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EXPLAINING DEPICTION:
RECENT DEBATES IN THE PHILOSOPHY OF PICTORIAL REPRESENTATION

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ABSTRACT

Explaining Depiction:
Recent Debates in the Philosophy of
Pictorial Representation

by

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Master of Philosophy

This thesis begins with a succinct survey of theories of depiction and then turns to two highly influential contemporary philosophical accounts, namely, the aspect-recognition theory proposed by Dominic McIver Lopes, and Robert Hopkins's experienced resemblance theory. The latter two theories of pictorial representation are presented in detail before objections to both accounts are presented and assessed.

One of the central contentions of the thesis is that the aspect-recognition theory succumbs to a number of serious objections. First of all, this account rests upon a philosophically problematic notion of semantic information and consequently fails to account adequately for the possibility of misrepresentation. Arguably the theory entails that all pictures are misrepresentational. It is also argued that Lopes's claim that all pictures are belief-independent is unsound. Criticisms of Hopkins's account of depiction developed in the thesis focus on problems raised by photographic depiction as well as ways in which the ambiguity of the notion of 'experienced resemblance' blurs the distinction between misrepresentation and indeterminacy of outline shape. It is also contended that a notion that is fundamental to Hopkins's account--experienced resemblance in outline shape—leads to problems that are at least as serious as those it would appear to solve. The thesis concludes with a brief assessment of the state of the art of philosophical accounts of depiction. While progress has been made, especially with regard to the clarification of key questions, we still do not have anything like a comprehensive final theory of depiction.

DECLARATION

I declare that this is an original work based primarily on my own research, and I warrant that all citations of previous research, published or unpublished, have been duly acknowledged.

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(Leung Chi Kei, Solly)

10th August, 2009

CERTIFICATE OF APPROVAL OF THESIS

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INTRODUCTION

It is said that in Raphael's *The School of Athens*, we can find a depiction of nearly every Greek philosopher, although we might have difficulties in identifying which ones are depicted since Raphael did not leave any personal notes on the topic. Still, some of them can be identified by their characteristics depicted in the painting. For example, the Vatican Museums Online website introduces the second man, who is writing on a book, in the bottom left, as Pythagoras, and the man on the right teaching geometry as Euclid. It is uncontroversial that the aged, wise man, who is dressed in a red robe in the middle of the painting, is Plato, while the middle-aged man, dressed in blue and next to Plato is Aristotle. However, other figures in the painting are far more controversial than these two, and it is highly possible that we may never be able to definitely determine who they are if there is no further discovery of evidence pertaining to the painting.

In the painting, Plato is represented as pointing towards the heaven, and Aristotle is represented as gesturing towards the ground. Their gestures are said to be representing their philosophy—the former represents Plato's appeal to the realm of ideal forms, while the latter represents Aristotle's insistence on building knowledge on observation of the material world.

In the paragraph above, the word "represent" was used several times; however,

the word does not seem to carry the same meaning in each case. For ‘Plato is represented as pointing towards heaven’, means that we see Plato pointing his finger towards the sky, and in this case the representation is visual. However, one may ask how we know that the person in the middle wearing the red robe is Plato? Why couldn’t this figure be plausibly interpreted as representing Aristotle? And why do we say that Plato is pointing towards heaven while we only see from the painting that he points upwards? We can also extend the question to other figures in the painting. Why is it indisputable that the two men in the middle are Plato and Aristotle, while the identities of some of the other figures in the painting are controversial? It would seem that these questions cannot be answered by appeal to visual perception alone. Our beliefs or cognition also contributes to our understanding of pictorial representation: we need concepts and background knowledge to interpret what we perceive visually. Similar circumstances obtain for the other senses, such as sound and scent. When we heard a sound, what we perceive is vibrations with certain frequencies. The perception of the sound is then processed by our cognition—we search our memory for similar frequencies that we have heard, the similar experience that we have had in similar situations, and we then associate the concepts in our knowledge with the sound that we just heard. In the case of *The School of Athens*, we identify the figures by their characteristic poses and their activities. Concepts and background knowledge are therefore also crucial in the

process of identification. Difficulties arise when we have no sufficient and decisive evidence supporting the identification of the figures.

Nonetheless, problems exist even for the uncontroversial figures like Plato and Aristotle. It is believed that Raphael depicts Plato with the appearance of Leonardo da Vinci. This means that Plato did not actually possess the characteristics that we perceive him as having in the painting. The question is: who is the man in the middle with the red robe in the painting? Is he Plato or Leonardo? It is legitimate for us to reply that the figure is Plato, yet someone may reply in a more delicate way: it is a pictorial representation of Plato with an appearance resembling Leonardo da Vinci. Can an object be represented with characteristics that it does not really have? The answer would seem to be obvious: yes, it can. Just imagine a general using paperweights to represent his enemies on a map. We can reframe the question more precisely: can an object be represented *pictorially* with characteristics that it does not really have? If the answer is yes, then we may wonder how? One may also wonder what is the difference between representing an object pictorially and representing the object by other means? And is there any difference between representing an existing object and a fictional object, for example, a unicorn?

Philosophers have for quite some time been trying to answer these and other puzzling questions about this distinctive kind of representation, namely, depiction. One reason why the questions are puzzling is that some of them have not been

clearly articulated. In an attempt to rectify this situation, in my first chapter, I will identify a number of possible questions that arise in the discussion of depiction.

The discussion of depiction can be traced back as far as Plato in ancient Greece. In this relatively short thesis it will be impossible to attempt a detailed historical survey, and I shall instead only focus on important contemporary theories, especially those presented by Robert Hopkins and Dominic Lopes, in the third and fourth chapter. I will reconstruct and discuss their theories in detail, and state objections that have been put against them. In chapter seven and chapter eight, I will raise my own criticisms of Hopkins's and Lopes's proposal individually.

CHAPTER ONE
QUESTIONS ABOUT PICTURES

It may be doubted whether it is necessary, or even possible, to give an accurate definition of ‘picture’. However, pointing out the important characteristics of pictures will be helpful in understanding the nature of depiction. In answering a question as simple as ‘what is a picture?’, one may say that it is a physical object that occupies a spatial and temporal location, just as a book or a piece of paper does. Although this conception may fit paintings in museums and other places, it does not apply very neatly to pictures appearing on computer screens or huge LCD displays in Times Square or Queen’s Road in Hong Kong. Perhaps it would be good enough to say, then, that a surface is necessary for something to be a picture. For both *The School of Athens*, or a Coca Cola advertisement on an LCD screen, have a surface. For paintings, there are marks consisting of paint and other materials *on* a surface; however, when it comes to an electronic display like LCD screen, the marks are *in* the surface. Perhaps it is possible for such images to be analyzed in terms of pixels or other elements of a visual array that appear in or constitute a visible surface. Since the ontology of paintings and other visual depictions is not my concern in this essay, I shall assume that the difference between marks *on* or *in* the surface is not

significant, and I will use ‘on the surface’ in what follows for convenience. [1]

Another important question can be framed as follows: what are these marks? These marks are determinant in deciding both what a painting is and what a painting is about. These marks contribute to various visual properties including lines with different thickness, shapes, colours, etc. I borrow the term ‘design properties’ from Dominic Lopes to describe these visual properties; we can then go on to say that the design properties make up the ‘design’ of a picture. The ways marks are formed determine the presence of certain design properties. Artists paint in various ways. For example, some of them apply heavy and obvious brushstrokes on the surface, which is often a canvas. Therefore we can find design properties such as the visibility of brushstroke and thickness of pigment in painting; however, these design properties are not applicable to some pictures, such as those in slide shows or in LCD displays, since in these surfaces, the ways the marks are formed are different from those of painting on canvas. The differences between the physical properties of marks lead to different interests that we have towards corresponding surfaces. For example, artists may be interested in the heavy and bold brushworks in impressionist paintings; while some historians are interested in the event a photograph shows due to the verisimilitude brought about by the automatism of photography. Philosophers,

[1] There is not much discussion on the ontology or definition of images, especially in paintings and drawings, in existing literatures. For background on the ontology of images, see Davies 2008, and Ponech 2006.

on the other hand, have taken an interest in the general relation between the marks and the contents of pictures.

The content of a picture is always at least in part the result of the design of the picture. We can see some male figures, architectural features, etc, in the design of *The School of Athens*, and that gives us part of the content of the painting. In Jackson Pollock's *Number 30*, what we can see is only the design resulting from paint having been dripped and splashed all over the canvas. Philosophers contend that pictures like *The School of Athens* are figurative, and they represent pictorially; while pictures like *Number 30* represent by other means (if at all). Pictorial representation is a distinctive kind of representation, and it has standardly been called 'depiction' in the philosophical tradition. The entities that a picture depicts are its subjects. The subject of a picture, which can be fictive or real, is often decided by its creator—in many cases, the artist. The artist creates and arranges the design properties of a picture that pictorially represents its subjects. The spectator sees the surface of a picture and the subjects depicted. The most puzzling part is how the spectator sees the subjects from the design of the picture, which consists of different design properties. Before taking up this most puzzling topic, we first have to formulate our questions correctly and carefully in order to have an effective and efficient discussion. To that end, I shall now examine how the questions have been framed by two prominent participants in the resent valuable and lively philosophical

debate on depiction—Dominic Lopes and Robert Hopkins.

The Questions Concerning Depiction

In his paper, "Pictures and the Representational Mind" (2003) , the first question Lopes purposes is:

L1: "what is a representational picture?" (633)

The answer to this question would be a "*theory of pictures*". As I have pointed out, we can search for a definition of all pictures, including figurative and abstract pictures. However, such a broad definition is not necessary for our purpose, which is the understanding of the nature of depiction. Therefore, what Lopes means by a "theory of pictures" is indeed a theory of representational pictures. The second question that he asks is

L2: What is the relationship between experiences of seeing the subject in the picture and experiences of actually seeing the subject in person?

This question concerns the nature of the experience that we have of the subjects in pictures. Lopes contends that when one is looking at the subject in the picture, one always has "an experience *as of*" the subject. However, it is obvious that our experience of the subject *in* the picture differs greatly from our experience of the subject in person, for the former experience is about a static, flat, and

two-dimensional surface with marks, while the later is about a three-dimensional object. A theory of pictorial experience is needed to explain this phenomenon. The third question that Lopes raises is:

L3: Why do we see particular objects in the marks on a picture surface, rather than seeing something else?

We see two male figures in the middle of the design of *The School of Athens*, which are Plato and Aristotle, but why are these figures the pictorial representation of Plato and Aristotle rather than other objects, say, two horses or two towers? A theory of depiction is necessary to answer this kind of question.

These three questions are indeed closely related. We can use a theory of pictorial experience to answer L3, the question of depiction. We see the particular object in the design of the picture because the experience that we have when we look at the picture determines what the picture represents. This is the stance embraced by Richard Wollheim, Christopher Peacocke, Robert Hopkins, and John Hyman. One can also answer L2 in terms of the answer to L3; we can explain the experience that we have when looking at a picture by appealing to a theory of depiction. We have an experience "*as of*" the subject because the subject is pictorially represented by the picture. This explains why the experience has a content involving the subject in the picture. This is the stance embraced by Lopes. Similarly, we can answer the question about what a representational picture is by

appealing to either a theory of pictorial experience or a theory of depiction. The design of a picture represents the subjects, thus the picture is a representation of its subjects by inducing content-specific experiences in spectators. One can also approach the question by appealing to a theory of depiction. For example, some theorists use representational theories of signs and symbols, like languages, to define what a picture is.

After looking at how Lopes formulates questions concerning pictures and pictorial representation, we turn to Robert Hopkins' formulations.

> [H]1 What is a picture?
> [H]2 What is pictorial representation?
> [H]3 What is the experience pictures characteristically generate?
> [H]4 What is it to understand a picture? (Hopkins 2003, 653)

Hopkins' formulations are similar to those of Lopes. H1 searches for a theory of pictures. However, when one says that a picture is a representation, the question that follows is what kind of representation is it? It is possible, and indeed probable, that pictures involve various kinds of representation, such as pictorial representation and semiotic representation. As searching for a definition of pictures is laborious and, maybe, fruitless, one narrows the scope and searches for the nature of *pictorial* representation. H2 searches for a theory of pictorial representation, or what we called a theory of depiction, and we can approach the question by the answers to H3 or H4, which are, Hopkins contends, respectively, the experiential approach and recognitional approach to depiction. An experiential account of depiction explains

our understanding of a picture based on the experience elicited by the picture when ‘we’(normal human subjects) look at it: we understand the picture as what the elicited experience is. Conversely, the recognitional account of depiction claims that we understand pictures by recognizing the subjects in pictures the way we recognize the subjects in the flesh. And it is this understanding that explains the nature of depiction. Advocates of the recognition theory, like Schier and Lopes, do not necessarily reject experiences elicited by pictures since the experience that we have when we look at pictures can be the product of our understanding.

After stating Lopes’s and Hopkins’s formulations of the questions, it is obvious that some of their formulations are similar, while some others are quite different. L1 and H1 are similar since both ask for a definition of picture, and more specifically, representational pictures. However, Lopes and Hopkins have a disagreement here. Lopes thinks that there are pictures that are non-representational: “Some philosophers want to answer a much broader question about the nature of all pictures, including non-representational or abstract ones” (Lopes 2003, 634). On the contrary, what Hopkins says implies that all pictures are representational, although they represent in different ways: “Perhaps only pictures represent pictorially, but not all do: consider abstract paintings” (Hopkins 2003, 653). This leads to the debate whether all pictures are representational. If all pictures are representational, abstract painting or even doodles are representational as well. However, it is controversial

whether abstract paintings are representational, for the purpose of some abstract paintings is to present us with beautiful and visually interesting formal elements, like the contrast between colours, the relations between lines and shapes, etc. This traces back to the fundamental question that what a representation is. I shall not, however, survey this controversial notion of representation-in-general in this thesis. I shall adopt Lopes's stance and assume that not all pictures are representational, as some, like abstract paintings, are non-representational.

L2 and H3 both concern the nature of pictorial experience. Lopes and Hopkins offer similar interpretations of what is at bottom just one question, although they hold different opinions on the roles of pictorial experience in depiction. Lopes contends that pictorial experience is the product of depiction, while Hopkins contends that pictorial experience is the core of the theory of depiction.

L3 and H2 are similar in seeking a theory of depiction. Both Lopes and Hopkins believe that the question can be answered by different theories of depiction, namely the experiential account or the recognitional account of depiction.

Hopkins thinks that pictures play an important role in human communication. So our understanding of the content of pictures needs explanation. Therefore he includes H4 in his set of questions. However, it is not quite clear what Hopkins means by *understanding*. Is seeing what is depicted in the picture, as intended by the artist, an understanding of the picture? Take *The School of Athens* as an example.

Does one understand the picture when one sees the male figures and other subjects in the painting? Or is it necessary to identify some of the figures by name in order to have a real understanding of the picture? Furthermore, does one need to have the knowledge, which is exclusive to the painting, that the painting is actually meant in praise of antiquity? These and a host of similar questions that could be raised indicate that the notion of "understanding" is a vague one. The meaning of 'understand' has to be clarified if we are to state its importance with any precision. One way this has been attempted is to postulate the existence of a specifically visual content that can either be understood or not. Either someone understands that a particular figure is depicted as pointing upwards or not. It is a separate question whether this figure is identified as Plato, Aristotle, or someone else, and quite another question whether the artist is understood as having expressed this or that attitude towards this ancient philosopher. Just as the name of his book *Understanding Pictures* suggests, Lopes equates the question of depiction and question of pictorial understanding. However, as what I have argued, these two questions, although they are intimately linked, deserve individual treatments.

After analyzing the sets of questions in relation to depiction proposed by Lopes and Hopkins, I agree with Hopkins that a separate question of understanding of pictorial content should be included. Therefore, I would adopt Hopkins's set of questions, which are:

Q1 What is a picture?
Q2 What is pictorial representation?
Q3 What is the experience pictures characteristically generate?
Q4 What is it to understand a picture? (Hopkins 2003a, 653)

After discussing the questions concerning pictorial representation, I now turn to a brief survey of various theories that try to explain depiction.

CHAPTER TWO

A BRIEF INTRODUCTION TO EXISTING THEORIES OF DEPICTION

The mimesis theory of representation was the dominant theory of depiction until the publication of Nelson Goodman's influential book *Languages of Art* in 1969. Since then, depiction has remained one of the central topics in aesthetics. In this chapter, I explore different theories of depiction—including the objective resemblance theory, the experienced resemblance theory, the semiotic theory, the illusion theory, the seeing-in theory, the make-believe theory, and the recognition theory, so as to provide the crucial background to a detailed discussion of Dominic Lopes's aspect recognition theory and Robert Hopkins's experienced resemblance theory.

The Resemblance Theory

In *The Republic*, book 10, Plato argues against painting because painting is just an imitation of appearance that is "far removed from truth". Although Plato contends that painting, like other mimetic art forms, has a negative effect on the pursuit of the *forms*, he holds that mimetic art represents by imitating the appearance of its subjects. The imitation of appearance, resemblance in short, undeniably matches our

intuition of how pictorial representation works, and I shall call such a theory the 'objective resemblance theory'. The objective resemblance theory holds that a picture pictorially represents its subject only if the picture possesses an actual resemblance to its subject. However, in spite of his doubts about the very idea of 'objective resemblance', Goodman refutes the objective resemblance theory by arguing that even if such a thing as objective resemblance exists, it is neither necessary nor sufficient for depiction. He argues that, first, resemblance is reflexive while depiction is not. *X* resembles itself, but *x* does not depict itself. Second, resemblance is symmetric while depiction is not. *X* resembles *y* as much as *y* resembles *x*; but while a picture, *x*, represents its subject, *y*, its subject *y* does not represent the picture. The above arguments prove that resemblance is not sufficient for representation. In addition, since everything may stand for any other thing (for someone), resemblance is not necessary for depiction. Therefore Goodman concludes that resemblance is neither necessary nor sufficient for depiction (Goodman 1976, 3-5).

Although Goodman's critique successfully points out the deficiencies of the objective resemblance theory, some philosophers have contended that some notions of resemblance can still play a role in the theory of depiction. I return to this topic in the last part of this chapter.

Following Goodman's line, Lopes questions the resemblance theory with what he calls the 'independent challenge'. With reference to Trevor Pateman and Margaret Deuchar (Lopes 1996, 16), Lopes proposes that sign languages can be divided into three categories. Some sign languages do not visually resemble their referents, so similarities perceived between these signs and what they stand for are independent of the understanding of these signs. The second category includes signs that can be understood by perceiving the similarities of the signs and their referents before knowing what they stand for, and these similarities are 'representation-independent'. As for the third category, in some cases the similarities of signs and their referents become obvious only when the meanings of the signs are known. This kind of resemblance is 'representation-dependent'. Lopes argues that many resemblances between pictures and objects represented that we notice in everyday life are actually representational-dependent. Resemblance can be the product, rather than the origin, of our understanding of pictures. Since resemblance is inseparably connected to depiction, it is hard for us to determine whether it, as Goodman proposes, is the result of depiction, or is the origin of depiction. The independent challenge is the idea that although not all resemblances are necessarily representation-independent, resemblances that we have to perceive in order to identify the subject of a picture need to be representation-independent. This

means that we cannot explain what depiction is by merely appealing to resemblance intuitively; the resemblance theory has to prove that the resemblance used to explain depiction is representation-independent. Everything resembles other things in some aspects, but not everything depicts. Therefore the resemblance theory has to state what the resemblance is based on, and this basis has to be unique to pictures, otherwise depiction cannot be distinguished from other kinds of representations.

One possible answer appeals to intended resemblance. There are a number of logically distinct theses related to both the notion of intention and resemblance, and a variety of theses can be constructed using different combinations of these notions. Lopes argues against a very strong thesis, which holds that a picture depicts the subject if and only if the artist intentionally painted the picture resembling the subject in some aspects. The School of Athens depicts Plato not only because part of the design resembles Plato, but also because Raphael intended to do so. However, Lopes argues, intended resemblance is not sufficient for depiction, for it fails to meet the independent challenge. Lopes writes, “on the one hand, to be guided by knowledge of how a picture is intended to resemble its subject is to seek representation-dependent similarities” (Lopes 1996, 19). If a perceiver cannot understand the picture and what it depicts only by noticing the resemblance of the picture and its subject, but must also know what the artist intended to represent, then

the resemblance that the perceiver notices is just representation-dependent. Second, intended resemblance is not sufficient for depiction. Carpets and wallpaper samples are intended to represent by resembling what they represent; however, they do not depict. Therefore the resemblance theory has to identify kinds of salient similarities in order to meet the independent challenge. I return later to other weaker intention conditions in the literature in chapter four for Hopkins's experienced resemblance theory in outline shape.

The Experienced Resemblance Theory

In order to avoid the difficulties that the objective resemblance theory faces, some theorists, for example, Christopher Peacocke (Peacocke 1987), Robert Hopkins, and John Hyman (2006), defend the 'experienced resemblance theory'. The experienced resemblance theory differs from the objective resemblance theory in that according to the former, the resemblance between the picture and its subject is not objective, but experiential (where the experience in question meets some standard of correctness). Although a picture resembles another picture much more than it resembles its subject, the experience that one appropriately has when looking at the painting resembles the experience of looking at the object face-to-face. The experienced resemblance theory is a generic categorization; different experienced

resemblance theories appeal to different aspects of the experience that enable such resemblance. For example, Hopkins appeals to the resemblance of outline shape between objects in the pictorial experience and the object in reality. Hopkins's experienced resemblance theory will be discussed in detail in Chapter 4.

