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Phenomenal presence and visual awareness: a dual view*

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1. Introduction

In this essay, I offer a theoretical account of a phenomenological datum about perception that many philosophers from the traditions of both phenomenology and analytic philosophy have highlighted. The datum is that perceptual experience involves a certain duality: we seem to be visually aware of more than what is phenomenally present or, as I shall put it, what is visually apparent to us. I try to clarify both terms of the duality, and enquire into the scope of visual awareness and the phenomenal nature of visual appearances.

The essay is structured as follows. In §2 I present the duality hypothesis with respect to a central case, which concerns the visual perception of opaque volumetric objects. The intuition driving the duality hypothesis in this case is that we can be visually aware of a whole self-occluding object even though there is a phenomenal sense in which what is visually apparent to us falls short of the presence of such an object. I suggest that the duality hypothesis can be generalised to other cases involving natural kinds, artefacts and familiar persons. §3 is about the nature of visual appearances. I argue that visual appearances supervene on visually detectable facts, i.e., facts about properties that the visual system is innately equipped to detect. In §4 I present various accounts of visual awareness, depending on whether imagination, sensorimotor abilities or doxastic states are claimed to constitute visual awareness over and above what is visually apparent in our experience. §5 develops a version of the doxastic account according to which visual awareness involves doxastic inclinations causally based on visual appearances. On this account, the scope of visual awareness depends on context-sensitive cognitive habits or heuristics.

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2. The duality of perceptual experience

Many philosophers of perception have observed that the phenomenology of perceptual experience involves a certain duality. For instance, Husserl (1907) draws a distinction between what he calls “proper” and “improper” appearances. In his own example, when we see a house, the front side of the house is a properly appearing moment of what is perceived, whereas the back side and the interior of the house are improperly appearing moments. Following Husserl, Merleau-Ponty (1964) claims that there are “two elements of perception”, and that what is perceived “contains something more than what is actually given”. He also adds that “the appearance of ‘something’ requires both this presence and this absence” (p. 16). In a similar vein, Sellars (1978) introduces the notion of a part of reality, such as the white flesh inside of a perceived apple, which is not seen but nevertheless “present in actuality” in visual experience. More recently, Noë (2004, 2006) distinguishes between actual and virtual presence in perception, and describes the latter as “presence as absence”. His examples are already familiar: when we see a tomato, the front side and the back side of the tomato are respectively actually and virtually present (although Noë eventually argues that the distinction is one of degree).¹

In what follows, the phenomenological duality of perceptual experience will be construed as a distinction between what is visually apparent to us, in some phenomenal sense to be clarified, and what we are visually aware of, i.e., what is apprehended in visual experience and reflected in basic perceptual judgments.² As we shall see, the duality hypothesis is motivated by the fact that visual appearances fall short of what we are typically aware of when we see something. There is not much agreement about either the scope of visual awareness or

¹ The duality that these philosophers have emphasized is first and foremost a phenomenological duality, independently of its various theoretical characterizations. There are in the literature other distinctions between forms or dimensions of perception that might bear interesting connections to the phenomenological contrast discussed here. Among these figure the distinction between simple (non-epistemic) *vs* epistemic perception (Dretske 1969, see below), and the numerous accounts that have been offered of the sensory/sensational *vs* cognitive/conceptual dimensions of perception (see, e.g., Peacocke 1983, 1992; a recent discussion of the latter distinction can be found in Bengtson et al. 2011). Finally, some controversies in the philosophy of perception can be re-interpreted as focusing on different but complementary aspects of perceptual experience. This might be the case for the debate between a relational view (Campbell 2002, Martin 2002) and a representational view (Crane 2006) of experience. Perhaps one and the same visual experience involves a non-representational relation to an appearance and some explicit representation at the level of visual awareness.

² This essay is about the visual modality. It is an interesting question whether and how other sensory modalities involve the phenomenological contrast at stake here.

the nature of visual appearances, but we can start with the much-discussed and reasonably clear illustration of the duality hypothesis, namely the visual perception of self-occluding objects.

