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Inflected and Uninflected Experience of Pictures

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1. Introduction: Inflected Versus Uninflected Seeing-In

One big question about pictures is how we perceive them: what perceptual state we are in when we see a depicted object in the picture surface. Following Richard Wollheim, I will call the experience of seeing something in a picture seeing-in (Wollheim 1980, 1987, 1998). The question about the nature of seeing-in is crucial enough, but it has also been suggested that seeing-in may play an important role in understanding what pictures are: pictures are those objects in the face of which 'suitably informed' perceivers are supposed to have a seeing-in experience (Wollheim 1987, 1998). I will remain neutral about whether we can use seeing-in to define what pictures are.

But my concern in this chapter is not just the nature of seeing-in, but mainly the distinction between two different kinds of picture perception: inflected and uninflected. It has been suggested that sometimes our experience of pictures is inflected. As Dominic Lopes says: 'Features of the design may inflect illustrative content, so that the scene is experienced as having properties it could only be seen to have in pictures' (Lopes 2005: 123–4).

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An important clarification is in order: what Lopes means by design is 'those visible surface properties in virtue of which a picture depicts what it does' (Lopes 2005: 25). I will call these properties *design properties* in what follows.

Lopes is clear that 'design *may* inflect illustrative content'. In other words, it does not always do so. Some of our experiences of pictures are inflected, some others are not (see also footnote 4 below). When I watch a football game on TV, my experience tends not to be inflected. When I am admiring the composition of a Cézanne landscape, it tends to be inflected. And here is the main question I would like to address in this chapter: what is the difference between these two kinds of experience of pictures, inflected and uninflected?

Thus, we have two questions: (*a*) what is seeing-in? and (*b*) what is inflected seeing-in? It is difficult to answer (*b*) without having a clear answer to (*a*), and what we say about (*b*) may put constraints on the way we can answer (*a*). I will attempt to answer the two questions at the same time.

We have seen that we may be able to use the answer to (*a*) in order to tell what pictures are. How about (*b*)? Why is it relevant? It has been suggested that the answer to (*b*) may be the key to understanding not depiction but another big topic of aesthetics: the aesthetic appreciation of pictures. The suggestion, in a very sketchy form, is that the aesthetic appreciation of pictures in some way depends on our inflected seeing-in; maybe inflected seeing-in is even necessary for the aesthetic appreciation of pictures (see the discussion in Lopes 2005, ch. 3, and Hopkins, Chapter 6 in this volume). Further, it is also taken to be a crucial, and maybe even necessary, feature of 'advanced picture making abilities' (Lopes 2005: 28).

A couple of possible misunderstandings need to be dispelled. First, whether our seeing-in is (supposed to be) inflected does not have any direct consequence with regard to whether the picture is good or bad. We can have inflected seeing-in experiences even when we face really bad pictures. And we can have uninflected seeing-in experiences when we are looking at masterpieces. But is a 'suitably informed spectator' supposed to have an inflected pictorial experience when she is looking at a masterpiece in order to appreciate it as such? We should not rush to a positive answer to this question. Inflected seeing-in may allow us to focus on features of the picture that we may find valuable. But there may be other dimensions

of value that do not require inflected seeing-in. There is no obvious and straightforward connection between inflected seeing-in and the value that we assign to pictures.

Second, inflected seeing-in is not to be confused with the widely discussed phenomenon of aesthetic experience (whatever that means; see Carroll 2005 for an excellent summary). Whatever we mean by the concept of 'aesthetic experience', it should be applicable to experiences other than those of pictures. And it is not clear how the notion of inflected seeing-in would apply in those cases.

2. Inflected Seeing-In

So far I have not said much about what inflected seeing-in is supposed to be. The most important feature of inflected seeing-in seems to be that when we have experiences of this kind, the perceived object is experienced differently from the way it would be experienced face to face. As Lopes says, 'Design seeing transforms the content of seeing-in so that it no longer matches the content of seeing the scene face-to-face. Design is 'recruited' into the depicted scene so that the scene no longer looks the way it would when seen face-to-face' (Lopes 2005: 40; see also Podro 1998: 13). And again: 'Except in *trompe-l'œil*, seeing O in P is quite different phenomenally from seeing O face to face; O is seen to have properties in P that it is not seen to have with the naked eye' (Lopes 2005: 128–9).

And here we encounter a problem. One may suggest that in the case of *any* instance of seeing-in, inflected or not, it is true that 'the content of seeing-in no longer matches the content of seeing the scene face-to-face'. Seeing Jessica Alba face to face and seeing her in a photograph are two very different experiences. Seeing a shark swimming towards me on TV is, again, very different from seeing it swimming towards me face to face.

But this is not the difference the champions of inflection have in mind. Michael Podro says that in the case of inflected seeing-in, the picture's design is 'recruited' into the depicted scene and this is why the scene does not look the way it would when seen face to face (Podro 1998: 13, 26). In the Jessica Alba example and in the shark example our experience is different from the way it would be if we saw the depicted scenes face to

face, but it is not different because the picture's design is 'recruited' into the depicted scene. So inflected seeing-in, as Podro understands it, is not merely a kind of seeing-in where our experience is different from the way it would be if we experienced the depicted object face to face. It is a kind of seeing-in where our experience is different *because* the picture's design is 'recruited' into the depicted scene.

It is not clear, however, what it is supposed to mean that the picture's design is 'recruited' into the depicted scene. Podro's other formulations of inflected seeing-in are equally metaphorical: he says that when our seeing-in is inflected, then besides seeing the scene in the design, we also see the design in the scene (Podro 1991: 172). He also says that inflected seeing-in straddles the boundary between the marked surface and the depicted object (Podro 1998: 17, 28). If we want to understand the difference between inflected and uninflected seeing-in, we need to make sense of these metaphors.

