long time in the West. I will return to this possibility in the discussion (subsection 6.2.3), and for the time being I just note that I tried to control for this possibility in the following way. In addition to the participants who rated the works of art as either paintings or photographs for liking, I had another group of participants who rated the same works of art in the same conditions but for *effort and skill*. If this second group of participants judged that the works of art presented as paintings required more effort and skill than the works of art presented as photographs, then this would further suggest (although not demonstrate) that the first group of participants used the effort heuristic (or at least perceived different levels of effort and skill) to decide which works of art they preferred, and that they were not only subjected to historical or cultural constraints while doing so.[167]

6.2.1 Method. ***Participants.*** Out of the participants who were recruited, selected, and randomly assigned to experiment 1 as described in the general method section (6.1),

[167] Another way to put the weakness of experiment 1 (without emphasising cultural factors as in the main text) would be to say that it used a less precise indicator of effort (i.e., type of art) than that of Kruger and colleagues (i.e., amount of time to create the work of art). In other words, a possible bias in experiment 1 would be that it might not have measured the effect of effort on liking, but the effect of type of art (painting vs. photography) on liking. Three things need to be said here. First, in experiment 1 I wanted to test the hypothesis that people use the effort heuristic even when they receive no explicit information about the effort that went into the work of art, and for this reason I needed a more "subtle" indicator of effort, which involved the risk of introducing the bias mentioned above. Second, I tried to mitigate this possible bias in the following way. As I have explained, the participants did not rate either "painting" as a general art category or "photography" as another general art category. The participants rated specific hyperrealistic paintings as either paintings or photographs, and it seems highly probable to me that the only difference between these two conditions is the perceived amount of effort that went into the works of art. The participants also rated these works of art in only one condition, and therefore they were not primed to directly compare paintings and photographs. Third, one has to remember an important thing here. Often, the variables used and measured in an experiment do not correspond exactly to the actual variables of interest, but are "proxies" of them. For example, a researcher may measure IQ as a proxy of intelligence, but it would probably be wrong to think that IQ and intelligence are equivalents. Even in Kruger et al.'s (2004) study, the proxy used, amount of time, is not exactly equivalent to the actual variable of interest, effort. In fact, an artist can work for a long time on a work of art, but this does not *necessarily* mean that the work of art cost him or her a lot of "effort." For example, the skilled artist may be so well trained that creating the work of art was almost "mechanical" or "effortless" to him or her. In other words, in many experiments the researcher cannot be absolutely sure that he or she will measure the actual variable of interest. Despite these three reasons, I still decided to control for this possible bias by including a further group of participants who rated effort and skill, as explained in the main text.

103 accessed the online questionnaire and completed it entirely. The mean age of these participants was 26.92 years (*SD* = 9.75; range: 16-58 years). Fifty-nine percent (*n* = 61) of the participants were female. Five nationalities were represented, with a majority of British participants (58%, *n* = 60), followed by American participants (37%, *n* = 38). Finally, 53% (*n* = 55) of the participants were university students, out of which 56% (*n* = 31) were graduate students.

Hyperrealistic paintings. I selected 32 highly realistic to hyperrealistic paintings representing a wide variety of genres such as portrait, landscape, still life, and animal painting. To ensure that these paintings could be mistaken for photographs, they were prerated for ambiguity by seven graduate students (mean age: 27.85; *SD* = 4.13; 4 females) without special training in the visual arts and naive to the rationale of the task.[168] These preraters were shown the 32 paintings in one random order on a computer screen and asked to judge whether they were paintings or photographs on a 7-point scale anchored at 1 (*definitely a painting*), 4 (*it could be either a painting or a photograph*), and 7 (*definitely a photograph*). A control item, which clearly looked like a painting, had been added to the selection. Out of the 32 paintings thus prerated, nine passed the test, or were considered to be photographs or either paintings or photographs (range of ratings: 4.0-5.84; *M* = 4.83; *SD* = 0.66.); all preraters recognised that the control item was a painting (*M* = 1.0). These 9 paintings were therefore selected to feature in the actual study.[169] For the complete list of paintings and illustrations, see appendices 7 and 13, respectively (see also figure 17).

[168] None of these preraters participated in the actual experiment.
[169] As I had selected most of the paintings for their quasi-photographic quality, I was surprised that only nine of them passed the test. Maybe this was because the preraters were explicitly instructed to distinguish between paintings and photographs, and looked for small clues to do so. That said, this conservative selection ensured that the stimuli could really look like either paintings or photographs.

The figure originally presented here cannot be made available online for copyright reasons.

Figure 17
Agua Caliente Nova (1975) by Robert Bechtle (original in colour). In experiment 1, this hyperrealistic painting was labelled as either a painting or a photograph.

Procedure. The participants were randomly assigned to either a High effort condition or a Low effort condition (between-participants design). In the High effort condition, the 9 hyperrealistic paintings were labelled as "paintings," whereas in the Low effort condition they were labelled as "photographs." Thus, each stimulus was accompanied by a caption simply stating: "Painting/Photograph by [name of fictitious artist, see subsection 6.1.2 above]."[170] In both conditions, half of the participants rated the 9 stimuli for Liking ("How much do you like this painting/photograph?") on a seven-point scale anchored at 1 (*not at all*), 4 (*neither like nor dislike*), and 7 (*very much*). These participants also indicated whether they were familiar with any of the stimuli rated ("Have you ever seen this painting/photograph before participating in this survey?") with the following options: *yes*,

[170] To ensure that the participants in the High effort condition would believe that the stimuli were paintings, they were also briefly introduced to hyperrealism in the first page of the questionnaire. This introduction read: "You are going to see a series of 'hyperrealistic' paintings and you will be asked how much you like them/how much effort and skill you think went into making them. Painters in the so-called hyperrealism (or photorealism) movement attempt to represent scenes and subjects as realistically and objectively as possible, just as they would appear in reality." The participants in the Low effort condition read exactly the same introduction, with the phrases "hyperrealistic paintings," "painters," and "hyperrealism (or photorealism)" replaced by "realistic photographs," "photographers," and "pure photography (or straight photography)," respectively. "Pure photography" is not my invention but an actual school of photography that, similarly to hyperrealism in painting, emphasises realistic and objective depiction.

no, can't remember. Further, in both conditions, the other half of the participants rated the 9 stimuli for Effort and Skill ("How much effort do you think went into making this painting/photograph?;" "How much skill do you think went into making this painting/photograph?") on two seven-point scales anchored at 1 (*practically no effort/skill*), 4 (*moderate effort/skill*), and 7 (*extreme effort/skill*). I predicted that hyperrealistic paintings would be rated significantly higher when labelled as paintings, both for liking and effort and skill.

6.2.2 Results. The data thus collected were averaged by participant: each participant provided one score, an average of his or her ratings of the 9 stimuli for either Liking or Effort and Skill (depending on the measure to which the participant had been assigned). The responses of the participants who rated Liking and who indicated that they had previously seen one of the stimuli (or could not remember whether this was the case) were excluded from the analyses.[171] The mean of the participants' scores for Liking in the High effort condition was 4.82 (SD = 0.69), while that in the Low effort condition was 4.06 (SD = 0.75). A two-tailed independent-samples t-test found this difference to be significant, $t(48) = 3.721$, $p < .001$, 95% CI of the mean difference 0.35 to 1.17, $d = 1.05$. Thus, the participants preferred the stimuli when they were labelled as paintings.

The variables Effort and Skill were averaged as a global measure. This was done because they had been designed as such, and because, as expected, they strongly correlated in both conditions (High effort: $r = .9$; Low effort: $r = .65$; both two-tailed, both $p < .001$). The mean of the participants' scores for Effort and Skill (collapsed) in the High effort condition was 5.8 (n = 27; SD = 1.04), while that in the Low effort condition was 4.39 (n = 26; SD = 0.65). A two-tailed independent-samples t-test found this difference to be

[171] This happened only eight times out of a possible total of 450 (50 participants rating Liking for nine paintings = 450). This confirmed that the stimuli selected were not familiar to the participants.

significant, $t(51) = 5.837$, $p < .0001$, 95% *CI* of the mean difference 0.92 to 1.88, $d = 1.65$. Thus, the participants considered that the stimuli required more effort and skill to be created when they were labelled as paintings.

Table 6
Means of ratings for Liking and Effort and Skill by condition

	Condition	
Variable	Low effort	High effort
Liking	4.06 (0.75)	4.82 (0.69)
Effort and Skill	4.39 (0.65)	5.8 (1.04)

Note. Standard deviations are indicated in parentheses.

6.2.3 Discussion. The results of experiment 1 support the claim that perceived effort influences art appreciation (prediction 9), or that people use what Kruger et al. (2004) have called the effort heuristic when judging of the quality of a work of art. Especially, the results suggest that the effort heuristic might be used even when no specific or precise information is provided about the effort that went into a work of art. In fact, the participants in experiment 1 received no such information; instead, just labelling an identical work of art "painting" or "photograph" had a strong effect on their liking judgements. It is highly probable that this effect was due to perceived effort and skill. In fact, the only difference between the stimuli rated was the style of art to which they were thought to belong, with hyperrealistic paintings indicating a high effort, and visually identical photographs indicating a lower effort. That the participants who rated the stimuli for Liking were sensitive to the effort and skill thus manipulated (and not other considerations) is further supported by the results of the second group of participants included in experiment 1. In

fact, these other participants attributed significantly higher ratings for Effort and Skill to the stimuli that were labelled as paintings.

I acknowledge, however, that these results may still be interpreted as a general bias in people to consider that painting simply is "better" than photography, perhaps because painting has been culturally sanctioned as a "high" art for a long time in Western cultures. Although I will not reiterate here the precautions that I have taken to avoid to prompt such a bias in the participants of experiment 1 (e.g., use of a between-participants design in which the participants did not directly compare paintings with photographs; use of a type of art, hyperrealism, which obviously requires a lot of effort and skill from the artist; see also footnote 167), I would like to make a general comment here. If the possibility exists that people consider that painting is a "higher" art than photography just by cultural convention or constraint, this does not mean that this cultural convention is not itself constrained by other factors, such as the effort heuristic. In other words, the cultural "idea" or "belief" that painting is a "higher" art than photography might be based on the perception that painting requires more effort than photography *in the first place*. Thus, even if experiment 1 had measured the effect of a cultural convention on how people judge works of art, that cultural convention may itself reflect intuitive considerations about effort and skill.[172]

[172] A last possibility for why the participants preferred the paintings is that perhaps photography was not given a "real chance" in experiment 1. In fact, no *actual* photographs featured in the study. The potential problem here is that maybe photographers would not typically photograph scenes or objects similar to those depicted by hyperrealist painters, or at least differently. In other words, the participants would not have liked the stimuli labelled as photographs in experiment 1 because they were not representative of real photographs (or "artistic" photographs). Although I doubt that this might have been the case (mainly because hyperrealist painters typically create their paintings *on the basis of actual photographs*), a follow-up study could easily address this problem. One could simply use photographs instead of hyperrealistic paintings, with exactly the same manipulation, and exactly the same prediction: that the actual photographs will be preferred when they are labelled as paintings than when they are labelled as photographs.

6.3 Experiment 2a

Experiment 2a tested prediction 7, according to which the information that accompanies a work of art, such as a title, will influence its appreciation. As the reader remembers, prediction 7 is based on prediction 6, according to which, all other things being equal (such as aesthetic quality), a work of art whose artist's intention is easy to understand will be preferred over a work of art whose artist's intention is difficult to understand. As I have proposed in chapter 4 (subsection 4.1.2), a series of factors facilitate (or on the contrary make more difficult) the understanding of the artist's intention. Titles, typically, may provide useful information to understand the artist's intention, in which case they should have a positive effect on art appreciation. This is what I have tested in experiment 2a.

There are at least five studies, in previous research, which investigated the effect of titles or other accompanying information on how people understand and judge works of art (Cupchik, Shereck, & Spiegel, 1994; Franklin, Becklen, & Doyle, 1993; Leder, Carbon, & Ripsas, 2006; Millis, 2001; Russell, 2003). These studies provided mixed results that I will briefly review here. One difficulty with reviewing these studies, however, is that they used different experimental designs (within- or between-participants), participants (art specialists or non-specialists), measures (e.g., affective, cognitive, or contextual), manipulations (titles, captions, or artists' statements), and types and styles of art (painting or sculpture, figurative or abstract); I will therefore focus on my main parameters of interest, that is on the effect of *titles* on *understanding* and *liking* (but I have provided an analytical table of these studies in appendix 8).

Franklin, Becklen, and Doyle (1993) first investigated the psychological effect of titles on the art experience. Although they did not measure liking, and did not use any rating scales, they found that people's description and interpretation of two paintings

(Monet's *Terrace at Ste. Adresse* and Gorky's *Agony*) differed in function of the title that accompanied these paintings. For example, when Gorky's abstract painting was accompanied by its original title, *Agony*, a participant commented: "This is freaky. It's a painting of a girl screaming. . . . The girl seems to be isolated somehow. Colors are very strong, expressing anger of the painter maybe" (p. 103). In contrast, when the same painting was accompanied by a fabricated title, *Carnival*, another participant commented: "This is a clown-shaped figure here, dancing like a court jester. Large shoes. A stop sign. Triangle like a tent here. This is some kind of round circular thing like the tub of water a high diver jumps into. Perhaps a juggler here… Lots of carnival people." (p. 103). Similar results were obtained with Monet's figurative painting,[173] and the researchers, following Fisher's (1984) and Levinson's (1985) theoretical work, concluded that works of art are approached differently when accompanied by different titles, as if these were "framing" people's interpretation or understanding of works of art. Is there evidence, however, that titles could also have an influence on how much people *like* a work of art?

Cupchik, Shereck, and Spiegel (1994, experiment 1) asked their participants to rate 3 installations (each consisting of one sculpture and one painting) as being more or less "pleasing," "powerful," "challenging," "interesting," and "personally meaningful." The participants all rated the installations three times: (1) with the original title; (2) then with either (a) a fabricated, more elaborate title and a short artist's statement or (b) some stylistic information; (3) and then after having themselves written a short interpretive text about the installations. Amongst others, Cupchik et al. found that elaborate titles had no effect on any of the scales, but that the installations were considered more powerful,

[173] In the case of Monet's figurative painting *Terrace at Ste. Adresse*, whose alternative fabricated title was *The Coming Storm*, the participants, of course, did not report seeing different things depicted, as in the case of Gorky's abstract painting. However, the title *The Coming Storm* made them focus on describing elements of the weather, such as the clouds or the effect of the wind.

challenging, and personally meaningful after the participants had written an interpretive text about them.

In contrast, Millis (2001, experiment 1), who used figurative paintings and photographs, reported an effect of title on art appreciation. The two types of titles fabricated by Millis were "descriptive" or "elaborative." The descriptive titles simply described in a few words what the image represented, whereas the elaborative titles provided an explanation or interpretation; for example, the elaborative title of an image of a rundown bar was *Prohibition* (p. 322; unfortunately, Millis did not provide his complete list of elaborative titles, and no example of descriptive title). Millis found that the paintings and photographs accompanied by elaborative titles received higher ratings for understanding, enjoyment, interest, emotion, and elicitation of thoughts.

Russell (2003, experiment 2) also provided evidence that some accompanying information—if not titles—positively influences art appreciation. In this study, the participants rated a series of semi-abstract to abstract paintings for meaningfulness and pleasingness, first without information, and then with the original title, the artist's name, and a short text (of approximately 50 words) describing the artist's style. Russell found that the paintings were rated higher for meaningfulness and pleasingness once the participants had received such information. These results, however, have to be contrasted with those of experiment 1, in which Russell used a between-participants design and failed to find such an effect.

Finally, Leder, Carbon, and Ripsas (2006, experiment 1) used figurative and abstract paintings and measured understanding and liking. The paintings were accompanied by fabricated descriptive and elaborative titles similar to those used by Millis (2001). For example, the descriptive title of a Pollock painting (original title: *Eyes in the Heat*) was

Fine curved lines in colour, whereas its elaborative title was *Impulsiveness*. Leder et al. found that elaborative titles increased the understanding (but not the liking) of the abstract paintings (but not the figurative paintings). They also found that this effect occurs only after 10 seconds of presentation time (below 10 seconds of presentation, descriptive titles increased ratings of understanding, but elaborative titles did not; experiment 2).

In summary, the five studies reviewed above provide mixed evidence that the information that accompanies a work of art, especially its title, has an effect on how it is received by viewers. If titles, in all the cases reported, increased what one would call the *understanding* of a work of art, they did not seem to have an effect on *liking*.[174] Millis (2001, experiment 1) and Russell (2003, experiment 2), it is true, reported such an effect of title on liking. However, the paintings used by Russell were accompanied not just by titles, but also by an explanatory text. Further, both Millis and Russell used a repeated-measures design, in which each participant rated the work of art first in the control condition, and then in the experimental condition (or some works in the control condition, and others in the experimental condition). In other words, it is probable that the participants noticed that the researchers were interested in the effect of titles, especially because, in the case of Russell's experiment 2, they were actually told so.[175]

It is surprising that in previous research the titles accompanying the works of art increased their understanding but in most cases not their liking. From a relevance theory point of view, an act of communication that is easy to understand should also be considered

[174] The closest measures of what I call "understanding" and "liking" in the studies reviewed above (and that allow comparison) were respectively: Cupchik et al. (1994): meaningfulness and pleasingness; Millis (2001): understanding and enjoyment; Russell (2003): meaningfulness and pleasingness; Leder et al. (2006): understanding and liking.

[175] Participants in Russell's (2003) experiment 2 received the following instructions: "You are now asked to go through the set of paintings and rate them again. This time, each painting will be accompanied by some information about it. The question we are interested in is: Does the accompanying information: Increase the meaningfulness [/pleasingness] of the painting for you?; Decrease the meaningfulness [/pleasingness] for you?; Or make no difference to the meaningfulness [/pleasingness for you]?" (p. 106).

"good," or at least it should be "preferred" over an act of communication that, at an equal potential cognitive contribution, is more difficult to understand. In other words, in the case of art as in the case of communication, and all other things being equal, a higher "understanding" should be followed by a higher "liking." However, there are at least two reasons for why this might not always be the case. I will briefly discuss these two reasons because they might help accounting for the mixed results in previous research, and because they provide the rationale of experiment 2a.

First, a work of art might be perceived as so "uninteresting" or "bad" that understanding what the artist wanted to convey would not make it more appreciated. Imagine here a black and white doodle-like drawing titled either *Untitled* or *Self-portrait* and presented as a work of art. Although the elaborative title, *Self-portrait*, would indeed help you to understand what the artist wanted to represent, you would probably not like the drawing more as a result (you might, on the contrary, like it less, thinking that it is silly to use a doodle to represent oneself, and that it is pretentious to present that doodle as a "work of art;" with the doodle titled *Untitled*, you could have at least "projected" what you wanted in the work of art). So maybe the works of art used in the studies reviewed above were just considered too "uninteresting" to be appreciated, whatever titles accompanied them, and whatever they were understood or not.