Suppose that we are looking at a sleeping cat from a fixed point of view. Many parts of the cat are hidden from view. Some of them could easily be seen, for instance by changing our point of view on the cat, but they are not actually seen. The only part of the cat that we can see, at any given time, is its facing surface at that time. Still, there is a sense in which we are visually aware of a whole, voluminous cat. Our visual awareness can give rise to an ordinary perceptual judgment such as “Here is a cat”. The phenomenological contrast at stake here is between what we are visually aware of, namely a cat, and what is visually apparent to us but falls short of being a cat. The driving intuition is that what is visually apparent to us when we see a cat is the same as what is visually apparent to us when we see a fake cat, say a convincing paper mache cat, or a cat façade viewed from the intended perspective.

The hypothesis that visual experience is dual can be acknowledged without a commitment to two further theses, which I think should ultimately be rejected.

The first thesis is that even though the hidden parts of a perceived object are not visually apparent, we can be visually aware of at least some of them. In his own attempt to capture the duality of visual experience, Alva Noë writes that we are “visually aware of the presence of the parts of the [cat] which [we] don’t actually see” (2006, p. 414; Noë’s original example involves a tomato). This is objectionable. It is not obvious that being visually aware of a whole cat entails being visually aware of its hidden parts. Perhaps we are visually aware of a whole cat even though we are not visually aware of its hidden parts (after all, they are hidden). The inference from “S is visually aware of x ” and “ y is a proper part of x ” to “S is visually aware of y ” is not obviously valid.

The second thesis (which will be further discussed in the next section) is that we are always visually aware of what is visually apparent to us. The content of visual awareness typically goes beyond what is visually apparent, but it would encompass at least the latter. This seems false. We can be visually aware of a cat without being visually aware of a visual appearance shared by both cats and fake cats. At least our ordinary perceptual judgments do not reflect visual appearances. When we see a cat, we normally judge “Here is a cat” and not “Here is a cat-like appearance”, or “Here is something that looks like a cat”. Perhaps in some circumstances, as when a scenographer or stage designer tries to build up a convincing scenery for a theater performance, the subject is visually aware of what is visually apparent to her. These

are special circumstances, though, and we are not normally aware (visually or otherwise) of what is visually apparent to us.

The duality of visual experience is not restricted to the contrast between being visually aware of a voluminous object and being visually appeared to in a way shared by both voluminous objects and mere façades. Here are other plausible generalizations of the duality hypothesis:³

Natural kinds. We can be visually aware of a tiger, or water, even though what is visually apparent to us falls short of the presence of a tiger, or water.

Artefacts. We can be visually aware of a car, even though what is visually apparent to us falls short of the presence of a car.

Familiar persons. We can be visually aware of Mary, even though what is visually apparent to us falls short of the presence of Mary.

Our visual awareness of the world can give rise to ordinary judgments such as “This is a tiger”, “This is water”, “This is car”, or “Here is Mary”. However, there seems to be a level of visual experience that is shared among relevantly different situations. For instance, we can be visually aware of a tiger, or water, even though what is visually apparent to us is shared by fake tigers or, say, liquid with chemical composition XYZ. We can be visually aware of a car even though what is visually apparent to us is a car-like object with none of the functional properties of a car. Finally, we can be visually aware of Mary herself as opposed to her twin sister or her *Doppelgänger*, although the same visual appearance is involved in each of these cases. As a consequence, our visual awareness can go, and normally goes, beyond what is visually apparent to us.⁴

Of course there are various ways of reacting to the hypothesis that visual experience is dual. One might adopt that hypothesis for a restricted set of cases only, such as that involving the sense of volumetric presence, and reject it for the other cases just mentioned. One might

³ Many philosophers interested in the duality hypothesis have focused on the case of volumetric things. A notable exception is Sellars (1978), who explicitly envisaged generalizations of that case within the perceptual domain. See also Lyons (2009, 104) who discusses similar cases, which he interprets as a contrast between perceptual belief and visual experience.