The Semiotic Theory

After rejecting the objective resemblance theory, Goodman introduces his semiotic theory of depiction. According to the semiotic theory, a picture represents by virtue of conventional symbol systems, in which rules and conventions are set up so that the users of the systems can understand what a given expression is about. We understand what a picture is about because the picture functions within a pictorial system and uses symbols that we have learnt. Since resemblance is not necessary and sufficient to pictorial representation, what a picture represents is solely determined by the rules and conventions of the system related to the picture being interpreted. We see an elegant woman in the *Mona Lisa* because the symbols that compose the design of the painting represent an elegant woman given our convention; a viewer from a fully distinct culture with different conventions may see a pink elephant in the painting because the same design may indeed represent a pink elephant according to some alternative conventions. Yet if that is so, what

distinguishes pictorial representation from other kinds of representation, say, languages? Goodman proposes that symbols in pictures are ‘analogue’ and ‘relatively replete’. By ‘analogue’, Goodman means that the slightest change to a pictorial symbol would result in a different representation. Whereas the font of the inscription ‘*dog*’ is different from that in ‘**dog**’, the change does not normally affect what the word means; however, even adding a single black dot to a picture of an apple could change the representation from an apple to an apple with a certain property, namely a black dot on its surface. Pictorial symbols are also relatively replete in the sense that surface properties of pictures are more representationally significant compared to other forms of representations. In other words, in a picture more surface properties are representationally relevant. The colour of a painting, the size and the thickness of brushstrokes, etc. affect the representational content of a picture. The precise width of the lines in the inscription of a character such as ‘g’ does not in the same way factor into the fact that the inscription is a token of the character-type ‘g’.

The semiotic account of depiction is appealing in some respects. First, pictures do have compositional elements just like languages. The composition of a picture is discussed as the arrangement of different parts and objects in a picture; different compositions deliver different meanings and represent differently. In this respect,

pictures have semantic properties. Second, the symbol system approach to depiction squares easily with the variety of pictorial styles. Pictures from different conventions differ in style; this may be due to the fact that pictures belong to different symbol systems, which may be as arbitrary as verbal languages. Nonetheless, the semiotic theory faces several challenges. First, even if pictorial styles are partially conventional, they do not have to be fully conventional, as Goodman suggests. According to Goodman, the content of a picture is determined entirely by the function of symbols in a certain pictorial system. The same content may represent differently in other systems. Hence, the content of a picture does not determine what the picture represents, but depends on the conventions and the rules of the pictorial system. However, it is far from obviously true that anything can visually depict anything; instead, it is more plausible to think that the visual design of a picture determines its specifically pictorial content, and that this content to some extent determines what the picture is about. In addition, when viewing a picture, we seem to understand what the picture means without relying on any concept of pictorial systems. Children can be observed to recognize the visual content of pictures at a stage in life where it is implausible to say that they have mastered a set of conventions or an arbitrary symbol-system. The second objection is closely related to the first: the arbitrariness that the semiotic theory postulates makes this theory

unable to account for the picture viewing experience, namely, the seeing-in experience. Following the semiotic theory, the viewing experience of pictures is the same as the experience of reading a description, and it is a mistake for semiotic theory to ignore the perceptual experience totally. Third, human beings possess some capacities pertaining to depiction that the semiotic theory cannot account for. Nowadays people learn about unseen objects largely by looking at pictures. Children learn what a lion looks like by seeing a photograph of a lion, and they are able to identify lions when they see real ones in a zoo. Pictorial systems cannot account for this human universal perceptual capacity since if pictorial symbols are arbitrary, the pictorial symbol that stands for lion in one symbol system may not be the same as the one that has the same function in another system. In addition, such a capacity is not found in sign systems such as languages, for by learning the word 'lion', one cannot know what lions look like when one encounters real lions[2].

The Illusion Theory

Illusionism is another theory of depiction that originates from Plato's discussion of mimetic art. The word 'illusion' is used in different ways in the

[2] For more detailed objections to Goodman's semiotic theory of depiction, see Schier 1986.

literature. It is important to distinguish, for example, between illusion and delusion. Plato writes in *Republic*:

> [A] painter, we say, will paint us a cobbler, a carpenter, and other craftsmen, though he himself has no expertness in any of these arts, but nevertheless if he were a good painter, by exhibiting at a distance his picture of a carpenter he would deceive children and foolish men, and make them believe it to be a real carpenter. (598b-c)

In Plato's example, the children and the men do not only have an experience that is phenomenally indistinguishable from the experience of seeing the carpenter in person, they also have a belief that they are actually seeing the carpenter face to face; therefore Plato's example is a case of delusion. A delusion differs from an illusion in the sense that delusion is necessarily cognitive, nonetheless, an illusion can be either perceptual or conceptual, or both. For example, when we look at a Ponzo's illusion, although we suffer from the visual illusion that the upper line is longer than the lower line, we may have the knowledge, and hence the belief, that they are actually the same length. Therefore a perceptual illusion is not necessarily accompanied by a cognitive illusion. If an illusion is both perceptual and cognitive, then it is a delusion. The delusion theory of depiction receives little support nowadays since it does not normally match the viewing behaviors of spectators. Although the delusion theory fails to account for the viewing experiences of most kinds of pictures, it does explain that of some pictures, for example, *trompe-l'œil* pictures.

E. H. Gombrich is one of the advocates of illusion theory (Gombrich 1960). Gombrich holds that a picture depicts its object only if the picture elicits an illusion in its viewers to the effect that their experience of viewing the picture is phenomenally indistinguishable from viewing the object face-to-face. Although the illusion theory had been popular since its proposal by Descartes, it has very few advocates nowadays since it has some obvious deficiencies. The first problem with the illusion theory is that even if we grant that some pictures, like *trompe-l'œil* pictures, do elicit such illusions, not all pictures do. The experiences of viewing drawings, engravings, and some other kinds of paintings apparently differ from the experience of seeing the depicted objects face to face, and these pictures hardly elicit illusions. Second, illusion theory does not explain how the design features contribute to the representational content. According to Gombrich, one's attention can only oscillate between seeing the designs on the surface, or seeing the objects represented; seeing both at the same time is impossible.

The Seeing-in Theory

Although one may reject Gombrich's claim that the viewing experiences of pictures are illusionistic, one can still explain depiction by appealing to viewing experience. Richard Wollheim's 'seeing-in' theory is one of the influential

approaches to depiction in this vein. In “Seeing-as, seeing-in, and pictorial representation”, which is a chapter of his book *Art and Its Objects*, Wollheim (1980) contends that seeing-in is different from seeing-as in two respects. The first distinction between seeing-in and seeing-as is based on a linguistic constraint. Seeing-in allows not only particulars to be seen, but also states of affairs; whereas seeing-as does not allow states of affair to be seen, but only particulars:

> [T]he object of seeing-in may be given by a name or description but it may also be given by a sentential clause: however, the only licit way of giving the object of seeing-as is by use of a name or description. An example: If I am looking at x, and x is a particular, I can see a woman in x, and I can also see in x that a woman is reading a love-letter: but, whereas I can see x as a woman, I cannot see x as that a woman is reading a love-letter (Wollheim 1980, 210).

The second difference between seeing-as and seeing-in according to Wollheim is the ‘localization requirement’. When one sees *x* as *y*, there are some parts of *x* that one sees as *y*; in other words, if *x* is said to be seen as *y*, one has to be able to specify which part of *x* is seen as *y*. However, seeing-in need not meet the localization requirement since seeing-in is a kind of representational seeing; one “neither have[has] nor expected to have a responding answer” when one sees objects in a picture because one can answer no more than ‘I see the object in the picture’.

Even though one may not agree with these two distinctions of seeing-as and seeing-in, seeing-in is used widely to describe our experience of seeing the object represented in pictures. According to Wollheim, seeing-in has two characteristics.

When we look at marks or patterns, no matter how they are made or where they are, we can freely associate these marks and patterns with objects that we imagine. One may see a rabbit in a cloud, or a battle in the stains on a wall. However, one would not necessarily say that the cloud depicts a rabbit, or that the wall depicts a battle. This is because in spite of the marks or patterns on the surface, there is a standard of correctness that governs what is correctly seen in the picture—namely, the artist's intention. We might *see* a spider in Pollock's *Out of the Web*, however, we are not suppose to see a spider in the painting because Pollock, who painted the painting, did not intend the viewers to see a spider in the painting; we are right to see a man with a red robe in the middle of *The School of Athens* because Raphael painted the surface with the intention that such figure could be seen by its viewers. This kind of intention, which partially governs the object of the representation when we see a picture, is the standard of correctness of pictorial representation.

The second characteristic of seeing-in is twofoldness. Twofoldness is the idea that the experience of viewing a picture simultaneously involves an experience of seeing the designs on the surface and seeing the object represented. Wollheim offers different reasons in support of this famous claim about twofoldness. The first reason supporting twofoldness is that the uses of various design properties by painters are praised by spectators for producing different representational effects. These effects

can only be explained by our attention to both the design properties and the objects that we see in pictures. Wollheim also draws an analogy between pictures and poetry when we appreciate a poem, we are simultaneously aware of both the sounds and the meanings of the words. The second reason Wollheim proposes in supporting twofoldness is that the shapes of the object depicted in the picture do not show perspectival distortion, which is necessarily brought about in the case of viewing the actual object face-to-face when a spectator moves from the standard viewing-point. Wollheim argues that this perceptual constancy shows that the spectator is not merely visually aware of the object depicted but also of the surface properties of the picture. Wollheim's third argument in favor of twofoldness, which is relatively weak compared to the other two arguments, is that the twofold experience has a distinctive phenomenology: seeing the object in a representation is experientially different from seeing the object face-to-face.

The seeing-in theory gives a detailed account of what the picture viewing experience is like; however, I would consider it to be merely a theory that points out some of the characteristics of depiction, in Wollheim's sense, but not a theory that *explains* depiction. What I have in mind here is that this account does not answer the core question about depiction: how can objects be seen in a marked surface? Even Wollheim himself is pessimistic about the possibility of explaining depiction with

the seeing-in theory. He writes “Seeing-in is triggered off by the presence within the field of vision of a differentiated surface. Not all differentiated surfaces will have this effect, but I doubt that anything significant can be said about exactly what a surface must be like for it to have this effect” (Wollheim 1987, 46). In other words, although it can be observed that something like ‘seeing-in’ happens, the conditions under which this phenomenon does and does not occur have yet to be outlined.

The Make-believe Theory

Although Wollheim’s seeing-in theory does not explain depiction, some theories, like Hopkins’s experienced resemblance theory and Kendall Walton’s theory of make-believe, adopt the seeing-in theory to account for the distinctive experience of depiction. According to Walton, pictures are props in visual games of make-believe. Nearly everyone has engaged in games of make-believe during their childhood. Children riding on a plain stick may imagine that they are actually riding on horses; or children engaging in the ‘family members pretending game’ may imagine a mud pie as a real pie. Of course the stick is not a real horse and the mud pie is not a real pie, but they are make-believedly, or in other words, it is imaginarily true that there is a horse and a pie. The stick and the mud pie are the props in games of make-believe that help players in the game participate physically and

psychologically. Similar to the functions of the stick and the mud pie, pictures are props in visual games of make-believe. When we are viewing a picture of a ship at sea, we imagine, of our perceiving of the marks on the surface that it is a perceiving of a ship at sea. One observes the connection between the marks and the depicted object. We do not actually see the sea at sea, but we fictionally do so.

Just like all kinds of games, games of make-believe are governed by game rules. Imagining mud pies as real pies, children fictionally eat pies by pretending to bite pies. They do not actually bite into pies. This is because in the game, pretending to bite pies is fictionally identical to biting pies. If you really bite the pie, the children may complain about what you do because in such a game, really biting pies is against the rules. Similarly, visual games of make-believe are also governed by game rules, or what Walton calls ‘principles of generation’. These principles are internalized in our perceptual capacity (Walton 1990, 302). Rejecting Goodman’s strong claim that depiction is governed by conventional rules, Walton writes, “Are the principles [of generation] biologically grounded, as Wollheim thinks the capacity for picture perception is, or cultural artifacts, as Goodman contends? I am sure they are some of both. The proportions do not matter” (Walton 1990, 301-2).

The Recognition Theory

The recognition theory of depiction was proposed by Flint Schier. The recognition theory is based on the thesis that human beings possess a universal recognitional capacity. We recognize the object in a picture by employing the same recognitional capacity that we would use to recognize the object in person. Schier defines recognition in terms of interpretation: one recognizes an object if one visually interprets it as such by employing the recognitional capacity. A picture represents an object if the picture triggers the visual interpretation of the object in the viewer. Lopes adopts the recognition theory and develops it into the aspect recognition theory. In the next chapter I turn to Lopes's account in detail.

CHAPTER THREE

THE ASPECT-RECOGNITION THEORY

This chapter mainly introduces Lopes's theory of depiction—the aspect-recognition theory. The account is a kind of hybrid theory of depiction, as it has both a symbolic and perceptual nature. In what follows, I will lay out Lopes's formulation in detail based on his book *Understanding Pictures* (1996).[3]

Pictorial Reference

Adopting a denotative symbol system—a system in which symbols represent by denoting, or referring to entities—as the core of a theory of depiction, Lopes surveys different theories of pictorial reference to answer the question how pictorial symbols refer. He first rejects Goodman's anti-perceptualism, which is the idea that pictorial reference does not depend on the content of the picture, his reason being that the descriptive theory of naming is inconsistent with Goodman's account. In addition, a genetic or causal account of reference proposed by Saul Kripke (1980) is proven insufficient to determine the denotation of pictorial reference. Lopes then introduces his own account of pictorial reference founded on Gareth Evans's theory

[3] In this chapter, pages numbers refer to *Understanding Pictures* unless specifically noted.

of information-based identification (Evans 1982). Accordingly, an adequate understanding and assessment of Lopes's claims about depiction requires some reference to Evans's ideas about information.

According to Evans, information states, which are the mechanisms for information transmission and the storage of information systems, are usually associated with "the sub-personal level of the brain, neural processes, and psychological mechanism" (102). In addition, information states are 'belif-independent' and 'non-conceptual'. The contents of information states are not affected by beliefs and desires. In a Ponzo's illusion, we still perceive the top line as longer than the bottom line even when we know that they are actually the same length; hence information states are belief-independent. With regard to their 'non-conceptual' status, the contents of information systems could consist of properties of which the subject does not have concepts. Using Lopes's example, "in order to see and respond to a spectrum of colour, one need not have a concept of every visible colour" (103).

Moreover, a piece of information is "of" the source of that information, which is the input of the information system. The reliable transmission of information results in a reliable information system, in which the content of an information state matches the properties of its source; contrarily, an unreliable information system,

because of unreliable transmission, may lead to distorted information. A paradigm of an information system that Lopes mentions is a mechanism like a camera. A photograph, which is a piece of information, is “of” whatever object reflects the light to the film: in other words, object is the source of the information. The resulting image may not be an accurate representation of its subject, since accuracy depends on the reliability of the system, which in the example refers to the mechanism of the camera.

Information-based identification

When someone possesses a piece of information, he can identify the source of the information in two ways: by identifying the source 1) as whatever was actually the causal origin or source of the information, and 2) on the basis of its content. Identifying the source as whatever was its actual source does not depend on either the content or the reliability of the system; one can trace the source by knowing the causal history of the information. However, this method of identification requires “a sophisticated conception of the information system and of what counts as a source” (104). On the other hand, identifying the source by the content of the information depends on the reliability of the system. We adopt different ‘modes of identification’ towards different kinds of content of informational states.

Constraints on thought

According to Evans, while the information system and accompanying processes of identification function at a sub-personal level, "much of the importance…of information-based modes of identifying objects lies in their making available certain ways of thinking about and hence referring to them" (105). The thoughts about objects that enable us to identify these objects as the source of information, and this by means of uptake of a particular kind of content are called 'information-based thoughts'. As this is a somewhat obscure way of putting things, resource to examples is important. One example mentioned by Lopes is that we think of an object by having perceptual contact with it. Such a thought is information-based thought, since the content of the thought originates from the perceptual information system. Information-based thoughts are confined to two constraints—'Russell's principle' and the 'generality constraint'. Russell's principle refers to the idea that in order to think of an object, one must possess the concept of the object that distinguishes the object from all other objects. Elaborating on Russell's principle, we derive the generality constraint that in order to have the thought that '*a* is *F*', one must have a concept which enables one to understand thoughts like '*a* is *G*', '*a* is *H*', and so on for all the properties that one has a concept of; likewise, for having the thought '*a* is *F*', one must have a concept which enables one to understand the

thoughts '*b* is *F*', '*c* is *F*', and so on for every object one has a concept of. Therefore, the capacity of having a concept of an object is constructed by understanding the commonalities between all the thoughts about the object. It is worth mentioning that these two constraints only apply to source identification based on the content of the information. Identification of the source as whatever was the actual source, this is, by understanding the causal history, is not subject to these constraints.

As I have mentioned, to trace the source of a piece of information with a particular kind of content, one has to adopt an appropriate 'mode of identification'. The 'demonstrative mode' is one paradigmatic case that satisfies the constraints on thought. In Lopes's words:

> Demonstrative identification requires that the perceiver maintain a perceptual connection with an object which provides information about it over a period of time. (106)

In addition,

> [D]emonstrative identification enables a perceiver to think of an object as occupying a unique path in space and time. To understand a demonstrative expression is to think of its referent on the basis of an ongoing perceptual link with it that meets Evans's two constraints on thought. (106)

Lopes takes Evans's idea of perceptual demonstratives as a suitable model for pictorial reference. Pictures are part of an information system. Every picture, as a piece of information, carries perceptual information of its subject. A picture depicts its subject, as the source of the information, only if the perceiver identifies the

subject by employing a particular mode(s) of identification with the information provided by the picture. This account of depiction is a hybrid theory in the sense that, on the one hand, an object is the picture's subject only if it serves as the source of the information in the causal history of the picture; on the other hand, the content of the picture is crucial to the identification of the source of the information, which is the subject of the picture. That is why the perceptual aspect of depiction is compatible with a denotative symbol system.

Pictorial Aspects

The next question Lopes tries to answer is what makes pictures distinct from other forms of representation. Lopes's answer to the question appeals to a notion that is a fundamental component of his aspect-recognition theory—pictorial aspects.

The specificity of pictures, which refers to the distinctive features of pictures' content as well as to their design, is their structural selectivity. There are two kinds of selectivities relevant to pictures, and Lopes believes that only the second kind is essential to pictures. The first kind of selection is derived from the "impracticability of determinacy", which refers to selections made by artists when they determine what properties the object is represented as having, or not having, where the rest remains non-committal—meaning indeterminate. For example, a painter may choose

to depict a girl as having freckles or as having no freckles. The second kind of selectivity is derived from "structural features" of depiction (118). Someone may create a picture from points of view that preclude the picture from representing its subjects as having or not having certain properties. One can draw a figure whose head is blocked by a signboard, so that whether the figure is wearing a hat remains indeterminate, and this indeterminacy is caused by the content of the representation. Borrowing Ned Block's terminology, in Lopes's example, the first kind of indeterminacy is 'inexplicitly non-committal', and the second kind of indeterminacy is 'explicitly non-committal', to the question whether the object is represented as hatted or not (118). Lopes argues that descriptions, whether verbal or written, are never explicitly non-committal as pictures are. Although a description may state that it does not go into whether what it represents has or does not have a certain property, it is not necessarily being non-committal regarding that property; this is because describing something as having one property does not stop it from being described as having, or not having, other properties. Quoting Lopes's example, saying "I have no comment about allegations of the mayor's corruption" can be supplemented with "except to say she's an extortionist". Lopes contends that the commitments and non-commitments of a picture are what he calls the 'aspect' of the subjects represented (119). A subject is represented in different aspects when its properties

are committally, explicitly non-committally, and inexplicitly non-committally represented.

Some theorists, like Daniel Dennett (1986, 135-136), E. H. Gombrich, and John Searle (1980), try to reduce pictorial aspects to visual aspects. Lopes claims that it is a mistake to assume that depiction resembles vision, or pictures must represent their subjects from a single viewpoint just as vision is from a point of view. Split-style pictures, cubist and neo-cubist paintings represent features of their subjects not from a single perceptual point of view but rather from two or multiple indeterminate viewpoints, “making commitments and explicit non-commitments consistent with those made by visual experiences of objects seen from any number of viewpoints” (120). Some pictures, especially those that are not in Albertian perspective, are able, by means of different combinations of commitments and explicitly non-commitments, to achieve pictorial aspects that no normal visual experience could achieve. Furthermore, impossible or paradoxical pictures also distinguish pictorial aspects from visual aspects.

It is worth noting that pictorial aspects are not only spatial. Explicit non-commitments also exist in the form of commitments to texture, colour, and other different kinds of properties. Certain combinations of commitments and explicit non-commitments of these properties are unique to pictures, hence “the

aspects presented by pictures expand on those presented in ordinary visual experience. Pictures can represent objects as having combinations of properties that the objects could not normally be seen to have" (124).

According to Lopes, "every picture is *explicitly non-committal* in some respects". All pictures are selective due to the fact that not all spatial relations of their subject, which are in three-dimensional space, can be represented in pictures, which is a two-dimensional medium. In order to represent some spatial relations, some others would have to be precluded. Therefore representing some of the spatial features of a subject in a picture prevents representing others. Pictures are selective because artists have to select what spatial features they want to represent, or not to represent.

Is it possible to individuate pictures by the aspects that they represent their subjects as having? Take cubist paintings for instance. Such paintings represent their subject with fragments from multiple viewpoints. Can we say that a cubist painting is actually not one but many pictures? Consider another case of a postcard that is divided into four quadrants that show the same scene in four seasons. Are the postcard and cubist paintings the same in the sense that they consist of multiple pictures? Lopes suggests that what individuates pictures is the 'spatially unified aspect' of its subject, which is the idea that "every part of the scene that a picture

shows must be represented as standing in certain spatial relations to every other part" (126). These spatial relations are different for pictures depending on what relations are chosen. In cubist paintings, although subjects are represented from multiple viewpoints, each part represented from a different viewpoint nevertheless relates to every other part. However, in the case of the postcard, each quadrant represents different seasons of the same scene, but the objects represented do not spatially relate to each other pictorially. To defend the claim Lopes asserts that, "being in the same place" is not a spatial relation that suffices for being a commitment for a unified picture. Therefore the case of the postcard consists of four pictures rather than one.