Second, and more importantly, not all information accompanying a work of art is necessarily "useful" to the viewers (and, therefore, would not necessarily have an impact on liking). In fact, some accompanying information may fail to reduce the cognitive effort required to process the work of art, or may fail to point at the cognitive contribution that processing the work of art could bring in return. Let me take here again the example of the doodle titled as either *Untitled* or *Self-portrait*. What is "wrong" with this work of art is not

that it is not interesting *in itself*, but that the information provided does not show that it *could* be interesting and that it *could* bring something to the viewer. For example, if I were to tell you now that the person behind that drawing is an autistic artist who, all his or her life, used doodles alone in his or her art, and developed a complicated "vocabulary" of doodles, and that, if you look well in this "self-portrait," you will perhaps recognise the artist's face, then maybe you would invest more effort in understanding that work of art, and like it more as a result.

From this point of view, the titles used in previous research were maybe not sufficiently "useful" to the participants; they might have helped them to understand the "meaning" of the works of art, but not how these could be more "interesting" or "relevant." Consider here the "descriptive" and "elaborative" titles used by Leder et al. (2006, experiment 1), who found a positive effect of elaborative titles on understanding but not on liking. Some of these descriptive and elaborative titles were respectively *House on slope* and *Longing*; *Ship* and *Impetus*; *Wide black beans* and *Loading capacity*; *Colour patterns* and *Implosion*; *Contrasting coloured elements* and *Harmony in contrast*; and so on (p. 194-195). Leaving aside the fact that most of these elaborative titles refer to concepts, and that some of them are "difficult" words (e.g., "impetus"), it is easy to see how they could increase understanding but not liking. Take here the painting (by Franz Kline, original title: *Untitled*) that was titled as either *Wide black beans* (descriptive) or *Loading capacity* (elaborative; it was probably titled as such because indeed it might represent some kind of stacking support or scaffoldings). Just as in my example of the doodle, if "loading capacity" provides information as to what the artist intended to "represent" or "mean," it

does not make the artist's message more "interesting" or "relevant." In other words, it is unlikely that such a title will have a positive effect on art appreciation.[176]

In short, the mixed findings reported in previous research may be due to the titles that were used, which may not really have helped the participants to better understand the artist's message *and* how this message could have been interesting and relevant to them. In experiment 2a, I have tried to provide viewers with information that would be more useful to them in relevance theory terms. That is, I have fabricated titles that I thought would both decrease the cognitive effort required to process some works of art and indicate what cognitive contribution this processing might bring about in return. I predicted that, if both these conditions were fulfilled, the works of art accompanied by "useful" titles would not only be easier to understand, but that they would also be preferred.

6.3.1 Method. ***Participants.*** Out of the participants who were recruited, selected, and randomly assigned to experiment 2a as described in the general method section (6.1), 212 accessed the online questionnaire and completed it entirely. The mean age of these participants was 26.9 years (*SD* = 10.55; range: 13-64 years). Sixty-nine percent (*n* = 146) of the participants were female. Fifteen nationalities were represented, with a majority of British participants (55%, *n* = 115), followed by American participants (34%, *n* = 72). Finally, 49% (*n* = 104) of the participants were university students, out of which 61% (*n* = 63) were graduate students.[177]

Paintings and titles. I selected 12 works of art (10 paintings, 1 drawing, 1 collage) using two criteria. First, they had to be relatively unknown by the greater public to avoid familiarity effects (see subsection 6.1.2 above). Second, they had to fit with three types of

[176] Some elaborative titles may even *increase* the cognitive effort required to understand a work of art, and therefore have a *negative* effect on appreciation. I will discuss this further in chapter 7, subsection 7.2.2.
[177] Valid statistics are reported. Missing values were: nationality: *n* = 1; student: *n* = 1.

title (see next paragraph), and as a result most of them were abstract to semi-abstract. For the complete list of these works of art and their illustrations, see appendix 7 and 14, respectively.

I fabricated three titles for each of these works of art. The first title, following Millis (2003) and Leder et al. (2006), was "descriptive" (hereafter Descriptive) or described in a few words what one could see in the painting (e.g., *Mixed Colours on White*; *Trident-shaped Form*). The second title, still following Millis (2003) and Leder et al. (2006), was "elaborative" (hereafter Elaborative I) or proposed an interpretation, usually by referring to a concept (e.g., *Impulsiveness*; *Monotony*). The third title was also "elaborative" (hereafter Elaborative II) but, crucially, I tried to make it more "relevant" to the viewer in the sense explained above. This was done using two strategies. First, I avoided referring to concepts (as with Elaborative I titles). As I have argued above, "conceptual" titles may fail to decrease the cognitive effort required to process the work of art, and they may not "help" the viewer to understand the artist's intention and value the work of art as a result. Second, I tried to make that these titles would indicate the potential "interestingness" or "relevance" of the works of art. This was done by using titles that provided a more precise interpretation, usually by encouraging the viewers to look for something in particular in the painting. For example, the Elaborative I title of a painting was *Impulsiveness*, whereas its Elaborative II title was *Brawl* (see figure 18). The title *Brawl* may be said to provide a more precise (and perhaps more interesting) interpretation, because it encourages the viewer to look for something in particular in the painting (i.e., human figures fighting with each other). It is also not merely conceptual and as such may be easier to process than *Impulsiveness*. For the complete list of titles, see appendix 9.

The figure originally presented here cannot be made available online for copyright reasons.

Figure 18
After Nature (2008), a painting by Fons Heijnsbroek (original in colour) used in experiment 2a and titled as either *Mixed Colours on White* (Descriptive title), or *Impulsiveness* (Elaborative I title), or *Brawl* (Elaborative II title).

To ensure that the fabricated titles would be plausible, they were matched with the works of art by six graduate students (mean age: 25.33; *SD* = 7.14; three females) without special training in the visual arts and naive to the rationale of the task.[178] Using a similar method as Leder et al. (2006), each of these participants received the 12 works of art (each were printed on a separate A4 sheet), the 36 titles (each were printed on a separate small piece of sheet, and the participants received them in the following order: Descriptive, Elaborative I, Elaborative II), and were asked to assign the titles to the works of art. In 82 percent of all the cases, the participants' choice matched with my own assignment of the titles to the works of art. Following Leder et al. (2006, p. 181), who reported 79 percent agreement, I considered that the assignment of my fabricated titles to the works of art was plausible.

Procedure. The participants were randomly assigned to rate the 12 works of art in one of these four conditions (between-participants design): (1) no title (Control), (2) Descriptive titles, (3) Elaborative I titles, and (4) Elaborative II titles. In each of these four

[178] None of them participated in the actual experiment.

conditions, half of the participants rated the works of art for Understanding ("How easy is it for you to understand what this work of art is about?;" "How successful do you think the artist was in conveying what this work of art is about?") on two seven-point scales anchored at 1 (*not at all easy/not at all successful*), 4 (*moderately easy/moderately successful*), and 7 (*very easy/very successful*). Further, in each of the four conditions, the other half of the participants rated the works of art for Liking ("How much do you like this work of art?") on a seven-point scale anchored at 1 (*not at all*), 4 (*neither like nor dislike*), and 7 (*very much*). These participants also indicated whether they were familiar with any of the works of art rated ("Have you ever seen this work of art before participating in this survey?") with the following options: *yes*, *no*, *can't remember*. I predicted that the works of art would be rated higher for both Understanding and Liking when accompanied by Elaborative II titles (in comparison with the two other types of title).

6.3.2 Results. The data thus collected were averaged by participant: each participant provided one score, an average of his or her ratings of the 12 stimuli for either Understanding[179] or Liking (depending on the measure to which the participant had been assigned). The means (with standard deviations in parentheses) of the participants' scores for Understanding by condition were: Control: 2.73 (1.00); Descriptive: 3.39 (1.22); Elaborative I: 3.53 (0.90); Elaborative II: 4.12 (0.70).

A one-way ANOVA examining effect of condition (Control, Descriptive, Elaborative I, Elaborative II) on ratings of Understanding was conducted. Analyses showed a significant main effect for ratings of Understanding amongst conditions, $F(3, 102) = 9.366$, $p < .0001$, $\eta^2 = .21$. Post-hoc Tukey tests were run. Analyses showed that the ratings

[179] The two measures of Understanding (see subsection 6.3.1 above) were averaged as a global measure. This was done because they had been designed as such, and because as expected they strongly correlated in each condition (Control: $r = .71$; Descriptive: $r = .94$; Elaborative I: $r = .75$; Elaborative II: $r = .75$; all two-tailed, all $p < .0001$).

in the Elaborative II condition were higher than the ratings in both the Control condition (mean difference = 1.38, 95% *CI* 0.69 to 2.08, $p < .0001$, $r = .46$) and the Descriptive condition (mean difference = 0.73, 95% *CI* 0.01 to 1.45, $p < .05$, $r = .23$), but they did not significantly differ from the ratings in the Elaborative I condition (mean difference = 0.59, 95% *CI* -0.12 to 1.30, $p = .141$). Further, the ratings in the Elaborative I condition were higher than the ratings in the Control condition (mean difference = 0.79, 95% *CI* 0.11 to 1.48, $p < .05$, $r = .28$), while they did not significantly differ from the ratings in the Descriptive condition (mean difference = 0.14, 95% *CI* -0.57 to 0.86, $p = .952$). No other significant pairwise differences between the conditions were found. In other words, works of art rated in the Elaborative I condition were considered easier to understand than those rated in the Control condition, and works of art rated in the Elaborative II condition were considered easier to understand than those rated in both the Control and Descriptive conditions.

Table 7
Means of ratings for Understanding and Liking by condition

	Condition			
Variable	Control	Descriptive	Elaborative I	Elaborative II
Understanding	2.73 (1.00)	3.39 (1.22)	3.53 (0.90)	4.12 (0.70)
Liking	3.69 (0.89)	3.57 (0.89)	3.75 (0.82)	3.56 (0.99)

Note. Standard deviations are indicated in parentheses.

The responses of the participants who rated Liking and indicated that they had previously seen one of the stimuli (or could not remember whether this was the case) were excluded from the analyses.[180] The resulting means (with standard deviations in parentheses) of the

[180] This happened 46 times out of a possible total of 1,272 (106 participants rating Liking for 12 paintings = 1,272). This confirmed that the stimuli selected were not familiar to the participants.

participants' scores for Liking by condition were: Control: 3.69 (0.89); Descriptive: 3.57 (0.89); Elaborative I: 3.75 (0.82); Elaborative II: 3.56 (0.99). A one-way ANOVA failed to find that these means significantly differed, $F(3, 102) = 0.29$, $p = .832$. In other words, the different titles that accompanied the works of art had no effect on how much these were liked.

6.3.3 Discussion. The results of experiment 2a do not confirm prediction 7, according to which titles that help the understanding of the artist's intention will have a positive effect on art appreciation. In fact, none of the types of title used (Descriptive, Elaborative I, and Elaborative II) increased participants' ratings for Liking (by comparison with the Control condition). The results of experiment 2a, however, replicate the findings of previous research that I have reviewed above: some types of title (in this study Elaborative I and Elaborative II) increase the understanding of works of art (in this study by comparison with the Control condition for Elaborative I titles, and with both the Control condition and Descriptive condition for Elaborative II titles).

There are at least three reasons for why experiment 2a may not have found an effect of type of title on liking. First, perhaps there is no causal relationship between understanding and liking a work of art. In other words, even if some types of title increase the understanding of a work of art or of the artist's intention (and in experiment 2a Elaborative I and Elaborative II types did), this would not cause the work of art to be appreciated more. Second, maybe there *is* a causal relationship between understanding and liking a work of art, but the titles used in experiment 2a were not "helpful" to the participants in the sense defined in the introduction. The reader remembers here that I tried to fabricate a type of title, Elaborative II, which, in comparison with the types of title used in previous research, would better help the viewer to understand the artist's intention and

also indicate the potential "relevance" of the work of art. But maybe these Elaborative II titles were not more helpful to the viewers than those used in previous research, and as a result had no effect on liking. A third possibility is that there *is* a causal relationship between understanding and liking, and that the Elaborative II titles used in experiment 2a *were* helpful to the viewers, but that the between-participants design used was not "sensitive" enough. As Russell (2003, experiment 2; see also Russell & Gray, 1994) has shown, between-participants designs may fail to find an effect (especially if that effect is small) because they prevent the participants from making *relative* judgements; in other words, as the participants rate the paintings in only one condition (with only one type of title), they cannot make comparisons with paintings accompanied by other types of information (by different types of title). Experiment 2b was designed to test that third possibility.[181]

6.4 Experiment 2b

Experiment 2b tested the same prediction as experiment 2a with the same works of art and the same titles but using a different design. As I have just explained, a between-participants design may be too insensitive to detect an effect of type of title on liking, especially if that effect is small. In experiment 2b, a within-participants (mixed) design was used: each participant rated the 12 works of art for liking, but with different types of titles (that is, each participant rated three works of art without titles (Control), three other works of art

[181] A fourth possibility is that the design used *was* sensitive enough, but that in many cases the Elaborative II titles not only increased the understanding of the work of art but simultaneously changed the appreciation of the communication *in either a positive or negative direction*, thereby "neutralising" the main effect of Elaborative II titles. The results of study 2b, however, suggest that this was not the case, as simply using a within-participants design revealed a positive effect of Elaborative II titles on art appreciation (see next section, 6.4). A last possibility is that the participants would simply not have read the titles. This is, however, not very plausible. First, the titles were displayed in large fonts and they were located between the work of art and the rating scales; it was probably difficult to "avoid" reading them. Second, significant differences were found between conditions for Understanding, which indicates that participants in this group read the titles. As the participants were randomly assigned to rate either Understanding or Liking, one could not explain why one group would have read the titles, and the other group not.

with Descriptive titles, 3 other works of art with Elaborative I titles, and the 3 remaining works of art with Elaborative II titles—all works of art were presented in random order).

This design is similar to those used in previous research (see introduction to previous section, 6.3) with one important difference. In all the studies reviewed above (except Millis, 2001; and Russell, 2003, experiment 1), the participants rated *each* work of art with different titles (for example, they rated a first work of art with a descriptive title and then with an elaborative title; and then a second work of art with a descriptive title and then an elaborative title; etc.). In contrast, in experiment 2b the participants rated *some* works of art with *some* titles, and *other* works of art with *other* titles (for example, they rated a first work of art with a descriptive title, and then a second work of art with an elaborative title; and then a third work of art with a descriptive title, and then a fourth work of art with an elaborative title; etc.). In other words, the design used in experiment 2b was still more "conservative" than those used in previous research. In experiment 2b the participants saw the four types of titles, but not with the same works of art, which probably made it less obvious to the participants that I was interested in the effect of titles on appreciation, and therefore minimised potential demand characteristics.

6.4.1 Method. ***Participants.*** The participants of experiment 2b were recruited separately, after the completion of the other experiments of study 2, but following the same criteria and within the same population as described in the general method section (6.1). Out of those, 114 participants accessed the online questionnaire and completed it entirely. The mean age of these participants was 25.95 years (*SD* = 10.44; range: 17-65 years). Sixty-two percent (*n* = 71) of the participants were female. Eight nationalities were represented, with a majority of British participants (72%, *n* = 82), followed by American

participants (19%, *n* = 22). Finally, 42% (*n* = 48) of the participants were university students, out of which 54% (*n* = 26) were graduate students.[182]

Paintings, titles, and procedure. The paintings and titles used were the same as in experiment 2a. The procedure was the same as in experiment 2a with the following changes. Each participant rated all the 12 paintings for Liking (on the same scale as in experiment 2a) with three in the Control condition, three in the Descriptive condition, three in the Elaborative I condition, and three in the Elaborative II condition. A 4 (groups of participants) X 4 (conditions) Latin square was used to ensure that each work of art would be rated the same number of times in each condition. That said, the order of presentation of the works of art was randomised for each participant. The second difference with experiment 2a was that the understanding of the works of art was not measured. Experiment 2a supported the claim that some types of title increase the understanding of a work of art or of the artist's intention, and there was no reason to think that this would be different when using a more sensitive design (especially because the works of art rated and the titles used were the same).

6.4.2 Results. The data thus collected were averaged by participant and condition: each participant provided four scores, that is, one average Liking score for the stimuli rated under each of the four conditions (Control, Descriptive, Elaborative I, and Elaborative II). The responses of the participants who indicated that they had previously seen one of the stimuli (or could not remember whether this was the case) were excluded from the analyses.[183] The resulting means (with standard deviations in parentheses) of the

[182] Valid statistics are reported. Missing value: nationality: *n* = 1.
[183] This happened 85 times out of a possible total of 1,368 (114 participants rating Liking for 12 paintings = 1,368). This confirmed that the stimuli selected were not familiar to the participants.

participants' scores for Liking by condition were: Control: 3.52 (1.18); Descriptive: 3.46 (1.14); Elaborative I: 3.63 (1.25); Elaborative II: 3.81 (1.18).

A repeated-measures ANOVA examining effect of condition (4: Control, Descriptive, Elaborative I, and Elaborative II) on ratings of Liking was conducted. Analyses showed a significant main effect for ratings of Liking amongst conditions, $F(3, 339) = 2.947$, $p < .05$, $\eta^2 = .02$. Bonferroni-adjusted pairwise comparisons revealed that the works of art were rated higher in the Elaborative II condition than in the Descriptive condition (mean difference = 0.35, 95% *CI* 0.01 to 0.67, $p < .05$, $r = .14$), but not than in the Control condition (mean difference = 0.28, 95% *CI* -0.07 to 0.64, $p = .197$). In other words, the only titles that increased liking significantly were the Elaborative II ones, but only in comparison with the Descriptive titles.

Table 8
Means of ratings for Liking by condition

	Condition			
Variable	Control	Descriptive	Elaborative I	Elaborative II
Liking	3.52 (1.18)	3.46 (1.14)	3.63 (1.25)	3.81 (1.18)

Note. Standard deviations are indicated in parentheses.

6.4.3 Discussion. The results of experiment 2b, contrary to those of experiment 2a, provide some support to the claim that titles which help the understanding of the artist's intention positively influence art appreciation. Apparently, just using a relatively more sensitive experimental design was sufficient to detect an effect of title on the liking of the works of art. The only type of title that had such an effect on liking was the Elaborative II type. This suggests that the titles that I had designed to be more "useful" to the viewers actually helped them to understand the artist's message while at the same time indicating how that

message might be "interesting" or "relevant" to them. This might explain, too, why no effect of (mere) titles on liking was found in previous research. As I have argued in the introduction of experiment 2a, the types of title used in previous research may have helped the viewers to better understand the works of art, but not how these works of art could be relevant to them. This claim is supported by the fact that Elaborative I titles, which were similar to those used in previous research, had no effect on liking in both experiments 2a and 2b.