Robert Hopkins goes through a couple of possible interpretations of inflected seeing-in and settles for the following: 'Sometimes, what is seen in a surface includes properties a full characterization of which needs to make reference to that surface's design (conceived as such)' (Chapter 6 in this volume, p. 000).

If we accept this characterization of inflected seeing-in, then some, but not all, of our experiences of seeing-in are inflected. Seeing a football game on TV is (supposedly) not inflected as what is seen (the football game) does not (presumably) include properties a full characterization of which needs to make reference to the picture's design, conceived as such. And admiring the composition of a Cézanne landscape may indeed be an inflected experience: what I see in the painting may include properties a full characterization of which needs to make reference to the painting's design.

In other words, the difference between inflected and uninflected seeing-in is that we attribute properties of a certain kind (properties that cannot be fully characterized without reference to the picture's design) to the object of our experience in the former but not in the latter case. This will be our preliminary definition of inflected seeing-in for now. Some further complications, clarifications, and modifications will follow as we go along.

For now, it is sufficient to point out that what this distinction amounts to depends on what we take seeing-in to be, inflected or uninflected.

I pretended in this section that we have a clear understanding of what seeing-in amounts to and we are drawing a distinction, within this neatly defined category, between inflected and uninflected instances of seeing-in. In fact, it is not at all clear what seeing-in amounts to. So if we want to see clearly with regard to the nature of inflected seeing-in, we may need to take a step back and ask what seeing-in is, inflected or not.

3. Seeing-In and Twofoldness

Wollheim, who introduced the concept, said that seeing-in is a twofold experience: 'The spectator is, and remains, visually aware not only of what is represented but also of the surface qualities of the representation' (Wollheim 1980: 214–15).

This feature of our experience of pictures is called 'twofoldness' and, in some form or other, many philosophical accounts of depiction endorsed it as a necessary feature of our experience of pictures (Walton 1990: 300–1; 1991: 423; 2002: 33; Hopkins 1998: 15–17; see also Lopes 2005, ch. 1, and Kulvicki 2006: 172–3 for moderately critical overviews).[1]

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In spite of its widespread use of this notion, neither Wollheim nor other philosophical accounts of pictorial perception say much about what is supposed to be meant by the twofoldness of experience.

Wollheim talks about simultaneous *awareness* of surface and scene (Wollheim 1998: 221; 1987: 46). But the notion of awareness he uses is ambiguous and as a result Wollheim's notion of twofoldness itself is also ambiguous (Nanay 2005). And those who used, or criticized, the notion of twofoldness did not get rid of this ambiguity. Here are two possible interpretations of twofoldness (both of which we have good reasons to attribute to Wollheim):

(i) We consciously attend both to the depicted object and to some properties of the surface.[2]

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[1] Ernst Gombrich's account of our experience of pictures is inconsistent with the idea of twofoldness. As he said: 'is it possible to 'see' both the plane surface and the battle horse at the same time? If we have been right so far, the demand is for the impossible. To understand the battle horse is for a moment to disregard the plane surface. We cannot have it both ways . . .' (Gombrich 1961: 279).

[2] One important consideration in favour of (i) is the following quote: 'The seeing appropriate to representations permits simultaneous attention to what is represented and to the representation'

(ii) We perceptually represent both the depicted object and some properties of the picture surface (while we may or may not attend to them).[3]

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We have many reasons to reject the view that (i) is a necessary feature of seeing-in, but none of these reasons should persuade us to reject (ii) as a necessary feature of seeing-in. I will go through some of the influential criticisms of the concept of twofoldness and of the claim that twofoldness is necessary for seeing-in and point out that although they are all valid arguments if we take twofoldness to mean (i), they lose their appeal if we interpret twofoldness as (ii).

First, if twofoldness implies the conscious attention to surface and scene, then this rules out the possibility of perceiving things in pictures unconsciously. But it seems that we are capable of perceiving things in pictures unconsciously. We can perceive objects in pictures even if we are not conscious of either the surface or the depicted object, as the widely discussed phenomenon of subliminal priming shows (Strahan et al. 2002; Eimer and Schlaghecken 2003; Greenwald et al. 1996). If we watch a film and, unbeknownst to us, images of a can of a certain beverage are flashed for less than 100 milliseconds, we tend to develop a desire to drink that kind of beverage. We are not conscious of the depicted object (we see it for less than 100 milliseconds), but the fact that we desire the beverage (the depicted object) seems to indicate that we did perceive it in the picture in spite of the fact that we were not aware of it. Perception can be conscious and unconscious and so can perceiving something in a picture. Thus, it seems that perceiving something in a picture does not need to be a conscious experience. So while we have good reason to reject (i) as a necessary condition for seeing-in, these considerations do not count against the claim that seeing-in entails (ii), the simultaneous visual *representation* of the picture surface as well as of the depicted object.

Second, here is Jerrold Levinson's attack on the idea that twofoldness is a necessary feature of seeing-in (Lopes 1996: 37–51 makes a similar point):

> Plausibly *not* all seeing-in or registering of pictorial content is aesthetic in character, or even informed by the awareness of pictures as pictures; for instance, that directed

(Wollheim 1980: 213). But it is not clear whether seeing-in only needs to 'permit' simultaneous attention or it is constituted by it.

[3] The main consideration in favor of attributing this notion of twofoldness to Wollheim is his argument in favor of the necessity of twofoldness for seeing-in from perceptual constancy (Wollheim 1980: 215–16). I will analyse this argument at the end of this section (see also Nanay 2005).

to or had in connection with postcards, passport photos, magazine illustrations, comic strips, television shows, or movies. Thus, any view that builds aesthetic character, or even awareness of pictures as pictures, directly into seeing-in would seem to have something amiss.