Lopes concludes by defining pictures as

i. representations that present spatially unified aspects of objects, presenting objects and parts of objects as related to each other spatially.
ii. Essentially selective. Since a picture cannot be committal regarding all its subject's spatial properties, commitments it makes to some spatial properties entail explicit non-commitment about others. (127)

Lopes contends that the diversity of pictorial systems can be explained by different kinds of spatial aspects resulting from combinations of different commitments.

Pictorial Systems

Lopes contends that there are quite a number of theories that attempt to set

forth what distinguishes pictorial representation from other kinds of representations. He claims, however, that no theorist has answered the question about what distinguishes pictorial systems from each other. He proposes that the answer to the question can appeal to different combinations of commitments and explicit non-commitment of different types of properties. ‘Pictorial systems’, the term proposed by Goodman, is a concept similar to language systems. In Lopes’s words, “a system of depiction, in the abstract, is the set of all pictures that could be made by combining pictorial referents with pictorial predicates” (128). If two pictures share the same commitments and non-commitments regarding all the same types of properties, then they are in the same pictorial system; on the contrary, if two pictures are committal and non-committal with regard to different types of properties, they are in different pictorial systems.

Nevertheless, unlike linguistic systems, the representational content of pictorial systems is not boundless since pictorial content is aspectually constructed, which means that in order to make commitments about some properties, one must be non-committal about other properties. This constrains the “allowable combinations of predicates”; therefore pictorial content is limited rather than boundless.

So far, pictorial systems have been likened to linguistic systems in different ways. One may wonder whether pictorial systems are conventional in the same way

linguistic systems are. Lopes claims that a system-relative account of depiction is not necessarily connected to the kind of anti-perceptualism that Goodman defends, which is the idea that since depiction is not confined to perceptual mechanisms, anything may represent anything else. Moreover, a conventional account of depiction is incompatible with aspectually structured pictorial systems.

Lopes introduces David Lewis's conception of conventionality (Lewis 1975) that is based on the idea that conventions are solutions to coordination problems. According to Lewis, something *x*'s being conventional implies that there are other alternatives that are just as good as *x*. In other words, preference for any equally viable solution is arbitrary (in the sense that it is conditional on the preferences of others in the group). Language is conventional because there are many equally good languages that could in principle serve the coordinative functions of the language. However, Lopes contends that aspects of different systems of depiction are sometimes preferable to others in some contexts. Aspectual differences do matter for 'compositional' reasons and 'representational' reasons (Lopes 1996, 134). The former is about "preference given to certain kinds of marks, shapes, patterns, colours, or textures on the picture surface". For example, Kwakiutl split-style is preferable for symmetry composition, and fitting pictures onto surfaces of predetermined shapes; axonometric projection is preferable for scroll painting since it allows

infinite horizontal or vertical extension of scenes without distortion. Aspectual differences matter to representational reasons because pictures are made according to what aspects of the world we would like to show. For example, Albertian painting aims at mimicking visual experience by complying with the perspective projection. Therefore, the choices of pictorial systems are not arbitrary since every system adopts different characteristic aspects for different purposes. As a result, pictorial systems are not equally good alternatives, hence they are not conventional, at least in Lewis's sense.

Pictorial Recognition

In spite of the aspectual construction of pictures, recognition is another important notion in Lopes's theory of depiction. As Lopes has shown, pictures are aspectually structured, resulting in a diversity of pictorial systems. He argues that human beings have an ability, which he calls 'pictorial competence', such that once we understand a picture of a certain pictorial system, we understand other instances in that system but not necessarily pictures in other systems. Lopes contends that a recognition theory, which is the basis of Lopes's theory of depiction, is able to explain the diversity of pictures and their aspectual structures, as well as the limitation of our pictorial competence. There are three forms of recognition—feature

recognition, individual recognition, and kind recognition. Feature and kind recognition can happen without individual recognition—one could recognize what kind of dog one meets without knowing whether it is the particular dog that one had met before. And Lopes's focus is on individual recognition, which is also known as particular recognition.

This kind of recognitional ability that human beings possess is dynamic, and is an ability that "link[s] currently perceived objects with objects perceived in the past despite what may amount to radical changes in appearance" (139). Facial recognition is especially dynamic. We are able to recognize faces of our relatives, whom we haven't met for many years, in spite of changes in appearance due to aging. According to Lopes, saying recognition is dynamic means the particular can be recognized under different aspects. An object with a set of visual properties can be recognized although it had another set of visual properties that we have once seen. However, the recognition dynamism has its limits. First, the elasticity of recognition is not boundless. Objects may change, with extreme distortions for example, beyond recognition when the changes "overstretch" the dynamic recognition capacity. Second, "recognition abilities are always dynamic relative to kinds of aspects". Recognition fails when a familiar object's changes lay in other aspects in relation to which recognition is not dynamic. We may recognize our relatives even though they

are aged, but we may fail to recognize them in distorting mirrors. Therefore the dynamic recognition ability is aspectually bounded. Lopes calls “the kinds of aspects with respect to which objects can vary but remain recognizable ‘dimensions of variation’” (139).

Dynamism of recognition varies in degree with the number of dimensions over which recognition is still viable. And recognition reaches its limit when the object is not recognized across a new dimension of variation. Not only does aspectual structure affect the boundaries of recognitional dimension of variation, but the amount and type of information gathered from the object required for recognition vary from one dimension to another. One can imagine that recognizing an aged face may require information accumulated from several encounters, while recognition of a face from a slightly different angle requires information obtained from just a glance. These characteristics of the recognitional dynamic abilities explain the generativity of such ability. The generativity of the recognitional ability refers to the thesis that recognizing an object under a new kind of aspect is necessarily sufficient for recognizing other objects under the same kind of aspect. With such generativity, Lopes claims that being able to recognize an object seen from a new viewpoint must suffice “for being able to recognize other subjects transformed in similar ways”. The same idea applies to aging as well: when one is able to recognize the aged face of

one's relative, one is able to recognize other faces after aging.

Since Lopes adopts Evans's structure of thoughts, he has to examine whether the recognition-based thoughts can satisfy the two constraints—the 'Russell's principle' and the 'generality constraint'.

If someone is to recognize his/her relative, he or she has to distinguish this relative from all other people. The discriminating characteristic of recognition-based thoughts meets Russell's principle. Moreover, the dynamism and generativity of recognition assure recognition-based thoughts satisfy the generality constraint. The example provided by Lopes is a dimension of variation which consists of upside-down aspects of objects, with the generativity of recognition, if one is able to judge the thought that an object is upside-down, one is also able to judge thoughts that all other objects are upside-down within that dimension; similarly, by dynamism of recognition, if one is able to have a thought of an object seen in one aspect, one is able to recognize that object seen under other aspects, within the limit of one's recognition capacity. Therefore, the generativity and dynamism of recognition ensure recognition-based thoughts satisfy the generality constraint. It is worth noting that since information states are belief-independent and non-conceptual, aspectual information, which pertains to the aspectual information system, is also belief-independent and non-conceptual. This means that even though the perceiver

possesses concepts of the subjects in a picture that is shown in a particular aspect, he does not necessarily have the concept of that aspect. For example, someone necessarily possesses the concept of Big Ben in order to recognize Big Ben in a picture in Albertian style; however, it is not necessary to have the concept of the Albertian style.

One may ask what the mechanism of recognition is. A number of theorists, H. H. Price for example, reduce recognition to descriptive identification. Descriptive identification is the idea that recognizing an object requires one to identify characteristics of that object which can lead us to recall an earlier instance that shares the same characteristics. These characteristics are called the 'identifying features'. However, according to Lopes, recognition is different from 'recall' in that recall is neither necessary nor sufficient for recognition. One the one hand, one could recognize someone in the street while not being able to recall when and where one previously met that person; or one could misremember that occasion while still successfully recognizing who the person is. One the other hand, it is not uncommon when someone, J, is in front of us, to be able to recall the previous features of J, even though we cannot recognize J as J. We fail to do so because we are not able to establish the link between the occurrent perceptual information and the past encounters. Lopes concludes that recognition is not descriptive since recall of

identifying features is neither sufficient nor necessary to recognition.

Lopes claims that because they depend on our ability of identification, pictures are 'visual prostheses' that "extend information systems by gathering, storing, and transmitting visual information about their subjects" (144). Pictorial recognition differs from ordinary visual recognition by having two levels of recognition—'content recognition' and 'subject recognition'. Since a picture is a two-dimensional surface covered with marks, colours, and different kinds of visual properties, on viewing a picture, one has to recognize "the design as the features making up an aspect of its subject." This level of recognition is called 'content-recognition'. By recognizing the features that make up the aspect of the subject, we recognize the pictorial content as its subject in a certain aspect. This is 'subject recognition'. Someone may have content recognition but fail to have subject-recognition if he cannot recognize what the features are an aspect of. For example, someone may fail to recognize a portrait of Nixon even though he recognizes all the visible facial properties that Nixon possesses as represented by pictorial content. He may identify a man with all the properties, which are the properties of Nixon, that are represented in the picture, but he cannot recognize the man represented as Nixon since he does not have concepts about Nixon or the thought that the man with such properties is Nixon. In addition, Lopes rejects the

idea that subject-recognition comes always after content-recognition since subject recognition may change the representational relevance of the design features. So "content-recognition can be informed by simultaneous subject-recognition" (145).

After explaining how a picture depicts in terms of recognitional identification, Lopes argues that the resemblance experienced between the picture and the object can be explained by content recognition and subject recognition. The representationally relevant resemblance is indeed recognition-dependent resemblance—the experienced resemblance between the properties the object is depicted as having and the properties of the object is dependent on one's interpretation during the recognitional processes. Using the duck-rabbit picture as an example, our experienced resemblance between the design and the object varies when we see the design differently as a duck or a rabbit. When we see the design as a rabbit, the left part resembles long ears; however, when we view it as a duck, it resembles a bill. Therefore, the experienced resemblance is recognition-dependent. Since pictures are aspectually structured, recognition-dependent resemblance is also aspect dependent; it varies with different systems of depiction.

Lopes distinguishes two kinds of depiction—'basic portrayal' and 'basic depiction'—by the nature of their sources. Lopes contends that pictures represent by embodying information that allows perceivers to recognize the object in a certain

aspect. If the source of the information embodied in a picture is a particular object, then the picture ‘portrays’ the object; this kind of picturing is called ‘basic portrayal’. For example, we may see a photo of Bill Clinton in a newspaper. By the properties that we recognize in the information, we recognize that the man with the features is Clinton. However, the source is not always recognized. One recognizes a woman with certain features in the *Mona Lisa*, however, one may or may not be able to know who the woman is. In other words, one does not sufficiently recognize the woman depicted by merely looking at the painting. In another example, in the duck/rabbit picture, we recognize there is a duck/rabbit, however, the duck/rabbit is a depiction of the kind, which is the duck/rabbit kind, but not of a particular duck/rabbit. This kind of picturing is called ‘basic depiction’.

Both basic portrayal and basic depiction require the perceiver to be a ‘suitable perceiver’. According to Lopes, a suitable perceiver is someone who possesses a “*suitably dynamic* recognition ability” (152) in both levels of content recognition and subject recognition. In spite of recognizing the content of a picture, which is the general requirement, for a picture depicting *x* in *y* aspect, suitable perceivers

1. are those familiar with the subject and who possesses recognitional capacity for the subject;
2. should have the competence to recognize other subjects which one is familiar

with under *y*.

However, it is not uncommon that suitable perceivers of a picture no longer exist. This is the case especially for paintings with a long history. Lopes argues that recognitional ability need not be derived from direct acquaintance with the subject; one may derive the ability from people who had direct acquaintance. Therefore the ability may be passed down from person to person over a long period of time. Furthermore, it is possible for perceivers to identify the source of the object by applying the recognition ability of the same object one derived from other pictures. For example, one may apply the recognition ability of Wellington derived from a banknote to a painting of Wellington and successfully identify Wellington. In addition, some pictures cannot be recognized although viewers know that the pictures have sources. Lopes suggests those pictures should be treated in the same way as we treat fictions (154-155).

Pictorial Meaning

Lopes claims that understanding what a picture represents by means of recognizing the subject is “to entertain a thought which links the visual information presented by the picture with a body of stored information from its subject” (158). Pictures represent in various ways. A picture may be used to represent the ground of

a building in a model; however, in this example, the picture does not represent *as a picture*. When a picture represents *as a picture*, the representational content is the 'pictorial sense'; hence "a theory of depiction is a theory of pictorial sense". Understanding the pictorial sense of a picture *qua* picture requires one first to identify the subject of the picture. Basic picturing, which includes basic portrayal and basic depiction, is one of the ways to grasp the pictorial meaning of a picture. Hence for a picture to depict *x*, *x* must be able to be recognized by a suitable perceiver who understands the picture as a picture *qua* picture. Reading an excellent an informative description of a picture's content, and thereby knowing what the picture is a picture of, is not a case of understanding that picture's pictorial sense.

With regard to the relation between pictorial sense and the picture-maker's intentions, Lopes adopts an anti-intentionalist line. Lopes maintains that what the artist intended to do is not always what the artist has actually done. There is possibly a gap between "what I intended to depict and what I in fact depicted" (159). The intentions of the artist are neither necessary nor sufficient for fixing the meaning of the works. Lopes draws a distinction between 'pictorial' intention and 'communicative' intention. The former refers to the intention to produce a picture embedded with information that is identifiable by a suitable perceiver; the latter refers to the general intention to represent "something". Pictorial intention is

involved in pictorial representation, while communicative intention can be involved in representations other than pictorial representation.

Lopes introduces two puzzles to see whether they can be resolved by his theory of depiction. The first problem is that recognition ability fails when we are unable to distinguish indiscernible objects. Pictures, as a result, fail to “portray” objects that have indiscernible counterparts since we do not possess recognitional abilities towards these objects. The second problem is that some pictures present their subjects in unusual aspects that are unrecognizable by normal perceivers. This kind of “malfunction in the information system” may happen in a way that the subject of the picture is represented as a totally different object. This happens commonly when models are used for the artists to represent something else. The example Lopes gives is that Rembrandt used Hendrickje Stoffels as the model for a picture of Bathsheba. Although the person depicted in the picture can be recognized as Hendrickje, many people would disagree that the picture is of Hendrickje. These problems reveal that tracing the source of the subject of a picture solely by its content is inadequate.

In order to solve these puzzles, Lopes introduces a distinction between primary sources and secondary sources. A primary source is an object or a kind of object serving in the genesis of a picture, and it does not depend on the “nature of other information from any other source” (Lopes 1996, 164). Similarly, a secondary

source is an object or a kind of object serving in the genesis of a picture, and it depends on the nature of information that derived from the primary source of the picture. For example, in the case of Rembrandt's *Bathsheba*, Bathsheba is the primary source and Hendrickje is the secondary source because Hendrickje served as the model for Bathsheba due to her putative resemblance to Bathsheba. In other words, Rembrandt made use of the features of Hendrickje, which is crucial to represent Bathsheba, to represent Bathsheba. In Lopes's words, "*Bathsheba* is primarily of Bathsheba and secondarily of Hendrickje, because Hendrickje's serving as a model depended on a resemblance to Bathsheba that made her a suitable conduit for information from Bathsheba" (164).

In the last section, Lopes distinguishes between pictorial intentions and communicative intentions. Pictorial intentions may not be fulfilled because of failure of recognition due to poor artistry. However, even when pictorial intention fails, the communicative intention can be known in other ways, for example, by means of testimony given by the painter. A picture may fail to depict its subject pictorially, but we can understand the meaning of the picture by understanding the communicative intention of the artist.

Like basic picturing, information-based pictorial description and conventional iconographic pictures are pictorial modes of identification. Unlike a purely

descriptive picture, which represents its subject as what its content represents, pictorial description depicts by possessing information that can be identified by viewers who derived the information from sources other than the picture. It is necessary to have a well-grounded identification in order to identify what is represented as the source of the picture. It is this well-groundedness, rather than the accuracy of the content to the source, that distinguishes pictorial description from purely descriptive pictures. Pictorial description is applied frequently to historical subjects and places. Another kind of identification mode Lopes introduces is iconographic pictures. Both descriptive pictures and iconographic pictures depict objects that we can no longer recognize, like historical figures. However, the subject of an iconographic picture is not bounded by the properties that the picture represents it as having. The same subject can be represented in different ways. For example, St. Jerome is depicted with various features. We recognize St. Jerome not by the attributed features but the 'emblems' that are depicted along with St. Jerome. These emblems including a representation of an old man, "a priest, a cardinal, a monk writing, a penitent in the desert, with a lion nearby, a model of a church…" (169) and so on. With the presence of these emblems, we realize a picture depicts St. Jerome no matter what different facial features he is represented as having. The emblems, hence the iconographic pictures, are based on convention. According to

Lopes, “a representation depicts an object iconographically in a community of picture-users if it has a content ϕ and there is a convention such that ϕ-pictures represent that object” (171).

Pictorial Experience

According to Lopes, an adequate theory of depiction should be able to explain four constraints—the diversity constraint, the competence constraint, the phenomenology constraint, and the twofoldness constraint. The first two have been introduced and discussed above; the latter two, which both pertain to pictorial experience, will be explained now. According to Lopes, the aspect-recognition theory of depiction has three advantages in explaining pictorial experience. First, by not building the theory of depiction upon pictorial experience, the verity of pictorial experience is not limited by our affinity to ordinary visual experience. Hence, aspect-recognition theory accommodates the pictorial experience of seeing a landscape picture in reverse colour, or seeing a man in a cubist painting. Second, aspect-recognition theory acknowledges that pictorial experience is aspectual. Unlike most perceptual theories that have no such acknowledgement, aspect recognition theory claims that the pictorial experience of an object is an experience of the object in a pictorial aspect, rather than the experience of the object *tout court*.

Third, aspect-recognition theory accommodates the idea of the spectrum of twofoldness. Lopes claims that pictorial experience need not be twofold. The spectrum of twofoldness, with twofold experience in one pole and illusionism at the other extreme, allows pictorial experiences to be twofold or merely object-directed.

With what he refers to as 'the three advantages' in mind, Lopes tries to answer the question how one has a visual experience of the object represented in a picture when viewing the picture by appealing to Kendall Walton's idea of seeing-through. Walton holds that while only photographs are transparent, meaning we literally see the objects in a photograph, we make-believedly see the objects of other pictures. However, Lopes argues that transparency is indeed the key for explaining pictorial experience of all kinds of pictures; all pictures share the transparent nature. He does so by arguing that pictures are also belief-independent and non-conceptual.

According to Lopes, an information system is a system of non-deviant causal chains. If picturing is an information system, a picture is caused by its source, which is the input, and is caused in typical but not in deviant ways. As mentioned earlier, informational states are belief-independent, therefore pictures are also belief-independent in two ways. First, the subject of a picture is the source of what it represents, the subject of a picture is no more determined by artist's intention than that of photographs. Hence, just like photographs, pictures are belief-independent.

Second, drawing a picture is belief independent since "drawing is simply applied recognition. In order to draw, you are required only to make marks that are recognizably of the object whose appearance is guiding your drawing movements" (Lopes 1996, 184). Since recognition is belief-independent, drawing, which is simply the application of recognition, is independent as well.

In spite of its belief-independent nature, Lopes claims that drawing is also 'non-conceptual'. Recalling the example of seeing a colour spectrum, concepts of the colours, like the wavelengths of light, are not necessary for seeing the colour. Similarly, the content of experience of design features is non-conceptual. One may compare two polygons and conclude that they are different without knowing that one is a 998-sided polygon and the other one is a 1000-sided polygon. If experience of design features is non-conceptual, how about the experience of pictorial content? Similar to his argument of the belief-independent nature of drawing, Lopes holds that "to draw is simply to be guided by the appearance of an object in making a surface which will present an aspect that is recognizable as of that object" (186). Lopes's claim here is obviously a strong and controversial one. He comments:

> I see no reason why an artist must bring to bear any concepts about the content of a picture he is making. It is possible to draw something, guided by the look of the thing, and to produce a recognizable aspect of it, without having a concept of it. (ibid)

Since a concept of *x* is necessary for having a belief of *x*, if drawing is

non-conceptual, as Lopes claims, then drawing can be belief-independent.

Despite arguing for the *possible* belief-independent nature of pictures, Lopes also rejects Walton's claim that 'real similarity relations' suffice for transparency. Everything is similar to everything else in some respects. It is unclear how to separate the similarities that are 'real' from others. However, Lopes contends, the account of transparency does not really appeal to the "reality of real similarity", but to the notion of 'second-order isomorphism'. He claims that the similarity in Walton's claim is a 'second-order correspondence' between the design properties and the properties the object is represented as having. This kind of correspondence, in the usage of cognitive science, is called a 'second-order isomorphism'[4] (188). The problem is that second-order isomorphism is not unique to pictorial transparency, since "any analogue measure, by definition, preserves some second-order isomorphism with properties of what it measures" (189). Even worse, non-analogue representations also preserve second-order isomorphism. Therefore, second-order isomorphism is not sufficient to transparency, and it cannot explain depiction.

Drawing on Alvin Goldman's and Fred Dretske's proposal regarding visual modality (190-191), Lopes tries to explain the characteristic experience of visual perception—pictorial transparency. Pictures use design properties, which are visual,

[4] For more details and references to the 'second-order isomorphism', see Lopes's footnote on p. 188.

to visually represent objects with visual properties. Lopes holds that the general principle of transparency should be explained in terms of perceptual modality: “transparent media are those whose design properties are perceivable through the same sense modality as are the properties comprising their content” (Lopes 1996, 190). One example he gives is voice. “A voice on a radio is transparent in part because radios represent voices aurally and voices are normally perceived aurally” (ibid). Under the notions of modality and transparency, Lopes contends that pictorial experience is indeed twofold: in one fold, the design properties convey visual information; on the other fold, the object represented conveys visual information of its properties. Therefore, Lopes argues, pictures are a visual prosthesis as they represent the visual world by visual properties in different aspects that could not been seen under ordinary vision.