The size of the effect of Elaborative II titles on liking found in experiment 2b, however, was very small. Does this mean that the (useful) information that accompanies a work of art only play a minor role in art appreciation? I do not think so. One has to remember here that the design used in experiment 2b was still less sensitive than those used in previous research. If the participants saw different types of title, this was not with the same works of art, and their attention was never directed to the titles themselves, as in previous research (see above the introductions to experiments 2a and 2b). It is probable that if the participants of experiment 2b had rated each work of art with different types of titles, and had been prompted to take into account the titles to make their judgements (as in Russell, 2003, experiment 2), the effect of Elaborative II titles would have been larger. Remember, too, that experiment 2b was conducted online, with participants probably quickly looking at the work of art, reading its title, and then rating it. In spite of this, an effect of Elaborative II titles was found.[184]

Concluding experiments 2a and 2b, which tested prediction 7, according to which the information that accompanies a work of art will influence its appreciation, I would like

[184] Further, as noted above (footnote 181), the effect might have been weakened by the fact that on average the Elaborative II titles increased liking, but that for some works of art they decreased liking, because the interpretations provided by the title was not "attractive" (e.g., think here of the works titled *Brawl* or *Wounded* in the Elaborative II condition).

to make a general comment here. Titles, in fact, are only *one* type of information that accompanies a work of art. And, if they constitute important information to aid understanding the artist's intention and message,[185] that information is nevertheless limited, at least quantitatively speaking and in comparison with longer captions, interpretive texts, or gallery curators talks (to mention just a few). In other words, however "useful" they are, titles may not always decrease the cognitive effort required to process a work of art—because they constitute a "minimum" amount of information—and therefore may fail to have an effect on art appreciation. Still in other words, using titles alone is a *conservative* test of whether the information that accompanies a work of art influences its appreciation. As I have already reported, the only researchers who found an effect of accompanying information on art appreciation used not only titles, but also artist's statements and interpretive texts (e.g., Russell, 2003, experiment 2). It would be wrong, therefore, to conclude on the basis of the mixed findings in previous research using titles alone, that art appreciation is not influenced by accompanying information. That said, the results of experiment 2b, contrary to previous research, show that even just titles may impact art appreciation, arguably via relevance dynamics.

6.5 Experiment 3

In contrast to study 1 and to the other experiments of study 2, experiment 3 did not test a prediction for art appreciation but for art *categorisation*, or what people intuitively consider to be "art." As I have argued in chapter 2, works of art are ambiguous artefacts, because as human-made objects they trigger expectations of purpose and function, but at the same time frustrate these expectations. As this is the case, I have hypothesised that works of art

[185] Titles constitute important information in understanding the artist's intention or message first because they are often provided by the artist himself or herself, and second because even if they are unclear they still say something about what the artist wanted to achieve, for example—as in a work of art titled "Untitled"—that the work of art should not be approached as a "message."

trigger speculation about the artefact maker's intention. This hypothesis is supported by the findings of Bloom and colleagues, who have shown that artefacts whose form or function are ambiguous, are categorised following the artefact maker's intention (Bloom, 1996; Bloom & Markson, 1998; Diesendruck et al., 2003; S. A. Gelman & Bloom, 2000; S. A. Gelman & Ebeling, 1998; Preissler & Bloom, 2008; see chapter 2, section 2.4 of this thesis for a discussion). As works of art are ambiguous artefacts *par excellence* (they can have any form, and have no function), I have then argued that they should also be categorised following the artefact maker's intention. In other words, as prediction 1 states, what should first cause an artefact to be considered a "work of art" is that it was intended to be a work of art by the human agent who created it, and this is the prediction that I tested in experiment 3.

To my knowledge, there is no empirical study in previous research that tested the hypothesis that people categorise some artefacts as works of art following the artist's intention. That said, the method and manipulations used in experiment 3 are similar to those of S. A. Gelman and Bloom (2000), and S. A. Gelman and Ebeling (1998, experiment 1) but applied to the categorisation of some artefacts as *works of art* and by *adults*. As described above Gelman and collaborators used "intentional" or "accidental" cover stories as main manipulation (see chapter 2 of this thesis, section 2.4). Children were presented with a series of objects or drawings that could have been created either intentionally or accidentally (e.g., a newspaper intentionally folded into the shape of a hat, or a newspaper that, following a random accident, appeared to be shaped as a hat), and had to name these objects and drawings; results showed that the children were more likely to name the object or drawing as the target artefact (e.g., "hat") when it had been intentionally created. Experiment 3 used a similar method and manipulation but with adults as

participants and works of art as target artefacts: a series of images were accompanied by either intentional or accidental cover stories, and the participants had to decide whether these images were instances of "art."

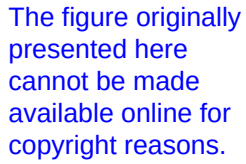
6.5.1 Method. ***Participants.*** Out of the participants who were recruited, selected, and randomly assigned to experiment 3 as described in the general method section (6.1), 76 accessed the online questionnaire and completed it entirely. The mean age of these participants was 25.96 years (*SD* = 9.47; range: 18-64 years). Seventy (*n* = 53) percent of the participants were female. Eight nationalities were represented, with a majority of British participants (53%, *n* = 40), followed by American participants (35%, *n* = 27). Finally, 54% (*n* = 41) of the participants were university students, out of which 56% (*n* = 23) were graduate students.[186]

Images and artists' statements. I selected 12 images (4 paintings, 3 drawings, 3 photographs, 2 mixed) using two criteria. First, they had to be unknown by the greater public to avoid participants considering them works of art (or, on the contrary, not works of art) just because they already knew them to be. For this reason, a visual artist, Sherry Barrett, created most of the stimuli especially for experiment 3. Second, the images had to fit with two types of artist's statement (see next paragraph) and as a result most of them looked abstract to semi-abstract. For the complete list of stimuli and their illustrations, see appendix 7 and 15, respectively.

I fabricated two artist's statements for each of these images. The first type of statement, hereafter Intentional, implied that the stimulus had been intentionally created by the artist and with a specific goal in mind. In contrast, the second type of statement, hereafter Non-intentional, implied that the stimulus had not been intentionally created by

[186] Valid statistics are reported. Missing values were: nationality: *n* = 2.

the artist or at least that its planning or execution had been less deliberate. For example, one image was a photograph of flowers that was out of focus. In the Intentional condition, the artist stated that he deliberately used defocusing in an attempt to render the "vibrant" character of the colours; in the Non-intentional condition, the artist stated that he simply forgot to focus the lens (see figure 19 for a second example). For the complete list of artists' statements by condition, see appendix 10.



Artist's statement, Intentional condition:

"This piece is inspired by Japanese art, which I like for its simplicity and expressivity," Edward Mason explained. "In this instance, I have tried to represent a single branch using just black paint, which I applied on a wood board using a chain."

Artist's statement, Non-intentional condition:

"Because of its simplicity and expressivity, this piece may look like a branch painted in Japanese style. In fact, it is just a wood board on which I had laid a chain that I needed to paint in black for another work," Edward Mason explained.

Figure 19
Painting by Sherry Barrett (2011, *Untitled*) used in experiment 3, and in which it was rated for "artness" when accompanied by either an Intentional or Non-intentional artist's statement. The real story behind that work is that it was a mere by-product, as in the Non-intentional condition.

Contrary to Gelman and collaborators (S. A. Gelman, & Bloom, 2000; S. A. Gelman & Ebeling, 1998, experiment 1), the cover stories in the Non-intentional condition did not all refer to "accidents," but used a wider range of how the stimuli had been (less deliberately) created. Some of the Non-intentional stories stated that some of the stimuli were preparatory studies for other works (e.g., a sketch), or by-products (e.g., a piece of sheet

used to test the pens to be used in another work), or that the artists were not entirely free when they created them (e.g., a commissioned work). As one can see, the common point between all these Non-intentional artist's statements was that they implied that the stimuli had not been created entirely deliberately, or at least *less deliberately* than the same stimuli accompanied by Intentional artist's statements.

There were two reasons for not simply using an "accidental" mode of production. The first one was to avoid demand characteristics. Contrary to Gelman and collaborators, experiment 3 used adult participants, and I considered that if these were provided with 12 "purely" accidental cover stories, they would identify the common point between all the artists' statements and, probably, adapt their judgements as a result. The second, more important reason for using not only accidental cover stories in the Non-intentional condition was that this probably better corresponds to how people make judgements of what a work of art is in real-life situations. As I have claimed in chapter 4 (subsection 4.1.1), most works of art or elements of works of art are not *either* intentional *or* non-intentional, but rather *more or less* intentional or deliberate. In real-life situations, it is often clear that a work of art did not result from a pure accident, and if it did, then one does not probably need to conduct an experiment to find out that most people would say that it is not a work of art. What is more interesting is that people, perhaps, consider *relative* clues of deliberateness when deciding whether an artefact is a work of art. If true, they would maybe consider that a sketch is "less" of a work of art than a finished painting, or that a photograph taken freely by the artist is "more" of a work of art than a photograph that was commissioned for an advertising campaign.

That said, I tried to make the artist's statements highly similar between conditions. Most of the time, the Intentional artist's statements used the same words and the same

phrasing as the Non-intentional artist's statements (see, e.g., the artist's statements reproduced in figure 19). Thus, I ensured that the only difference between the conditions was the degree of deliberateness that was said to have gone into the stimuli, and that any significant difference found could therefore be attributed to whether the artists intended them to be works of art or not.

Procedure. The participants were randomly assigned to rate the 12 images in one of these three conditions (between-participants design): (1) no artist's statements (Control), (2) Intentional artist's statements, (3) Non-intentional artist's statements. In all conditions, the participants were asked to judge whether each stimulus was a work of art using the following scales (hereafter referred to as measures of Artness): "Do you consider this to be art?" on a seven-point scale anchored at 1 (*definitely not art*), 4 (*may or may not be art*), and 7 (*definitely art*); and "If you were an art gallery curator, how likely would you be to select this for an art exhibition?" on a seven-point scale anchored at 1 (*not at all likely*), 4 (*moderately likely*), and 7 (*extremely likely*).[187] I predicted that the images would be rated higher for Artness when accompanied by Intentional artist's statements than when they were accompanied by Non-intentional artist's statements.

6.5.2 Results. The data thus collected were averaged by participant: each participant provided one score, an average of his or her ratings of the 12 stimuli for Artness.[188] The means (with standard deviations in parentheses) of the participants' scores

[187] The questionnaire begun with the following general instructions: "You are going to see a series of 12 images (most of them paintings and photographs) and you will be asked whether you personally consider them to be works of art. As you will see, these paintings and photographs are accompanied by short captions or artist's statements. It is important that you read them as they could help you to reach a judgement. That said, please remember that there are no right or wrong answers—please just answer spontaneously and give your personal opinion." The second and the third sentences were omitted in the Control condition.

[188] The two scales of Artness were therefore averaged as a global measure. This was done because they had been designed as such, and because as expected they significantly correlated in each condition (Control: $r = .40$, $p < .05$; Intentional: $r = .73$, $p < .0001$; Non-intentional: $r = .50$, $p < .01$; all two-tailed).

for Artness by condition were: Control: 4.29 (0.68); Intentional: 4.37 (0.90); Non-intentional: 3.79 (0.80).

A one-way ANOVA examining effect of condition (Control, Intentional, and Non-intentional) on ratings of Artness was conducted. Analyses showed a significant main effect for ratings of Artness amongst conditions $F(2, 73) = 4.071$, $p < .05$, $\eta^2 = .10$. Planned contrasts were run with a Bonferroni correction of $p < .016$. Analyses showed a significant difference: the mean of ratings for the images accompanied by Intentional artists' statements, as predicted, was higher than those accompanied by Non-intentional artists' statements (mean difference = 0.57, 95% *CI* 0.13 to 1.02, $t(73) = 2.59$, $p < .05$, $r = .28$). This single contrast accounted for most of the between-conditions variance, $\eta^2 = .08$. The mean of ratings for the images accompanied by Intentional artists' statement did not significantly differed from those that were not accompanied by artists' statements (Control).

Table 9
Means of ratings for Artness by condition

	Condition		
Variable	Control	Intentional	Non-intentional
Artness	4.29 (0.68)	4.37 (0.90)	3.79 (0.80)

Note. Standard deviations are indicated in parentheses.

6.5.3 Discussion. The results of experiment 3 support the claim that works of art are categorised as such partly following the artist's intention (prediction 1). Simply providing the participants with information about how the stimuli were created had an effect on what they considered to be art. The stimuli that were said to have been deliberately and carefully created by the artists were more likely to be judged as works of art than those that were

said to have been created less deliberately or less carefully. In other words, it seems that the participants took into account the artist's intention—whether he or she wanted to create a work of art—to reach a judgement. From this point of view, experiment 3 extends the findings of Gelman and collaborators (S. A. Gelman, & Bloom, 2000; S. A. Gelman & Ebeling, 1998, experiment 1) to adults and to a special class of artefacts, that of works of art (and using a more subtle, *relative* manipulation of deliberateness). More generally, it supports Bloom's (1996) theory of artefact categorisation as well as Levinson's (1979) intentional-historical definition of art. If the stimuli used in experiment 3 were considered to be works of art, it is not because they had special "aesthetic qualities," but simply because they were *intended* to be so.

Does this mean, however, that people would readily categorise *anything* as a work of art if this were the artist's intention? Unlikely. As I have argued in chapter 4 (subsection 4.1.1; see also chapter 1, subsection 1.3.1), people have intuitions about what a work of art is. Two of these intuitions that are particularly important are probably that a work of art is a human-made object or artefact, and that it was not created to be used functionally. In other words, there are limits to what people consider to be art. For example, it is unlikely that people will accept that a natural object, such as a cloud, or that a functional artefact, such as a dishwasher, is a work of art, even if an artist declared it to be so (see prediction 2 in subsection 4.1.1).

From this point of view, the stimuli used in experiment 3 were not counterintuitive as potential "works of art:" all were human-made objects or artefacts, and most of them had no obvious practical use or function. An indication of this is that no significant difference was found between the stimuli rated in the Control condition and those rated in the Intentional condition. In other words, the stimuli used in experiment 3 were not less likely

to be considered as works of art when accompanied by no information than when accompanied by information stating that they had been intentionally created, as if they were "acceptable" works of art in themselves (except when they were said to have been created less deliberately). Now, what if experiment 3 had used more counterintuitive potential works of art, such as natural objects or functional artefacts? It is not possible to know but, following prediction 2 (see chapter 4, subsection 4.1.1), I would expect that the accompanying information, such as deliberate and less deliberate artists' statements, would have had a smaller, or no impact on what people considered to be art. Experiment 3, however, tested the more general prediction 1, and found that non-functional artefacts are categorised as works of art following the artist's intention.

6.6 General discussion and conclusion

Overall, the results of the four experiments supported the predictions that were tested in study 2. The results of experiment 1, which tested prediction 9, suggest that the perceived effort and skill that went into a work of art influence its appreciation. A series of hyperrealistic paintings received higher ratings of liking when they were labelled as paintings than when they were labelled as photographs, probably because people tend to think that a painting requires more effort and skill to be produced than an identical photograph. Thus, a high perceived effort and skill would have a positive effect on art appreciation.

The results of experiments 2a and 2b, which tested prediction 7, suggest that some information that accompanies a work of art improves its understanding and under some conditions its liking. A series of paintings were considered easier to understand when they were accompanied by elaborative titles (both Elaborative I and Elaborative II) than when they were accompanied by descriptive titles or no titles. Further, when the participants

were given the opportunity to make relative judgements, these paintings were also preferred when they were accompanied by one type of elaborative titles (Elaborative II) than when they were accompanied by descriptive titles. This suggests that some "useful" titles decrease the cognitive effort required to understand the artist's message, which in turn increases the relevance of that message and may cause the work of art to be preferred as a result. Although this might not always be the case with mere titles, which constitute a "minimum" amount of information about the works of art, previous research shows that other, cognitively "richer" types of information, such as interpretive texts, do have a positive effect on liking in the domain of art.

The results of experiment 3, which concerned art categorisation and tested prediction 1, suggest that people decide whether an artefact is a work of art or not based on the artist's intention. A series of images were more likely to be considered as instances of "art" when they were said to have been deliberately and carefully created than when they were said to have been less deliberately and carefully created. Thus, people seem to take into account the artefact maker's intention when deciding what "art" is.

More generally, study 2 extends the findings of study 1 under experimental conditions, and therefore further supports the main claims of this thesis. For a start, the results of experiment 3 show that the art experience involves speculation about the artist's intention, which is the first claim of this thesis. In experiment 3, the participants based their judgements of what a work of art is not on aesthetic considerations alone, but partly relied on the artist's intention and deliberateness in producing the work. If the participants had based their judgements on aesthetic or historical or cultural considerations alone, then one could not explain why these judgements differed between the two experimental conditions (deliberate or less deliberate), because in both of these conditions the images were visually

identical. The only thing that differed between the conditions was *what the artist intended to do*, and this apparently had an effect on the participants' judgements.

Further, the results of experiments 2a and 2b suggest that works of art are assessed partly as acts of communication, which is the second claim of this thesis. As the reader remembers, experiments 2a and 2b used titles, but they tested the more general prediction that accompanying information (titles, but also other captions, artists' statements, interpretive texts, gallery curators' talks, and even past knowledge or expertise in the arts) will influence art appreciation via facilitating better understanding of the work. If such information has the potential to influence art appreciation, it is probably because works of art are not only approached as aesthetic or "beautiful" objects, but also as some kind of "messages." If works of art were approached on the basis of their formal qualities alone, then any accompanying information should be deemed irrelevant to assess them and judge their value (because accompanying information adds nothing, by definition, to the visual properties of a work of art). But this is not what experiments 2a and 2b as well as previous research suggest. In these studies, accompanying information had an effect on how art is understood and under some conditions appreciated. Why is this case? Perhaps it is because the viewers consider that a work of art essentially constitutes a message, and that the accompanying information has the potential *to clarify that message or to make it more relevant to them*. Think here of the Elaborative II titles that accompanied the paintings in experiments 2a and 2b, and which were the only ones that had a positive effect on appreciation. The common point between these Elaborative II titles was that they all provided a more precise *interpretation* or *meaning* to the viewers. In other words, these titles explained or clarified what *message* the artists wanted to convey, and apparently this had an effect on how much the works of art were liked.

One could here argue that the works of art were approached as messages only because they were accompanied by other messages, that is by titles and other information. But consider the following. If the participants did not consider the works of art to be some kind of messages in themselves, then they would not even have read the accompanying information, because such information would have been irrelevant to understanding or judging the work of art (or they would have read the information—as they were instructed to—but this would have had no influence on their judgements). On the contrary, as the findings of experiment 2a and 2b as well as those of previous research indicate, the participants actually read the accompanying information (and it had an effect on understanding and in some cases on liking), and if they did so, it is probably because they considered that the message conveyed by the accompanying information may also help them to understand the message conveyed by the work of art itself.

In sum, studies 1 and 2, which used different methods, different types of participants, and different types of art, provide empirical support that the art experience involves speculation about the artist's intention, and that it is conceptualised at least partly as a form of communication, probably via relevance dynamics. In the next chapter, I will draw some implications of these findings, and suggest directions for further research.

Chapter 7

Conclusion

In this final chapter, I recapitulate the main claims and findings of this thesis (section 7.1), and I draw some implications for the anthropology of art, the psychology of art, as well as for the art world (7.2). I also reiterate the main limitations of these claims and findings, and I show how these limitations might indicate directions for further research (7.3).