(Levinson 1998: 228–9)

And even more explicitly:

If you see a woman in a picture in virtue of visually processing a pattern of marks, then of course in some sense you thereby perceive the medium in which those marks inhere or consist. But it is far from clear that when you see the woman in the picture you must in some measure be attending to, taking notice of, or consciously focusing on the picture's surface or patterning as such.

(Levinson 1998: 229)

Thus, if Wollheim held that (i) is a necessary feature of seeing-in, he was wrong. I agree. But Levinson's considerations are silent about whether (ii), the other interpretation of twofoldness, could be considered to be a necessary feature of seeing-in.

Lopes gives a thorough analysis of the notion of twofoldness (Lopes 2005, ch. 1). He concludes that although twofoldness is an important feature of some of our experiences of some pictures, it is not a necessary feature of seeing-in in general. I will attempt to point out that Lopes's arguments presuppose that the notion of twofoldness is to be interpreted as (i). While they are very persuasive that (i) is not necessary for seeing-in, they say nothing about whether (ii) could be considered to be necessary for seeing-in.

Lopes introduces the notion of 'design seeing', a concept we shall use later, as 'seeing design features as responsible for seeing-in' (Lopes 2005: 28). He says:

When we look at a picture, we normally see in it the scene it depicts, but we may also see its design as a design. Of course, there is a sense in which we always see the picture's design when we see things in it, for we always see a scene in a picture by seeing the picture face to face. It is only in virtue of seeing the configuration of marks on its surface, and being sensitive to visible changes in them, that we see anything at all in the picture. However, seeing a pictorial design face to face does not entail seeing the design as a design—it does not entail design-seeing.

(Lopes 2005: 28)

Thus, we always see the surface of the picture when we see something in it, but we may or may not see its design as design. This sounds like a rejection of the claim that (i) is a necessary feature of seeing-in and an endorsement of the claim that (ii) is. But Lopes restricts the notion of twofoldness to (i) and hence denies that twofoldness (that is (i)) is a necessary feature of seeing-in. He says: 'According to Wollheim, seeing-in is one component of an experience with two aspects: a simultaneous or 'twofold' experience of design and depicted scene (Wollheim calls the complete, twofold experience 'seeing-in'). It is impossible to see a scene in a picture without also seeing the picture's design as a design' (Lopes 2005: 33).

Thus, the claim Lopes attributes to Wollheim is that twofoldness, that is, (i) is necessary for seeing-in. And he then rightly rejects this view, pointing out that one of Wollheim's main arguments for the claim that twofoldness is necessary for seeing-in, the argument from perceptual constancy (Wollheim 1980: 215–16), 'requires that the visual system access information about the surface of pictures, but it does not follow that the surface is experienced. We may see the design without seeing it *as* a design, if design information is used by vision to correct for viewing position without entering conscious experience' (Lopes 2005: 35).

The way I read Lopes's point is that the perceptual constancy of picture perception does not support twofoldness as (i), but it does support twofoldness as (ii). He comes close to a similar formulation: 'An explanation of constancy requires at most that constant seeing-in be accompanied by surface seeing, not design seeing' (Lopes 2005: 36).

Another argument Lopes gives against the claim that (i) is necessary for seeing-in is the following. He introduces the notion of pseudo-twofoldness and argues that some of our seeing-in experiences are pseudo-twofold, hence, by definition not twofold (Lopes 2005: 40–2). His example is the famous picture of the Dalmatian where we can see the Dalmatian's contour only if we see the dog in the picture. If we do not see the Dalmatian in the picture, we do not see the contour: we only see 'a patchwork of unrelated blobs' (Lopes 2005: 42). What this is supposed to show is that when we see the Dalmatian in the picture, we do not see the picture's design as a design: there is no design seeing going on. Why? Because 'the design features . . . must be visible independently of seeing anything in the picture' (Lopes 2005: 41) and we cannot see the shape of the

Dalmatian independently of seeing the dog in the picture. Be that as it may: seeing the Dalmatian in the picture may or may not exclude design seeing, i.e. seeing the design as a design. But it definitely does not exclude that seeing it in the picture entails representing the picture's design: it does not exclude that our experience of seeing-in is a twofold one in sense (ii).

Lopes concludes from these observations that seeing-in is a diverse phenomenon: sometimes it entails design seeing (seeing the picture's design as a design), sometimes it doesn't. Sometimes it entails surface seeing (seeing the picture's design, but not seeing it as a design), and maybe sometimes (in the case of the experience of *trompe l'œil* paintings) it doesn't.

Importantly for our purposes, Lopes holds that if seeing-in does entail design seeing, then seeing-in is inflected. If it does not, it is uninflected. This is a coherent account of inflected and uninflected seeing-in and I do think that it is on the right track. Inflected seeing-in is defined with the help of the concept of design seeing: seeing-in is inflected if it 'doubles with design seeing'. But it is not at all clear how the concept of design seeing could be cashed out. The two characterizations Lopes gives are not extremely helpful. He says that design seeing is 'seeing design features as responsible for seeing-in' (Lopes 2005: 28) and that design seeing is seeing 'the picture's design as a design' (Lopes 2005: 33; see also 2005: 28).

In order to make sense of these suggestions, I will turn to a Wollheim-inspired way of looking at the distinction between inflected and uninflected seeing-in in the next section, which I take to be consistent with Lopes's distinction (although they use the concept of twofoldness, and of seeing-in, differently).

In this section, we have found that we have a number of reasons to reject the idea that (i) is necessary for seeing-in. But none of the arguments that have been given against the importance of twofoldness show that (ii) is not necessary for seeing-in. I will assume in what follows that (ii) is necessary for seeing-in. This is not such a wild assumption: many of the critics of the notion of twofoldness and of Wollheim's views in general would also be happy with this claim (Lopes 2005, ch. 1; and maybe even Hopkins, Chapter 6 in this volume).