Fictive Pictures

In spite the possibility of misrepresentation, the possibility of fictive pictures is another issue that a theory of depiction should accommodate. A fictive picture is real picture of which the content, or the objects represented do not exist. Fictive pictures are problematic for objective resemblance theory because fictive pictures represent imaginary objects. If the represented object is imaginary, there is no referent of the

objective resemblance; hence resemblance is hardly applicable to the object represented. Fictive pictures raise other problems that are not only problematic to the objective resemblance theory, but to all theories of depiction: objects represented with different properties may indeed be representations of the same imaginary subject. What does it mean when we say that pictures may depict the same fictive subject? Lopes answers this question by appealing to 'Moore's constraint': "two pictures represent the same fictional object if and only if, were the object to exist, both would represent the same object" (198). Therefore if two pictures with different content are indeed representing the same subject, there should be some relations between them explaining the shared subject.

Lopes appeals to the notion of pretense in order to say how fictive pictures refer and how such reference mimics, and is parasitic upon, actual reference. Fictive reference is derived by pretending that there is actual reference. Lopes adopts Walton's theory of make-believe to explain the notion of pretense. According to Walton's theory, one participates in a game of make-believe when one imagines some non-existent states of affairs is the case with props of the games under certain 'game rules'. For example, when one is viewing the painting *Piazza San Marco*, the painting is a prop for one to imagine that one is actually seeing Piazza San Marco. The notation of this example is "*see Piazza San Marco*(MB)" (202), which means

that it is make-believedly true that one sees the Piazza San Marco. It is worth noting that the aspect-recognition theory need not draw upon Walton's notion of make-believe to explain depiction, since according to the aspect-recognition theory, one simply recognizes the piazza in the painting by virtue of the information of the painting which was derived from its subject. The aspect-recognition theory need not use the notion of make-believe to explain our seeing of the piazza because what the picture depicts has a source and, therefore, the reference to the source is established. However, in the case of a fictive picture, the information conveyed by the picture does not have a source, so the reference of the information to the source cannot be established. Therefore Lopes proposes that "make-believe may explain only fictive pictures, as it may explain only fictive words" (202).

As mentioned earlier, the viewer of a picture recognizes the object represented by identifying the visual information of the picture derived from the source. However, such identification can be 'ill-grounded' in four cases:

1. a picture embodies information from a source that is identified as of a different source;

1. a picture that has a source is identified as of no source;

2. a picture that has no source is identified as of a source; and

3. a picture embodies information from no source that fails to "elicit"

identification.

Lopes claims that fictive pictures fall into the fourth kind of ill-grounded identification. Fictive pictures do not actually have any source, and viewers of fictive pictures fail to identify the pictures as of anything. Thus the notion of make-believe is necessary to explain the imaginary source and identification: a picture *has a source*(MB) and is *identifiable as of the source*(MB). The identification of *source*(MB) is made possible by the application of our recognition ability for fictive objects. We acquire such abilities in a manner that is "largely parallels" to how we acquire recognition ability for existent objects: by verbal testimony about fictive objects, and sometimes such abilities originate from fictive pictures as well. One may *recognize yeti*(MB) in a picture by one's previous *recognition of yeti*(MB) in another picture. In addition, Lopes claims that "pictures and stories must be responsible for initiating abilities to *identify*(MB) fictional objects" (206). Again, Lopes holds an anti-intentionalist view: the intentions of artists do not contribute to the fictive status of a picture; an artist may paint a picture of yeti while believing that yeti really exist, so he paints the picture without merely pretending that the source of the information exists. However, the viewers of the picture may understand the picture as a fictive picture, and engage in a pretence that the source of the information exists. Lopes concludes

that “the meaning of pictures, including fictive ones, is independent of the artist’s, or anybody else’s, beliefs. Pictures’ status as perceptual mechanisms is the foundation of their function as fictions” (208).

Various published criticisms of Lopes’s aspect-recognition theory will be summarized in chapter five, and my own critical remarks about this theory will be introduced in chapter seven. Before going into the criticisms, let us take a detailed look at Robert Hopkins’s experienced resemblance theory in outline shape.

CHAPTER FOUR

EXPERIENCED RESEMBLANCE THEORY IN OUTLINE SHAPE

The Six Explananda

Robert Hopkins set forth his theory of depiction in his book *Pictures, Image and Experience*[5]. Before he presents the details of his theory, he first outlines six 'explananda' of depiction. Hopkins acknowledges that there are different approaches to depiction and he adds that one cannot choose any of them unless one makes clear what kind of explanation a theory of depiction should provide. By setting forth the explananda, based on agreement over key features of depiction, we can gain a sharper sense of the boundary around the phenomenon of depiction. Such an approach, he argues, is superior to that of trying to argue over whether individual cases count as depictions or not. These explananda are themselves valuable, as Hopkins claims, since even if Hopkins's theory is proven inadequate, philosophers can still continue the discussion based on these explananda; or if one finds the explananda unsatisfactory, theorists can propose modifications to, or even a new set of, explananda before proceeding to a detailed account of depiction. Therefore, setting forth the explananda facilitates the discussion of the theory of depiction, and

[5] Page numbers in this chapter refer to *Pictures, Image and Experience* unless specifically noted.

promises to make it more efficient.

The first feature of depiction Hopkins mentions is that "(x1) There is a significant minimum pictorial content" (27), which distinguishes pictorial representation from linguistic representation. A picture may represent a particular thing, or some, but no particular, thing. This means that a picture may ascribe properties to a particular, or it may ascribe properties to some, but no particular, things. When a picture depicts a particular, some properties have to be ascribed to that particular; there is no *bare* depiction of a particular. This contrasts to linguistic representation in the sense that a proper name represents a particular without ascribing any properties to it. For example, I learn nothing from the term 'Big Ben' except that it names Big Ben; by contrast, a picture of Big Ben shows me the shape, the colour, and even some detailed features of Big Ben, assuming that the picture is a true and clear depiction of Big Ben. In addition, this contrast applies to depictions of some, but no particular, thing as well. The term 'horse' does not ascribe any properties to the group of animals while a picture of a horse ascribes at least some, if not many, features to these animals.

This explanandum faces two objections. First, the sentence is the basic unit of linguistic meaning. Proper names only represent by "the role they can play in sentences" (25). Although proper names do not ascribe properties to their referents,

sentences do. Second, as the description theory of language proposes, proper names refer to their referents with a set of descriptions that ascribe properties to them. Hopkins claims that one can avoid the first objection by abandoning the contrast between depiction and linguistic representation. One can only claim that there is no bare depiction, and explain this feature by a theory of depiction. However, the second objection is more problematic since abandoning the contrast with language simply leaves us with the question of how a picture depicts specifically.

Hopkins replies to the objection by appealing to the Aristotelian notion of genus and species. Everything that falls under the species S of a genus G must fall under G, but not vice versa. For example, 'toy poodle' is a species of poodle, which belongs to the genus 'dog'; therefore 'toy poodle' automatically falls under the genus of 'dog'. Furthermore, for a representation to ascribe properties F to an object O is to represent O as falling under the class of F-things (26). In Hopkins's words, "the F-class is represented as *occupied*" (Ibid). However, both language and picture represent species as occupied; what distinguishes depiction from linguistic representation lies with the concept of 'base class'. A 'base class' is a class "for a representation R any class such that R represents something as falling under that class, but not by virtue of representing it as falling under some species with respect to which that class is genus" (ibid). Pictorial representation differs from linguistic

representation in that for any base class represented as occupied by a pictorial representation, there is a genus that can be represented as occupied by a linguistic representation, but not vice versa. Hopkins gives a detailed formulation as follows:

(1) For any pictorial representation P and any based class C which it represents as occupied, there is a genus G and some (possible) linguistic representation D, such that G is a base class for D.

While in contrast:

(2) It is not the case that for any linguistic representation D and any base class C which it represents as occupied, there is a genus G and a (possible) pictorial representation P, such that G is a base class for P (26-27).

For example, the observer of *The School of Athens* sees two men in the middle of the painting. For the base class—man-class—the painting represented as occupied, we have a genus—'mammal' and a linguistic representation—'*mammal*', such that 'mammal' is a base class of '*mammal*'. On the contrary, for the linguistic representation 'man' and the base class—man-class—it represented as occupied, there is a genus—'mammal'—but no pictorial representation, such that 'mammal' is a base class for the pictorial representation. Hopkins claims that this prevents cases like a picture of a dappled horse from representing a mammal, and allows a description of a dappled horse to represent nothing more than a dappled horse (27).

The second feature of depiction discussed by Hopkins is that depiction is necessarily perspectival.

(X2) Everything depicted is depicted from some point of view. (27)

Pictures do not always depict from one single point of view. Cubist paintings for example, may depict from multiple points of view. Hopkins claims that the pictorial perspective is one of the significant features that a theory of depiction should explain.

The third feature of pictures concerns the visibility of pictures' subjects and objects.

(X3) Whatever can be depicted can be seen. (ibid)

By 'whatever', Hopkins refers to any particular or property. He contends that any particular subject of pictures is visible since pictures only depict visible particulars, and the objects represented always have an appearance. In other words, the properties ascribed to the object represented are "in general visually detectable" (ibid). With the reading above, (X3) precludes the possibility of the depiction of non-visible properties.

A straightforward objection is that pictures sometimes represent things that are not visible, for example, the magnetic field. A diagram showing the magnetic field of a magnet seems to be a counterexample to the claim that pictures can only represent visible subjects, since the subject of the diagram and the object represented, the magnetic field, is not visible. Hopkins replies to this counterexample by stating that although the diagram is a representation of a magnetic field, it does not

represent the field pictorially. Just as a map represents a certain area, the diagram represents by other means.

The fourth feature concerns the misrepresentation of depiction:

(X4) Pictorial misrepresentation is possible, but has its limits. (30)

Pictures may ascribe various properties to the objects represented that are not possessed by the subjects. In cases like this, misrepresentation happens because depending on painters' intention and imagination, properties can be boundlessly ascribed to the objects represented. However, Hopkins holds that misrepresentation has its limits. When an object is represented as deviating too much from its subject, the object is no longer a pictorial representation of that subject.

The fifth and the sixth features concern the epistemic resources needed to understand pictures. When one knows how a pictorial style depicts, one is able to interpret other instances of that style, and is able to know that those instances depict, provided that one has the knowledge of the appearance of the objects depicted. Hopkins formulates the condition as follows:

> (X5) General competence with depiction and knowledge of the appearance of O (be it a particular *a* or merely a, but no particular, F-thing) suffice for the ability to interpret depiction of O.
>
> (X6) General competence with depiction and knowledge of the appearance of O are necessary for the ability to interpret depiction of O (31).

However, there may be counterexamples to (X5) and (X6). Throughout the history

of art, there are many paintings, especially portraits of historical figures, such that the viewers, even the painters themselves, do not possess knowledge of the appearances of the subjects, yet we still say that the paintings depict the subjects. The example used by Hopkins is Simone Martini's *St John the Evangelist*. The painting depicts St. John even though the painter does not possess any knowledge of St John's appearance. This example challenges (X6) since viewers are able to understand the painting, say, by reading the title of the painting, without having any knowledge of St John's appearance. Hence having knowledge of St John's appearance is not necessary to an understanding of the painting; the example also challenges (X5) since if one has the knowledge of St John's appearance, one may fail to understand who the painting depicts since the properties ascribed to St John by the painting could be different from the properties St John actually had. Hence possessing knowledge of St John's appearance is not sufficient for understanding the painting. This example also threatens (X4) as well, for Simone Martini was ignorant of St John's appearance, so the properties he ascribed to St John could be very different from the properties that St John really possessed. Nevertheless, we still say that the painting depicts St John. This undermines (X4) because misrepresentation seems not to have any limits, at least in the sense that quite possibly St John looked vastly different from other persons depicted in the painting.

Hopkins contends that the claim "*St John the Evangelist* depicts St John" is not accurate. He agrees that the painting does represent St John, but it represents him in a "non-pictorial manner" (33). Since if we accept that *St John the Evangelist* depicts St John, we have to accept that understanding some kinds of picture requires resources different from understanding pictures of someone whose appearances we know; what is required is only a general competence and knowledge of appearances. Thus there are two distinctive kinds of pictorial content, the understanding of which requires different epistemic resources. In the case of *St John the Evangelist*, having the knowledge of St John's appearance is not necessary and sufficient for understanding the picture. Extra knowledge, say, derived from reading the title of the painting and understanding the historical background, is needed. Yet in many ordinary cases an observer can understand a picture with only the general competence and knowledge of the subject's appearance. Hopkins claims that the kind of pictorial content exhibited by *St John the Evangelist* does not cohere with the six explananda as a whole, and if someone claims that the painting does represent St John pictorially, the burden of proof falls on him or her (35).

Experienced Resemblance Theory

At the end of chapter two, Hopkins raises three problems that a revised resemblance theory should overcome in order to be workable (49). The first one is that the resemblance theory does not fit the logical framework of depiction, in which pictures very often depict some, but no particular objects, while resemblance is a relation between two particular objects. Second, when one says that a picture resembles its object, one has to state specifically in what respects the resemblance consists. Third, some pictures do not resemble the object depicted, for example, cubist paintings, but we still say that those pictures depict. In chapter three, Hopkins tries to overcome the first two problems and proposes an experienced resemblance theory. According to him, although resemblance is a relation between particulars, experienced resemblance is not. Even though every experience is distinct, "the basic phenomenological facts are the same". Our experiences are grouped phenomenologically into different sorts, thus resemblance can be experienced resemblance between sorts, rather than resemblance only between particulars (51).

Outline Shape

The second problem, which is a more crucial one, involves the following

question: in what respect is the design of a picture experienced as resembling the object? Hopkins contends that unlike colour and tone, which only sometimes play a significant role in what a picture depicts, shape is always relevant. Hopkins asks us to imagine looking at objects through a misty window. We can trace the features of the objects on the glass surface. Although the shape of what we trace on the glass surface is two-dimensional, it is determined by the three-dimensional objects outside the window. The shape we obtained by means of tracing in the example is the outline shape of the objects. Let's say the object of the tracing through the misty window is a pyramid. When we look at the pyramid, both the apex and the base of the pyramid subtend an angel to our eyes. When we move our gaze up from the base to the apex, the angle subtended by the face of the pyramid gradually decreases. Imagining there are vertical planes between the pyramid and our eyes, in each of these planes, we can trace the features of the pyramid, and indeed there are many, if not infinite, points making up the shape, and each of the points subtends an angle to the plane. The totality of the angles subtended in the individual plane is the solid angle. Since the pyramid subtends the same angles to each plane, the solid angles subtended to each plane are thus the same[6]. In Hopkins's wording, "we can now

[6] Catherine Abell points out that in Hopkins's recent formulation of the definition of outline shape, he has abandoned the notion of solid angle and adopted one in terms of "sets of directions from a point." See Hopkins 2003b. For Abell's article, see

define an object's outline shape at a point as the solid angle it subtends at that point" (55). In our example, since the solid angle in every plane is the same, and the outline shape is the solid angle subtended in the plane, thus the outline shape in every plane is almost the same, but only vary in size. From some points in which when a solid angle of an object subtended is similar to the solid angle of other objects subtended, the outline shapes of the objects resemble each other.

Hopkins emphasizes three points about outline shape. First, the outline shape of an object is different from the silhouette of that object. The outline shape of an object may include the nested outline shapes of any parts that are on the faces of the solid angle. The possibility of nested outline shape can be explained by the nesting of solid angles. The solid angle subtended by an object may include smaller solid angles subtended by the parts of the faces. Second, the outline shape is "relative" to the feature of the object that the solid angle is subtended by. The outline shape of a face of a pyramid with a doorway is different from that without a doorway. A more detailed tracing would trace the doorway, so that the outline shape has more details. This matching of the outline shape and the feature of the traced object is important, for it accounts for the attribution of properties to objects in depiction. For example, in the case of the doorway, it accounts for the "difference between *depicting* the

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Abell 2005.

pyramid while depicting the doorway, and depicting it without depicting that entrance" (57). Third, objects without clear edges or contours can still have outline shapes. This includes something like a patch of mist, which has indeterminate contours and edges. As long as the patch varies through space, some parts of the patch subtend certain angles, while some other parts subtend different angles. Thus the item has a solid angle, although it varies from time to time. Hence, Hopkins claims that any object has a 3-D shape (the shape of the object in three-dimensional space), and thus has outline shape (57).

With the three cautions in hand, Hopkins continues to elaborate the notion of outline shape. He claims that outline shape is a property that we experience the object as having. Using Hopkins's example, when one looks at a road which extends straight across a plain, one sees the edges of the road as converging at the vanishing point, although one's knowledge of the 3-D shape of the road tells one that the edges of the road are not really converging. It is a mistake to say that one sees the road as converging because saying so suggests that one's experience misrepresents the road, which does not really converge. Our saying that the edges are seen as converging can be re-formulated by saying that we see the outline shape of the edges as converging. In another example Hopkins mentions when looking from an oblique angle, we see the shape of a wagon wheel as elliptical. However, what is seen as

‘elliptical’ is not the 3-D shape of the wheel, but the outline shape of the wheel. Hopkins then contends that the term ‘elliptical’ cannot be applied to outline shape but only to 2-D shape since the outline shape is different from the 2-D shape in that the former is a point relative to the solid angle subtended from an object. Although the outline shape is not elliptical, during the tracing of the wheel, the tracing is elliptical; in this case, the 2-D shape shares the shape of the outline shape, so it is elliptical. In Hopkins’s wording, “It [‘elliptical’] describes the 2-D shape of an item which, from the appropriate angle, shares the wheel’s outline shape” (60).

Hopkins then points out the features of outline shapes. First, he states that the perception of outline shapes is part of the non-conceptual content of a picture, which means that one can process the experience of perceiving outline shapes even though one does not possess adequate concepts to characterize the content of the experience. Our perceptual experience involves different kinds of non-conceptual content; we see a cloud with clear contour but we may not be able to tell what shape it is, or we may hear a sound and be unable to tell what the source of the sound is. Perceiving the outline shape of objects is a kind of non-conceptual content of visual experience. Second, as 3-D shapes can be misperceived due to various factors, outline shapes can also be misperceived. When looking at a stick that is half emerged in water, due to the refraction of light, the stick appears bent. Hopkins claims that our experience

of seeing the stick as bent is a misperception of the outline shape of the stick, given that the "real" outline shape of the stick is what it is when it is on dry land (62). Hence, although the outline shapes we perceived are often accurate, it is possible that outline shapes may be misperceived under certain circumstances. Third, binocular vision causes the indeterminacy of outline shapes. As mentioned before, the outline shape is always relative to a point. When one perceives the outline shape of an object, the outline shape is relative to one's eyes. However, since people usually perceive things with both eyes, which differ in position, the outline shapes perceived by each eye are slightly different from each other. Therefore, Hopkins points out that only a certain level of determinacy of outline shape can be attained under general vision, "…in binocular vision the point at which objects are represented as having their outline shapes is sufficiently indeterminate to include the position of *both* eyes, and any point the individual eyes might occupy while the outline shape is experienced as unchanged" (62-63). The limit of outline shape, if it really has one, would be the limit on its determinacy caused by the differences between the positions of the two eyes.

Standard of Correctness

However, similarity in outline shape is not sufficient for depiction. In order to

avoid all kinds of idiosyncratic experiences, some kinds of intention should be introduced to the theory of experienced resemblance. In chapter four, Hopkins states at the beginning that depiction is necessarily an artifact; it is a human endeavor. Hence depiction is impossible without any creation by human beings. Second, although things could be seen in various situations, depiction is only possible when the things are intended to be seen. A rabbit could be seen in a cloud, but we do not say that the cloud depicts a rabbit[7]. With the above claims in mind, Hopkins adopts Richard Wollheim's notion of the 'standard of correctness'. According to Wollheim, a standard of correctness is a standard that governs what is depicted in a picture, and such a standard is given by the intention of the people who create the picture. However, intention is not the only standard governing what is depicted by a picture, since in the case of a photograph, the intention of the photographer can possibly be absent from the shooting of a photo, i.e. the photographer might accidentally press the shutter. In the case of cameras, as well as other media depending on automatism, the causal relation is the standard of correctness. Nonetheless, not all causal relations are relevant; for example, the fact that I loaded the film contributes to the possibility of shooting the photo, but this fact is not relevant to what is depicted by the photo. According to Hopkins, "[t]he relevant relations are those used for a certain purpose.

[7] These two assumptions are indeed controversial, different theories hold different views towards the role of the intention of the picture's creator.

They are those exploited by someone who intends that whatever is the cause in the relevant chain be visible in whatever is the effect" (73).

Hopkins then formulates a schema of an experiential theory of depiction as follows:

(1) *a*/something F can be seen in [a surface] P

And either

(2i) (1) because someone intended that *a*/something F be seen there

Or

(2C) P is the product of a system successfully intended to produce surfaces causally related to objects in such a way that those objects can be seen in those surfaces, and (1) because P is so related to *a*/something F (77).

Different experiential accounts of depiction hold different views on (1). For example, Christopher Peacocke holds that we see the object depicted by virtue of the experienced resemblance of the visual field shape (Peacocke 1983). Hopkins adopts the similarity of outline shape to explain our seeing of the object depicted:

> Something O is seen in a surface P iff P is experienced as resembling O in outline shape. (ibid)

Hopkins maintains that the schema of an experiential theory of depiction together with the characterization of seeing-in provide a theory of experienced resemblance theory in outline shape for depiction. Next, based on the formulation above, he returns to his explananda and tries to explain how they are so by the experienced

resemblance theory in outline shape. He also raises and replies to some potential objections, and comes up with a refined formulation of his theory of depiction.

Perspective

Motivated by the notion of seeing-in, Hopkins holds that our experience of perceiving the resemblance in outline shape is twofold, which means that two outline shapes are experienced. When we look at a picture of a horse, we first see part of the design of the picture, which is the outline shape of the picture corresponding to the object represented. In addition, we also see the outline shape of a horse. In order for us to experience the resemblance, the content of our experience must involve both seeing the outline shape of the design and a horse of certain outline shape (Hopkins 1998, 79). As the second outline shape is relative to a point/points, our seeing of the object depicted is necessarily relative to a point/points; nothing can be depicted unless it is depicted relatively to a point/points. Thus depiction is necessarily perspectival.