7.1 Recapitulation

In this thesis, I have proposed elements for a "cognitive anthropology of art," which I have defined as an approach to *art as a cultural phenomenon that is constrained by how the human mind naturally works*. As I have explained in chapter 1 (section 1.2), the most basic tenet of contemporary cognitive anthropology, a sub-discipline of anthropology, is that the way humans acquire, store, and retrieve information affects the form and content of concepts and representations that become widely shared, that is, cultural ideas. Cognitive anthropology is further an *interdisciplinary* approach to cultural phenomena. In my approach to art, I have used research in cognitive psychology, philosophy, social anthropology, and sociology. This means that a cognitive anthropology of art has the potential to be relevant to scholars in several disciplines, but also that it cannot be equated or reduced to any of these disciplines and that it should be judged on the basis of its own merits and limitations.

In chapter 1, I have shown that a cognitive anthropological approach to art shares many interests with philosophy of art, such as the questions of what art is and how it is judged by people (subsections 1.3.1 and 1.4.1). A cognitive anthropology of art, however, cannot provide a "philosophically correct" or normative definition of art, and it cannot provide the basis for an art criticism either. Philosophers are interested in what art "really"

is and in how art "should" be judged. Their definitions of art generally attempt to encompass all art and this in terms of necessary and sufficient conditions—even if the only condition that remains is that art can be anything if a member of the art world declares it is (see, e.g., Dickie, 1974; and subsection 1.3.1 of this thesis). From a cognitive anthropological point of view, the problem with such definitions is that they do not take into account the fact that people have intuitions about art. For example, in real life situations people may refuse to apply, or on the contrary extend, these "philosophically correct" definitions of art. Philosophers of art have treated art criticism in similarly normative terms (subsection 1.4.1). For example, they have claimed that approaching a work of art in terms of the artist's intention constitutes a fallacy (Wimsatt & Beardsley, 1946). For a cognitive anthropologist, however, the so-called intentional fallacy does not constitute a problem, but on the contrary it indicates a strong intuition that people have about works of art and how these are approached by non-philosophers. In other words, a cognitive anthropology of art does not study what art "really" is or how it "should" be judged, but just what people intuitively think it is, and how people intuitively judge it.

A cognitive anthropology of art cannot be equated, either, to a perceptual psychology or a neurology of art; it does not reduce the art experience to the perception of "beautiful forms and colours" (subsection 1.4.2). The physiology of the eye, the lower-level cognitive processes involved in the art experience, as well as the specialisations of the visual cortex, obviously affect how people produce and receive art (see, e.g., Ramachandran & Hirstein, 1999; Solso, 1994; Zeki, 1999). However, the art experience does not end, but merely begins with the perception of forms and colours. Perhaps more importantly, a work of art speaks of the artist who created it and of its historical and cultural context of production. Further, for the viewers a work of art may be "more" than

its visual content. A successful forgery looks exactly like the original, but most people would accept that it is not as "good" as the original; when people judge of the quality of a work of art, they also take into account how it was created or its "history" (Bloom, 2004, 2010).

That said, as an interdisciplinary approach, a cognitive anthropology of art has the potential to propose its own, alternative accounts in three important domains of the art experience: these were the three research questions of this thesis (section 1.3). The first of these questions (subsection 1.3.1; see also subsections 1.4.3 and 4.1.1) was that of art categorisation: what people intuitively consider to be art? Frequent public controversies indicate that people have intuitions about what art is. What are these intuitions? Why do people sometimes refuse to apply, or on the contrary extend the definitions of art proposed by philosophers and members of the art world? If people were merely following what Western culture tells them is art, they would not refuse to accept that an empty room or a can of faeces is a work of art, and they would not claim that a TV show is "art" or that a footballer is an "artist." A cognitive anthropology of art suggests that people intuitively categorise human-made objects or artefacts that lack practical functionality in a distinct category, which is called "art" in the West. Such an intuition would explain why people consider that an object that is not an artefact, or that an artefact that is functional, is not a work of art.

The second research question (subsection 1.3.2) was that of art appreciation: what people intuitively consider to be "good" art or "poor" art? As sociologist Bourdieu (1984/2010) has famously argued, art may serve as an indicator of social status, and aesthetic taste(s) may signify the distinctions that social classes make between them: people would like the art that is liked by their peers. From a cognitive anthropological point

of view, the main problem with Bourdieu's and similar approaches is that they cannot account for why some art is liked across all social classes (and, sometimes, across several nations and cultures), and for why some other art is not liked by enough people to become cultural at all. A cognitive anthropology of art suggests that psychological factors, and not only social class membership or other cultural factors, determine art appreciation or which art is liked. If some art is liked by all classes, then it might because it is naturally more attractive to human minds.

The third research question (subsection 1.3.3) was that of art cultural distribution: what art is likely to be successful enough to become widely spread or cultural? For Becker (1982/2008), another famous sociologist of art, some art forms are more successful than others because their representatives manage to "impose" them in the art world. Successful art forms would not spread because they are "artistically" better than others or because they are "universally appreciated," but because they are better organised or receive institutional support (on the basis of selection criteria that can be arbitrary). The main problem with Becker's account, however, is that it cannot explain why some art forms become *cross-culturally* successful. For example, split representation, studied by anthropologists Boas (1927/1955) and Lévi-Strauss (1958/1963), occurred in cultures that could not possibly have been in contact (they could therefore not have spread just because they were better "organised" or received institutional support). A cognitive anthropological approach suggests that split representation occurred in several cultures because it may have a cognitive advantage: it conveys more information about the subject depicted than any other form of representation (see also Allen, Bloom, & Hodgson, 2010; Deregowski, 1969, 1970). Other recurrent cross-cultural features of the arts, such as the use of figurative art, or

the fact that often symbols look like what they represent, may similarly be constrained by cognitive factors and communication efficiency.

A cognitive anthropological approach to art, therefore, takes into account how the human mind naturally works, and aims to determine how this could affect the art experience (what people consider to be art, what people consider to be "good" art and "poor" art, and what art is likely to become culturally and cross-culturally successful as a result). However, how does it go about reaching this aim? A first, important fact that a cognitive anthropological approach emphasises, is that many works of art are *human-made objects*. As this is the case, it seems important to understand how people approach and conceptualise artefacts, and to determine whether there are any differences between works of art and other artefacts. An important difference is that works of art cannot usually be approached in purely functional or practical terms (section 1.1 and subsection 1.4.3). In other words, works of art are *ambiguous artefacts*, because as human-made objects they trigger expectations of practical use or function, but at the same time frustrate these expectations. It is on this simple observation that the two main claims of this thesis were based.

In chapter 2, I have defended the first of these claims: the art experience involves speculation about the artist's intention. As material things, works of art involve the same cognitive processes as other solid objects, which constitute one of the so-called ontological categories (Keil, 1979; see section 2.1 in this thesis). The intuitive expectations that people have about solid objects are that of cohesion, boundedness, contact, and permanence (Spelke, 1990), and there is no reason to think that works of art that are solid objects would make an exception. Works of art, however, probably frustrate other expectations that

people have about objects, especially those that were created by other agents. In other words, works of art may pose a series of "problems" to human minds.

First, works of art have no, or only misleading, affordances (Gibson, 1979): they cannot readily be manipulated and touched, either because this is forbidden (as in Western galleries), or more simply because the artists did not create them for this (subsection 2.1.1). Works of art, similarly, have no obvious functions, and therefore they cannot easily be approached in terms of teleological reasoning (Kelemen, 1999a; subsection 2.1.2). Second, works of art probably trigger the detection of (traces of human) agency, but at the same time the purpose of that agency is not clear (subsection 2.2.2). The detection of agency is hypersensitive (Heider & Simmel, 1944) and involves theory of mind (Wimmer & Perner, 1983). It is likely that works of art, as human-made, complex objects (most of them could not have resulted from a random "accident"), also involve the detection of agency and theory-of-mind-like thoughts. In the case of art, however, it is not clear what the "purpose" of that agency might be. In fact, why did the agent create an artefact that cannot be touched and used? Third, many works of art are representations or "stand for" something else (even if the only things they stand for are the human agents who created them, as in the case of "purely" non-representational art). In other words, works of art may be said to have a "dual nature," because they are things in themselves, but at the same time "point at" something else (Ittelson, 1996). Although the recognition of pictured objects does not need to be learned (Hochberg & Brooks, 1962), this dual nature of representations poses a problem to young children (DeLoache, 1995) and perhaps also, as I have claimed, to adults (section 2.3). In fact, recognising what is depicted in a painting, and knowing that the painting is not the same thing as what it represents, does not mean that the painting will be "easy" to understand as a result.

These three reasons have allowed me to claim that works of art trigger speculation about the artist's intention. As a work of art cannot be approached in terms of purpose, function, and as a "thing in itself," the only solution for people to make sense of a work of art would be to speculate about why a human agent created it. As I have then shown, Bloom and colleagues' research suggests that other artefacts, whose form or function is ambiguous, indeed involve speculation about the maker's intention (section 2.4). As works of art typically are ambiguous artefacts (they can have any form, and they have no function), they would also be approached in terms of the maker's (i.e., of the artist's) intention. I have also discussed Gell's (1998) theory of art, which illustrates the potential of using psychological concepts in anthropological research (section 2.5). Gell, too, emphasised that strong psychological constraints mean that people overdetect agency, and that works of art may be thought to act as social agents as a result.

If works of art are ambiguous artefacts, how do people surmount that ambiguity and come to understand and enjoy art? In chapter 3, I have defended the second claim of this thesis: people intuitively approach works of art as acts of communication. As the artist's intention is apparently not to create a functional artefact, viewers would automatically assume that, at the most general level, the artist's intention is to "say" something or convey a "message." I have first shown that this is not a new claim in the history of anthropology (section 3.1). Anthropologists of the second half of the 20th century have approached the arts of other cultures as systems of communication. Art communicates important information about the society in which it is produced. It can reflect the relationships between genders and clans, the structure or organisation of the religious and public life, as well as many other facets of society. Mainstream anthropologists, however, have probably exaggerated the arbitrariness and particularity of the arts of other cultures (section 3.2).

Focusing on the *interpretation* of the arts of other cultures, they have been little interested in how art communicates information between the social agents *themselves*. This is an important limitation from a cognitive anthropological point of view. If art is a system of communication, then it should be studied first for how it communicates information between the people who created and use that system, and not for how it could be interpreted by observers.

I have then argued that if art, as mainstream anthropologists have claimed, is a form of communication, then it might be better understood using another paradigm (section 3.3). Sperber and Wilson's (1986/1995) relevance theory claims that communication is constrained by the cognitive principle of relevance. When people communicate, they expect that the effort they have to invest to process the message will bring them something in return, which defines the relevance of the message. If art is a form of communication, it might also be subject to a similar constraint. In other words, a work of art that is easy to understand, and that brings something to the viewer, would intuitively be preferred over a work of art that is difficult to understand, and that brings little to the viewer. As I have shown, the relevance theory paradigm has several advantages over the mainstream anthropological approach that I considered before. An important advantage is that it can account for cross-cultural features of the arts. If art is a form of communication, and if communication is constrained by the principle of relevance, then works of art, art forms, or forms of representation that are efficient at communicating relevant information, should be more successful and widespread within and between cultures. That could explain, amongst others, why split representation occurred in cultures that were not in contact, or why figurative art was historically more successful than abstract art, or why symbols, although

their meanings may differ between cultures, nevertheless often look like what they represent.

In chapter 4, I have split the two main claims of this thesis into more specific predictions to facilitate empirical testing. These predictions concerned the three general research questions of art categorisation (or definition), art appreciation, and art cultural distribution, and they were based on Bloom's (1996) theory of artefact categorisation, Sperber and Wilson's (1986/1995) relevance theory of communication, and Sperber's (1994, 1996) theory of epidemiology of representations, respectively, as well as my own hypotheses.

In chapter 5, I have reported the results of the first study that was conducted to test three of the predictions thus generated. Using a correlational design, more than 500 Tate Britain visitors rated 57 works of art for goodness, understanding of the artist's intention, and perceived effort and skill. The results of this study supported the three predictions tested. First, significant positive correlations were found between the ratings of goodness and the ratings of understanding of the artist's intention. This suggested that, all other things being equal, works of art that are easy to understand are preferred over works of art that are difficult to understand (prediction 6), as if art were judged at least partly in terms of cognitive relevance (understanding the artist's intention presumably decreasing the effort required to process the message, and therefore increasing the contribution). Second, significant positive correlations were found between the ratings of goodness and perceived effort and skill. This suggested that works of art that require a significant investment from the artist are considered better than works of art that require less investment from the artist (prediction 9), perhaps because a high investment may indicate that the message is potentially more relevant. Third, a significant difference was found between the ratings of

art specialists and non-art specialists, with the former generally attributing higher ratings than the latter. This confirmed that art specialists are more generous in their judgements than non-specialists (prediction 8), probably because they have less effort to invest in understanding the work of art, and can get more cognitive contribution in return.

The results of study 1 were strengthened by the fact that the significant correlations found between goodness and understanding of the artist's intention, and between goodness and perceived effort and skill, remained significant when controlling for familiarity effects. Further, a general measure of the accessibility of the artist's intention (which combined understanding of the artist's intention and perceived effort and skill), deliberateness, was a stronger predictor of goodness than was familiarity.

In chapter 6, I have reported the results of a second study that tested the same (or closely related) predictions as study 1 but under experimental conditions. This second study consisted of four experiments; it was conducted online and involved a further 500 or so participants, who were all English native tongue speakers without special training or expertise in the visual arts (and who were quasi-randomly assigned to one experiment and, within each experiment, to one of the experimental conditions). In contrast with study 1, the stimuli used in study 2 were not "famous" works of art.

In experiment 1, participants rated a series of hyperrealistic paintings that had been labelled as either paintings or photographs for liking in a between-participants design (section 6.2). As expected, the stimuli received higher ratings for liking when they were labelled as paintings than when they were labelled as photographs, probably because the participants considered that paintings require more effort and skill to be created than exactly identical photographs (this was further suggested by the fact that other groups of participants, who rated the same stimuli but for effort and skill, considered that the stimuli

labelled as paintings required more effort and skill than the stimuli labelled as photographs). As with study 1, these results supported the claim that a high perceived effort and skill positively influences art appreciation (prediction 9).

In experiment 2a, participants rated a series of works of art (most of them paintings) that were accompanied by different types of title for either liking or understanding of the artist's intention in a between-participants design (each participant saw only one type of title and rated only one scale; section 6.3). Two types of elaborative title significantly increased the understanding of these paintings, but not their liking. In experiment 2b, a follow-up study, participants rated the same works of art for liking but using a mixed design: each participant saw all types of titles, but with different paintings (section 6.4). Using this more sensitive design, one type of elaborative title—the one that had been designed to be more helpful or relevant to the viewers—significantly increased the liking of the paintings. Taken together, the results of experiments 2a and 2b confirmed that titles can influence the understanding of a work of art and in some cases (that is, when the viewers can make comparative judgements) its liking (prediction 7). Further, as titles constitute the minimum cognitive input that generally accompanies a work of art, it is likely that richer information about the artist's intention, such as longer captions, interpretive texts, or gallery curators talks, will have a larger effect on how people understand and appreciate art as a result (as previous research suggests).

Experiment 3 tested a prediction for art categorisation, or what people intuitively consider to be art. Participants rated a series of artefacts that were accompanied by either intentional or non-intentional artist's statements for "artness" in a between-participants design (section 6.5). The artefacts that that were said to have been intentionally created by the artists were more likely to be considered "art" than those that were said to have been

created less intentionally. This confirmed that people categorise some artefacts as works of art at least partly following the artist's intention (prediction 1).

Overall, the results of studies 1 and 2 supported the two main claims of this thesis. First, the art experience seems to involve speculation about the artist's intention. When people look at a work of art, they wonder what the artist wanted to do or achieve (e.g., whether the artist wanted to create a work of art). Second, art seems to be approached at least partly as a form of communication. When people look at a work of art, they also wonder what the artist wanted to "say" or "mean," and what the artist's "message" could bring to them (e.g., they read the accompanying information to interpret the work of art, and this affects their judgements). If art were only about beauty (be it defined philosophically or neurologically), the participants in studies 1 and 2 should not have been sensitive to the artist's intention and accompanying information, because these essentially add nothing to the "beauty" of works of art.

7.2 Implications

This thesis has a number of implications for psychology of art and anthropology of art (subsection 7.2.1), as well as for the art world (7.2.2). Of course, all these implications are based on the presumption that my main hypotheses and interpretations of the data are accurate. I will discuss limitations and alternative interpretations (more precisely, those that I have not discussed yet in other chapters) in the subsequent section (7.3).

7.2.1 Some implications for psychology of art and anthropology of art. In this thesis, I have several times contrasted the cognitive anthropological approach to art that I propose with two other approaches. The first of these other approaches is that of perceptual psychology or neurology of art (see subsection 1.4.2). Perceptual psychologists and neurologists have focused on the lower-level cognitive processes and brain structures

involved in the art experience. There is, of course, nothing wrong with doing so. As I have acknowledged in this thesis, the way people produce and receive art is necessarily constrained by physiological, perceptual, and neurological factors. From a cognitive anthropological point of view, however, *reducing* the art experience to the perception and processing of more or less harmonious forms and colours poses two important problems.

First, it implies that art is necessarily about what philosophers would call "beauty." For the gestaltists (e.g., Arnheim, 1954) and the neurologists (e.g., Ramachandran & Hirstein, 1999), art is first about the production and appreciation of more or less "harmonious" forms and colours, which will "please the eye" and trigger "aesthetic" responses in the brain's reward system (e.g., Barry, 2006). The problem, here, is not only that while claiming so perceptual psychologists and neurologists use a (probably outdated and ethnocentric) philosophical definition of art without calling it into question. It is also, more simply, that not all art is about beauty (perhaps especially in the West and following the most recent philosophical definitions of art), and that other things than art can display beauty and, therefore, trigger aesthetic responses in the brain's reward system. In one word, the so-called psychology and neurology of "art" are less about art than about what humans find aesthetically pleasing in a variety of domains, one of them being art.[189]

The second, more important problem with lower-level psychological and neurological approaches to art (or more precisely, aesthetics) is that they have little

[189] Hyman (2010) has expressed the criticism that "neuroaesthetics" is not really about art in a more colourful language. Here is what he writes about Ramanchandran and Hirstein's (1999) treatment of Chola art (in which the features of male and female subjects represented in sculptures are amplified, which would constitute a "super-stimulus" for the human brain): "[Ramachandran's] theory is not really about art at all. It is really a theory about why men are attracted to women with big breasts. Remember: the theory is meant to be giving us "the key to understanding what art really is." But the fact that the Indian sculpture is a work of art is completely irrelevant to this theory. It could just as well be a theory about Pamela Anderson. The theory would be that Pamela Anderson has amplified the "very essence" of being feminine—in other words, she has had her breasts enlarged—and the result is a "super stimulus" in the domain of male/female differences. And of course this is more or less true, although it cannot be described as a cutting-edge piece of science." (p. 250). This has led Hyman to name Ramachandran's theory the "*Baywatch* Theory of Art."

explanatory power to account for the richness and diversity of the arts both within a culture and cross-culturally. On the one hand, it is interesting to demonstrate that Mondrian's and Malevich's paintings will activate neurons in the primary visual cortex (Zeki, 1999, chapter 12), whereas expressionist and fauvist paintings will activate neurons in the inferior temporal and frontal cortex (Zeki & Marini, 1998). This means that different art forms are differentially processed across different areas of the brain, and that people's reactions to art are not only "subjective." In other words, this means that art production and appreciation have a neurological basis, and therefore that at least some features of the art experience should be stable across individuals and cultures. On the other hand, crucially, it does not explain how so different art forms have emerged in the first place, and why some of them were culturally more successful than the others. In what historical and social context did Mondrian produce his art? Can it really be distinguished from fauvism (or aboriginal art) on the basis that it fires cells in V1, not V4? And, more interestingly to the cognitive anthropologist, why was Mondrian's art culturally less successful than that of the impressionists? (Have you heard of neo-plasticism? Neo-plasticism is the term Mondrian used to define his art. In contrast, cheap reproductions of Monet's paintings adorn the walls of many Western kitchens). The fact that the impressionists were more successful than Mondrian and the like cannot probably be reduced to purely neurological factors,[190] and stating that brain structures constrain the art experience is simply too general to be useful to the cognitive anthropologist, or perhaps any anthropologist.