The reason why I spent so much time on the distinction between (i) and (ii) is not merely to rule out a false interpretation of the concept

of twofoldness. I hope to show in the next section that Wollheim's two concepts of twofoldness may help us to understand the difference between inflected and uninflected seeing-in better. The view I will outline is not really Wollheim's; I believe that a very charitable interpretation of his writings could yield this view, but I will not argue for this claim. That is why I call this account a Wollheimian (rather than Wollheim's) account of inflected seeing-in.

4. A Wollheimian Account of Inflection

Here is the view in a nutshell that could be attributed to Wollheim: while twofoldness, interpreted as (ii), is a necessary feature of seeing-in, twofoldness, interpreted as (i), is an important, and maybe even necessary, feature of (something like) inflected seeing-in. If we interpret Wollheim as having this view, then we can conclude that much of the confusion around the notion of twofoldness stems from the fact that he held both claims, often not distinguishing between the two.

This chapter is not a piece of Wollheim scholarship, but it should be pointed out briefly that some of Wollheim's arguments in favour of the importance of twofoldness are in fact arguments for the claim that (ii) is necessary for seeing-in and some others are arguments for the claim that (i) is necessary for (something like) inflected seeing-in.

One of Wollheim's original arguments in favour of his twofoldness claim is that we would not be able to appreciate the great examples of pictorial representations unless we were consciously attending to both the design of the picture and the depicted object at the same time (Wollheim 1980: 214–16). As he writes: 'in Titian, in Vermeer, in Manet we are led to marvel endlessly at the way in which line or brushstroke or expanse of colour is exploited to render effects or establish analogies that can only be identified representationally' (Wollheim 1980: 216).

Now, 'marvelling endlessly' at a Vermeer, according to Wollheim, entails something like inflected seeing-in: we attribute properties to the experienced object that can only be fully described with reference to the 'lines or brushstrokes or expanses of colour'. And he claims that this experience (again, not seeing-in per se, but (something like) inflected seeing-in) is a twofold experience in sense (i). This claim is

underlined by the analogy Wollheim draws between experiencing pictures and poetry:

> A comparison that suggests itself is with the difficulties that would have lain in store for us in our appreciation of poetry if it had been beyond our powers to have simultaneous awareness of the sound and the meaning of words. In painting and poetry twofoldness must be a normative constraint upon anyone who tries to appreciate works of those arts.
>
> (Wollheim 1980: 216)

Thus, Wollheim's argument seems to suggest that twofoldness, in the sense of (i), that is, simultaneous conscious attention to the surface and the depicted object, is a necessary condition for the aesthetic appreciation of pictures and maybe for inflected seeing-in (and not for seeing-in per se).

Contrast this argument with Wollheim's other important argument concerning twofoldness, the one from the perceptual constancy of pictures we considered above. The argument from perceptual constancy aims to establish something about the nature of seeing-in per se, not about the aesthetic appreciation of pictures: it is true of all seeing-in that the depicted object is not distorted if we look at a picture from an oblique angle. And the concept of twofoldness he appeals to in Wollheim (1980: 215–16) is closer to (ii) than to (i): the simultaneous representation of surface and scene. But what is important for our purposes here is that Wollheim seems to use twofoldness in sense (ii) to argue about seeing-in per se and he uses twofoldness in sense (i) to argue about inflected seeing-in and the aesthetic appreciation of pictures.

It is time to summarize what Wollheim teaches us about the intricate connection between twofoldness, seeing-in and inflected seeing-in. Seeing-in necessarily entails twofoldness in the sense of (ii): the simultaneous representation of surface and scene. But inflected seeing-in necessarily entails twofoldness in sense (i): simultaneous conscious attention to surface and scene. Maybe it is not overly charitable to attribute this view to Wollheim. The fact that he uses two concepts of twofoldness, which play very different roles, without acknowledging the difference, has muddied some waters, but it is nonetheless a coherent account of both seeing-in and inflected seeing-in.

More recent discussion on inflection describes Wollheim as holding that every instance of seeing-in is inflected. Lopes, for example, claims that:

> Wollheim holds that we always see a picture's design at the same time as we see in it the scene it depicts: the one interpenetrates the other in a single experience. Design seeing transforms the content of seeing-in so that it no longer matches the content of seeing the scene face to face. Design is 'recruited' into the depicted scene so that the scene no longer looks the way it would when seen face to face.
>
> (Lopes 2005: 40)[4]

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Notice that the first sentence just says that seeing-in entails seeing a picture's design. But the second sentence says it entails design seeing, which, as we have seen above and Lopes himself meticulously pointed out, is something much stronger than seeing the design: it implies seeing the design *as a design*. If Wollheim in fact held that seeing-in entails design seeing, that is, conscious attention to design properties, then he seems to be confusing inflected seeing-in and seeing-in per se. In this case, it is unclear what logical space there remains for uninflected seeing-in, just as Levinson suggests in the quotation above.

But if we interpret Wollheim as having two concepts of twofoldness and, to use Lopes's terminology, if he takes design seeing to be necessary for inflected seeing-in and at the same time takes seeing the surface to be necessary for inflection per se, then there is no prima facie problem with his account.