In addition, it is worth noting that the second outline is not necessarily fully determinate. Like other kinds of resemblance, the resemblance of outline can be of something “fairly indeterminate”, although the indeterminacy has its limits (Hopkins 1998, 80). The limit of the indeterminacy will be discussed in detail in a later

section.

Minimum Content

Hopkins' first explanandum states that pictorial representation has significant minimum content. There are two features of this claim. First, Hopkins claims that there is no bare depiction of particulars; some properties have to be ascribed to the object depicted. Second, the claim about content is that properties ascribed to the depicted object of a pictorial representation "must" be more determinate than those ascribed by any possible linguistic representation. Obviously, the outline shape is a necessary property that is ascribed to the object. The outline shape that we experience of whatever the object depicted is, at least, a property ascribed to the object depicted. However, in spite of the outline shape, some other properties are also covered by the explanandum.

Hopkins holds that outline shape correlates with other properties of the object depicted. The determinable properties that are correlated with outline shape are called 'correlators'. Shape and orientation are two examples of correlators. The outline shape of an object changes when the shape of the object changes. For example, the outline shape of a watermelon would change if the shape of the watermelon changed from a sphere to a cube. In addition, the outline shape of an

object changes if the orientation of the object to the point, to which the outline shape is relative, changes. It is easy to imagine that the outline shape of a chair changes if the orientation of the chair changes when it is viewed from a fixed point. Since orientation and shape correlates with outline shape, any other properties that correlate with orientation and shape also correlate with outline shape. The determinacy of outline shape fixes that of the correlators, for when we perceive the outline shape of a chair, we also perceive the 3-D shape of the chair. The more determinate the outline shape is, the more determinate the 3-D shape is. Hence we can see why the correlators are reasonably determinate, for the outline shape is always reasonably determinate.

However, why should properties other than outline shape be involved in our experience of resemblance? Is it possible for one merely to experience the design as resembling the outline shape of whatever is seen from the design, and no other properties, be the properties correlators or not? Hopkins contends that although this possibility does not violate (X1), it "seem[s] to betray (X1)'s spirit, since the content of such a picture would be very thin indeed" (83). Experiencing properties other than outline shape is necessary for an experience of resemblance since merely experiencing the resemblance in outline shape makes one unclear whether one is experiencing a present object as resembling an absent one.

In addition, in the depiction of particulars, we experience the design resembling the outline shape of the particular, therefore, at least one property—the outline shape of the particular—is ascribed to the object depicted. Under normal circumstances, when one perceives the similarity of the outline shape of a particular, properties more than the outline shape are ascribed to the object depicted. However, the creator of the picture does not necessarily refer to ascribed properties other than outline shape to a depiction of particular; since under rare situations, outline shape may be the only property ascribed to the object depicted (84).

Other Resemblance

Following his discussion of outline shape-correlated properties, Hopkins discusses properties that are independent of outline shape. It is possible that in some cases, properties other than outline shape ascribed to an object depicted are the properties than the object does not actually possess, while the outline shape-related properties ascribed to the object depicted are those actually enjoyed by the object. For example, the outline shape of a boy is equal to his fairer-haired identical twin brother. One straightforward solution to this problem is that without altering the form of the experienced resemblance theory in outline shape, properties that are independent of outline shape are just added to the “characterization of the thing

resembled" (85); for instance, to see the fairer-haired identical twin brother in a picture is to see a surface with the marks resembling the outline shape of the fairer-haired boy. However, this straightforward solution is problematic since it fails to capture the phenomenology of seeing-in.

Hopkins asks us to imagine looking at a photograph of some toy blocks. The experience differs phenomenologically when one looks at the photograph believing (1) that the photograph is a black and white picture that does not show what colour the blocks and background were, as opposed to (2) the photograph was in colour but the blocks and background happen to be black, white, and grey. The former case differs from the latter in that, for example, we may not have thoughts about the colour of the blocks in the former case, while we have the thought that the blocks are black and white in the latter case. The straightforward solution cannot account for this difference, since in both cases, one perceived the resemblance in outline shape of the black and white blocks. After all, to see a picture depicting the fairer-haired boy is to see the design resembling the outline shape of the boy plus the fairer-haired colour. However, resemblance in colour is not always necessary to seeing-in. A sketch may depict a woman without any colour. Therefore, while experienced resemblance in outline shape is always involved in the experience of seeing-in, experienced resemblance in colour is only involved sometimes. When we

experience resemblance in colour, the object must involve a colour; hence the colour must have a certain determinacy. So experienced resemblance in colour entails colour determinacy.

Just as some properties are correlators of outline shape, there are properties correlated with colour, like tannedness. The determinacy of outline shape of an object fixes the determinacy of all the outline shape-correlators, and similarly, the determinacy of colour fixes the determinacy of all the colour-correlators. Hopkins concludes that in addition to perceived resemblance in outline shape being involved in seeing-in, perceived resemblance in colour may also be involved. Hopkins is open to the possibility that there are other forms of resemblance that we experience when we see things in pictures. However, no matter what these other forms of resemblance may turn out to be, that of outline shape is necessary to seeing-in.

Misrepresentation

By appealing to experienced resemblance, the experienced resemblance theory in outline shape has overcome the problem that the traditional resemblance theory faces, which is that the traditional resemblance theory does not fit the logical framework of depiction, in which pictures very often depict some, but no particular objects, while resemblance is a relation between two particular objects. This theory

also states specifically in what respects the resemblance consists, namely, necessarily, the outline shape, and not necessarily but in some cases, colour, as well as other possible properties, tones for example. The next question that Hopkins tries to deal with is that the objects seen in some pictures do not resemble their subjects, yet we claim that those pictures do represent their subject. Hopkins uses a caricature of Tony Blair, the ex-Prime Minister of Britain, to illustrate this problem of misrepresentation. The caricature, titled *Kim Il Blair*, represents Blair as having exaggerated characteristics, like huge ears, bulging cheeks, an enormous mouth with long teeth, etc. Of course Blair does not possess these properties, and the picture represents Blair as having these properties; hence the picture simply misrepresents Blair. The problem is that in this caricature, we see Blair, and at the same time, we see a thing with bulging cheeks, an enormous mouth, etc. These two things are irreconcilable since the outline shape of Blair and the outline shape of the thing with an enormous mouth are totally different. The problem is how we can see two things with different outline shape as the single subject of a picture.

In the previous discussion of ascribing properties to objects, it was suggested that properties can be roughly divided into two types: outline shape correlated properties and non-outline shape correlated properties. Misrepresentation causes problems for both kinds of properties. For if the misrepresented properties are

non-outline shape correlated, such as colour, it is hard to see how it is a property of what a surface is seen as resembling, since the object does not possess that property, and thus there is no resemblance. If the misrepresented properties are outline shape correlated, it is unclear how both the object and the misrepresented object, like the case of Blair and the thing with an enormous mouth, can be seen in the same surface.

One proposal is that a theory of depiction may choose to abandon its claim to apply to particulars. One can simply say that we see a thing with big ears, bulging cheeks, an enormous mouth, etc. without claiming that that thing is ex-Prime Minister Blair (97-98). However, this proposal fails if the misrepresentation of types is also possible. One may misrepresent human beings as having three arms, or four eyes. One option would be to abandon the depiction of types; however, doing so would leave the content of depiction problematically empty, for if depiction cannot apply to particulars and types, to what else can depiction apply to?

Two alternative proposals are that one may deal with the problem by appealing to the misrepresentation of parts and to some notion of the degree of misrepresentation. One may claim that we see both Blair and the thing with an enormous mouth because some parts of the picture are seen as resembling Blair while some parts of it are seen as resembling a thing with an enormous mouth, huge

quaffed hair, etc. Although different parts are seen as resembling different things, no parts are seen as resembling both Blair and the thing with an enormous mouth (101). Hopkins replies that this may solve the problem of misrepresentation of particulars in some kinds of pictures, but not in caricature because, very often, there is no part in the caricature that actually resembles the subject. In the case of the caricature of Blair, no matter what viewing angle we take to observe Blair, we cannot observe any parts of Tony Blair as having the outline that the caricature represents Blair as having. Furthermore, the proposal presupposes that the separation and location of discrete spatial parts are possible; however, such a presupposition "threatens to break our hold on the notion of a spatial part altogether" (101).

Another attempt is to try to explain our seeing of both Blair and the thing with an enormous mouth by appealing to the degree of experienced resemblance. So the caricature of Blair is seen as resembling both Blair and the thing with an enormous mouth, but only to a certain degree. Although this attempt seemingly accommodates our seeing in the surface both the object and the misrepresented object, it violates the phenomenology of seeing-in. For seeing the design of the surface as resembling both Blair and the enormous mouth thing involves two seen resemblances: one is the seen resemblance between the surface and Blair, another is the seen resemblance between the surface and the enormous mouth thing. However, our experience of

seeing-in does not involve two experiences of resemblances separately; we see the surface as resembling Blair with an enormous mouth.

Hopkins asks us to imagine three different cases. First, one may see one thing in one part of a picture while seeing a different thing in another; second, one may see one thing in one part of a picture at a moment, and see another thing in the same part at another moment. An example of the latter is the famous duck-rabbit picture. The picture is seen as resembling a duck at one moment, while it is seen as resembling a rabbit at another. One switches from seeing the duck and the rabbit from time to time, but not seeing the same part as resembling both the rabbit and the duck at the same time. Third, one may simply see one thing in one part of the surface. For example, in *The School of Athens*, one sees Plato as having long white hair and Aristotle as having short brown hair. Hopkins holds that the experience of seeing-in indeed belongs to the third case. We see in a surface Blair with huge ears, an enormous mouth, etc., but we do not see different parts as resembling Blair, or the enormous mouth thing; nor do we experience switching experiences of resemblance of Blair and the enormous mouth thing.

The Solution

The previous deliberations suggest that seeing the caricature of a misrepresented figure involves experiencing two resemblances: one is that of the misrepresented object, while the other experience is that of the object as having the misrepresented properties. Yet these two resemblances violate the phenomenology of seeing-in. The separation of two experiences of resemblance is indeed based on the assumption that when an object is depicted by virtue of our experiencing the resemblance between the design of the surface and the outline shape of the object, the depiction depicts the object as it really is. Thus when one sees the caricature of Blair as having misrepresented properties, one is forced to admit that one sees both the resemblance of the outline shape of Blair as he really is, and at the same time, the resemblance of the outline shape of Blair with the misrepresented properties.

Hopkins proposes that the problem of two resemblances can be solved by abandoning the assumption that when an object is depicted, the object is depicted as it really is (104). Thus when one sees the caricature of Blair with those misrepresented properties, one actually experiences the resemblance between the design surface and the outline shape of Blair with those misrepresented properties, e.g. an enormous mouth, huge ears, quaffed hair, etc. Given this proposal, there is only one resemblance, instead of two, involved in our seeing of the misrepresented

object as having misrepresented properties. The resemblance between the design of the surface and the outline shape of Blair as he really is does not matter to our seeing Blair as being misrepresented; what does matter is that the design of the surface is *experienced* as resembling Blair.

Despite solving this problem of misrepresentation, the proposal also possesses the advantages of matching our intuition about depiction and not violating the phenomenology of seeing-in (104-105). Our intuition about depiction is that the picture resembles what is seen in it. Appealing directly to the resemblance in the outline shape of the object with the misrepresented properties matches this intuition about depiction. Furthermore, the experience of resemblance also matches the phenomenology of seeing-in. Thus one sees the object with misrepresented properties in the surface by experiencing the resemblance between the design surface and the outline of the object with those misrepresented properties.

However, as noted above, the solution requires us to abandon the assumption that depictions resemble the item as it really is, and this may entail a problem for the proposal. Blair is hardly alone in not possessing the misrepresented properties: neither does Clinton, for example. Why, then, is it Blair, and not Clinton, who is seen in the caricature? The outline shape of the thing with an enormous mouth may also possibly be similar to Clinton with those properties. The upshot of this

objection is that abandoning the assumption makes it impossible to see particulars, as well as types, in pictures. In order to solve this problem, Hopkins offers the second solution.

Hopkins contends that the above problem arises because what he calls 'the indifference principle' is contravened by our saying that seeing Blair with those features is different from seeing Clinton with them. The indifference principle is about our experience of resemblance in general, and states that "if two things match in respect of some property R, no third thing could be experienced as resembling, in respect of R, one of those things but not the other" (107-108).

Hopkins argues, however, that the Indifference Principle is simply wrong. The principle attempts to limit the specification of our experience of resemblance to features that are dependent on a certain property R, and that property R is the respect in which the resemblance is experienced. This means that nothing can vary independently of R and be the feature in respect to which the resemblance is experienced. This means that if a property can vary independently of R and is mentioned as the feature in respect to which the resemblance is experienced, resemblance would be experienced to one of two things differing in that feature but matching in R. The counter-example that Hopkins gives is that one can hear the noise of one's car as resembling a baby wailing in respect of the rhythm of its rising

and falling tones, even if one's vacuum cleaner has the same very rhythm of changing tones (ibid). Furthermore, the Indifference Principle limits the specification of experienced resemblance in respect to R by restricting mentioning the R-ness of the resembled object. Hopkins argues that this cannot be right, otherwise experiencing the resemblance to something else is impossible. He comments:

> [W]e perceive something R, and experience it as resembling something else R. But if there is nothing more to be said about that second item than that it is itself R, it is wholly unclear that we experience a present object as resembling an absent one. We seem instead simply to be repeating to ourselves that the object before us is R. In short, if experiences of resemblance were bound by the principle, the only properties (the thought of which) they would involve would be those of the *resembling* object (108).

As the Indifference Principle does not limit the possible experience of resemblance, Hopkins proposes that what limits the possible experience of resemblance is indeed what limits our possible experience in general. For example, it would sound very odd and incorrect to say that one saw a rock as resembling the 3-D shape of a female sea horse, but not as resembling a male sea horse. This is because in general, we cannot distinguish a male sea horse from a female sea horse by normal vision. In addition, the limits of our visual experience in general are the limits on the visual experience of resemblance. Return to the example of the picture of a thing with an enormous mouth. Seeing the marks on the surface as resembling Blair with the

properties ascribed by the picture indeed differs from seeing the marks as resembling Clinton with those properties, since there would be a difference should you see Blair as opposed to Clinton with those properties.

If this is sound, the next question concerns the differences between seeing Blair with those features and seeing Clinton with those features. In order to answer this question, Hopkins appeals to the application of concepts to visual experience. The strongest position on this topic is that our visual experience does not merely represent things as having various properties, but representing the properties of a particular or kind. According to this strong view, the concept of a particular enters the content of experience, so the concepts of a particular can also enter the content of experience of resemblance in outline shape. This accounts for the difference of seeing Blair with an enormous mouth, etc., and seeing Clinton with these properties.

Nevertheless, Hopkins concedes that the claim that there can be singular experiential content is controversial, so he adopts a more moderate view to the effect that even though concepts of particulars cannot enter the contents of experience, the application of the concepts are still justified by experience (110). Hopkins contends, for example, that on seeing a woman with all of the features and mannerisms of one's mother (and no conflicting ones), one would, under usual circumstances, judge that the person is indeed one's mother; such a judgment is rather immediate and

irresistible (ibid). Since in this weaker position, the concepts of particular do not enter the content of experience, the difference between seeing Blair with the odd properties and seeing Clinton with those properties is not phenomenological. Nonetheless, a slight modification enables the weaker position to account for the difference between seeing Blair with the odd properties and Clinton with those properties:

> [M]ost distinct pictorial contents engender in us (phenomenologically) distinct experiences; some merely engender a distinctive wider set of reaction—an experience which is not phenomenologically unique, coupled to a conceptual response to that experience which is (111).

Hopkins adds that what he argues with regard to the depiction of particular things would also do for the depiction of types. And he argues that the question 'why does the caricature induce one of the experiences but not the other?", should not be answered by philosophy, but by other disciplines. What Hopkins, *qua* philosopher, wants to account for is *what it is* to see Blair, but not Clinton, in the surface. He means to do this by characterizing the seeing-in experience, which provides an analysis of the notion of depiction. However, answering the empirical question of *why* one thing is seen rather than the other lies outside the realm of philosophy (112-113).

The Limits on Misrepresentation

After discussing what it is to see a misrepresented object on the basis of the design of a surface, in other words, why pictorial misrepresentation is possible, Hopkins goes on to a consideration of the limits on misrepresentation. For example, is it possible that the picture of Blair with an enormous mouth and other odd properties could be a misrepresentation of Clinton?

Although we do see that Blair is misrepresented as having those odd features, it is possible for us to see the picture as resembling Clinton with those features. Therefore, Hopkins claims, it is contingent for us seeing Blair with the odd features in the picture, and it is also contingent that Blair with those features is intended to be seen in the picture by the artist. It seems that what the picture does and does not depict is merely a contingent fact; does this mean that there is no limits or constraint on misrepresentation? Hopkins holds that how a thing really is affects what we see as resembling a thing; this applies to experienced resemblance in outline shape as well. For example, when we see the marks on a surface as resembling Blair with an enormous mouth, wild eyes, huge ears, and the like, our being able to see the resemblance partly depends on how Blair really is, partly on how mouths really are, etc. How things really are thus provides a cluster of constraints that constrain how the surface should be in order for the surface to be able to sustain an experienced

resemblance in outline shape. However, some of these constraints cannot be met simultaneously. For example, Hopkins claims that the constraint on a set of marks in which something with only the features of a saxophone can be seen is incompatible with the constraint on marks in which Clinton can be seen, since these two constraints cannot be met by any one set of marks (120). The incompatibilities between constraints are the limits of misrepresentation.

Hopkins claims that this explanation does not tell us which sets of constraints cannot be met simultaneously. It follows, he believes, that the explanation does not state which misrepresentations are and are not possible. However, the explanation does explain what counts as the limits of misrepresentation, and what governs the limits of misrepresentation, namely, how things really are.

Indeterminacy and Interpretation

In the last section, we have discussed the problem of misrepresentation, understood as the attribution of properties to an object that it does not really enjoy; in this section, we are going to see how Hopkins handle a similar, and equally significant problem in depiction, namely the indeterminacy of depiction.

Indeterminacy in pictures is just as prevalent as misrepresentation. Just imagine a stick-figure picture. It is *prima facie* correct for us to say that the picture depicts

something, and more specifically, that it depicts a man. Moreover, it depicts a man with some features, like having a round head, two arms, and two legs. The problem is that the shape that we see in the marks on the surface is different from the outline shape of a person. The problem is how one sees these two different shapes as resembling each other. The case of indeterminacy is quite different from misrepresentation in the sense that the stick-figure picture neither depicts a man with odd properties nor is seen as resembling a man. The picture does not ascribe properties to the man that he does not enjoy; rather, it does not ascribe any properties to the man except some necessary features of a standing person. The features that the picture keeps silent about are the indeterminate content of the picture; the indeterminate content includes shape, colour, the number of fingers on each hand, etc. Pictorial indeterminacy falls into roughly two kinds: either the property ascribed is reasonably but not completely determinate, or there is no determinate property ascribed. The example for the former case is the head of the stick-figure picture. The stick-figure is depicted as having a head, although it is indeterminate whether the person is bald or not. For the latter case, there is no determinate colour of the stick-figure picture, so the person is depicted as having no colour at all.

Advocates of the resemblance view can attempt to deal with these examples in

two ways. One way is to claim that if a picture's content is indeterminate in some respect, our experience of it is also indeterminate. In other words, the source of the indeterminacy in pictorial content lies in the indeterminacy of our experience of it. This approach ties the indeterminacy of pictorial content to the indeterminacy of the experience of seeing-in; Hopkins calls this approach the 'Marriage approach'. Another approach is separating the indeterminacy in pictorial content from the seeing-in experience, meaning that the depicted object is indeterminate although what is seen in it is not. In other words, the indeterminacy of pictorial content does not lie in our experience of it. This approach separates the indeterminacy in pictorial content from the indeterminacy in seeing-in. Hopkins calls this approach the 'Separation account' (128).

The marriage account seems inadequate to cope with the problem of indeterminacy in pictorial content. The marriage account is able to account for indeterminacy in some cases by "locating a corresponding indeterminacy in what is seen in the picture" (124). For example, in the stick-figure picture, we see a colour-neutral picture, which is indeterminate in colour, so we see a person that is indeterminate in colour. Nonetheless, the marriage account fails to account for some respects. If one says that the stick-figure picture resembles the outline shape of a person, thus it depicts a person, then the outline shape of the person resembled has

to be very indeterminate since otherwise the marks on the surface cannot be experienced as resembling that person. However, our experience of resemblance is hardly so indeterminate. Therefore accepting the marriage account would “put the resemblance view in an uncomfortable situation” (124).

Another approach, just as the Separation account purports, is to accept that what is depicted may be indeterminate even though what is seen in the surface is not. This separation implies that what is seen is can be different from what is depicted. In the stick-figure picture, what we see in it is a person with an odd shape; however, the stick-figure picture does not depict an oddly-shaped person. According to this account, what the marks are seen as resembling is not a stick-figure like person, but something that is more determinate. Recall the example of two photographs, one in black and white and one in colour, of toy blocks. It happens that the toy blocks and the background are in shades of grey, and therefore that two photographs are indistinguishable. However, the difference between the two situations is, Hopkins claims, that what we see in the colour photograph is what it depicts, while what we see in the black and white photograph is not (125). The limit of determinacy of what is seen in the surface depends on the limit of visual experience (127).