[190] By the way, Zeki's neurological approach to art appreciation would predict the contrary. For Zeki (1999, chapter 12), Mondrian's and Malevich's art is more appealing to the brain (because it activates cells in the early or primary visual system) than more "complex" visual stimuli, and therefore it should be more successful culturally and cross-culturally (because processing these simple—Zeki would say "essential"—forms would be a universal ability, and also because one does not need to learn cultural conventions to enjoy them). The problem, of course, is that this is simply not the case, and that on the contrary many people who have no expertise in the arts don't get what Mondrian's or Malevich's art is about or how it could be relevant to them.

The second approach with which I have contrasted mine is that of the anthropology of art as a form of communication. Contrary to perceptual psychology and neurology of art, the anthropology of art as a form of communication has the potential to account for the richness and diversity of the arts. Anthropologists and sociologists have shown that art is not only about aesthetics or the perception of "beautiful forms and colours." Art forms may drastically differ both within a culture and between cultures, and it is naive to believe that there are simple, universal "laws" of art production and appreciation—or if there are, these are so general that they explain little about the art experience. Different arts have different histories and they are all used in different contexts that need to be taken into account. Art may convey information about the structure of society and about social relationships; it may also be used as an indicator of status or as an instrument of cultural domination; in both cases, art is not about beauty (be it defined philosophically or neurologically) but about conventions, class struggle, and symbolic communication.

This is not to say, however, that mainstream anthropology and sociology of art pose no problem to the cognitive anthropologist. By focusing, contrary to perceptual psychologists and neurologists, on the diversity and "particularness" of the arts, anthropologists and sociologists have little explanatory power when it comes to account for the recurrence and stability of some forms of art. If art were constrained by culture alone—through arbitrary conventions that only the privileged anthropologist can "interpret"—how could one explain some culturally and cross-culturally recurrent and stable features of the arts? And if art were only used to make distinctions between classes, how could one explain that sometimes all classes agree on what is very good or very poor art?

As it should now be clear, the two approaches with which I have contrasted a cognitive anthropology of art are situated at the two opposite ends of a "reductionist"

spectrum. For perceptual psychologists and neurologists, art triggers aesthetic responses in the brain, which provides the neurological, "universal" basis for the art experience, but at the same time this is such a general statement that it is of little value when approaching particular art forms and how these are produced and used in real-life situations. For anthropologists and sociologists, art is about the different societies that produce it, which explains the richness and diversity of the arts, but at the same time these arts are presented as so particular and arbitrary that this obscures what could be common in how different cultures produce, experience, and transmit their arts.

Thus, the first, and most general implication of this thesis, is that the art experience cannot be reduced to either the "brain" or to "culture." It is not, of course, because the brain and culture play no role in the art experience. And it is not, either, because reductionism would be an ill-conceived scientific strategy to approach art—quite the contrary. More simply, any reductionist strategy should be judged for its capacity to account for the widest possible range of facts using the least possible number of hypotheses. From this point of view, a cognitive anthropological approach to art presents several advantages.

In fact, a cognitive anthropological approach to art has the potential to account for both the diversity and stability of art forms using a limited set of hypotheses. It proposes that art is intuitively approached as a form of communication, and that as such it is subject to the cognitive principle of relevance. This cognitive principle means that people expect acts of communication to be relevant, and this would explain why some art forms are more successful than others. Art forms that are efficient in communicating relevant information would naturally tend to be more valued, more used, and therefore would become culturally and cross-culturally more widespread. Further, that would also explain why some art forms are more likely to be produced in the first place than others. As artists would essentially be

communicators, they would intuitively tend to maximise the cognitive relevance of their messages, which would limit the range of types of art that they will use.

Now note that such a relevance paradigm approach does not prevent art from being extremely diverse and adapted to very particular social contexts. In fact, art can potentially communicate anything, and this to innumerable ends. As far as the message is relevant, art can be about the artist's inner life, or history, or society, and so on. It can also, of course, just be about beauty (in which case the message communicated is: "Just appreciate these beautiful forms and colours!"). Note, too, that the relevance paradigm can be applied to very specific cases, such as to a particular art movement or even a particular work of art. If art is about communicating relevant messages, then within each art form some works of art will presumably be better at doing so. In other words, this might account not only for why some art forms are more popular than others, but also why within these art forms some artists are preferred to others (such as those who are liked across all social classes). Note, finally, that a relevance theory paradigm is not in contradiction with perceptual, neurological, and socio-anthropological approaches; instead, it is a complementary approach, which perhaps allows unifying important factors involved in the art experience. For example, the hypothesis that art is intuitively approached as a form of communication is based on how humans naturally approach solid objects and artefacts. This includes the lower-level perceptual and neurological processes involved in object recognition and categorisation, and which constrain the art experience. Further, none of the predictions generated under the relevance paradigm prevent social and cultural factors from playing an important role in the art experience. An art movement may be more successful because it conveys more relevant information, but of course its success may be conjointly determined by the dynamics of the art world.

A second important general implication of this thesis is that people have intuitions about art, and that these intuitions should be considered seriously. For some philosophers and art critics, it is a mistake to speculate about the artist's intention or life when judging the quality of a work of art (see subsection 1.4.1). There may be good reasons for this, but the fact is that strong psychological constraints make people use the artist's intention as some kind of "default approach" to understand and value a work of art. And that people are right or wrong to do that is irrelevant to explaining art categorisation, appreciation, and cultural distribution. For the anthropologists and sociologists discussed in this thesis, art speaks of class and society; it conveys "hidden" meanings of which people are "unaware" and that need to be "interpreted." But if art is a system of communication then it should be studied first for how it is used by the people who created it and use it. Further, people may not be so "unaware" of the meanings conveyed in the arts, and they also sometimes clearly indicate what these meanings are (if the observer is ready to listen, and does not postulate that this constitutes "no information at all"). From this point of view, a cognitive anthropological approach seems more democratic. It does not say what art should be or how it should be appreciated; and it does not pretend to be able to discover the "hidden" meanings of the arts. All it does is take into account how people approach artefacts, and how this could affect art categorisation, appreciation, and cultural distribution.

7.2.2 Some implications for the art world. This thesis also has more specific implications, especially for members of the art world. For a start, it may be important for artists and art gallery curators to take into account that there is a general natural tendency in viewers to approach art at least partly in terms of intention and communication, and that this will likely affect how the art presented to the public is received (and possibly widely opposed). To put it crudely, people like the art they can understand—especially if the art

has little to offer aesthetically speaking. An obvious way to meet people's expectations in this domain is to provide them with information about the works of art exhibited. Why did the artists create them? What did they have in mind or want to say? What do the works or art mean (even if the "meaning" of the work of is that it has no meaning, and that art is not necessarily about meaning)? In which contexts were they produced? How difficult were they to plan and execute (including intellectual or conceptual effort required from the artist)? Are there anecdotes about them? In short, provide the viewers with information that will decrease the effort needed to understand the works of art and therefore increase their relevance. To be fair, members of the art world, especially gallery curators, seem to be already aware of this in some measure. For example, in recent years, visitors have seen an increase in the amount of information and aids available in exhibitions (longer captions, curator's talks, multimedia devices, affordable exhibition catalogues, introductory sessions for children, etc.).

Importantly, however, such accompanying information has to be carefully selected and displayed. In fact, not all information is equal in helping the viewer to understand the artist's intention or message (as the results of experiments 2a and 2b suggest, see chapter 6, sections 6.3 and 6.4). In other words, the information that accompanies a potentially relevant work of art has to be potentially relevant itself; if it is not, it will not help but may on the contrary obscure communication, and frustrate the viewer as a result. Of this, members of the art world seem less aware. Helping the viewers is not simply providing them with large quantities of erudite information printed in small font size on the walls (or projecting a one-hour long documentary in a black room with hard chairs). When people go to the gallery, they would probably prefer that the visit does not just consist of reading interpretive texts and listening to experts' talks (after all, it is *visual* art). Or, if they are

expected to do so, then at least the information provided should be maximised for relevance, and members of the art world could be more creative in achieving this.[191]

The way titles are used in much contemporary art strikingly illustrates how accompanying information may fail to facilitate communication, and on the contrary confuse or frustrate the viewers. Consider here the titles of some of the works used in study 1 (chapter 5): *Structure 14c*; *Untitled (yellow)*; *rsXXII – /8-7*; *Synthetic Construction (White and Black)*; *Work, Made-ready, Les Baux de Provence (Mountain Bike)*. These titles are not likely to help the viewers, but on the contrary may annoy them. Following the conventions of relevant communication—that people would intuitively expect to be applicable to art—the artist created the work of art because he or she had something to say, and because he or she considered this to be potentially interesting to the viewers. If not, why would he or she have deliberately created an artefact that cannot be used functionally (and that often, in the case of contemporary conceptual art, can also not be appreciated for its "aesthetic" value)? Now, of course, if the message conveyed in the work of art itself was "obvious," relevant titles would not be so important. You may title a Constable landscape *Forms and Colours #26*, or not title it at all (*Untitled, May 1821*), but still the viewers could easily assess the relevance of the message. On the contrary, the works of art mentioned above are in themselves "obscure" acts of communication, and then it would be

[191] A simple way of ensuring that the accompanying information is relevant might be to have that information prerated for "usefulness," just as in a scientific study. For example, volunteers (an incentive might be that they do not have to pay the entry, and obviously that they would be the first to see the exhibition) would rate the accompanying information for how helpful it is to them to understand the artists' intention (and the accompanying information, if necessary, would be revised before the actual exhibition). Another solution could be to make the accompanying information more "present," just as if it were part of the art exhibited (think here of Magritte's caption for *The Treachery of Images*, which is contained in the work of art itself; although it is of course rarely possible to do so, that should inspire art gallery curators and artists to find better ways of displaying accompanying information.). Still another solution would be to arrange the works by how difficult it is to understand them (also following some pre-visitors ratings). The exhibition would follow an ascending order of difficulty (e.g., avoid displaying the most difficult works in the first room), or would alternate "difficult" and "easy" works (e.g., an easy work may "relax" the viewers, and in some cases it might even be used as an "explanation" of, or as a "commentary" on a difficult work, such as a figurative landscape accompanying an abstract landscape and bearing some relation to it).

crucial that they are accompanied by helpful titles. Instead, the titles provided for these works of art by the artists are equally obscure—they do not help the viewers to understand what the artists wanted to achieve, but on the contrary makes it even more difficult. As a result, the viewers may intuitively think that the artists did not follow the most basic conventions of relevant communication (or even deliberately violated them), and may be frustrated by the works of art in question.

If not all accompanying information is equally helpful to the viewers, then in some cases *no* accompanying information—however good it is—can be helpful enough. Some works of art are so obscure or apparently so irrelevant that they "cannot be helped" by accompanying information. A gallery curator may find optimal ways of explaining what Manzoni's can of faeces is about, what type of effort it required (because Manzoni produced 90 of these cans, which is pretty impressive, isn't it?), and what its significance in Dada art is;[192] still, most people would probably not revise their judgement and come to think that *Artist's Shit* is a masterpiece of Western art. On the contrary, in similar cases accompanying information may cause the work of art to be liked *less* as a result. It is one

[192] As indeed there exists a respectful tradition of what I would call Pee-Poo Art since Duchamp's urinal, and that tradition did not end with Manzoni or Serrano, but continues to inspire new generations of artists. Here is an example of this taken from a BBC documentary by Silver and Temple (2010) on soon-to-be-graduated students at the prestigious Goldsmiths's Department of Art in London (whose alumni include at least 20 Turner prize nominees). It is Roisin Byrne who describes her work in 2010 (she will be happy that I quote her—although in a footnote—as apparently being quoted by commentators is also part of her "art"): "I am a conceptual artist, and I work with ideas. Ideas are my commodity, ideas are my product. . . . I shoplift things, and I swallow them, and then I shit them out and present them as art objects. This [presenting some kind of small piece of jewellery] is something I expelled this morning, and its partner is making its way through as we speak. So there is two, which become my artwork [*sic*]. I'm very interested in ideas of property, and what belongs to who. So I just steal everything, so therefore I don't have to work to maintain my artistic practice. I don't have to be focused primarily on creating original artwork. And, I just steal stuff" (Silver & Temple, 2010). In the same documentary, a tutor at Goldsmiths reported the following anecdote that happened during a seminar (in which students present their production—quite literally in this case—to each other): "A student, two years ago, came in drinking a bottle of wine—and we don't normally have alcohol in seminar—and then she got up on the table, lowered her shorts, and did a big shit, into a big glass bottle. With a lot of grunting, and groaning, and stuff. And then [she] put a lid on the bottle and sprayed it gold, and then left the room. The students were very offended by this, because, basically, she had done a shit for them, so it was very shocking, but also people thought that it was an affront, that they were treated like shit, by her shiting for them."

thing to know that an artist canned his faeces (shouldn't all good artists be a bit mental?); it is another thing to learn that a national gallery bought one of these cans for $61,000, and that members of the art world seriously discussed and analysed the "significance" of this "work of art."

Of course, Manzoni's can of faeces is an extreme example. But the point here is that some works of art seem just too obscure to be readily understood—whatever title or additional information accompanies them—or at least that it is very difficult to increase their perceived relevance to the wider public. From this point of view, contemporary art may be said to present a profound paradox. On the one hand, much of contemporary art is *conceptual*; it is not about beauty but about ideas. On the other hand, much of contemporary conceptual art is obscure; the ideas it conveys are difficult to understand (remember the results of study 1, chapter 5, in which modern and contemporary works of art received lower ratings of understanding, and effort and skill, than historic works of art) or may seem to have little potential relevance. As a result, much of contemporary conceptual art is in a sense "condemned" to being disliked by the wider public. Let me develop this claim. Contemporary conceptual art is not aimed at producing beautiful forms and colours, and therefore it cannot be appreciated for its aesthetic value. Manzoni's can of faeces, Duchamp's urinal, and Hirst's pickled shark are not "beautiful" in the traditional sense. Their value, if they have one, is to be found somewhere else: *they convey potentially interesting messages*. In other words, contemporary conceptual art, more than any art, is the prototype of art as a form of communication—because it has nothing else to offer than messages and ideas. It is also the only art that people are necessarily *justified* (this time in the philosophical, "art-should-be" sense) in approaching as a form of communication and in terms of the artist's intention, because apparently it is only as such that it can become

relevant. And this is exactly where the paradox lies. Although contemporary conceptual art can be approached only as a form of communication, it violates important conventions for successful communication. It speaks for the artist and nothing else, but what the artist wanted to say or achieve is not clear. It was created to convey ideas, but these ideas are difficult to understand. It may be highly relevant (in the very intellectual, cognitive sense), but its relevance cannot be easily assessed. In one word, contemporary conceptual art demands to be treated as a form of communication while at the same time sabotaging the conditions for communication.[193] As a result, it is not likely that it will be highly appreciated by the wider public.[194]

That said, it is important that the reader does not reach the wrong conclusion here. The implication of the above is that members of the art world, because of people's natural tendency to approach works of art in terms of intention and communication, should carefully select and display any accompanying information, and that in some cases such accompanying information, however helpful it is, may fail to have a positive effect on art appreciation. Does this mean, however, that I advise gallery curators and artists to use

[193] A similar analysis might be applied to perceived effort and skill in contemporary conceptual art. If conceptual art is not aimed at beauty, it is not aimed, either, at displaying obvious effort and skill, at least as assessed by time required to create the work of art or "mere" dexterity. That is, the effort and skill that conceptual art requires are *intellectual* (and note that there is nothing "wrong" with that—on the contrary intellectual prowess may potentially be as impressive as "mere" effort and technical skill). But again the problem is that this does not seem to be obvious to the wider public (see the results of study 1, chapter 5). And again because of this conceptual art may fail to be relevant and to be liked as a result. Therefore, an implication for artists and art gallery curators is that they should better explain in which sense a work of conceptual art required effort and skill. They should explain that effort and skill are not only "physical" but can also be intellectual, as in other arts such as literature, or even as in philosophy or science.

[194] A relevance theory approach to art appreciation, indeed, implies that a work of art that is just too obscure will not be successful. That said, Sperber (2005) has interestingly claimed that, in some cases, the "obscurity" of an act of communication may on the contrary be perceived as a sign of high relevance, especially when the communicator is an influent *maître à penser*. In these cases, the audience would assume that if the act of communication is obscure, it is because the message conveyed is particularly "rich" and "important," and because it could not be "simplified" by the "inspired" communicator, while of course in reality the message might simply be paradoxical or absurd. Sperber has called this the "guru effect," and it may account for why flawed ideas can become successful when they are professed by influential social agents—or, in the case of art, why the work of some influent artists is appreciated despite that it is very obscure and perhaps not very relevant.

straightforward, perhaps patronizing or boring titles and captions from now on? Or does this mean that art simply has to be "easy to understand" to be "liked by the masses," that is to be perhaps a bit dull and childish? Or that artists are not entirely free to create what they want, or that art gallery curators have to conduct opinion polls each time that they want to organise an exhibition? In other words, does a relevance theory approach to art limit and simplify the art experience? Not at all.

As I have already said, a relevance theory approach to art makes no prediction as to the content of the message conveyed through a work of art. A work of art can be about anything—in fact, it could even be about faeces if the joke were not a little old by now. And a work of art can be as puzzling, as controversial, as shocking, and as politically incorrect as the artist wants—and there are plenty of examples of this in the history of art. In other words, art can be about anything, *but on the condition that it is also relevant*. And to be relevant does not mean to be soppy, childish, or even "easy to understand." All it means is that the message has to bring a contribution to the viewer, and that this contribution should match the investment that the artist has required from the viewer (because it is the artist who spoke in the first place, and who required attention from the viewer). If the contribution is potentially highly significant (as indicated not only by a first look at the work of art, but also by helpful accompanying information), then the viewers will eagerly invest more effort in the work of art, even if it is apparently an obscure and demanding act of communication. And triggering this in viewers is probably not impossible to achieve for creative people such as artists, and one might think this is precisely what artists would want to achieve.