It is worth noting that if we interpret Wollheim the way I have suggested, then one of the allegedly most problematic consequences of his account will appear much less problematic. Wollheim famously thought that our experience of *trompe l'œil* paintings is not twofold, which, in his wider theory, also implies that *trompe l'œil* paintings are not pictures. Many have found this conclusion very counterintuitive. But if seeing-in entails twofoldness in sense (ii), that is, the simultaneous representation

[4] Lopes's point may apply in the case of Michael Polanyi's observations that could be taken to be an early introduction of the idea of (something like) inflection. Polanyi writes: 'The arts do not exhibit things that could be really there and yet are not there; they exhibit things of a kind that cannot exist either in nature or in human affairs' (Polanyi 1970: 234). It seems that Polanyi is committed to saying that all seeing-in is inflected. What I tried to show is that there is a way of interpreting Wollheim in such a way that he is not committed to this claim.

of surface and scene, then it is not at all clear that our experience of *trompe l'œil* paintings is not a twofold experience in this sense. When we are deceived by a *trompe l'œil* painting, we are not *aware* of the surface: that's why, for a moment, we are fooled into thinking that we are perceiving the depicted object face to face. But this does not exclude that we do represent the surface properties, without being aware of them. The perception of *trompe l'œil* paintings is a good example for uninflected seeing-in.[5]

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Of course, Wollheim repeatedly admitted that it is a (maybe not too desirable) consequence of his account of seeing-in that our experience of *trompe l'œil* paintings is not seeing-in (see Wollheim 1998 and Feagin 1998 for a good summary; see also Levinson 1998: 228–9). And this may make one wonder how charitable my interpretation is. Well, it may be a bit too charitable. But, again, this chapter is not a piece of Wollheim scholarship. If he didn't in fact hold this view, it is still a view that is coherent, does not face any prima facie problems, and gives a straightforward answer to both questions this chapter set out to answer: what seeing-in is and what inflected seeing-in is (and, in addition, it does so without being committed to the allegedly problematic consequences of his views regarding *trompe l'œil*).

I do not want to endorse the Wollheimian account I outlined here. But I do think that it gives us some important considerations for giving a general account of inflected seeing-in. According to the Wollheimian account, inflected seeing-in entails simultaneous attention to design and scene. I think that's almost right. I will argue that we are consciously attending[6] to one property only, but this property is relational: it cannot be fully characterized without reference to both the picture's design and the depicted object. For those who find the Wollheimian account appealing, it needs to be pointed out that attending to this one relational property, depending on how we think of attention, could be taken to imply twofold simultaneous attention to design and scene.

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[5] The perception of *trompe l'œil* paintings is, of course, very different from other examples of uninflected seeing-in, like watching television or looking at magazine illustrations. In the latter cases, we are not fooled into thinking that we are looking at the depicted object face to face (not even for a moment).

[6] I have been and I will be using the concepts of 'attention' and 'conscious attention' interchangeably. This does not mean that I take sides in the grand debate about whether attention is necessary and/or sufficient for consciousness. On this thorny issue, see Campbell (2002) and Prinz (forthcoming).

5. A General Account of Inflected Seeing-In

In this section, I will depart from the Wollheimian considerations and formulate the difference between inflected and uninflected seeing-in. The hope is that we can find a general account of inflected seeing-in that would capture the intuitions behind the way Lopes and Wollheim draw the distinction between inflected and uninflected seeing-in.

First, what is in common between inflected and uninflected seeing-in? Both inflected and uninflected seeing-in are twofold experiences: if we see an apple in a picture, we represent the picture's design and the depicted apple simultaneously.

Second, what is the difference between inflected and uninflected seeing-in? In the case of inflected seeing-in, we consciously attend to a relational property that cannot be fully characterized without reference to both the picture's design and the depicted object. In the case of uninflected seeing-in, this is not necessarily the case. To put it simply, the difference between inflected and uninflected seeing-in is a matter of attention. And attention, as the famous 'inattentional blindness' experiments show, can dramatically change what we experience (Simmons and Chabris 1999; Mack and Rock 1998; Rensink n.d.).

I said that when our seeing-in experience is inflected, we attend to a relational property that cannot be fully characterized without reference to both the picture's design and the depicted object. I will call these properties that we attend to in the case of inflected seeing-in 'design-scene properties'. Not all relational properties that cannot be fully characterized without reference to both the picture's design and the depicted object are 'design-scene properties'.[7] Further, there are many ways of expressing a 'design-scene property': it could be referred to as the property of how features of the picture's design give rise to or undergird the experience of the depicted object; or of how the depicted object emerges from the design, etc. What is important is that when seeing-in is inflected, we are consciously attending to 'design-scene properties'.

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[7] The property of 'being seen in this surface by me right now', for example, although it probably cannot be characterized fully without reference to the picture's design and to the depicted object, is not a 'design-scene property'.

That the properties we are attending to when seeing-in is inflected are relational is also reflected in many of the intuitions behind the concept of inflection: when we have an inflected seeing-in experience, we experience how the depicted object emerges from the design: from the marks on the surface. As Lopes says, we see the depicting design 'undergirding' the depicted scene: 'seeing a picture as a picture amounts to seeing its undergirding—to seeing, as it were, the process of depiction and not merely its product' (Lopes 2005: 39). Design seeing, which is necessary for inflected pictorial experiences, 'amounts to seeing design features as responsible for seeing-in' (Lopes 2005: 28).

As Hopkins summarizes the view (which he himself disagrees with): '[An] account of inflection's importance takes it to lie in the way it allows us to appreciate emergence. After all, inflection precisely straddles the divide between design and the world visible in it. The idea is that, in doing so, it offers us the opportunity better to appreciate how the one emerges from the other' (Chapter 6 in this volume, p. 000).

It is hard to see how these properties we see in surfaces would be capable of all this if they were not relational: if they did not make reference to both the picture's design and the depicted object.

When seeing-in is uninflected, we do represent some design properties perceptually. But this does not entail attending to 'design-scene properties'. But when seeing-in is inflected, we do attend to 'design-scene properties': we consciously attribute the property of emerging from the picture's design to the depicted object. This is the difference between inflected and uninflected seeing-in.