However, the separation account’s separation of the content of depiction and the experience of seeing-in seemingly contradicts the experiential approach more

generally, since what is seen in a picture does not match the content of the picture. Nonetheless, the pictorial content is not totally free from the experience of seeing-in. Given the basic insight behind the experiential approach, which is that a picture depicts O only if O is correctly seen in it, a picture cannot depict a dog if everyone sees a cat in it; yet, a picture may depict a dog even though a greenish dog is seen in an over-exposed photograph (128). If seeing-in does not constrain pictorial content in a way that every aspect of what is seen is depicted, what else can constrain what aspects are depicted? Hopkins holds that the answer is the standard of correctness: "The picture will depict only those features of what is seen in it which the causal or intentional history of the surface makes it right to see there" (129).

Hopkins then proposes that the second question is what enables the viewer to see the depicted content. He claims that in order to deal with this question, it is necessary first to look at how pictures are interpreted (He asks the reader to put aside the separation account and simply assume there is no separation of pictorial content and the seeing-in experience). The interpretation of pictures concerns the explananda (X5) and (X6), which claim that the knowledge of the appearance of the depicted object and the general competence with depiction are necessary and jointly sufficient for interpreting pictures. Since the experiential account takes seeing-in as the core of picture interpretation, we explain depiction by experiences of seeing the

picture: what a picture depicts is necessarily what can be seen in the picture, which is jointly sufficient with the application of some sorts of standard. One may wonder whether anything more can be said about seeing-in, such as exactly what resources are needed to see something in a picture? Hopkins claims that one's general competence to see the outline shape and the resemblance in outline shape is essential to see in pictures, and this general competence is not a "trivial ability." It may require training to see the outline shape, and seeing the resemblance in outline would require even more training (131). However, the general competence alone is not sufficient. In order to see a horse, in addition to seeing a resemblance in outline shape, one "must also be able to see the picture as resembling *a horse"* (ibid), and "the ability to see resemblances in outline shape requires an awareness or conception of the things to which resemblance is experienced" (132).

The awareness or conception can be identified with the knowledge of appearance in (X5) and (X6), although the nature of the awareness or the conception is "rather obscure" (ibid). The resemblance view takes the notion of seeing-in as the core of the experience; when one sees an object in a picture, it necessarily involves a thought of the depicted, but absent, object. The resemblance view identifies the awareness or the conception with the thought of the absent object in seeing-in, and they are involved in the experience of resemblance because the marks on the surface

are seen as resembling: “It is that seeing-in involves whatever it is which experiences of resemblance in general involve—something I have, without considering the phrase illuminating, been calling the awareness/conception of the resembled object” (133).

Skeptics may question the identification of the awareness with the knowledge of appearance since the knowledge of appearance is a visual notion while the appearance, which means the outline shape of the object, is geometrical. This means that an invisible object may have outline shape, while such an object, being invisible, obviously does not have any visual appearance. So experiencing the resemblance in outline shape does not necessarily involve the knowledge of the appearance of the object in question; this claim makes (X6) questionable: the knowledge of the appearance of the thing depicted may not be necessary for interpretation of pictures. In order to solve this problem, Hopkins holds that no sense other than vision can be the means of access to outline shape; we can only detect outline shapes by seeing (134). However, our detection of outline shapes only by means of seeing is a contingent fact, since it is imaginable that with the help of some devices, we could able to detect outline shape of invisible objects (135). If this is so, there is possibly another form of representation that relies on the experience of resemblance in outline shape, and that is not limited to representation the visible. With our intuition

and the explananda, especially explananda (X3) and (X6), this kind of representation, which is akin to depiction, would be rejected as depiction. However, Hopkins claims, whether the putative representation counts as depiction can be controversial:

> The putative form of representation lies on a continuum of possible ways to represent, a continuum of forms of representation more or less akin to our paradigm cases of depiction. The kinship can be sufficiently strong, or weak, for the form of representation clearly to count, or not to count, as depiction. In many cases, however, including the one in hand, there is simply no answer to the question. We can legislate how we like on the matter, but we should not succumb to the illusion of thinking that what we say reflects anything substantial about the concept of depiction itself (136).

Separation and interpretation

Returning to the notion of separation, adopting Separation means the content of seeing-in is no longer a straightforward guide to pictorial content since what the picture depicts is less determinate than what one sees in the picture. Thus in order to interpret the picture correctly, one has to decide which aspects of what one sees in the surface are essential to what the picture depicts, and which aspects are not. General competence and the knowledge of appearance of the depicted item do not suffice for such decision for they only participate in seeing the resemblance in outline shape. Hopkins claims that three kinds of general knowledge are decisive to the decision making (137-138). The first kind is the knowledge of what sort of thing that the world contains. This kind of knowledge is very general; for example, when

one sees a greenish dog in a photograph, with the knowledge that normally no greenish dog exists in the world, one would conclude that the greenishness of the dog is not what the photograph depicts; the greenishness may simply due to some mistreatment of the negative of the photograph, or abnormal lighting. The second kind of knowledge is how things are generally depicted. This kind of knowledge concerns the viewer's understanding of how the sort of items seen in the picture tend to be depicted: "artists very often intend to depict items of the sort they take the world to contain. Since there is no reason for the viewer to think that either she or the artists is insane, the items depicted will thus be of a sort the viewer also takes the world, by and large, to contain" (138). The third kind of knowledge is that of the various means of depiction production. Depiction can be the result of various means, and different means involve different factors relating to the standard of correctness governing depiction. Some of these factors are dependent on the creator's intention or some kinds of causal dependence, which is the standard of correctness, and some are independent. Understanding these factors helps us to decide what aspect in the content of seeing-in is depicted, and what aspect is not. For example, the artist's intention is irrelevant to the colour of a black and white photograph, since no matter what the artist's intention is, it does not affect the fact that there is no colour available in a black and white photograph. Therefore, the factor of colour in black

and white photographs is independent of the standard of correctness. When one sees toy blocks in grey shade in a black and white photograph, one knows that the photograph does not depict the blocks in such grey shade since one understands that a black and white photograph is not able to present any colour except shades of grey, and it is also not something that the intention of the photographer can change. The limitations of different media "prevent such intentions from being fulfilled" (138). Due to these limitations, some factors of the means of depiction are unable to reflect the creator's intention or the causal genesis, and factors that fail to do so are irrelevant to pictorial content. A correct interpretation of the content of pictures requires the viewer be aware of these limitations and of the content-independent factors.

The interpretation of a picture's content takes place when the viewer applies these three forms of knowledge. These three forms of knowledge interact until an equilibrium is finally reached. Hence, Hopkins claims, the interpretation of pictorial content is a delicate matter, and runs parallel to our interpretation of many aspects of our environment (140).

Separation and Some Unfinished Explanations

We have seen from last section that by supplementing the three kinds of

knowledge as the resources needed for pictorial content interpretation, (X5) and (X6) are secured under the introduction of Separation. However, are other explananda also secured when Separation is applied? Under Separation, the depicted content is less determinate than what is seen in a picture. Would this lead to the possibility that the loss of determinacy is so great that a picture depicts its object without depicting any property of it? This may threaten (X1). Similarly, what (X2) and (X3) claim is that a depicted object should be depicted from at least a point of view; the visibility of the object depicted may also be threatened by Separation (142). Hopkins holds that the solution appeals to the standard of correctness, which should encompass the possibility of (X1) to (X3), and, at the same time, leave room for Separation, so that the standard of correctness should not allow that what can be seen in a surface is all that the surface depicts.

Hopkins holds that the creator of a picture who intends to depict some particular thing can only fulfill that intention by marking the surface deliberately and in accordance with some properties of that particular. During this process, she is able to see what can be seen from the surface. Therefore, “she must, in order words, refine her intentions as she enacts them. And so at least some of the properties visible in the surface will be depicted by it—as (X1) requires”(ibid). Yet what about those cases where it is not intention, but causation, that sets the standard of

correctness? Hopkins holds that for a particular, *b*, to act causally on surface P through a causal relation R, some of *b*'s properties must be "causally efficacious" in the process. If the picture depicts *b*, *b's* properties that is visible in P thus are those *b* really enjoys. Only by generating the properties of a particular on P by the properties themselves, could the causal relation have the flexibility and sensitivity necessary for open-ended depictive intentions, such as a photograph being intended to depict whatever is responsible for the marks on the surface. "The argument exploits the fact that no causal relation could have the flexibility required in order to underwrite depiction unless it generated some properties seen in the surface from those properties themselves" (146). Therefore, (X1) is still secured after the introduction of Separation, and it also allows the possibility of Separation.

Hopkins holds that the arguments and considerations evoked above apply to (X2) and (X3) as well, with only some necessarily amendments, and the explananda also allow the possibility of separation. "Similar consideration can take us from the necessity of seeing in a surface properties which are both reasonably determinate and visual, and some orientation to a point, to the necessary of such things being depicted. Further, they can do so without threatening the possibility of Separation" (146).

Accommodating diversity: resemblance, convention and drawing in perspective

So far we have discussed some major issues in depiction: the nature of depiction, pictorial visual experience, misrepresentation, and indeterminacy. One remaining problem is how the experienced resemblance theory accommodates the diversity of depiction. The diversity of depiction leads to problems at two ends that a theory of depiction has to accommodate: first, indistinguishable marks may depict different objects; in other words, they may have different pictorial content; and second, distinct marks may depict the same thing; they possess the same pictorial content (147).

For the first case, if two indistinguishable marks depict different objects, they must be experienced as resembling different things, and both experiences are legitimate. The legitimacy of experiencing the marks as resembling different objects can be the result of a difference in the standard of correctness. However, the possibility of whether the same marks can be experienced as resembling different things is in question. We have seen what it is to see something in a surface, and why a certain object is seen rather than others (recall the reason why one sees Blair in a picture rather than seeing it as Clinton). However, Hopkins claims, it is an empirical question, and not philosophy's job to provide the answer to why the marks on the surface are seen as resembling in outline shape a certain object rather than others.

And since this question is directly related to the question why one sees a mark as resembling a certain object, while others see the same mark as resembling other objects, the reason why indistinguishable marks can be seen as resembling different objects is indeed empirical; “So nothing in our account of depiction precludes different subjects seeing the same marks as resembling different things. All that is needed is some suitable variation in the empirical determinants of the experiences of resemblance. Given that, and appropriate differences in histories of production, similar marks can carry different pictorial meanings” (151). According to Hopkins, reasons for such variation include convention, individual encounters with other pictures, and other possibilities.

Given the considerations just introduced, the problem of indistinguishable marks depicting different objects is accommodated. Another problem is whether it is possible for different marks to depict the same thing. In other words, is it possible for different marks to possess the same pictorial content? With this question in mind, Hopkins first tries to explain the diversity of depiction systems. He claims that systems can achieve their diversity by providing different details of the same item; or they can simply be indeterminate with regard to different aspects of the depicted objects (153). With regard to the possibility of different marks possessing the exact pictorial content, Hopkins holds that this possibility lies also in cultural factors: “We

there considered the role of perceptual expectation based on past acculturation as determining the 'resembled' side of the formula; but it seems equally likely to influence which marks can fill the 'resembling' role"(ibid). How about non-perspectival[8] depiction? Hopkins claims that when a spatial property is depicted with a certain determinacy, representations of other spatial properties would also be represented with a certain determinacy (157). Due to the fact that non-perspectival systems fail to preserve outline shapes of the item drawn, they only depict, if they can, objects in a reasonably indeterminate manner. Thus Hopkins concludes that "[s]o the experienced-resemblance view, coupled to our theoretical constraint on depiction and our sense of what is psychologically possible for us, does seem to preclude any depiction of spatial detail that is not depiction in perspective" (158).

Here ends my introduction of Hopkins's experienced resemblance theory. I now turn to a survey of criticisms of Lopes's and Hopkins's theory.

[8] The meanings of 'perspectival' or 'perspective' refer to the perspectival drawing systems in which outline shape of the item drawn is preserved. See p. 153.

CHAPTER FIVE
CRITIQUES TO THE ASPECT-RECOGNITION THEORY

In this chapter, I survey the critiques of Lopes's aspect-recognition theory. Critiques of the theory can mainly be divided into critiques concerning, first, pictorial aspects; second, the recognitional capacity; third, the referent and source of the information; and, fourth, the transparency of pictures. I will first survey the critiques made by other philosophers, and then focus on Hopkins's objections to the aspect-recognition theory.

Questions Concerning Pictorial Aspects

According to Lopes, the explicit non-commitment of pictures is what distinguishes pictorial representation from other kinds of representation, such as natural languages (refer to chapter 3, pictorial aspects). However, a number of philosophers question the sufficiency of explicit non-commitment to pictorial representation. Anthony Savile, in his review of Lopes's book (Savile 2000: 158-162), raised doubts about Lopes's distinction between descriptions and pictures. Savile argues that although it is true that a picture of a bowlered bulldog is explicitly non-committal whether he is bald or not, a description of the bowlered bulldog is also explicitly non-committal. Recall Lopes's argument that describing something as

having one property can always allow describing it as having another properties by supplementing the previous description of the object. However, Savile argues that this is simply not right, since a description can only describe an object with certain properties at a time: “It may be true that in representing the bulldog as bowlered I cannot show him as bald, but then in describing him as hated I cannot *at the same time* be forthcoming about the state of his scalp either. Of course I can go on to describe him as bald, but then equally I can go on to paint him as bald (having removed his bowler)” (Savile 2000: 161). Savile extends his argument by claiming that given Lopes’s formulation, a perfume, or even a good meal can be examples of pictures. Every picture is explicitly non-committal in some ways, while some respects are chosen to be committal, some others are precluded. However, a particular perfume, for example, can also be explicitly non-committal for the scent of the perfume may prevent other scent in the situation be detected. “A particular perfume may prevent other olfactory information about a situation from being detected by a competent nose—consider air fresheners—and in the realm of taste, an aioli inevitably masks other features of the dish it enhances (the fish’s lack of freshness)” (Savile 2000, 162).

Daniel Herwitz raises a similar question about the role of aspects in Lopes’s account. He argues that the choices that a writer makes are also explicitly

non-committal in the sense that by showing the character in a certain way, the writer has to preclude showing the character in other ways. “The writerly choice of not to show a character through the medium of words is an inherently precluding one: by showing X one must leave out Y, and a good bit of writing consists in formulating the terms for these restrictions” (Herwitz 2000, 386). Under Lopes’s account, language would be counted as pictures as well—on the assumption that aspect-based content is sufficient to pictorial sense.

Questions Concerning the References and Sources of Information

Philosopher Ira Newman questions Lopes’s ‘naturalized account of pictorial reference’ (Newman 1998, 274-275). Lopes claims that pictures are ways of “gathering, storing, and transmitting visual information about their subjects” (Lopes 1996, 144). However, how the information is transmitted by the marks on the surface of a picture is never told. The information cannot be transmitted as linguistic symbols, otherwise his account would recapitulate the linguistic model of Goodman that Lopes has rejected; nor can Lopes explain the hypothesized information transmission in terms of the resemblance between marks and the subject, as otherwise his account would be unable to claim that resemblance is independent, and thus the production, of depiction.

Denial Herwitz also questions the referential system of Lopes's theory. He contends that Lopes's account is problematic in explaining fictive pictures. Recall the example of the painting of Bathsheba by Rembrandt, Lopes argues that the painting depicts the model rather than the fictional character Bathsheba, since the visual information of the painting refers to the model; and it is make-belief that the picture depicts the fictional character. However, according to Herwitz, it is possible, although rare, that under some particular schema, the painting depicts both the model and the fictional character. And for most cases of fictional pictures, the model is "meant to disappear", and all competent viewers would think so under the relevant schema. The underlying reason is that reference is not merely causal, but also intentional (Herwitz 1999, 388).

Questions Concerning the Transparency of Pictures

Lopes's claim that all pictures are transparent is controversial. Philosopher Gordon Graham doubts whether fictive pictures, which are works of imagination, can be seen through. This is because to ensure that fictive pictures, whose objects do not exist, can be seen through, Lopes appeals to Walton's make-believe theory. Although the original claim made by Walton about the application of the make-believe theory is that all pictures are fictional, Lopes incorporates the

make-believe theory in explaining only fictive pictures. According to Lopes, viewers have to identify the source of the target of make-believe. However, Graham is suspicious whether Lopes's claim can be plausibly applied to cartoon characters: "Does anyone really pretend, or need to pretend, that there is an original 'source' for Mickey Mouse or Popeye, which the cartoon drawing represents? We see these as drawn originals, and yet they are representational, not abstract, drawings" (Graham 1999, 400). If Lopes cannot answer Graham's doubts about cartoon, the aspect-recognition theory is defective.

Daniel Herwitz is also suspicious about the bald claim that all pictures are transparent. He argues that Lopes's theory of depiction needs the transparency thesis because the Gombrichean notion of aspect presentation requires belief, attitude, concept and other mental states to ensure the referentiality of pictures. However, Lopes's "causal theory of reference" moves from the referent to a picture, and to the referent finally. In moving from the picture to the referent, the process undergoes a "sublevel of belief" (Herwitz 1999, 387). Here is why Lopes needs the notion of transparency in pictures, for transparency is used to describe the believe-independent relation between the pictures and the one who creates them.

However, Herwitz holds that the bald claim, which is made by Lopes, that all pictures are visual prostheses goes too far. Grasping the aspectual properties of

Cubist paintings requires a lot of training in belief and attitude to reconstruct and understand the paintings, since the depiction in cubist works depends on how the world is believed to be, and "depiction in Picasso's works makes visible in the charm and construction of its objects aspects of the world that are not visible but a matter of knowledge" (Herwitz 1999, 387). He also believes that the claim that all pictures are transparent, which means belief-independent, makes the notion of belief obscure: "…a theory of depiction cannot be exhausted by a theory of belief-independent transparency with its implication that paintings are prostheses—as if, finally, one knew what belief was in sufficiently clear terms to be able to say with confidence what is and what is not "belief independent"" (Herwitz 1999, 387-8).

Hopkins's Objection to the Aspect-recognition Theory

In his review to Lopes's book *Understanding Pictures*, Hopkins questions Lopes's definition of pictorial representations of properties and kinds (refer to chapter 3: Pictorial Recognition for the distinction of basic portrayal and basic depiction). Unlike the depiction of particulars, claims Hopkins, the notion of an information link involved in the depiction of properties is unclear. In the example of a picture with a pure property content given by Hopkins, which is a doodle

resembling the 3-D shape of a thing, if we assume the picture embodies information from the thing, this would prove to be wrong in cases where there is no such a thing with the 3-D shape; nor is it composed by other instantiated shapes. Hopkins claims that such a picture does not fit Lopes's definition of the depiction of a property. Even if Lopes tried to deal with this case by having recourse to his account of fictive pictures, the counterexample cannot be handled since it is implausible and unwarranted to treat every object that we do not know as fictive. The example threatens the notion of an information link in Lopes's definition.

Hopkins then argues that a picture with pure property content points to problems in Lopes's theory. The properties in such a picture are "instantiated, but do not depict any particular as instantiating them" (Hopkins 1997, 285). There is a second problem of Lopes's theory related to pictures with pure property content: pictures with pure property content threaten Lopes's bald claim that all pictures are transparent. For if the object in the picture with pure property content is seen, "we are not restricted to seeing particulars and properties instantiated by them" (Hopkins 1997, 285). The result would be that pictures extend vision across logical barriers, and this is, for Hopkins, hard to accept. Hopkins contends that Lopes may modify the bald claim by saying that all pictures representing particulars are transparent, while others are not. However, this move would lead to an inability to explain the

twofold experience of picture viewing. Hopkins claims: “he [Lopes] tries to understand twofoldness as a consequence of the fact that, on the right account of what it is to be an object of perception, seeing a picture involves two such objects, at different stages in the causal chain—the surface before the viewer and the object from which comes the information that surface embodies” (Hopkins 1997, 285). Since this attempt to take the transparency of pictures is central to Lopes’s account, abandoning the claim that all pictures are transparent would jeopardize the explanation of twofoldness. However, our experience tells us that twofoldness is involved in both pictures that represent particulars and pictures that represent properties or kinds, so therefore Lopes could only choose either to insist that all pictures are transparent, or that some pictures fail to satisfy the twofoldness constraints.

In a later paper titled “Pictures, Phenomenology and Cognitive Science” (2003), Hopkins gives some new and more detailed objections to Lopes’s aspect-recognition theory. Hopkins formulates Lopes’s theory as “**P** depicts ***a***/an **F** only if **P** is able to engage the ability of a suitable perceiver viewing **P** in suitable conditions to recognize ***a***/ an **F**” (Hopkins 2003, 666). Hopkins claims that the meaning of the recognitional capacity cannot be equated to the disposition that we identify kinds of stimuli as ***a***/ something **F**, for pictures do not engage the latter sense of the capacity.

This is because we can clearly identify ***a***/ an **F** from a picture of ***a***/ and **F**. Thus Hopkins reformulates the definition as follows,

> **P** depicts ***a***/ an **F** only if there is significant overlap between the processing operations, whatever they are, involved in someone's understanding **P** and the processing operations, whatever they are, involved in someone's recognizing (in the flesh) ***a***/ an **F** (Hopkins 2003, 667)**.**

The objection that Hopkins raises targets the expansionism in Lopes's theory. According to Lopes, "the dimensions of variation across which pictorial recognition is dynamic go far beyond those across which ordinary recognition is dynamic" (Lopes 1996, 147). Hopkins interprets this expansionism as follows: pictures work by engaging our recognitional capacity across a larger variation than the recognitional capacity engaged by face-to-face objects. After some refinements and deductions, Hopkins claims that the expansionism should be understood more precisely as consisting in the following claim: "for some properties **G,** and some particulars or kinds, a pictures [sic] of ***a*** /an **F**-thing as **G** can engage our ability to recognize ***a***/**F**-thing, even though were we confronted with a **G**-bearing such thing in the flesh, those recognitional capacities would not be engaged" (Hopkins 2003, 670). If Hopkins's formulation of the expansionism captures what Lopes means, it seems that Lopes's theory fails to meet one of Hopkins's explananda, namely that there are limits on pictorial misrepresentation. This is because before adopting expansionism, Lopes can explain the limit of misrepresentation by appealing to the

overlap claim—"[t]here are limits on which recognitional capacities can be jointly engaged by a single object seen in the flesh; and the limits on pictorial misrepresentation reflect these general limits on which capacities can be engaged as a cluster" (Hopkins 2003, 671). However, if the expansionism runs as Hopkins suggests the limits of misrepresentation cannot be explained because the tentative expansionism claims that the clusters of capacity engaged by pictures go beyond those engaged by objects seen face-to-face. Therefore Lopes's theory fails to meet the explanandum.