Think here, one last time, of Magritte's pipe. Just as the works of contemporary art I mentioned above, Magritte's pipe is not primarily about beauty, and its value is to be

found in the message it conveys. Note, too, that it is not even exactly "easy to understand." In fact, it is rather contradictory and puzzling—or even "provocative," just like the contemporary works mentioned above—because it represents a pipe while at the same time claiming that it is not a pipe. But there are also three crucial differences here. First, the message conveyed by Magritte's pipe is potentially highly relevant. It teaches us—or reminds us—that representations are not the same as what they represent, and it is difficult to see how this could not be relevant to art lovers (including art specialists), because this simple statement contains an important truth about what visual art is; it is also relevant to people in general and even has a didactic value: as I have shown in chapter 2 (section 2.3), children have to learn the dual nature of representations, and even adults may have trouble understanding representations. Second, the high relevance of Magritte's pipe is relatively easy to discover, or at least the viewer is encouraged to do so. There is this provocative, striking contrast between the image and the written statement, which makes one want to understand and "solve" the contradiction—and the fact that it is funny cannot hurt, either. Third, the accompanying information has been carefully chosen and displayed. Not only is the interpretation of the work of art contained in the work of art itself (the statement that the pipe is not a pipe), and therefore the viewer does not need to read a long caption to understand the message, but also the title of the work of art (*The Treachery of Images*) further helps us to understand the message or confirms that what has been understood is correct. In sum, it would be difficult to find a better example of a work of conceptual art that has managed to be relevant but not dull, to be easy to understand but not obvious, and this with elegance, humour, and intellectual effort and skill, and while inventing new ways of optimally displaying relevant accompanying information. And, therefore, there is

nothing that should prevent a talented contemporary conceptual artist from creating art that would similarly captivate and enrich even the wider audience.

That said, why should members of the art world even care? After all, they cannot be held responsible for the human tendency to approach works of art in terms of intention and communication. Furthermore, artists and gallery curators are not "advertisers," and should not be expected to provide pre-baked, "optimally relevant" information that will "naturally" please the cognitive systems of the potential viewers-consumers of their art (although I have just shown that this can be done with elegance, wit, and in one word, genius). If visitors don't understand it, or don't like it, or complain about it, then so be it—and by the way, triggering such puzzlement and questions has always been one of the virtues of art. But think of Bourdieu here. The main implication of Bourdieu's (1984/2010) work is that art can be used as an instrument of social domination. The "high" art of the upper classes would signify their politic, economic, and cultural "superiority" over the lower classes. It is partly because of engaged works such as Bourdieu's, by the way, that governments made significant efforts to bring the art to the public and made it more "democratic" (e.g., Malraux in France, and attempts, almost everywhere in the West, to make galleries more accessible, and more affordable to a wider public). But that is probably not enough. Artists also have their social responsibility. There is no point in bringing art to the public if it is the art in itself that makes distinctions between those that can understand it and appreciate it and those that cannot. And there is no point opening galleries if the public feels mocked by obscure works of art accompanied by obscure titles and created by artists who are little motivated to explain what they wanted to achieve (provided that they themselves know what this was[195]). Zeki (1999) said that artists are in a

[195] Here is an illustration of this taken from the same BBC documentary I cited in footnote 192 (and which, by the way, is worth watching as it features many unintentionally hilarious moments). In this passage one

sense born neurologists, because they manage to create art that titillates different areas in the brain, and therefore to provide a variety of experiences to the viewers. But maybe it is time that they also learn to become better psychologists, and better democrats.

7.3 Limitations and research suggestions

The possible implications of this thesis should not obscure the fact that it also has important limitations. In this section, I re-discuss some of these limitations and also re-acknowledge that the findings of this thesis may be consistent with alternative explanations. Doing so will allow me to make suggestions for further research at the same time.

I have already mentioned the most important limitations of this thesis. These limitations are related to the approach to art that I propose (an interdisciplinary approach

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student is interviewed on how he chose the work he will exhibit for the important degree show (where it will first be shown to the public and potential buyers), and what it could be about. I quote it almost entirely because it illustrates well several things that I have claimed in this section: "If you're having a solo show, and people come specifically for your solo show, they will take the time to really get into what you're doing, they'll probably already know a bit about you. In this instance [the degree show], like, very few people coming are gonna have any idea about what you do, what your practice is about. And so, I think you need to grab your audience, and kind of, get them in with something which is kind of like, maybe a bit of a trick. What I've been doing is just creating a piece which is a shell with a strobe inside of it. So it sounds like a simple idea, but I think it's quite effective in a kind of a darkened room. And I think it achieves quite a few things that I'd like to achieve, but in a very simple way. I don't know, I think there's something kind of, glorious and mad about, this kind of game of shells just strobing away. Recently I had a tutorial and showed this work. And there was a bit of a discussion about this work not being sophisticated at all. That it just appears to be a juxtaposition of objects, and so, well, then I'm asked, why is this juxtaposition of objects any more important, or any more relevant than any other two things you can just shove together? It's a funny thing to try to explain exactly what a strobing conch shell is saying. You know, what's happening here, I don't know, maybe, God, I was hoping I was gonna say something really good just then! Can I repeat that? Can I have [interrupts himself]. I did take some notes here, maybe this is what I'm supposed to say. [Reading his notes:] "I'm supplying a certain type of minimalism and conceptual rigour, to a place which is expected to sit outside of all of that, and engage in a less sophisticated way." Well, you know I wrote that on the tube this morning. I wish that I could be more directing and clear with you, but, I think overall the work *will* be accomplishing something. God it sounds really bad, an artist, like, I don't even know what I'm doing, do I?" (Silver & Temple, 2010).

Now the point of quoting this passage is not to have fun at an artist who is perhaps simply shy or intimated in interviews (and who seems to be a nice guy). But it shows, first, that conceptual artists are aware that their works are acts of communication and should be about something ("What is a strobing conch shell saying?"), and that the public will approach them in terms of relevance ("I think you need to grab your audience, to give them a trick;" "Why is this juxtaposition more relevant than any other juxtaposition?"). Second, it shows that works of conceptual art may be so obscure that even art specialists (the tutors), or the artist himself or herself, may fail to understand it or at least readily explain what it is about. In these conditions, how could one be surprised that such art will frustrate the general public?

that can account only partially, amongst others, for the "aesthetic" dimension of the art experience; subsection 1.4.2); to the type of art that I have considered (works of visual art that are artefacts that lack practical functionality; subsection 1.4.3); to the use of relevance theory (that cannot account, amongst others, for why art would be used as a form of communication in the first place; section 3.3); and to the predictions tested in Studies 1 and 2 (out of which none concerned the cultural distribution of art, but I have mentioned how further studies could easily include predictions for cultural distribution; see section 4.2, and footnote 132). I have also already mentioned alternative explanations for the findings of studies 1 and 2 (subsections 6.2.3, 6.4.3, and 6.5.3; see also section 6.6).

Here I would like to discuss two of these limitations further, partly because they have the potential to suggest directions for further research. The first of these limitations is that of the type of art considered in this thesis. My approach has been directed to the *visual* arts, and this naturally poses the question of whether it might be applied to non-visual arts, such as music. I mention music because, a priori, one might think that it precisely illustrates one of the limitations of my approach to art as a possible general category. For a start, music, contrary to most works of the visual arts, does not consist of *material* artefacts (that is, visible material artefacts). In other words, the perceptual and cognitive processes involved in the art experience that I have mentioned in this thesis cannot apply to music. For example, as a piece of music is not a material artefact, it should not trigger the expectations associated with the ontological category of solid objects (chapter 2, section 2.1), and therefore it not should trigger, either, the detection of affordances (subsection 2.1.1). As a result, music cannot "frustrate" expectations associated with artefacts, and there would be no need or intuition to approach it as a "form of communication." Much music, by the way—and this is the second important difference with the visual arts—is not

about "meaning" and conveying "messages," or at least not in the sense of how a figurative painting may do so. Most instrumental pieces of music do not "mean" anything in particular, but just require to be appreciated for their rhythm, harmony, arrangement of sounds, and other "formal" qualities, perhaps a bit like abstract works of visual art.[196]

Despite these important differences, there are also similarities between visual art and music, and this might suggest directions for further research. For example, although music does not consist of material objects, it is also intentionally created by human agents for other human agents, and it also lacks purely practical functionality. From this point of view, there is no reason to think that music could not involve similar cognitive processes as works of visual art. For example, music would also trigger the detection of traces of human agency: a piece of music, just like a work of visual art, is probably perceived as too "complex" or "deliberate" to have resulted from a random accident. As a result, it might trigger speculation about the composer's intention (e.g., what did he or she have in mind or feel while writing the piece?). Further, music may present an ambiguity to human minds: contrary to other sounds produced by human agents, such as speech acts and utterances, a piece of music has no purely functional value (such as in "Beware of the snake!" or "Please pass the salt" for speech acts). As a result, it is not clear why the composer, musician, or performer wanted these sounds to be heard by the audience, or what the purpose of these sounds might be. From this point of view, music might also be partly approached as a form of communication by hearers. Instrumental music would not be thought to communicate precise "meanings" or "messages," but perhaps it would be thought, more generally, to

[196] However, sometimes even instrumental music is approached or described in "figurative" terms, just as if it were representing (or at least inducing associations or emotions about) an object of the real world. For example, why is Beethoven's violin sonata no. 5 called the "Spring" sonata? How can a piece of music stand for, or be about "spring" (note too that spring is not an "emotion")? And this is not just an isolated case: one could find other examples in the romantic period as well as earlier, such as, of course, Vivaldi's *Four Seasons*. To me, this is a first indication that music may also intuitively be approached in terms of "representation" or "communication," which I develop in the main text.

express and convey the composer's or performer's emotions to the audience—indeed, common sense as well as empirical evidence suggest that music is partly about communicating or inducing emotions (Cross, 2005; Gabrielsson & Juslin, 1996; Juslin & Sloboda, 2001; Nevard, 2011; Schubert, 2007).[197]

If music involves speculation about the composer's or performer's intention, and constitutes some sort of communication of emotions, then it might also be partly subject to the dictates of Bloom's (1996) theory of categorisation, and Sperber and Wilson's (1986/1995) relevance theory of communication. This is, at least, what fellow student Francis Nevard (2011) has claimed in his MSc dissertation, with some promising first empirical findings. Nevard tested, amongst others, the hypothesis that auditory stimuli are categorised as "music" partly following the composer's intention (just as visual stimuli would be categorised as "art" if they were intended to be so). Following a similar method as I used in experiment 3 (chapter 6, section 6.5), Nevard created a series of audio samples that could have been generated either intentionally or unintentionally. As predicted, he found that audio samples that were said to have been generated intentionally received significantly higher ratings of "musicality" than those that were said to have been generated unintentionally. This suggests that music, just like visual art, is not approached merely in terms of "formal" or "intrinsic" properties—whether it sounds like "typical" music, or whether it is "harmonious"—but also in terms of what the human agent who created it wanted to achieve. Music may further be approached in terms of relevance, where the potential relevance of a piece of music would be how successful it is at inducing a

[197] The analogy with abstract art may again be helpful. A work of abstract art is not necessarily about something in particular, but still it is probably approached as an act of communication (see chapter 2, subsection 2.3.3 of this thesis). The "message" communicated in a work of abstract art may be a "mood," an "emotion," or simply "beauty."

particular emotion in the viewer (Nevard, 2011; see also Acotto, 2011).[198] In sum, the cognitive anthropological approach to art that I propose is limited to visual art, but there are good reasons to think that it might also have the potential to shed light on some aspects of other arts, such as music (and obviously literature, poetry, and any other art using textual information that has propositional content, see, e.g., Malley, 2004), and this suggests exciting possibilities for further research.

The second limitation that I would like to discuss relates to the use of the relevance theory paradigm to explain the findings of studies 1 (chapter 5) and 2 (chapter 6, experiment 1) on the role of perceived effort and skill in art appreciation. In both studies it was found that a high perceived effort and skill positively influence art appreciation. As I have argued, a relevance theory-inspired approach to art appreciation suggests that the effort and skill that went into a work of art may constitute efficient indicators of relevance or clarifiers of the artist's intention. If a work of art was allocated a lot of time and energy, the viewer may assume that it is because the artist thought that the message mattered enough for this high degree of investment (and, therefore, that the message is "worth" processing because it might be highly relevant). Similarly, the skill that went into a work of art may make the viewer assume that the message conveyed is exactly the one that was intended by the artist, as if each part of the work was highly deliberate and "unambiguous" (and therefore easier to understand). If true, a high perceived effort and skill should increase the perceived relevance of the work of art (because the message would be considered more "important" and more "polished," which would both encourage the viewer

[198] Sperber and Wilson's (1986/1995) principle of relevance, indeed, applies to all forms of communication and to all "contents" (language and propositional contents being just one of them). In other words, the communication of emotions should also be constrained by the principle of relevance (see Nevard, 2011, pp. 13-20, for discussion).

to process it and decrease the cognitive investment required to do so), and therefore positively influence appreciation.

But now, of course, one might propose alternative explanations for the results of Studies 1 and 2 (experiment 1) concerning the role of perceived effort and skill in art appreciation. If effort and skill positively influence art appreciation, it might be simply because they "impress" the viewers. This is at least what scholars in evolutionary studies of art could claim, and I mention them here because their work has not yet been discussed in this thesis (but see subsection 4.1.2). Evolutionary studies scholars have approached art as either an adaptation (Dissanayake, 1992; Miller, 2000; Tooby & Cosmides, 2001) or a by-product (De Smedt & De Cruz, 2010; Hauser & McDermott, 2003; Pinker, 1997, chapter 8). Although discussing the important differences between these two camps would be outside the scope of this section, I would like to mention here how an adaptationist approach to art could account for the findings of studies 1 and 2 (experiment 1) regarding perceived effort and skill. For adaptationists, art evolved in relation with sexual selection (e.g., Miller, 2000). To put it simply, art would indicate the fitness of the artist who created it; just as the peacock's tail, art would costly (because it requires time and energy, and is not necessary to survival) signals its creator's mating qualities. Now it is not difficult to see how this hypothesis could be used to account for why perceived effort and skill positively influences art and appreciation. The effort and skill perceived in a work of art would simply signal the artist's mating qualities such as healthiness, vigour, intelligence, self-control, and so on. And that might also partially explain, incidentally, why many people wish to meet their favourite artist, or are attracted to them.[199]

[199] There is not, however, much evidence that art may be *adaptive*, and like De Smedt and De Cruz (2010) I consider that the evolutionary account of art as a by-product is more convincing. Further, as I will develop in the main text, scholars in the by-product camp and cognitive anthropologists share some close interests, which seem more promising for a cognitive anthropology of art. That said, even if art were not an adaptation,

This is, of course, a very general and simplified interpretation, but here I am merely acknowledging that some findings of this thesis might be accounted for in the evolutionary framework. I am implying, also, that a cognitive anthropology of art would probably benefit from collaboration with evolutionary studies. One similarity between cognitive anthropology of art and evolutionary psychology of art is that both are interested in cross-culturally recurrent features of the arts. For example, evolutionary scholars in the by-product camp have been interested in the recurrence of the use of some scales in the music of different cultures (Gill & Purves, 2009), and in the recurrence of some themes in the visual arts of different cultures, such as faces, landscapes, and animal imagery (see De Smedt & De Cruz, 2010, for a review). Further, as an approach interested in the "ultimate causes" (De Smedt & De Cruz, 2010, pp. 697-698) of art, evolutionary psychology could add "depth" to a cognitive anthropology of art (just as for cognitive anthropology of religion or cognitive science of religion, see Barrett, 2011a, p. 233). For example, it could account for why art is used as a form of communication in the first place, or what possible advantages of using art as a form of communication could have provided to humans. In contrast, a cognitive anthropology of art could offer more fine-grained analyses: art may be adaptive, and some art forms may be cross-culturally recurrent because they are by-products of natural cognitive systems, but which art forms exactly (or even, which particular works of art) are more likely to become cultural, and why? A cognitive anthropology would probably also be better equipped to account for the art that obviously has no adaptive function (e.g., what is the adaptive value of a work of art that does not display effort and skill, or that is ugly, or that is purely conceptual? These may be better

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it is difficult to see how the skill and virtuosity that went into a work of art could *not* positively affect the viewers and therefore act at least partly as indicators of the artist's "fitness" or "goodness."

accounted in terms of relevance—remember that "non-pleasing" works of art can be relevant and therefore appreciated and spread—or of the artist's intention).[200]

In this thesis, I have several times used examples from cognitive anthropology of religion and from cognitive science of religion in my attempt to lay the basis for a cognitive anthropology of art. I would now like to conclude it by showing how a cognitive anthropology of art could contribute to these disciplines in return. One of the most general implications of this thesis is that the art experience involves speculation about the artist's intention, and that perceiving "intentionality" and "deliberateness" in art can positively influence art appreciation. For example, non-functional artefacts that were deliberately and thoughtfully created may be more likely to be considered as "art" or "high" art, and works of art whose artist's intention is relevant may be considered "better" or more "pleasing" works of art. But maybe these intuitions run in the other direction as well. Maybe works of art that are considered "better" or more "pleasing" in the first place are seen as more "intentional" or "relevant" as a result. In fact people may think that "goodness" and "pleasingness" can be no accident, but that an agent is "behind" them or that they have a "purpose."

This idea may at least interest cognitive scientists of religion, and it may be tested concerning the perception of *natural beauty*.[201] Cognitive scientists of religion have

[200] Indeed, one important difference between a cognitive anthropology of art and evolutionary approaches to art—and this constitutes another reason for not having discussed them in detail in this thesis—is that evolutionary approaches, like perceptual psychology and neurology of art, are not strictly about *art*. Evolutionary studies on art are, more precisely, about what philosophers would call "beauty" or "aesthetic" experiences (and which would be naturally "attractive" or "pleasing" as fitness indicators or by-products of cognitive processes). I have already explained why this is an important limitation from a cognitive anthropological point of view, see subsections 1.4.2 and 7.2.1.

[201] It may sound surprising to the reader that, after having several times used the concept of "beauty" to discard alternative approaches to art, I am eventually using it myself. But there are two important things to remember here. First, I have never claimed that "beauty" and "aesthetics" are not an important part of the art experience, but that art, including "beautiful" art, is not *only* about beauty (see subsections 1.4.2 and 1.4.3). Second, I am here suggesting possible directions for *further* research, that is for a cognitive anthropological approach to art that would take into account judgements of beauty, and in this case how such judgements could have an impact in the domain of religious beliefs. Note, finally, that I am referring here to *intuitive*

provided strong evidence that humans have naturally-developing cognitive dispositions to construe aspects of the natural world as purposeful, and this purpose is often thought to be intentional and, hence, attributed to a supernatural agent such as a creator god (for a recent account, see Barrett, 2011b; see also Kelemen and colleagues' studies reviewed and discussed in chapter 2 of this thesis, subsections 2.1.2 and 2.2.1). Now, perhaps such attribution of divine purpose is triggered partly by perceiving *beauty* in the natural world. Perhaps some intuitive "arguments from beauty," paralleling intuitive arguments from design (De Smedt & De Cruz, 2011), would contribute to the credibility of beliefs in gods. This is not, by the way, a new idea. Many theologians, philosophers and other thinkers have claimed, indeed, that natural beauty could be thought to provide arguments for the existence of some kind of god (Haught, 1984; Plantinga, 2000; Ruskin, 1857/1895; Tennant, 1930; Wynn, 1997).