How does this account relate to Hopkins's characterization of inflected seeing-in? As we have seen, Hopkins said that, in the case of inflected seeing-in, 'what is seen in a surface includes properties a full characterization of which needs to make reference to that surface's design (conceived as such)' (Chapter 6 in this volume, p. 000). My suggestion keeps the spirit of this suggestion: in the case of inflected, but not in uninflected, seeing-in, we consciously attribute a property to the depicted object, a property that can't be fully characterized without reference to the picture's design—just as Hopkins says.

I said in the last section that this account could be thought to be consistent with Lopes's views on inflection. Lopes holds that seeing-in is inflected if it is doubled with design seeing. Design seeing, in turn,

is 'seeing design features as responsible for seeing-in' (Lopes 2005: 28). The big question is what it means to see design features as responsible for seeing-in. But as design properties are 'those visible surface properties in virtue of which a picture depicts what it does' (Lopes 2005: 25), it sounds plausible to claim that 'seeing design features as responsible for seeing-in' implies consciously attending to some relational properties that cannot be fully characterized without reference to the picture's design (that are responsible for seeing-in) and to the depicted object (what the design features are seen as being responsible for). In other words, 'seeing design features as responsible for seeing-in' could be plausibly taken to imply conscious attention to 'design-scene properties'.

We have made some progress: it seems that the Wollheim-inspired account of inflected seeing-in and Lopes's views converge and provide us with a way of understanding the distinction between inflected and uninflected seeing-in. Of course, the account I presented here is very sketchy: maybe I should call it a general framework for analysing inflected and uninflected seeing-in rather than an actual account. I will attempt to fill in the details of this general framework in Section 7. But before I do so, I need to address some important worries about both this sketchy account and the very idea of inflected pictorial experience.

6. Troubles with Inflected Seeing-In

In the case of inflected, but not uninflected, seeing-in, as we have seen, 'what is seen in a surface includes properties a full characterization of which needs to make reference to that surface's design (conceived as such)' (Hopkins, Chapter 6 in this volume, p. 000). If our seeing-in is inflected, we attribute properties of this kind to the object we experience. If it is not, we don't.

This may sound like a neat and clear-cut distinction between inflected and uninflected seeing-in, but what it amounts to depends on what we take the object of our experience (what we attribute these properties to) to be. More specifically, it depends on one's account of seeing-in per se.

Hopkins argues that the notion of inflection is difficult to combine with what he calls the 'divisive' accounts of seeing-in, that is, those accounts

FN:8 that take twofoldness to be a necessary feature of seeing-in.[8] If he is right, then the picture I outlined here must be wrong.

I think Hopkins's arguments are not conclusive, but they do put some important constraints on possible accounts of seeing-in (and of inflected seeing-in). I will outline an account of seeing-in and inflected seeing-in in Section 7 that satisfies these constraints. He has two complaints.

First, he argues that if seeing-in entails twofoldness, then in the case of inflected seeing-in the picture's design figures twice in our overall experience. It follows from the twofoldness claim that in the case of any seeing-in, inflected or uninflected, we must represent the picture's design. But, in the case of inflected seeing-in, we represent the depicted object as having properties that cannot be fully characterized without reference to the picture's design. Thus, design figures in both 'folds' of the twofold experience. But, Hopkins concludes, this does not reflect the phenomenology of seeing things in pictures.

The first thing to notice is that appealing to the phenomenology of seeing things in pictures may not be conclusive in this case. Take uninflected seeing-in first. As the representation of the picture's design is not necessarily conscious, design may not show up in the phenomenology at all. And in the case of inflected seeing-in, design may show up only in the characterization of some properties (the 'design-scene properties') we attribute to the depicted object. Hopkins's argument seems to presuppose that seeing-in is twofold in sense (i). But I argued that we have little reason to think so, whereas we do have some reason to think that it is twofold in sense (ii). But let us proceed more slowly.

When we see an apple in a picture, our overall experience attributes a number of properties to this apple. This overall experience represents some properties of the surface and it also represents some properties of the apple. Take uninflected seeing-in first. I represent (typically without attending to them) some design properties. I also represent some properties of the apple. I attribute some design properties to the surface and, at least normally, do so without attending to them (and, at least sometimes, I do so unconsciously). I attribute some non-design properties to the apple, such as being spherical, etc. As I represent design properties without

[8] Examples for 'divisive' accounts of seeing-in include Wollheim's, Lopes's, and Podro's account as well as mine. I have also argued that Kendall Walton's views on seeing-in are also divisive (Nanay 2004).

attending to them, these properties may not even show up in my experience at all.

Now let us turn to inflected seeing-in. If I experience this picture in an inflected manner, I still represent (again, without attending to them) the design properties of the picture. Similarly, I still represent the depicted object: I attribute non-design properties to the depicted apple. But, and this is the difference between inflected and uninflected seeing-in, I also attend to some 'design-scene properties': properties that cannot be fully characterized without reference to the picture's design. Does this make design properties figure in my experience twice over? I don't think so. It is only in attending to these 'design-scene properties' that design features show up in our experience. Our representation of design properties that makes seeing-in possible does not show up in our experience, as we are not attending to them. In other words, design shows up only in the 'depicted object' fold of our twofold experience, not in the 'surface' fold.