In addition, Hopkins claims, Lopes's aspect recognition theory also fails to account for another explanandum—there is no bare depiction of particulars. In order to meet the explanandum, the recognitional theory has to claim that recognition is necessarily engaged in clusters.

Furthermore, Hopkins contends that Lopes, with the aim of explaining depiction in terms of pictorial understanding, pushes the recognition of things into consciousness, since understanding pictures is a conscious response to them (Hopkins 2003, 672). Lopes claims, then, that "recognizing a feature entails having a conscious experience of that feature" (Lopes 2003, 648). However, Hopkins holds that the recognition capacity of some creatures is not engaged in clusters, and those creatures may only recognize particulars without recognizing them as having any

features, for the recognition of the features is triggered at the sub-personal level. What Hopkins is arguing is that “it is possible for the ability consciously to recognize a particular to be engaged without any other abilities for conscious recognition being so. If so, there could be pictures which engage the ability to recognize a particular without engaging any other recognitional abilities” (Hopkins 2003, 672).

In response, Lopes raises the example of pictorial blindsight. This is a thought experiment in which someone can “sense”, but could not see, the depicted objects, and remains unaware of the features of the object depicted while being capable of giving reliable answers about questions about this very content (Lopes 2003, 648). Lopes uses this example to argue that recognition of things is not necessarily conscious; there can be recognition in sub-conscious level. Thus, the example shows that recognition engaged in cluster does not necessarily rise to a conscious level. However, Hopkins argues that Lopes’s example of pictorial blindsight further confirms Hopkins’s criticisms of the aspect-recognition theory. Hopkins argues that in the example, the recognition of the object depicted is a conscious recognition of the picture’s content, and since the perceiver in the example can only identify the object depicted without stating any features of the object, the example is clear enough to show that Lopes’s theory allows bare depiction of particulars. Lopes can

defend the theory by saying that the recognition involved is not a conscious mental event. Nonetheless, Hopkins holds that a case of this sort would not be a matter of depiction since no representation can be formed at such a 'deep' level: "nothing buried so deep in our inner workings could constitute a form of *representation*, in the sense in which language, pictures and other external symbols all represent…" (Hopkins 2003, 673). Therefore, Hopkins claims, Lopes's account also fails to meet another explanandum—there is no bare depiction of a particular.

In a more recent essay entitled "The Speaking Image: Visual Communication and the Nature of Depiction" (Hopkins 2006, 145-159), Hopkins raises other criticisms of Lopes's theory. He questions the explanatory power of Lopes's theory and suggests that there are two claims in the general formulation of the recognition theory. First, one can only recognize an object in a picture if and only if one can recognize that object face-to-face. This claim concerns, in Schier's term, the "co-variance" between our ability to interpret pictures and our ability to recognize objects in person. The second claim, inferred from the first, is that "whatever subpersonal processing is involved in recognizing the object in the flesh, significantly overlapping processing is involved in understanding a depiction of that object" (Hopkins 2006, 155). This claim concerns the overlap and the "co-variance", between the two sorts of cognitive and perceptual capacities. In addition, a

recognition theory should be able to account for distinguishing recognition of an object in a picture from recognition of the object in the fresh.

With these remarks in place, Hopkins criticizes Lopes's account for saying nothing concrete about the differences between the processes of recognizing objects directly and recognizing them in visual representations. Hopkins contends that although Lopes might try to account for such differences with his talk of two-dimensional and three-dimensional recognition, this approach is unsatisfactory since it is not the recognition theory that is doing the explanation, but rather claims that can be attached to almost any position in the philosophy of depiction. Hopkins further explores some of Lopes's possible moves. Lopes might, Hopkins claims, solve the problem by adjusting the overlap claim by saying "what pictures engage is not merely our ability to recognize O in the flesh, but our ability to recognize O "seen two-dimensionally." Sculptures, in contrast, engage our ability to recognize O when presented in three dimensions" (Hopkins 2006, 157). However, the resulting adjustment either means, "(1) that we identify a representation as of O, and that representation is two-dimensional; or it means (2) that what we are seeing is O in two-dimensional form, and we recognize it as such" (ibid). However, both readings are unsatisfactory, for (1) is an uncontroversial claim that we are capable of understanding pictures, and it leads us back to the same way that we handle the

distinction by adding extra claims. And (2), claims Hopkins, is certainly false (ibid).

CHAPTER SIX

CRITIQUES OF THE EXPERIENCED RESEMBLANCE THEORY IN OUTLINE SHAPE

In this chapter, I survey the criticisms of Hopins's theory of experienced resemblance presented by Gabriela Sakamoto, Catherine Abell, and Dominic Lopes.

An Objection from Gabriela Sakamoto

As was established above, the experienced resemblance theory appeals not only to the viewers' competence at seeing resemblances in outline shape, but also to knowledge of what sort of objects the world contains, knowledge of how things are generally depicted, and knowledge of the various means of pictorial depiction. In his book review of *Picture, Image and Experience*, Sakamoto criticizes that this requirement of possessing knowledge of the world and the artistic conventions on the grounds that such a position opens the door to the objection that the theory does no real explanatory work (Sakamoto 2002, 93). If what Gombrich and Goodman claim—our experience of pictures is the function of our beliefs about how the world is structured—is correct, then it is our beliefs, and not resemblance, that explain our experience of pictures as possessing particular contents. Therefore, experienced

resemblance may merely be the product of depiction, not what really explains the phenomenon.

Objections from Catherine Abell

In her paper entitled “On Outlining the Shape of Depiction”, Catherine Abell raises two criticisms of Hopkins’s theory of experienced resemblance. Her first contention is that the notion of outline shape is inconsistent, and her second point is that the theory fails to establish that the determinacy of properties of 3-D shape is a result of the determinacy of outline shape.

Abell argues that the notion of outline shape is not purely geometrical but partially visual, and that this entails that either the account is inconsistent, or that outline shape is equivalent to the silhouette of objects. Hopkins asserts that outline shape is a geometrical notion: outline shape is the solid angle subtended by the surface of the object to a point; thus change of outline shape would only take place as a result of an alternation in the 3-D shape or changes of the orientation of the object (Hopkins 1998, 114). Hence, if outline shape is a purely geometrical notion, surface patterning would not affect the outline shape of an object. However, Hopkins claims in discussing an example that “outline shape is sensitive to the position of boundaries between areas of differing colour, if not to the particular colour those

areas are. Thus the outline shape of a zebra differs from that of a small horse, even if the only visible difference between the two lies in the former having stripes which the latter lacks" (Hopkins 1998, 85 footnote). Following what Hopkins says, outline shape is partially a visual notion since it is sensitive to boundaries between areas of colours. Changing the outline shape of an object by changing the pattern on its surface does not involve alternations of its 3-D shape or its orientation. Therefore Hopkins is inconsistent with regard to his elucidation of the notion of outline shape. Furthermore, Abell argues that Hopkins's inconsistency leads to a serious dilemma with regard to the notion of outline shape. The dilemma is confronted with regard to the problem of explaining how outline shapes can be nested in bigger outline shapes, and why the 3-D shape and the orientation of an object depicted are always reasonably determinate. In order to overcome the inconsistency, Hopkins can hold that surface patterning does not affect outline shapes. However, Abell argues, such insistence cannot explain the outline shape of an object containing nested smaller outline shapes since "it is only in virtue of surface patterning on the tracing of the pyramid that the solid angle it subtends comprises the solid angles subtended by two distinct parts" (Abell 2005, 34). If nested outline shape is not possible, the outline shape is equivalent to the silhouette of the object. Another solution that Hopkins can opt for—which for Abell constitutes the other horn of the dilemma—is that outline

shape is dependent on surface patterning; an outline shape is affected by the 3-D shape, orientation, as well as the surface patterning of the object. However, Abell asserts, claiming that outline shape is correlated with surface patterning is not an option for Hopkins since "this would not be sufficient to explain why the three dimensional shapes and orientations objects are depicted as having are *always* reasonably determinate" (Abell 2005, 32). Nonetheless, Abell has not elaborated why correlating surface patterning to outline shape would be insufficient to explain the determinacy of 3-D shape and orientation of the object depicted.

The second objection that Abell makes is that the theory fails to establish that the determinacy of properties of 3-D shape is a result of the determinacy of outline shape. According to Hopkins, since most human beings see with two eyes, the outline shapes relative to each of the two eyes are slightly different. Therefore general vision only achieves a certain level of determinacy, and such a limit of determinacy is the limit of determinacy of experienced outline shape. However, Abell argues that according to David Marr, the process of stereopsis—the process of visual perception that causes the depth effect by two slightly different images formed on the retinas of the two eyes—leads to the result that the more the eyes move in relation to an object, the more determinate the 3-D shape of the object is (Abell 2005, 36). Abell argues that the more the eyes move in relation to an object,

the less determinate the outline shape of the object is. The determinacy of outline shape decreases while the determinacy of 3-D shape increases, and "outline shape will be at its most determinate when three-dimensional shape is at its least determinate, and *vice versa*" (Abell 2005, 36). This shows that the perception of the 3-D shape of an object does not correlate with the perception of its outline shape, which leads to the conclusion that when our eyes move during the process of visual perception, we see things with increasingly determinate 3-D shape and at the same time with decreasingly determinate outline shape. Abell argues that given this result, the notion of outline shape can hardly be recognized as a general feature of visual experience.

Objections from Dominic Lopes

In his article "Pictures and the Representational Mind" (2003), Lopes raises some objections to the experienced resemblance theory. His first objection is a general objection to all theories that take seeing-in as central. Since Hopkins's theory takes seeing-in as a central component that necessarily involves a twofold experience, namely, seeing the object depicted and the surface of the picture simultaneously, some pictures, namely *trompe-l'œil* pictures, are excluded by the theory as representing their subject pictorially. Lopes claims that it is the domination

of the “object-presenting aspect” and the suppression of the awareness of the surface of pictures that makes such kind of pictures *trompe-l’œil* pictures (Lopes 2003, 636). Therefore, either seeing-in fails to account for *trompe-l’œil* pictures as pictures, or we have to say that these pictures do not represent pictorially.

Lopes’s second objection is about the application of concepts to our visual experience of viewing pictures. Hopkins contends that seeing the similarity of outline shape in a picture “forces from us” the application of a concept. Thus we see what the depicted object is. However, he argues that the question of why the application of the concepts is forced by the experience should not be explained in the realm of philosophy but psychology or other relevant disciplines. Lopes objects that this line of thought makes one wonder whether experienced resemblance of outline shape is necessary for seeing-in, and eventually, for depiction, since there are examples that show that experienced resemblance of outline shape is not necessary for depiction: a technical drawing of a rectangular table is not experienced as resembling the shape of a rectangular table; nor is Picasso’s portrait of Gertrude Stein is experienced as resembling the outline shape of the real Gertrude Stein. Lopes argues that it is possible that merely the experiences of viewing the pictures elicits the application of concepts, and experienced resemblance in outline shape is not necessary for the application of concepts (Lopes 2003, 639-640).

Replies by Hopkins

Hopkins treats Lopes's criticisms as requiring him to commit to an answer to the question about the causation of depiction, which Hopkins has tried not to answer that question and explicitly leaves it to psychology and other disciplines. In reply to the counterexamples that Lopes raises, which are Picasso's portrait of Gertrude Stein and the technical drawing of a rectangular table, Hopkins argues that sometimes the experience of seeing-in is not a perfect guide to the content of a picture—what we see in a picture is not sufficient for determining what the picture depicts.

In order to be insulated from potential counter examples, Hopkins makes three points in response to Lopes's general criticism, which argues that Hopkins's theory commits him to addressing the causal theory in depiction in order to explain why a particular surface pattern elicits the experienced resemblance in outline shape (Hopkins 2003, 663-664). First, Hopkins argues that if a picture is not experienced in the way he has argued, appealing to a causal theory that would explain *how* a particular surface causes that experience would not help to make the theory right. Second, Hopkins argues that he can appeal to a causal theory in discussing the particular cases in hand if appealing to a causal theory really helps to defend his constitutive theory of depiction. He would not be committed to any general claims about what is required for a concept application that generates experiences of

seeing-in not to mention a general claim about concept application in visual experience. Third, Hopkins argues that even if he makes general claims to the effect that concept application is triggered by perceiving outline shapes in pictures, Lopes's objection, which argues that objects and members of kinds are visually identified by their outline shapes, fails, since the application of concepts in cases of depiction and cases of face-to-face recognition could be different: "even if I did tell a general causal story about seeing-in, it need have no consequences for seeing generally……For it could be that different factors trigger the application of the concept in the pictorial and face-to-face cases" (Hopkins 2003a, 664).

More Objections from Lopes

In a more recent article "The Domain of Depiction", Lopes raises his objections to Hopkins by bringing in additional examples. Lopes's first objection is a continuation of the previously discussed objection. The example is a cube that is drawn under the parallel oblique perspective, and Lopes uses the example to show that experienced resemblance in outline shape is not necessary for depiction. Since the picture does not show us what a cube usually looks like, but, intuitively, one does see a cube in the picture, Lopes argues that Hopkins can either claim that the picture does not depict a cube (it can be a misrepresentation of a cube, or merely a

hexahedron), or it does depict a cube although the cube in the picture does not share objective similarity in outline shape with a cube. Both replies are problematic because the first reply would categorize a lot of pictures as misrepresentations and the second reply would detach experienced resemblance in outline shape from objective similarity in outline shape (Lopes 2006, 165).

Lopes then uses the second example to argue that experienced resemblance in outline shape is not sufficient for seeing-in. The example is three pictures that are identical except that they differ in shading. Although these three pictures share objective resemblance in outline shape, the easiness of identifying a face in these pictures varies: (a) shows the outline of positive shading of a face, (b) shows the outline in negative shading, and (c) shows the outline with no shading (Lopes 2006, 166). Similar to the last example of the cube, Lopes contends that Hopkins can opt for either (c) depicts a face, and our intuition is wrong that we do not see a face in it, or a face is not seen in (c) since there is no similarity in outline shape experienced, although (c) shares objective resemblance in outline shape with (a) and (b). The problem of the first response is that any object has nearly infinite numbers of outline shape, and there could be pictures matching these outline shapes; however, we are not able to identify the objects in all these pictures because there are cases like (c) among the pictures. Sometimes even the picture matches a particular outline shape

of the object, yet it depicts nothing since viewers cannot identify the object. If the theory argues that our intuitions that those pictures depict because they match the outline shape of the object is wrong, then our intuitions "have been pushed too far" (Lopes 2006, 167). The problem of the second response is that detaching experienced resemblance in outline shape from objective resemblance in outline allows idiosyncratic experiences that lack a standard of correctness.

Finally, the *Invisible Dalmatian* is used by Lopes as an example to argues that it is difficult to prove that experienced resemblance in outline shape explains depiction. According to Lopes, seeing the outline shape of the dog depends on first seeing a dog in the picture, and this is what psychologists called a "subjective contour". If the outline shape of the dog is only seen after one sees a dog in the picture, then experienced resemblance in outline shape does not explain depiction. Instead, such an experience is a product of depiction.

In light of these criticisms, Lopes argues that experienced resemblance in outline shape is neither necessary nor sufficient for seeing-in, and hence for depiction. And the theory fails to sidestep Goodman's challenge—resemblance, whether objective or experiential, has to be shown to explain depiction, rather than be the production of depiction.

Replies by Hopkins

Although Hopkins does not address himself specifically to all of Lopes's critiques, in a chapter belonged to the same anthology as Lopes's article "The Domain of Depiction", he makes six related points (Hopkins 2006, 152-154). First, the experienced resemblance theory is not a theory of how pictures should be made, but rather states a condition under which the resulting image depicts an object: namely, there is depiction only if the marks are experienced as resembling the object. Second, the marks will be experienced as resembling an object if the picture depicts the object. For example, if a picture depicts a deformed Tony Blair, the marks on the picture surface are experienced as resembling in outline shape a deformed Blair. Third, objects can be depicted imprecisely. When a picture depicts an object with certain indeterminacy, a "good deal of variation" of the marks is allowed for the picture to depict the object since the marks "share the relevant rough outline shape" (Hopkins 2006, 153). Fourth, although resemblance of the picture and the outline shape of an object, and the experienced resemblance of the picture and the outline shape of the object, always come together, the former is neither necessary nor sufficient for the latter. Fifth, there are many factors affecting our experience of resemblance in outline shape in pictures. Sixth, not everything seen in a picture is what the picture depicts. Seeing-in is necessary, but not sufficient, for depiction. For

example, one sees a man with a deformed shape, but such a stick-figure depicts a man with certain indeterminacy, not a man with a deformed shape.

CHAPTER SEVEN
MY CRITICISMS OF THE ASPECT-RECOGNITION THEORY

In this section, I lay out my criticisms of the aspect-recognition theory. As I have shown, criticisms of the aspect-recognition theory from various philosophers can be categorized into criticisms concerning several distinct features of the theory. My critiques concern, first, what counts as the source of a piece of information; second, the nature of information; and third, the bold claim that all pictures are transparent.

Lopes explicitly states that his theory is based on Gareth Evans's notion of an information system. In such systems, humans are "gatherers, storers and transmitters of information" (Lopes 1996, 102). One derives information from an object by having perceptual contact with it; the object is the source of the information we derive. The source is the input to the information system, and a piece of information is always "of" whatever object is the source, no matter whether the system is reliable or not. If a system is reliable, the content of an information state matches the properties of its source; if a system is unreliable, the content of an information state is garbled, and does not match its source.

However, Lopes takes the notion of information as given, and does not discuss this notion in detail. According to Godfrey-Smith, there are two senses of

‘information’ (Godfrey-Smith 2007), one is a mathematical notion proposed by Claude Shannon, and another one is a stronger notion proposed by Fred Dretske. The weaker notion of information is initially used for communication technology to quantify the number of alternatives of the source that might be realized in particular occasions (Godfrey-Smith 2007, 106). This notion of information only concerns contingent correlations. In Shannon’s sense, when one says that A contains information about B, one is saying no more than “there is an informational connection between smoke and fire, or between tree rings and a tree’s age” (ibid). The stronger notion of information, which is also called ‘semantic’ or ‘intentional’ information, is more controversial. Dretske’s notion of semantic information refers to information-bearing signals which exists objectively and are caused by states of the world. One important distinction between these two notions of information is that Shannnon’s notion of information does not have the capacity to account for misrepresentation, while Dretske’s allows for both accurate and inaccurate representations. Since misrepresentation is possible in pictorial representation, the notion of information that Lopes and Evans adopt must be a semantic one, like Dretske’s notion. In the book upon which Lopes builds his theory of depiction, Evans only briefly mentions information as follows:

> Our particular-thoughts [sic] are very often based upon information which we have about the world. We take ourselves to be informed, in whatever way, of

> the existence of such-and such an object, and we think or speculate about it. A thought of the kind with which I am concerned is governed by a conception of its object which is the result of neither of fancy…nor of linguistic stipulation…, but rather is the result of a belief about how the world is which the subject has because he has received information (or misinformation) from the object. (Evans 1982, 121)

In the above passage, it is obvious that Evans adopts the notion of information as reference to states of the world. This explains why information states can possibly be belief-independent and non-conceptual, since our beliefs do not change states of the world, and we do not always have concepts of them. It is also obvious that Evans has recourse to a semantic conception of information, since he refers explicitly to 'misinformation' and hence misrepresentation.

Objections to the Source of information

However, Lopes's adaptation of information as indicators of particular states of the world raises questions. For example, one may derive information of a lake from a painting of the lake, or from a photograph of the lake, or from the lake directly. With the idea of information transmission in mind, one may wonder about the differences between the sources of the information among these three cases. The information is about a particular state of the world—the lake. One has perceptual contact with the lake in the last case, but how about the first and the second cases? There is no doubt that one has perceptual contact with the painting and the

photograph, but does one have perceptual contact with the lake *through* viewing the picture or the photograph? Lopes may reply that one can have perceptual connection with the lake via viewing of the pictures because, as this is what the bold claim asserts, all figurative pictures are transparent—meaning one can literarily see the objects depicted in pictures. Therefore one derives information from a particular state of the world by having perceptual contact with the source. However, the bold claim that all figurative pictures are transparent is something Lopes wishes to prove, and it is extremely controversial. My objection to the claim will be raised in the latter part of this section. In the meanwhile, for the sake of the argument, let's assume that claim is correct.

Even if the bold claim were right, having perceptual contact with the source would not be the only and necessary way of determining the source of the information, since having perceptual contact is not necessary for determining the source of the information. Lopes admits that there are some cases where we cannot have perceptual contact with the object represented—for example, when what a picture depicts is fictive (Lopes 1996, 202). A fictional picture is an actual picture that depicts objects that do not exist. Lopes recruits Walton's notion of make-believe to try to solve the problem of how such fictive pictures refer. On such an account, a fictive picture refers by fictive reference. Since one cannot have perceptual contact

with things that do not exist, having perceptual contact with the object depicted is not necessary for determining the source of the information. In cases of fictive pictures, one determines the imaginary source of the picture by recognition.

With fictive pictures as one kind of example, there are special cases where a piece of information does not have a source, or it is wrongly recognized as arising from other sources. Evans claims that there are four cases of ill-groundedness (Evans 1982, 132-133). The first and the second kind of cases are the results of garbling and distortion of information. The first kind of case refers to information that has a source, but cannot be identified by the purported mode of identification. The second kind refers to information that has a source, but is wrongly identified as something else. The third case and the fourth case refer to information that do not have a source, but is identified as, for the third case, coming from a source; or, for the fourth case, information that remains unidentified.