The existence of such intuitive arguments from beauty may be empirically tested using, for example, photographs of natural scenes. These natural scenes would display obvious human intentional intervention (e.g., a photo of an ordered garden with rows, fence, etc.) or not (e.g., a photo of wilderness or of a comet), and would be prerated for "beauty." The experimental group of participants would then be asked to judge whether these scenes were created by someone or not (under a timed condition), with the prediction that the scenes prerated as "beautiful" will be more likely to be considered as having been creating by someone (in comparison with a group of participants in an untimed condition). Similar studies could test the same hypothesis but concerning the perceived beauty of works of art. A series of abstract works of art (that is, works of art that look as if they had been created either intentionally or accidentally, as in experiment 3 of this thesis, see

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judgements of beauty, and not to what beauty "really" would be (be it defined in a philosophical or a neurological sense).

chapter 6, section 6.5) may be photographed and manipulated as to obtain for each of these a "beautiful" version and an "ugly" version (e.g., using colour palate, and prerated by pilot participants). The participants would then have to judge whether these works of art were deliberately created or not, with the prediction that works of art that were prerated as "beautiful" will predict ratings of deliberateness. In both studies, positive findings would suggest that people use beauty as an indicator of intentionality and, in the case of natural beauty, that this intentionality may be perceived as "divine" as a result (as natural beauty could not be attributed to human agency). This is, of course, highly speculative, but it illustrates how a cognitive anthropology of art could contribute to the study of the dynamics between art, beauty, and religion, which has long interested not only philosophers and theologians, but also paleoanthropologists (see, e.g., the work of cognitive archaeologist Mithen, 1988, 1996, chapter 9).

In this conclusion, I have recapitulated the main claims and findings of this thesis, and I have drawn some implications for anthropology of art, psychology of art, as well as for the art world. I have then reiterated the main limitations of this thesis, and I have shown how these limitations might indicate directions for further research, such as in the domain of the non-visual arts, in evolutionary studies, and in cognitive science of religion. The art experience is a rich complex phenomenon, which requires equally rich and varied approaches. I believe that a cognitive anthropology of art has the potential to allow dialogue between these different approaches, and thereby to increase our understanding of the widespread, important, and uniquely human phenomenon that is art.

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Appendix 1

Predictions

P1. The categorisation of an artefact as a "work of art" will depend on whether or not the artefact's maker intended the artefact to be a work of art, and on whether or not the viewer recognises this intention.

P2. The categorisation of an artefact as a "work of art" will also depend on "art intuitions;" an artefact that is non-functional will be more easily categorised as a work of art than an artefact that is functional, independently of the artefact maker's intention.

P3. The categorisation of an artefact as a "work of art" will further depend on its *degree* of functionality and deliberateness; for example, an artefact that is clearly non-functional and that is highly deliberate will be more easily categorised as a work of art than an artefact that is only partly non-functional and that is minimally deliberate.

P4. The appreciation of a work of art will depend on the perceived relevance of the message that it conveys; the greater the perceived relevance of the message, the greater the appreciation of the work of art.

P5. The relevance of the message that a work of art conveys will depend on the cognitive investment it requires and the cognitive contribution it brings in return; at an equal cognitive investment, a work of art that brings a high contribution will be preferred over a work of art that brings a low contribution; and at an equal cognitive contribution, a work of art that requires a low cognitive investment will be preferred over a work of art that requires a high cognitive investment.

P6. All other things being equal (such as aesthetic quality), a work of art whose artist's intention is easy to understand will be preferred over a work of art whose artist's intention is difficult to understand.

P7. The information—title, caption, artist's statement, expert's interpretation—that accompanies a work of art will have an effect on appreciation; information that facilitates understanding the artist's intention will have a positive effect on appreciation, whereas a lack of information or irrelevant information will have a negative effect on appreciation; these effects will be stronger in the case of abstract and non-representational art.

P8. Art appreciation will differ between art specialists and art non-specialists; art specialists will be more generous in their judgements and like a broader range of art than art non-specialists.

P9. Perceived effort and skill will influence art appreciation; all other things being equal (such as aesthetic quality), a work of art that is thought to have required a lot of effort and skill will be preferred over a work of art that is thought to have required little effort and skill.

P10. The cognitive factors that constrain art categorisation and art appreciation at the individual level will have an impact at the cultural level; a work of art, an art form, or an art movement that is cognitively easy to categorise as such (following predictions 1-3), and whose cognitive relevance is high (following predictions 4-9), will be culturally more widespread and successful than a work of art, an art form, or an art movement that is cognitively difficult to categorise as such, and whose cognitive relevance is low.

P11. A work of art, an art form, or an art movement that is cognitively difficult to categorise as such will generate public debate about what art is, and its appreciation will be polarized; following prediction 8, the debate will typically oppose art specialists and art non-specialists.
P12. Following prediction 10, the cognitive constraints on art categorisation and art appreciation will also influence the *cross-cultural* distribution of art forms; art forms that are cognitively efficient at conveying relevant information will be more likely to occur cross-culturally than art forms that "deviate" from cognitively optimal ways of conveying information.

P1-P3: Art categorisation
P4-P9: Art appreciation
P10-12: Art cultural distribution

Appendix 2

Summary of Studies

Study			Variables			Art		
No	Type	Design	Dependent	Independent/ Predictor	Manipulation	Medium	Domain	Prediction
1	Empirical	Correlational (mixed)	Goodness	Familiarity Effort and Skill Intention Art expertise	None	Paintings Sculptures Drawings Installations	Appreciation	6, 8, 9
2(1)	Experimental	Between-participants	Liking	Effort and Skill	Medium (painting or photograph)	Hyperrealistic paintings	Appreciation	9
2(2a)	Experimental	Between-participants	Liking Understanding	Intention	Title	Paintings	Appreciation	6, 7
2(2b)	Experimental	Mixed	Liking	Intention	Title	Paintings	Appreciation	6, 7
2(3)	Experimental	Between-participants	Artness	Intention	Artist's statement	Paintings and photographs	Categorisation	1

Appendix 3

Study 1: List of Works of Art

ID	Artist	Title	Year	Type
1	C. Johnson	Apolonius Veth	1644	Painting
2	N. Hilliard	Queen Elizabeth I	1575	Painting
3	D. Des Granges	The Saltonstall Family	1637	Painting
4	B. Gennari	Elizabeth Panton	1689	Painting
5	B. West	Sir Thomas Beauchamp-Proctor, Bt	1777	Painting
6	T. Gainsborough	The Baillie Family	1784	Painting
7	G. A. Canal	London: The Old Horse Guards	1749	Painting
8	S. Scott	An Arch of Westminster Bridge	1750	Painting
9	J. Zoffany	David Garrick in “The Farmer’s Return’	1762	Painting
10	B. West	Cleombrotus Ordered into Banishment	1768	Painting
11	J. Reynolds	Self-Portrait as a Deaf Man	1775	Painting
12	J. Wright	Vesuvius in Eruption	1780	Painting
13	George Stubbs	A Couple of Foxhounds	1792	Painting
14	Richard Wilson	Llyn-y-Cau, Cader Idris	1774	Painting
15	T. Gainsborough	Gypsy Encampment, Sunset	1780	Painting
16	J. Ward	Gordale Scar	1814	Painting
17	J. S. Copley	The Death of Major Peirson	1783	Painting
18	J. M. W. Turner	St Benedetto, Looking towards Fusina	1843	Painting
19	J. Constable	Sketch for “Hadleigh Castle”	1829	Painting
20	J. Constable	Cloud Study	1822	Painting
21	J. Constable	The Revd Dr James Andrew	1818	Painting
22	J. E. Millais	Ophelia	1852	Painting
23	W. H. Hunt	The Ship	1875	Painting
24	F. M. Brown	Jesus Washing Peter’s Feet	1856	Painting
25	J. Brett	The British Channel	1871	Painting
26	E. C. Burne-Jones	The Golden Stairs	1880	Painting
27	G. F. Watts	Hope	1886	Painting
28	J. Pankiewicz	Swans in the Saxon Garden in Warsaw	1894	Painting
29	L. Alma-Tadema	Portrait of Ignacy Jan Paderewski	1891	Painting
30	F. Jasinski	Paolo and Francesca	1903	Etching
31	D. Bomberg	Tregor and Tregoff, Cornwall	1947	Painting
32	F. Auerbach	Primrose Hill	1968	Painting
33	F. Bacon	Study for a Portrait	1952	Painting
34	H. Moore	Recumbent Figure	1938	Sculpture
35	P. Vézelay	Lines in Space No. 3	1936	Relief
36	P. Nash	Voyages of the Moon	1937	Painting
37	P. Heron	Horizontal Stripe Painting	1958	Painting
38	P. Lanyon	Zennor Storm	1958	Painting
39	T. Frost	Black and White Movement	1952	Painting
40	V. Pasmore	Synthetic Construction	1966	Relief
41	M. Martin	Inversions	1966	Relief

(continued)

ID	Artist	Title	Year	Type
42	S. Gilbert	Structure 14c	1961	Sculpture
43	H. Gaudier-Brzeska	Bird Swallowing a Fish	1914	Sculpture
44	C. Brancusi	Prometheus	1912	Sculpture
45	D. Jones	Flora in Calix - Light	1950	Drawing
46	J. Deller	The History of the World	2004	Installation
47	S. Patterson	The Great Bear	1992	Print
48	M. Dion	Tate Thames Dig	1999	Installation
49	S. Starling	Work, Made-ready	2001	Installation
50	F. Rae	Untitled (yellow)	1990	Painting
51	R. Warren	In The Bois	2005	Sculpture
52	R. Warren	Come, Helga	2006	Sculpture
53	G. Carnegie	Black Square	2008	Painting
54	G. Carnegie	rsXXII - /8-7	2007	Painting
55	D. Hirst	Pharmacy	1992	Installation
56	D. Hirst	The Acquired Inability to Escape	1991	Sculpture
57	J. & D. Chapman	The Chapman Family Collection	2002	Sculpture

Note. Set 1 (Historic): works 1-15; Set 2 (Historic): works 16-30: Set 3 (Modern): works 31-45; Set 4 (Contemporary): works 46-57. This order of presentation corresponds to the order that was used in the questionnaires when not counterbalanced. Some titles have been shortened to fit in this table.

Appendix 4

Study 1: Means and Standard Deviations of the Main Variables by Work of Art

	Variable									
	Goodness		Effort		Skill		Intention I		Intention II	
Work	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*
1	4.78	1.46	5.38	1.21	5.49	1.22	5.80	1.71	5.88	1.45
2	5.22	1.64	6.13	1.07	5.82	1.23	5.95	1.40	6.05	1.38
3	4.37	1.78	5.74	1.08	5.45	1.13	4.59	1.79	4.59	1.87
4	4.42	1.52	5.56	1.02	5.51	1.07	4.53	2.05	4.95	1.74
5	5.29	1.45	5.26	1.16	5.41	1.16	5.74	1.50	5.71	1.35
6	5.00	1.49	5.97	1.01	5.74	1.02	6.42	1.11	6.47	0.86
7	5.29	1.51	6.31	1.03	6.36	1.04	6.18	1.43	6.21	1.19
8	5.03	1.54	5.65	1.21	5.73	1.17	6.15	1.51	6.05	1.62
9	4.63	1.65	5.45	0.95	5.55	1.08	4.45	2.02	4.55	1.93
10	4.47	1.44	5.72	1.11	5.78	1.20	4.51	1.97	5.14	1.57
11	4.88	1.39	4.92	1.36	5.42	1.34	5.54	1.68	5.67	1.49
12	5.09	1.47	5.83	0.97	5.64	1.10	5.88	1.65	5.98	1.37
13	4.33	1.71	4.92	1.38	5.22	1.34	6.08	1.44	5.95	1.50
14	4.34	1.36	4.97	1.44	5.00	1.43	5.60	1.72	5.35	1.66
15	4.58	1.28	5.14	0.99	5.28	1.00	5.63	1.51	5.40	1.43
16	5.10	1.83	6.47	0.84	5.97	1.18	4.93	1.84	5.10	1.85
17	4.68	1.58	6.34	0.78	5.95	1.14	5.67	1.30	5.81	1.17
18	5.34	1.62	5.24	1.30	6.03	1.12	4.86	2.02	5.02	2.20
19	5.00	1.64	5.19	1.51	5.66	1.26	5.46	1.59	5.38	1.66
20	4.54	1.74	4.36	1.81	5.33	1.66	5.98	1.77	5.86	1.52
21	3.38	1.46	4.83	1.13	5.25	1.30	5.80	1.55	5.61	1.32
22	6.30	0.94	6.57	0.83	6.59	0.80	6.36	1.07	6.43	0.85
23	4.51	1.84	5.42	1.23	5.57	1.32	3.93	1.72	3.95	1.67
24	3.86	1.66	5.86	1.06	5.78	1.29	6.20	1.27	6.09	1.00
25	5.47	1.56	5.92	1.13	5.64	1.22	5.55	1.70	5.66	1.70
26	4.61	1.87	6.00	1.25	6.05	1.22	4.02	1.78	4.72	1.86
27	4.65	1.90	5.35	1.11	5.67	1.10	4.00	2.04	4.64	1.85
28	4.44	1.93	4.75	1.66	4.86	1.76	3.56	2.17	4.07	2.17
29	4.82	1.47	5.54	1.19	5.76	1.01	5.97	1.48	6.03	1.18
30	4.70	1.78	5.36	1.31	5.56	1.42	5.53	1.50	5.27	1.61
31	4.32	1.67	5.06	1.32	5.24	1.17	5.88	1.17	5.29	1.17
32	3.05	1.72	4.64	1.56	4.30	1.72	3.73	2.04	3.71	1.82
33	4.15	2.23	5.27	1.26	5.45	1.25	5.66	1.53	5.71	1.29
34	5.00	1.61	6.02	0.93	5.66	1.35	5.38	1.59	5.64	1.47
35	4.09	1.72	4.07	1.65	4.19	1.82	3.75	1.95	4.04	1.84
36	4.05	1.56	5.14	1.34	5.11	1.33	4.19	1.73	4.21	1.42
37	4.43	1.89	4.43	1.70	4.41	1.82	4.70	1.82	4.87	1.73
38	3.67	2.01	4.66	1.71	4.20	1.76	3.84	1.90	4.20	1.52
39	4.17	1.91	4.91	1.31	5.00	1.33	3.87	1.75	4.00	1.41

(continued)

	Variable									
	Goodness		Effort		Skill		Intention I		Intention II	
Work	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*
40	4.50	1.92	4.77	1.29	4.44	1.40	3.83	2.05	4.04	1.78
41	5.00	1.78	5.85	1.18	5.49	1.25	4.00	1.87	4.48	1.77
42	4.53	1.54	6.12	0.80	6.00	0.85	4.37	1.69	4.63	1.63
43	4.28	1.78	5.60	1.27	5.62	1.23	5.59	1.82	5.68	1.61
44	4.24	2.10	4.75	1.79	4.66	1.89	3.56	2.13	3.95	2.06
45	4.29	1.91	5.74	1.34	5.74	1.15	4.38	1.95	4.36	2.00
46	4.44	1.77	4.64	1.24	3.87	1.44	4.96	1.37	4.71	1.16
47	5.27	1.62	5.13	1.72	4.24	1.68	5.46	1.56	5.02	1.71
48	5.60	1.27	5.63	1.24	4.48	1.52	5.20	1.61	5.05	1.70
49	4.13	1.66	5.31	1.69	4.50	1.76	4.14	1.90	4.27	1.83
50	4.45	1.44	4.14	1.34	4.02	1.54	2.78	1.58	2.86	1.51
51	3.10	1.69	3.52	1.50	3.16	1.48	2.57	1.55	2.66	1.64
52	4.19	1.67	4.53	1.30	4.28	1.47	4.15	1.73	4.05	1.63
53	5.29	1.62	5.07	1.28	5.05	1.41	4.98	1.98	5.19	1.63
54	4.79	1.60	4.20	1.27	4.59	1.62	5.18	1.87	4.82	1.83
55	4.50	2.04	5.05	1.69	3.62	1.81	4.98	1.84	4.76	1.80
56	4.17	1.88	2.88	1.40	3.07	1.76	4.83	2.10	4.65	1.90
57	5.98	1.69	6.10	1.12	5.90	1.28	5.85	1.28	6.00	1.26

Note. Minimum number of ratings per cell = 37 (up to 48).

Appendix 5

Study 1: Illustrations of Works of Art

The figures originally presented in Appendix 5 cannot be made available online for copyright reasons.

Appendix 6

Study 1: Sample Questionnaire (three pages)

Sun 31/07/09

UNIVERSITY OF OXFORD

BRITAIN TATE

191

61

SURVEY

WE WOULD BE GRATEFUL FOR YOUR PARTICIPATION !

Please read this before completing the questionnaire

Dear Visitor,

This is a survey carried out by the University of Oxford with the kind permission of Tate Britain.

You will be asked **how much effort and skill you believe was required in order to create the 15 works of art which feature in this questionnaire**.

Please remember that we want to know your personal opinion and that you are encouraged to answer spontaneously. This questionnaire is anonymous.

The works that you will be asked to rate are in **rooms 9, 11, 14, 15 and 16**. You can rate the works in whatever order you want.

If you do NOT see some works of art during your visit, please do NOT rate them in the questionnaire.

Please do not forget to complete the final sheets of this questionnaire.

Please give back this questionnaire at one of the Information Desks.

✓

T10_S2_O2_ES_C17

Page 1 of 9

ROOM 9

J. M. W. Turner
St Benedetto, Looking towards Fusina

1. How much **effort** do you think went into making this work of art?

Practically no effort			Moderate effort			Extreme effort
☐	☐	☐	☐	☐	☑	☐

2. How much **skill** do you think went into making this work of art?

Practically no skill			Moderate skill			Extreme skill
☐	☐	☐	☑	☐	☐	☐

ID18

J. S. Copley
The Death of Major Peirson

1. How much **effort** do you think went into making this work of art?

Practically no effort			Moderate effort			Extreme effort
☐	☐	☐	☐	☐	☐	☑

2. How much **skill** do you think went into making this work of art?

Practically no skill			Moderate skill			Extreme skill
☐	☐	☐	☐	☐	☐	☑

ID17

J. Ward
Gordale Scar

1. How much **effort** do you think went into making this work of art?

Practically no effort			Moderate effort			Extreme effort
☐	☐	☐	☐	☐	☐	☑

2. How much **skill** do you think went into making this work of art?

Practically no skill			Moderate skill			Extreme skill
☐	☐	☐	☐	☑	☐	☐

ID16

---

15. Why did you visit Tate Britain today (you can give more than one answer)?

- ☐ To visit the Van Dyck and Britain exhibition
- ☐ To visit Altermodern: Tate Triennial 2009
- ☐ To see the Permanent Collection: Free displays
- ☐ To see/look around building itself generally
- ☐ To go to the shop
- ☐ To have a meal/drink
- ☐ To attend a talk, film or other event
- ☐ Specialist/professional interest in art
- ☐ Interest in a specific artist
- ☑ Brought by friend or relative
- ☐ Passing by/ in the area
- ☐ Other

16. Overall, how would you rate the Permanent Collection, the free displays?

- ☑ Very good
- ☐ Fairly good
- ☐ Neither good nor poor
- ☐ Fairly poor
- ☐ Very poor
- ☐ Don't know

17. Do you have any further comments about this survey?

wish there were more than 2 questions about the works

Thank you very much again for your kind participation.