But Hopkins has a second worry about the prospects of combining the idea of inflected seeing-in with what he calls the 'divisive' account of seeing-in. He raises the following question. If seeing-in is a twofold experience, then we need to be able to tell how we represent the two entities this experience represents: the design and the depicted object. We presumably see the design, but how do we represent the depicted object? Do we also see it? As he puts it, do we represent it by means of a 'standard visual representation' (as opposed to a belief or mental imagery)? He assumes that the answer should be yes. But then inflected seeing-in poses a problem. As he says:

> Ordinary experience presents objects as before one, i.e. as seen face to face. Inflected properties are properties that, without reducing to design properties (consider, for example, the property of being an upturned hand), nonetheless need characterizing, in part, by reference to features of design, conceived as such (e.g. by reference to inky strokes). The experiences . . . in which we are presented with inflected properties thus cannot even seem to be cases of seeing face to face.
>
> (Chapter 6 in this volume, p. 000)

Hopkins is careful to put this point as a challenge: every account of seeing-in needs to be able to tell how seeing-in represents the depicted object and every account of inflected seeing-in needs to be able to tell how inflected seeing-in represents the depicted object. And it is not clear how those who

want to combine a divisive account of seeing-in with acknowledging the possibility of inflected seeing-in could answer this question. I will try to meet this challenge in the next section.

7. Filling in the Details of the General Account of Inflected Seeing-In

Hopkins is right. Any account of seeing-in must be able to tell how this experience represents the picture's surface and how it represents the depicted object. And any account of inflected seeing-in must be able to tell how our inflected experience represents these two entities and how these representations are different from the way we represent surface and scene in the case of uninflected seeing-in.

It is not enough to say that we see both the picture's surface and the depicted object, because in this case it remains unclear how seeing the design in the case of uninflected seeing-in is different from doing so in the case of inflected seeing-in. I will outline an account of seeing-in and inflected seeing-in that does respond to Hopkins's questions and that allows for the difference between inflected and uninflected seeing-in.

It is important to make it clear that the view I will outline is one possible way of filling in the details of the general account I outlined in Section 5. If this specific view failed, this would not make the more general points I made about the difference between inflected and uninflected seeing-in above obsolete. In this section I will give one way of filling in the details of the general outline of the account of inflected seeing-in. But there may be other ways of doing so. As an account of inflected seeing-in presupposes an account of seeing-in per se, filling in the details of the general outline of inflected seeing-in mainly means giving a precise theory of seeing-in per se and then plugging the general account of inflected seeing-in into this theory. Hence, I will spend a lot of time giving a theory of seeing-in per se: of what is in common between inflected and uninflected seeing-in and then turn to the differences between inflected and uninflected seeing-in.

Humans (and other mammals) have two visual subsystems that use different regions of our central nervous system, the ventral and dorsal streams. These two streams can be differentiated anatomically and functionally. I

will stick to the latter way of drawing this distinction. To put it very simply, the ventral stream is responsible for identification and recognition, whereas the function of the dorsal stream is the visual control of our motor actions. In normal circumstances, these two systems co-function, but if one of them is removed or malfunctioning, the other can still function relatively well (Milner and Goodale 1995; Goodale and Milner 2004).

If the dorsal stream is malfunctioning, the agent can recognize the objects in front of her, but she is incapable of manipulating them or even localizing them in her egocentric space (especially if the perceived object is outside the agent's fovea). This happens if a patient is suffering *optic ataxia*. If the ventral stream is malfunctioning, the agent can perform actions with objects in front of her relatively well, but she is incapable of even guessing what these objects are. This happens in the case of *visual agnosia*.

The philosophical implications of this physiological distinction are not at all clear. Some argued that ventral visual processing is conscious, whereas dorsal is unconscious (Milner and Goodale 1995; Goodale and Milner 2004), but this view has been criticized both on empirical and on conceptual grounds (Dehaene et al. 1999; Jeannerod 1997; Jacob and Jeannerod 2003). It has also been suggested that dorsal processing gives rise to non-conceptual content, whereas ventral processing gives rise to conceptual content (Clark 2001). I do not need to take sides in either of these questions.

All I assume here is that these two streams of visual processing are functionally different. The dorsal subsystem feeds into our perceptually guided actions and provides visual control for our motor actions; thus, it represents the perceived object egocentrically (see Nanay 2008 for details about what is meant by egocentricity). The ventral subsystem, however, feeds into our epistemic apparatus and helps us to recognize objects. This way of drawing the distinction between the two visual subsystems seems to be the common denominator between various interpretations of the anatomical findings: a similar distinction is made by Jeannerod (1997), Jacob and Jeannerod (2003), Goodale and Milner (2004), and Matthen (2005). Matthen somewhat idiosyncratically labels the two as 'motion-guiding vision' (dorsal) and 'descriptive vision'. Lopes (Chapter 2 in this volume) follows this terminology. I will use the dorsal–ventral terminology that is commonly used by psychologists, neuroscientists, and philosophers of mind.

In healthy humans the way the dorsal and the ventral stream works can come apart in some circumstances, as in the case of the three-dimensional Ebbinghaus illusion. The two-dimensional Ebbinghaus illusion is a simple optical illusion (see Figure 2.5). A circle that is surrounded by smaller circles looks larger than a circle of the same size that is surrounded by larger circles. The three-dimensional Ebbinghaus illusion reproduces this illusion in space: a poker-chip surrounded by smaller poker-chips appears to be larger than a poker-chip surrounded by larger ones. The surprising finding is that although our judgement of the comparative size of these two chips is wrong as we judge the first chip to be larger than the second one, if we are asked to pick up one of the chips, our grip size is not influenced by the illusion (Aglioti et al. 1995; some worries about the experimental conditions are expressed by Gillam 1998 as well as Franz et al. 2003).[9] The usual way of explaining this finding is that our dorsal stream is not fooled by the illusion but our ventral stream is.

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The same results can be reproduced in the case of other optical illusions. In the Müller–Lyer illusion, while we (mistakenly) see the two lines as having different length, our eye and pointing movements represent them (correctly) as being the same (Goodale and Humphrey 1998; Gentilucci et al. 1996; Daprati and Gentilucci 1997; Bruno 2001).[10] Similarly, in the case of the 'Kanizsa compression illusion' and the 'hollow-face illusion', our perceptual experience is fooled but our action is not (Bruno and Bernardis 2002 and Króliczak et al. 2006, respectively). Thus, it does happen under exceptional circumstances that our ventral visual subsystem attributes a different property to an object from the one the dorsal subsystem does.