The main defect of Lopes's account of depiction is that it fails to determine the source of misrepresentational information and information embodied in fictive pictures. Misrepresentation is commonly known as a representation ascribing non-*G* properties to *G*. Adopting the idea that human beings are gatherers, storers, and transmitters of information in the pictorial system, misrepresentational information may due to garbling and distortion of information within the system. For example,

one may ‘store’ the information of the lake in memory, and later, due to the degradation of memory, paint a painting of the lake with properties that the lake does not possess. However, such kinds of distortion can be sub-conscious or intentional. One may ascribe to the lake properties that the lake does not possess in order to express one’s ideas or feelings. The resulting painting may be wrongly identified as of other lakes, or it cannot be identified as of any lakes at all. Therefore this example belongs to the second and third kind of ill-groundedness of information. An interesting question is what the source of information of such a painting is. Lopes may reply that although it is the result of garbled information of the lake, the lake is the source of the information embodied in the painting. However, let’s assume that the properties ascribed to the lake that it does not really enjoy are actually drawn from my experience of many visits to the most beautiful lakes around the world. Therefore all of the additional properties ascribed to the lake indeed have a source, and the proportion between the information from the lake and from the memory of other lakes is the same in the resulting painting. It seems that given that it is unacceptable to admit that the painting has multiple (primary) sources, such an example counts as a serious counterexample to his theory. The example can be further developed by allowing that some properties ascribed to the painting are indeed imaginary. Then the information embodied in the resulting painting would

have no source and multiple sources at the same time. This is absurd. A better way, and a crucial way, to describe the example would be that the painting has multiple sources: one source of the imaginary properties ascribed is the mental states of the painter. Since information is about particular states of the world, and if one accepts that having a particular mental state is a particular state of the world, then information can be of a particular mental state; hence a particular mental state can be the source of information—in the sense of content.

In light of these considerations, we can say that Lopes's adaptation of the notion of information as indicators of particular states of the world is ambiguous and even confused. Lopes's account cannot explain misrepresentation unless it is accepted that particular mental states are also sources of information. In what follows, I will turn to my other objections to the nature of information in Lopes's theory.

The Nature of Information

Recall the three cases of deriving information of a lake by viewing a painting, a photograph, and the lake directly. What is the difference between these three situations in terms of information? Lopes would reply that the information conveyed by the painting and the photograph are aspectually-structured and essentially

explicitly non-committal (see chapter 3). Nonetheless, Lopes never explicitly explains how information can be structured as explicitly non-committal; it is possible that information is structured this way according to the painter's intentions and beliefs, or other attitudes, or again, in cases where the picture results from a mechanical or automatic process, the committal arises from some sorts of non-agential causal events. However, in the case of deriving information of the scene in person directly, the information one derives is also *explicitly non-committal.* For example, Tom, who sees a sign board blocking the head of a duck in the scene, finds it interesting and takes a photograph of it, and let's assume that what the photograph shows is actually what Tom saw. If one says that the information conveyed by the photo is explicitly non-committal about what is behind the sign board, then the information derived from the scene directly is also *explicitly non-committal* about what was behind the sign board.

Indeed, Lopes's idea that the specificity of pictorial representation resides in its explicitly non-committal structure has been objected to that on the ground that explicitly non-committal structure exists in other kinds of representations[9]. However, following the argument in the previous paragraph concerning the problem of distinguish pictorial representation from other forms of representation, Lopes's

[9] Refer to the summary of criticisms of Lopes's account in Chapter five.

account also fails to distinguish pictorial representation from direct perception, or in other words, ‘presentation’.

However, it is possible that Lopes intends to equate information derived from the scene directly to information derived from a viewing of the painting, since with information derived from a picture, one recognizes the subject of the picture, which is also the source of the information. Lopes may claim that the scene and the painting indeed convey the same information of the scene, and it is the recognitional capacity that distinguishes whether one is of a flat surface and one is from the scene directly. In “The Domain of Depiction”, Lopes claims: “Whereas sculptural recognition only requires the triggering of an ability to recognize the represented object in three dimensions, pictorial recognition involves the triggering of an ability to recognize the represented object seen two-dimensionally” (Lopes 2006, 172). However, it is problematic to postulate the cause of differences from viewing the scene from the picture and from the scene directly to recognition. Since recognition is a kind of causal reaction based on the stimuli received, if the information of the lake received from a picture and that from the scene is the same, then the result of recognition should be the same. In reply to this critique, Lopes may claim that the process of face-to-face recognition is different, although they overlap to a large extent. However, according to Lopes, both face-to-face recognition and pictorial

recognition are based on the same recognitional capacity that human beings possess; if the two recognitional processes are different, Lopes has to account for the cause of the differences. However, Lopes cannot without contradiction appeal to a claim that there are differences in the information derived; or contend that the recognitional processes are based on different capacities.

In spite of the inability to distinguish information derived from the object directly and from representations of the object, Lopes's notion of information is ambiguous when it is conjoined with the idea of aspectual pictorial system. Another objection hinges on a claim about a hidden consequence of Lopes's theory that it would be unwise for him to accept, namely, that all pictures are necessarily misrepresentations. How did this intuitively unacceptable idea follow from Lopes's assertions? According to Lopes, information is embedded in pictures aspectually, meaning that information is structured committally, explicitly non-committally, and inexplicitly non-committally. Lopes claims that it is the explicitly non-committal structured information that distinguishes pictorial representation from other kinds of representation (see chapter 3). It is worth nothing that the pictorial aspect of a picture is the result of processes of selectivity, and pictorial aspects are not only spatial, but also include other properties such as texture and colour. According to Lopes, every picture is necessarily explicitly non-committal in some respects: when

some properties are represented, some others are ruled out. A piece of information can be structurally embedded in different pictorial aspects. For example, I use Tom as the model for my paintings that are drawn in different styles, such as surrealism and cubism. I also take photographs, including both colour and black-and-white photographs, of Tom. My first question is whether the information embodied in these pictorial aspects is the same. Although a suitable perceiver may be able to recognize Tom in all these pictures, the information is not the same due to the fact that they are structured differently. The information is explicitly non-committally structured in different pictorial styles, different relations or properties of the information are selected to be represented or precluded. It is then obvious that the information embodied in pictures with different styles is indeed different: different relations and properties are represented, and precluded.

Although pictures of the same object in different pictorial styles contain different information, a suitable perceiver can still recognize the object in these pictures. The perceiver can still recognize the object probably because there are similarities between the information 'contained' in these different representations. However, as we have seen, having perceptual contact with the source of the information is not necessary for identification of the source; the viable option left open is to appeal to recognition. It is vital for Lopes to identify the commonality of

the information in different pictorial styles, since it is this common information that according to his theory, must perform the crucial function of triggering the same recognitional ability. However, Lopes does not offer any possible solution except by invoking the recognitional based identification of the source of the information. Yet appealing to recognitional based identification is not viable. Here's why: if Lopes claims that one can recognize the object from different pictorial aspects because one can identify the source of the information in the pictures by means of recognition, he is moving in a circular manner. Therefore unless Lopes gives a more detailed and explicit account of the nature of information, he is analyzing the notion of depiction in terms of recognition and not information.

Furthermore, the notion of pictorial aspects leads to the consequence that all pictures are necessarily misrepresentation. When information is aspectually structured, some relations and properties of the object are precluded, and this would result in a loss of information, as well as in the ascription of relations and properties that the object does not really enjoy. Therefore, given Lopes's notion of information, the aspectually structured information is misinformation, and all pictures are necessarily misrepresentations. For example, a cubist painting of my neighbor, Tom, would represent Tom as having a segmented face; or choosing to shoot a photograph portrait of Tom in black-and-white would represent Tom in gray scale. Thus

structuring information in various pictorial aspects is indeed a process of garbling and distortion of information, and all pictures are misrepresentation of their objects, given Lopes's account. Since I have shown that Lopes's account is inadequate in explaining misrepresentational pictures, and if all pictures are misrepresentational, then Lopes's account fails to account for all pictures.

Objections to the Bold Claim

Lopes's main argument for the bold claim—all pictures are transparent—is based on one assumption: the production of pictures and the recognition of depicted objects are non-conceptual. Lopes holds that a concept is a basic constituent of belief. It follows that if perceptual and recognitional processes are non-conceptual, then they are all belief-independent. According to Lopes, "A content is conceptual if in grasping or experiencing it one must possess concepts of the properties it represents the world as having. If one *need not* possess concepts of these properties, then the content is non-conceptual" (Lopes 1996, 185). However, non-conceptual mental content is a controversial notion in contemporary debates of perception and epistemology, and Lopes's taking this notion for granted looks rash. There are philosophers who disagree with the idea that recognitional capacity is non-conceptual. For example, John McDowell (1994) argues that recognitional

capacity is fully conceptual.

Furthermore, Lopes's treatment of 'concept' requires a more detailed explanation. One example provided by Lopes is that seeing a rainbow does not require the viewer to possess concepts of every light in the rainbow or wavelengths of light, therefore, seeing a rainbow is non-conceptual. With such a definition of conceptuality, human beings seldom possess concepts of things in their everyday life. When one looks at a lake, one does not know when the lake was formed, the name of the lake, or how deep the lake is; people from ancient times did not have any knowledge that a lake is full of water, at least if that means the substance consisting of H_2O. However, one can still plan on swimming in the lake, and people from ancient times could still live and had various activities with *beliefs* about the lake. Lopes should first have discussed what the criteria are in order for one to have a concept. On the basis of his remarks, it seems fair to say that he works with an ambiguous and overly narrow notion of concepts.

Even if we granted that recognition were non-conceptual, drawing is hardly non-conceptual. Lopes claims that drawing, or painting, is merely an application of the recognitional capacity. One does not need to possess the concept of what one draws, but only to ensure that the resulting images are recognizable as of the object. Nonetheless, drawing and painting are results of a series of complex

mental activities and conscious decisions. Structuring information, which is stored as memory, into various pictorial aspects requires decisions about what properties should be represented and what properties should be precluded. Drawing is always a process of attributing properties to the represented objects. When various properties are attributed to the objects, the drawer would consider what effects the picture conveys; amendment is always a vital process during the creation of a picture in order to achieve intended effects. Drawing or painting is not only a matter of recognition, but creation according to the creator's intention. It sounds absurd to suggest that the creator intentionally attributes properties to his drawing without relying upon any *concepts* of those properties.

Given the arguments introduced, it follows that Lopes needs to provide more detail about the nature of information and discussion of non-conceptual content before his account of aspect-recognition theory is viable, which means ultimate that his theory of depiction rests on shaky foundations. Indeed, the word 'information' is now often used in various disciplines, like biology and cognitive science, though it should be recognized that much of this usage is highly metaphorical and the subject of serious controversy. Godfrey-Smith suggests that the Dretskean notion of information, at least in the realm of biology, is at best a metaphorical linguistic description (Godfrey-Smith 2007, 114-118). It might be wisest to acknowledge that

a similar conclusion should be drawn with regard to usage of ‘information’ in philosophies of depiction.

CHAPTER EIGHT

MY CRITICISMS OF THE EXPERIENCED RESEMBLANCE THEORY

In this chapter, I raise my criticisms of Hopkins's experienced resemblance theory. In chapter six, I have shown that the major criticisms of the theory are made by Catherine Abell and Dominic Lopes. I shall elaborate in particular on some of the criticisms advanced by Lopes.

Can Photographs Depict?

The first objection that I want to raise is that in Hopkins's discussion, he distinguishes two types of standard of correctness—one based on intention, and the second based on causal relations. By 'causal relations' Hopkins means mechanical process like the process whereby a photograph is taken. For the causally established standard of correctness, misrepresentation is impossible since the camera only captures what is visible in front of it. In the case of the intentional standard of correctness, misrepresentation is possible since the creator can intentionally attribute properties to the represented object that it does not really enjoy. Someone may argue that misrepresentation is possible even in photographs since darkroom manipulations, which have a long tradition going back to the very invention of

photography, can result in pictures that attribute properties to the object that it does not really have. However, darkroom manipulations involve the intentions of the person who develops the film and fixes the image, and these are not part of the sort of purely mechanical process Hopkins talks about. (The sort of mechanical process that Hopkins evokes would seem to be approximated more closely by the example of Polaroid cameras with instantly processing film. Such a mechanical captures and displays only what is in front of the camera and are in some sense 'incorrigible'.)

The question is: since the fourth explanandum claims that misrepresentation is possible in depiction, can photograph depict? Hopkins argues that:

> That [fourth] explanandum concerns a form of representation, depiction. So there is no tension between it and the claim that a certain *set of pictures* are incorrigible, and necessarily so. To generate an inconsistency here, we would at the least have to claim that depiction by photograph forms a distinctive kind of representation. That is not something we have claimed. Furthermore, even if we did so, that form of representation would differ from non-photographic depiction only in failing to fit (X4). The other five explananda would hold of it, and thus there would still be ample ties of kinship between the two (Hopkins 1998, 75).

The answer to the question whether photographs depict remains obscure in Hopkins's statement. Of course not all pictures depict, abstract paintings are an obvious example. However, Hopkins claims that the six explananda determine what depict, and since photography fails to match one explanandum, it follows that photographs do not depict. Hopkins's saying that there is no tension between

photography's incorrigibility and (X4) implies that photography does not depict, and it represents by other means. Although Hopkins does not claim that explicitly, it is just simply logically impossible for photography to depict and fail (X4) at the same time. However, it is counter-intuitive to say that photographs do not depict, and we may concede that our intuition is wrong about this. An alternative for Hopkins is to claim that photography depicts, although it only fits five explananda. However, doing do would leave the six explananda as merely guidelines rather than necessary conditions for theories of depiction. Furthermore, if a mechanical causal relation counts as standard of correctness, and photographs depict, it is questionable whether other kinds of causal relation can also be counted as a standard of correctness, as mechanical causal relations can vary in complexity. The next question would be whether some kind of causal relation, in spite of mechanical causal relation, can also be counted as standard of correctness? If the answer is yes, then it seems all marks on a surface that trigger the experienced resemblance in outline shape would depict; if the answer is no, then it would be important to discuss why some complex mechanical causal relation has the privilege.

Experienced Resemblance

In his book *Picture, Image and Experience*, Hopkins argues that there are three

problems for the resemblance theory (11-12). First, resemblance is a relation between at least two particulars. However, pictures often depict general kinds of things. Second, resemblance must be resemblance in particular aspects, but not merely resemblance alone. However, when one has to state in what aspect(s) two things resemble, differences are always easy to find. Third, there are various pictorial styles, and it is unconvincing to claim that resemblance between the object and pictures of different styles are the same.

The proposal of experienced resemblance theory in outline shape aims at overcoming these (and other) problems encountered by resemblance theories. The problems the Hopkins proposal creates are no less than those it solves. In order for the experienced resemblance theory to be viable, Hopkins has to explain the nature of 'experienced resemblance in outline shape'. The notion of outline shape is introduced by Hopkins in detail. However, Hopkins does not talk much about the notion of experienced resemblance. He simply take the notion of experienced resemblance as given. Maybe Hopkins is right that experience is simply experience. What more can be said about it? Nonetheless, this vagueness of the notion makes the theory unclear about the relation between the subject of the picture and experienced resemblance in outline shape. Recall the objections that Lopes mentions[10], some of

[10] Refer to chapter six.

the objections attack the ambiguity of the notion of ‘experienced resemblance’. What is ‘experienced resemblance in outline shape’? One may answer that it is the resemblance in outline shape that one experiences via perception. The resemblance takes two forms. The first kind of resemblance actually tracks the actual resemblance. For example, the marks on a picture of an apple in Albertian style match the outline shape of an apple, thus one experiences the resemblance in outline shape between the marks and the outline shape of the apple. The second kind of resemblance experienced does not track the actual resemblance. A cube drawn in parallel oblique perspective mentioned by Lopes (2006, 164) is an excellent example of the second kind of experienced resemblance. The cube depicted does not resemble the outline shape of a cube as usually depicted, but people intuitively agree that it depicts a cube. Idiosyncratic experience can also be the source of this kind of experienced resemblance. I may experience a facial resemblance between my friend and a movie star, however, other may disagree with my idea.

Although Hopkins never makes the distinction, from the manner he talks about experienced resemblance, the first kind of resemblance certainly counts as ‘experienced resemblance’ in Hopkins’s theory. However, the second kind of resemblance is more controversial. As Hopkins points out, resemblance is a relation between particulars. I may claim that two toy dolls resemble each other by looking

at their appearance. Finding out the actual resemblance between two particulars is an empirical matter [11]. Experienced resemblance is more complicated. It is unproblematic that pictures are able to depict both particulars and kinds. When one says that a picture depicts a dog, a poodle for example, but not a particular dog, according to Hopkins's theory, one experiences resemblance between the marks on the surface of the picture and the outline shape of a poodle. However, in order to experience the resemblance, one has to know how the marks look, and have ideas about how the outline shape of a poodle looks. Without knowing these two things, one cannot experience any resemblance between the two. One can easily know how the marks look by merely looking at the picture, but it is questionable how one knows what the outline shape of a poodle looks. A picture may represent a poodle from many different angles and distances, in order to experience the resemblance, one has to know the many outline shapes of a poodle from all the angles and distances, not to mention different pictorial styles and perspectives depicting the same thing or the same kind of thing differently, in order to see what objects are depicted by these pictures. The outline shapes of objects that we perceive in

[11] The notion of actual resemblance is suspicious since it is necessary for us to perceive the actual resemblance, thus actual resemblance reduces to experienced resemblance, and resemblance is always experiential. However, I do not pursue this issue here, and grant that there is distinction between actual resemblance and experienced resemblance.

everyday life are extremely inadequate. Hopkins's notion of experienced resemblance also violates our views about many pictures and photograph. One major aesthetic value of pictures and photographs is that they lead us to appreciate the world and everyday objects from different angles and perspectives, and we often see what is depicted with ease. If one needs to know the outline shape of the objects from all those angles before knowing what the pictures depict, this particular aesthetic value is strongly weakened.

Hopkins may reply that both kinds of resemblance can be included in his sense of experienced resemblance, so experienced resemblance does not need to track actual resemblance. However, such a concession would blur the distinction between misrepresentation and accurate representation. A large proportion of pictures indeed depict with marks that do not track actual resemblance of the objects represented. If Hopkins allows that these pictures depict accurately given certain flexibility in outline shape (since experienced resemblance in outline shape does not precisely track actual resemblance in outline shape), one may wonder how large the flexibility is. An accurate depiction with a slightly varied outline shape and a misrepresentation are merely variations of degree of the outline shapes that match the object. Hopkins may need to clarify the distinction between a misrepresentation and an accurate depiction that diverges from the actual resemblance.

Problems with Indeterminacy

My final objection to the theory concerns the notion of indeterminacy. Hopkins states clearly that indeterminacy differs from misrepresentation in the sense that the former refers to an empty or missing attribution with regard to certain properties, and the latter refers to a present but inaccurate attribution of properties. The problem is how one can determine whether the object depicted in a picture is indeterminate or misrepresented? A portrait with no mouth can be a misrepresentation or a picture with an indeterminacy with respect to the mouth properties. Another example is the stick figure used by Hopkins to introduce the notion of indeterminacy. Why must the stick figure be an indeterminate figure, but not a misrepresentation? Hopkins does not explicitly discuss the distinction. One possible reply is to appeal to knowledge of pictorial conventions and pictorial styles. However, this reply would lead to the same problem of explaining depiction by experienced resemblance in outline shape in some pictorial styles featured in distortion or segmentation: we see the depicted object only by drawing on knowledge of the pictorial convention and pictorial styles together with experienced resemblance in outline shape[12], but not solely by experienced resemblance in outline shape. This shows that experienced resemblance in outline shape is not solely necessary and sufficient for depiction.

[12] Maybe there is in fact knowledge of how outline shape is experienced as resembling in different pictorial styles.

In this chapter, I have raised my criticisms of the experienced resemblance theory in outline shape based on Lopes's critiques of the theory, and argued that the theory is problematic in, first, excluding photographs from depiction, and, second, in the ambiguous notion of 'experienced resemblance in outline shape', and finally, in the fuzzy distinction between misrepresentation and indeterminacy in outline shape.

CONCLUSION

In this thesis, I have surveyed contemporary debates on the notion of depiction, and raised my own objections to the existing theories. In chapter one, I introduced the questions concerning depiction, and then explained the questions in relation to the experience and understanding of pictures. In chapter two, I provided a brief introduction to the existing theories of depiction, including the resemblance theory, the experienced resemblance theory, the semiotic theory, the illusion theory, the seeing-in theory, the make-believe theory, and the recognition theory. In chapter three, I introduced Dominic Lopes's aspect-recognition theory based on his book *Understanding Pictures*; and Robert Hopkins's experienced resemblance theory in outline shape in chapter four, based on Hopkins's book *Pictures, Image and Experience*. I then summarized the critiques of the aspect-recognition theory and the experienced resemblance theory in chapter five and chapter six respectively. After discussing the critiques offered by others, I raised my own objections to both theories in chapter seven and chapter eight. In chapter seven, I criticized the aspect-recognition theory. I contend, first, that this theory cannot explain misrepresentation unless it accepts that particular mental states are also sources of information; second, the notion of information needs further clarification, and its

ambiguity together with the notion of pictorial aspects leads to a consequence that all pictures are necessarily misrepresentational; third, I contend that the bold claim that pictures are belief-independent is false. In chapter eight, I criticized Hopkins's experienced resemblance theory in outline shape by contending, first, that photographs are not included in pictorial representational pictures; and second, that the notion of 'experienced resemblance in outline shape' needs further clarification and explanation since the problem solved by the notion is no greater than the problem it creates; and third, the ambiguity of the notion of 'experienced resemblance' blurs the distinction between misrepresentation and indeterminacy in outline shape.

The discussion of question about depiction has been receiving increasing amounts of attention. Better and better candidate theories have emerged during the last few decades. However, in light of the various alternatives and criticisms I have discussed in this thesis, as well as my own criticisms of the two most prominent and influential philosophical theories, I conclude that although we are making progress, especially with regard to the clarification of questions, we still do not have anything like a comprehensive final theory of depiction.

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