Please give back this questionnaire at one of the Information Desks.

T10_S2_O2_ES_C17 **Page 9 of 9**

Note. Questionnaire for set of works 2, group of raters 5, variables Effort and Skill, counterbalanced order.

Appendix 7

Study 2, Experiments 1-3: List of Stimuli

Experiment 1

ID	Artist	Title	Year	Type
1	D. Peterson	Dust to Dust	2004-8	Painting
2	R. Bernardi	Cerchi Perfetti	2006	Painting
3	A. Monks	Wake	2009	Painting
4	R. Bechtle	Agua Caliente Nova	1975	Painting
5	D. Loeb	Marty	2009	Painting
6	D. Kassan	Self Portrait (full)	Unknown	Painting
7	B. Sullivan	Morgan	2009	Painting
8	D. Peterson	Home Next	2004-9	Painting
9	G. Thielker	Suspension	2007	Painting

Experiments 2a and 2b

ID	Artist	Title	Year	Type
1	F. Heijnsbroek	After Nature	2008	Painting
2	A. Beech	After Mussorgsky's	Unknown	Painting
3	A. Martin	A Vision in Green	2009	Painting
4	Unknown	Unknown	Unknown	Painting
5	Unknown	Unknown	Unknown	Painting
6	A. van Wyk	Abstract Nude II	2009	Painting
7	Unknown	Unknown	Unknown	Painting
8	Unknown	Unknown	Unknown	Painting
9	S. Barrett	Untitled	2010	Collage
10	S. Barrett	Untitled	2010	Drawing
11	J. Fuess	Worm Wars	Unknown	Painting
12	S. Barrett	Untitled	2010	Painting

Experiment 3

ID	Artist	Title	Year	Type
1	Unknown	Unknown	Unknown	Photograph
2	S. Barrett	Untitled	2010	Drawing
3	S. Barrett	Untitled	2010	Painting
4	N. Beaty	Self Portrait Sketch 1	2008	Drawing
5	J.-L. Jucker	Untitled	1999	Photograph
6	S. Barrett	Untitled	2010	Mixed
7	Unknown	Unknown	Unknown	Drawing
8	M. Bruggmann	Paul Bremer's Office	2003	Photograph
9	Unknown	Untitled	Unknown	Mixed
10	J. M. W. Turner	Lake Lucerne	1844	Painting
11	S. Barrett	Untitled	2010	Painting
12	S. Barrett	Untitled	2010	Painting

Note. Some titles have been shortened to fit in these tables.

Appendix 8

Study 2, Experiments 2a and 2b: Summary of Previous Research

Study	Raters		Stimuli		Method				Effect of titles
	N	Type	N	Type	Design	IV	DV	Manip. (levels)	
Cupchik et al. (1994, ex1)	48	NS	3	Sc: F-A	W	I	Understanding Liking	Title, AS (3)	Positive on Understanding
Cupchik et al. (1994, ex2)	48	S, NS	24	Sc: F-A	W	I	Understanding Liking	Caption (3)	Positive on Understanding
Franklin et al. (1993)	31	n/s	2	P: F, A	W	I	Understanding	Title (2)	Positive on Understanding
Leder et. al. (2006, ex1)	48	NS	48	P: F, A	W	I	Understanding Liking	Title (2)	Positive on Understanding
Leder et al. (2006, ex2)	48	NS	24	P: A	W	I	Understanding Liking	Title (2)	Positive on Understanding
Millis (2001, ex1)	110	NS	30	O: F	W	I	Understanding Liking	Title (3)	Positive on Und. and Lik.
Millis (2001, ex2)	102	NS	30	O: F	W	I	Understanding Liking	Title (3)	Positive on Und. and Lik.
Millis (2001, ex3)	92	S, NS	30	O: F, A	W	I	Understanding Liking	Title (2)	Positive on Understanding
Russell (2003, ex1)	120	n/s	12	P: A	B	I	Understanding Liking	Title (3)	No effect
Russell (2003, ex2)	45	n/s	12	P: A	W	I	Understanding Liking	Title (2)	Positive on Und. and Lik.

Note. Only the parameters of interest are reported. The names of the variables have been standardized. A = abstract; AS = artist's statement; B = between-subjects; ex = experiment; F = figurative; I = information; n/s = not specified; NS = non-specialist; O = other; P = painting; Sc = sculpture; S = specialist; W = within-subjects.

Appendix 9

Study 2, Experiments 2a and 2b: Titles

	Title		
ID	Descriptive	Elaborative I	Elaborative II
1	Mixed Colours on White	Impulsiveness	Brawl
2	Grey Shapes	Regret	The Gates
3	Composition in Green and Black	Curiosity	Pregnancy
4	Blue Line on Blue Background	Infinity	Night Flight
5	Trident-shaped Form	Disgust	Wounded
6	Black Curved Lines on White	Opposition	Seated Nude
7	Colourful Forms and Blotches	Exuberance	The Bull
8	Composition in Grey and Green	Hope	Field in Fog
9	Brown and White Collage	Complementarity	Moose
10	Series of Coloured Marks	Monotony	The Prisoner's Colours
11	S-shaped Colourful Forms	Attraction	The Snake Fight
12	Trail of Black Paint	Wholeness	Branch in Japanese Style

Note. Control condition: no title.

Appendix 10

Study 2, Experiment 3: Artist's Statements

	Artist's statement	
ID	Non-intentional	Intentional
1	"This shot was taken at the beginning of a nude photography session," Harriet Kay explained. "I always begin with a series of pictures taken from various angles, almost at random, and without thinking too much about the details at this stage. These preliminary shots help me to choose the point of view and lighting that I will use later in the session."	"A current trend in nude photography is to depict the human body in a straightforward, realistic way," Harriet Kay explained. "I prefer to concentrate on details and texture, such as this woman's shoulder which I photographed slightly out of focus to evoke the softness of the skin."
2	This is a piece of cardboard that Michael Hirschman uses to compare the colour and width of his pens when drawing.	This is a piece of cardboard on which Michael Hirschman tried to represent the day-to-day feelings of a prisoner.
3	"Between the creation of two paintings," Sarah Hurst explained, "I produce quick, non-elaborated pieces to relax myself, so as not to think about what I just did or what I'll do next. This is one of these "spontaneous" paintings, which I don't usually show as they are not representative of my work."	"For two years now," Sarah Hurst explained, "I have painted almost exclusively coloured dots on white canvasses. I know it may sound like a weird obsession, but I can't get bored with the infinite ways of combining colours and the many effects one can achieve with just this."
4	This is a sketch that George Turnbull drew as a study for a portrait of his best friend.	This is the final version of a portrait that George Turnbull drew for his best friend.
5	William Hunter specialises in still life photography. Especially interested in nature, he develops his films and makes his prints himself. "I use an old enlarger which I like a lot, but here one can see the downside of it; everything has to be set up manually, and here I have simply forgotten to focus the lens. One can barely recognise that these are flowers."	William Hunter specialises in still life photography. Especially interested in nature, he uses defocusing and backlighting because "they allow me to depict things in vivid, vibrant colours," such as in the flowers photographed above.

(continued)

ID	Artist's statement	
	Non-intentional	Intentional
6	This is a latex glove that Edward Browning used to paint a work entitled *Composition in Red, Green, Brown*. "It may sound weird to use gloves in finger painting," he acknowledged, "but the canvas was eight metres square and in the end I had to protect my skin from the paint."	This is a latex glove painted by Edward Browning and entitled *Art Surgery*. He explained that he intended it to be "a critique of conceptual art using their own methods as well as a tribute to Renaissance painters whose precision was quasi surgical."
7	This is an illustration plate of the anatomy of a horse's head realised by Deborah Graham for an encyclopaedia. "You don't have much flexibility when you work as an illustrator," she explained.	This is an "illustration plate" realised by Deborah Graham, who deliberately tries to imitate the old-fashioned drawing style that was used in encyclopaedias or textbooks.
8	Shot taken by Susan Gibson to measure the ambient light before taking an official portrait of American diplomat Paul Bremer. "Office light is always tricky," she explained.	Shot taken by Susan Gibson in the office of American diplomat Paul Bremer. "Instead of taking "canonical" pictures of politicians, I prefer to convey what happens "behind the scenes," in order for the viewer to have a real sense of their day-to-day lives."
9	Can design work by Megan Stone commissioned by The Coca-Cola Company. "The marketing staff at Coca-Cola had some quite definite ideas about what they would like, and I was given little flexibility in the design**.** My original designs were so different to the final product shown here, that barely anything remains that I can say came from me."	Can design work by Megan Stone commissioned by the Coca-Cola Company. "The marketing staff allowed me quite a lot of freedom and I was given the opportunity to integrate my personal ideas in my own style. I had to make a few concessions but the final product shown here was very close to the one I had intended."
10	This is a landscape that Douglas Williams painted as a tribute to Romantic painter J. M. W. Turner. "I am not satisfied with it," he explained, "as I did not manage to strike the right balance between colour and light, which is typical of Turner's late works."	This is a landscape that Douglas Williams painted as a tribute to Romantic painter J. M. W. Turner. "What I like most in Turner's later works is his subtle use of colour and the depiction of shimmering light. This creates a mysterious ambiance and this is the effect that I tried to achieve in this piece."

(continued)

ID	Artist's statement	
	Non-intentional	Intentional
11	"I am clumsy by nature," Mary Drury confessed, "and this is a sheet of paper I have walked on with paint-covered shoes... My friends think it is funny as they see a pair of twins in it."	Mary Drury tries to represent things using only one primary form that she duplicates to create other forms. This piece was done with successive applications of an inked slab. One can recognise the heads and shoulders of two people in this piece entitled *Twins*.
12	"Because of its simplicity and expressivity, this piece may look like a branch painted in Japanese style. In fact, it is just a wood board on which I had laid a chain that I needed to paint in black for another work," Edward Mason explained.	"This piece is inspired by Japanese art, which I like for its simplicity and expressivity," Edward Mason explained. "In this instance, I have tried to represent a single branch using just black paint, which I applied on a wood board using a chain."

Note. Control condition: no artist's statement.

Appendix 11

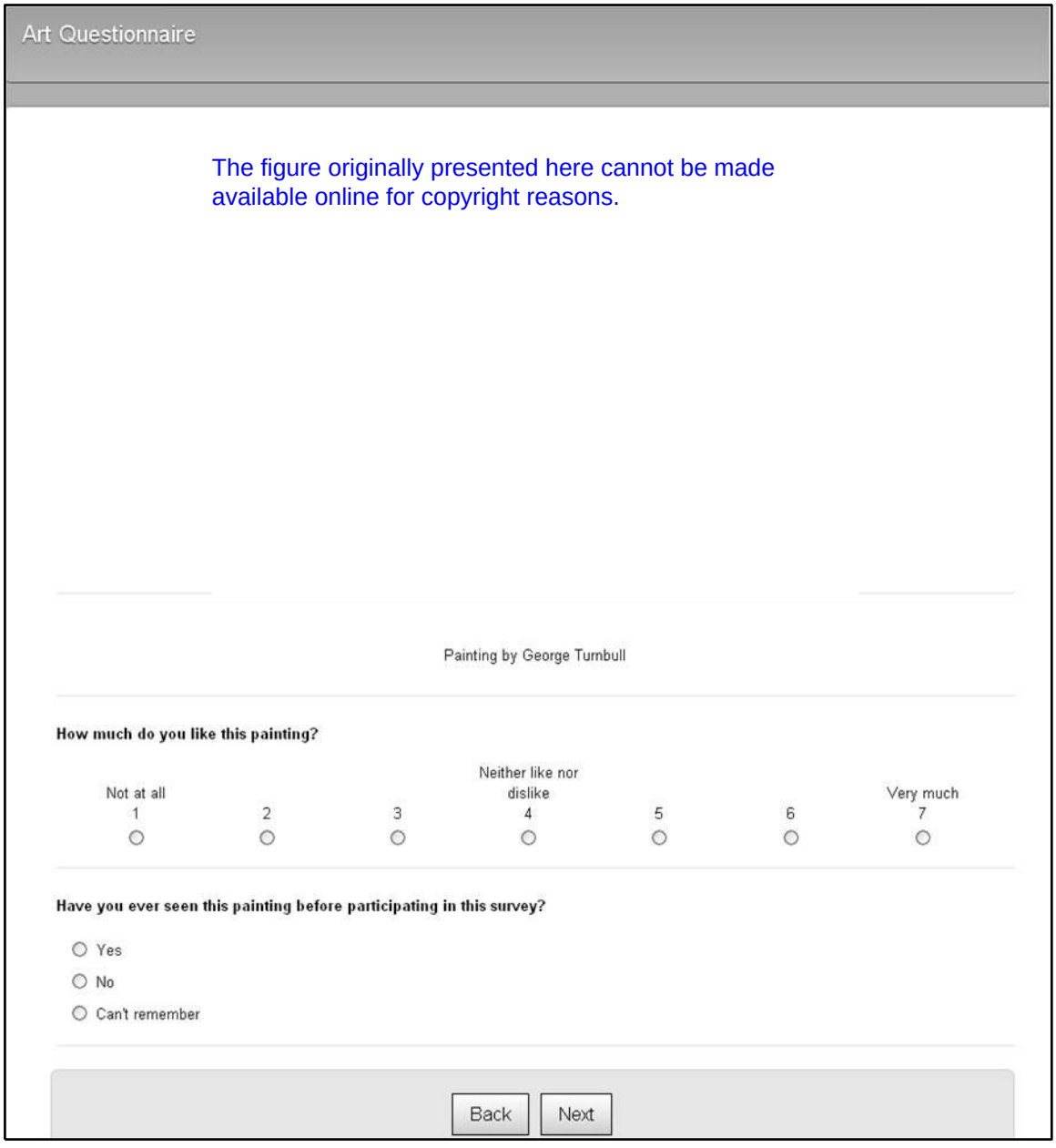
Study 2, Experiments 1-3: Fictitious Artist's names

ID	Name	Sex	Plausibility rating
1	Edward Browning	Male	4.25
2	Mary Drury	Female	4.5
3	Susan Gibson	Female	4
4	Deborah Graham	Female	3.75
5	Michael Hirschman	Male	4.25
6	William Hunter	Male	4.25
7	Sarah Hurst	Female	4.25
8	Harriet Kay	Female	4.25
9	Edward Mason	Male	4.25
10	Megan Stone	Female	4.25
11	George Turnbull	Male	4.75
12	Douglas Williams	Male	4

Note. *N* of raters = 4 (2 females). Scale: 1 = minimum plausibility, 5 = maximum plausibility.

Appendix 12

Study 2, Experiments 1-3: Sample Online Questionnaire Page



Note. Print screen of one webpage of experiment 1. Condition: High effort. Measures: Liking and Familiarity. Original stimulus in colour. A similar layout was used for experiments 2a, 2b, and 3.

Appendix 13

Study 2, Experiment 1: Illustrations of Stimuli

The figures originally presented here cannot be made available online for copyright reasons.

Appendix 14

Study 2, Experiments 2a and 2b: Illustrations of Stimuli

The figures originally presented here cannot be made available online for copyright reasons.

Appendix 15

Study 2, Experiment 3: Illustrations of Stimuli

The figures originally presented here cannot be made available online for copyright reasons.

Appendix 16

Study 1: Tate Approval

Not available in this electronic version of the thesis.

Appendix 17

Study 1: Ethics Approval

Not available in this electronic version of the thesis.

Appendix 18

Study 2: Ethics Approval

Not available in this electronic version of the thesis.

Appendix 19

Picture Credits

Figure 1: Museum Associates/Los Angeles County Museum of Art. **Figure 2:** Tate (left). **Figure 3:** Dover Publications (top left and right); The estate of Claude Lévi-Strauss (bottom right). **Figure 4:** Jason F./37signals.com (top left); Magenta Es Un Color/flickr.com (top right); Tim Thayer (bottom left). **Figure 5:** Trends in Cognitive Sciences. **Figure 6:** Transport for London (left); Simon Patterson/Transport for London (right). **Figure 7:** Gala-Salvador Dalí Foundation/Artists Rights Society (left); Columbus Museum of Art (right). **Figure 8:** Erich Lessing/Art Resource (left); Museum of Contemporary Art, Los Angeles (right). **Figure 9:** MHM-com/Wikipedia (bottom left). **Figure 10:** Irvin Rock/Robert Layton. **Figure 11:** American Anthropological Association. **Figure 12:** Howard Morphy/Robert Layton. **Figure 13:** Gucci (top row, centre); Bang and Olufsen (top row, right); Piaget SA (middle row, left); Montblanc International GmbH (middle row, centre); Apple Inc. (bottom row, left). **Figure 14:** Tate (top row, left; middle row, left and right; bottom row, left); Simon Patterson/Transport for London (bottom row, right). **Figure 17:** Robert Bechtle. **Figure 18:** Fons Heijnsbroek. **Figure 19:** Jean-Luc Jucker.

Appendix 5: Frank Auerbach (32); The estate of Francis Bacon (33); Gillian Carnegie (53, 54); Jake and Dinos Chapman (57); Jeremy Deller (46); Mark Dion (48); The estate of Sir Terry Frost (39); Stephen Gilbert (42); The estate of Patrick Heron (37); Damien Hirst (55, 56); Kettle's Yard (45); The estate of Peter Lanyon (38); The Henry Moore Foundation (34); Maureen Paley (51, 52); Simon Patterson/Transport for London (47); Fiona Rae (50); Simon Starling (49); Tate (1-6, 8, 10-27, 31, 36, 40, 41, 43); The estate of Paule Vézelay (35); Web Gallery of Art (7); www.alma-tadema.org (29); Yale Centre for British Art (9). **Appendix 13:** Robert Bechtle (4); Roberto Bernardi (2); David Jon Kassan (6); Damian Loeb (5); Allysa Monks (3); Denis Peterson (1, 8); Bill Sullivan (7); Gregory Thielker (9). **Appendix 14:** Andrea Beech (2); Jim Fuess (11); Fons Heijnsbroek (1); Jean-Luc Jucker (9, 10, 12); Alasdair Martin (3); Adri van Wyk (6). **Appendix 15:** Nate Beaty (4); Matthias Bruggmann (8); Jean-Luc Jucker (2, 3, 5, 6, 11, 12).

Note. Unfortunately, it has not always been possible to identify the copyright owner.