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My claim is that our visual system functions in a somewhat similar manner when we perceive pictures. I will argue that the dorsal and the ventral visual subsystems attribute different properties to the perceived object whenever we see objects in pictures. The ventral subsystem attributes properties to the depicted scene whereas the dorsal subsystem attributes design properties to the surface of the pictures. Or, to put it very simply, it is constitutive of our experience of seeing things in pictures that the depicted scene is represented

[9] Some philosophical implications of these results are discussed in Abell (Ch. 3 in this volume) and Lopes (Ch. 2 in this volume).

[10] These results have been questioned as they are difficult to parse with the phenomenon that we also experience the Müller–Lyer illusion in the haptic sense modality (Heller et al. 2002, 2005; Suzuki and Arashida 1992).

by our ventral vision, whereas the surface of the picture, together with its design properties, is represented by our dorsal vision.

The claim that the ventral subsystem represents properties of the scene, whereas the dorsal one represents properties of the surface, entails the following four claims:

(*a*) The depicted object is represented by ventral perception.
(*b*) The depicted object is not represented by dorsal perception.
(*c*) The surface is represented by dorsal perception.
(*d*) The surface is not necessarily represented by ventral perception.

I give detailed arguments for these four claims in Nanay (2008). My concern here is not seeing-in per se, but inflected seeing-in. I argued in Section 5 that seeing-in is inflected if we are attending to what I called 'design-scene properties': relational properties that cannot be fully characterized without reference to both the picture's design and the depicted object. The question we need to ask is how these properties are being represented. The response, in short, is that they are represented ventrally.

The difference between inflected and uninflected seeing-in is then the following: in the case of uninflected seeing-in, the depicted object is represented ventrally while the design properties of the surface are represented dorsally but not ventrally. In contrast, in the case of inflected seeing-in, the depicted object is represented ventrally and one of the properties it is represented (ventrally) as having is a 'design-scene property'. As this property is relational and it cannot be fully characterized without reference to both the picture's design and the depicted object, the fact that it is ventrally attributed to the depicted object means that at least some features of the picture's design must be represented ventrally (given that the 'design-scene property' is represented ventrally). In other words, while in the case of uninflected seeing-in the design features are only represented dorsally, in the case of inflected seeing-in at least some of them are represented both dorsally and ventrally.

This distinction between inflected and uninflected seeing-in is a version of the more general account I outlined in Section 5. As the ventral subsystem is what is taken to be the locus of attention, the fact that inflected seeing-in represents 'design-scene properties' ventrally could be interpreted as a version of the claim that in the case of inflected (but not uninflected) seeing-in, we attend to 'design-scene properties'.

It could also be thought to be consistent with Lopes's view on the difference between inflected and uninflected seeing-in. Lopes gives the following characterization of inflected seeing-in: 'Features of the design may inflect illustrative content, so that the scene is experienced as having properties it could only be seen to have in pictures' (Lopes 2005: 123–4).

If it is true that in the case of inflected seeing-in we ventrally represent the depicted object as having 'design-scene properties', then the scene is experienced as having properties it could only be seen to have in pictures: as having 'design-scene properties'. In the case of uninflected seeing-in, it is not experienced as having these properties (although it is dorsally represented as having design properties).

Now we are in the position to answer Hopkins's second objection about the way we represent the depicted object in the case of inflected and uninflected seeing-in. In both cases we represent it ventrally. In the case of inflected, but not uninflected, seeing-in we also attribute some 'design-scene properties' to it ventrally. Does this count as 'standard visual representation' I'm not sure. If 'standard visual representation' means seeing face to face, then it doesn't, as seeing face to face entails the ventral and dorsal representation of one and the same object. I argued that this is not the way we represent the depicted object (whether or not our seeing-in is inflected). We only represent it ventrally. But does this way of representing the depicted object count as perceiving it? Yes, it does. Ventral perception is perception all the same. Hopkins, rightly, pointed out that any account of inflected seeing-in (and of seeing-in in general) needs to specify how we represent the depicted object and the surface. I tried to meet this challenge in this section.

One last worry needs to be addressed. One may worry about whether this account of inflected seeing-in can handle Hopkins's 'doubling of the design features' objection. In the case of inflected seeing-in, we represent the surface both ventrally and dorsally. Does this mean that the design figures in our seeing-in experience 'twice over'? I don't think so. Each time we perceive something face to face, we represent it both ventrally and dorsally and it would be odd to suggest that this object 'figures twice over' in our experience.[11]

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[11] Hopkins raised another objection not to divisive accounts of seeing-in in general, but to my account in particular. Hopkins claims that I am 'reason[ing] from the principle that any property of

Finally, I need to emphasize that the specific account of seeing-in and inflected seeing-in I outlined in this section is just one way of filling in the details of the general account I gave in Section 5. If the specifics of my dorsal–ventral account of seeing-in are questionable, this does not cast any doubt over the general account of inflected seeing-in as conscious attention to 'design-scene properties'.

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what is seen in the surface is itself seen in it' (Ch. 6 in this volume, n. 3). Nothing I said here relies on this premiss. Every object has a lot of properties. Some of these we experience this object as having, but most of them we don't. The same goes for depicted objects. They have a lot of properties, but we experience them as having only a subset of these. I claim that we do experience them as having some 'design-scene properties'. They have a lot of properties (including Hopkins's 'being seen in this surface by me right now') that we do not perceive it as having. But my claim is that when our experience is inflected, we do perceive the depicted objects as having 'design-scene properties'.

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