⁴ Recent accounts belonging to the so-called “rich” view of perceptual content, according to which we can perceive sophisticated properties such as being a tiger, being a car, or being Mary, often neglect the duality of visual experience, and especially the dimension corresponding to visual appearances. Siegel (2010) is a case in point, although her account can be re-interpreted as concerning the content of visual awareness.

also balk at the very hypothesis. Two different options are then available. On the one hand, one might claim that the content of visual experience is exhausted by what is visually apparent. On this view, one is not visually aware of the cat, but only of something that is shared among cats and fake cats. On the other hand, one might contend that the notion of visual appearance is largely irrelevant to a theory of perception and perceptual belief. On this view, visual experience is exhausted by visual awareness, and the notion of visual appearance should emerge only in special circumstances, such as the case of the scenographer mentioned above.

In what follows, I propose to take seriously the duality of visual phenomenology and attempt to give a theoretical account of it. I take it that the more general such an account will be, in the sense that the more intuitive cases it can deal with, the more convincing it will be in comparison with reductive accounts, which reject the duality hypothesis altogether. In other words, the generality of the duality hypothesis should be an important criterion in order to assess its plausibility.

3. Visual appearances

What are visual appearances? The claim advanced in this section is that they have a special relationship to visually *detectable* properties. Our visual system is innately equipped to detect low-level properties such as colour, shape, size, texture and orientation (Zeki 1978, Kanwisher 2010). Whether a property is visually detectable or not is an empirical question, and depends on the architecture of our visual system. Socially relevant properties such as being a face, or looking to the self, correspond to dedicated cortical regions in the visual pathway (Farah 2000, Allison et al. 2000), and may be considered as visually detectable properties. Similarly, on the assumption that so-called “mirror neurons” provide inputs to the visual system (see Currie 2011), the property of being an action is a visually detectable property too. Visually detectable properties are low-level in the functional sense, by being processed early in the visual brain, but they need not be low-level in the ontological sense. Being an action, for instance, is an ontologically quite sophisticated property, at least compared to being red or round.

A visually detectable property constitutes a minimal visual appearance, so some visual appearances are visually detectable. However, not all visual appearances are visually detectable. Visually appearances can be complex *Gestalten* which the visual system is not equip to detect,

at least innately. Still, a plausible suggestion is that visual appearances *supervene* on visually detectable facts, i.e., facts involving visually detectable properties. In other words, an object cannot change its visual appearance, or ceases to have a visual appearance, without changing its colour, shape, texture, or some other (functionally) low-level visual property.

The supervenience of visual appearances on visually detectable facts provides a minimal constraint on what properties can be visual appearances. Consider for instance the property of being a cat. The fact that an object is a cat does not supervene on visually detectable facts. A cat can cease to be a cat without changing its low-level visual properties, for instance if it dies instantly, or is replaced by a perfect mechanical replica. Thus, the property of being a cat cannot be a visual appearance. In contrast, consider the property of looking like a cat, or having a cat-like look (perhaps from a given perspective). The fact that an object has a cat-like look does supervene on visually detectable facts. Something cannot cease to look like a cat without changing some of its low-level visual properties. A cat can look like a cat and then come to look like a cat robot, say if its behaviour suddenly turns mechanical. Thus, the property of looking like a robot can be a visual appearance, as well as the property of looking like a cat robot.

Of course, the fact that something looks like an F does not entail that it *is* an F. The property of looking like an F is also the property of looking like a fake F, and a fake F cannot be an F. Thus, the very same visual appearance can be correctly described as the appearance of a cat, but also as the appearance of a stuffed cat, or even a convincing cat robot with a smooth, non-mechanical behaviour.⁵

In the terminology used here, having the visual appearance of an F and having the look of an F (or looking like an F) are one and the same property, whether or not it is relative to a point of view. However, something can have the visual appearance of an F, i.e., look like an F, without looking like an F *to* the subject. A given visual appearance may or may not enter the subject's visual experience. When it does, it shapes the phenomenal character of the experience. There is something it is like to experience the look of an F, which is different from what it is like to experience the look of a G, at least if the phrases "the look of an F" and "the look of a G" pick out different appearances properties. For instance, what it is like to experience the look of a cat is not the same as what it is like to experience the look of a lamp, since the visual appearance of a cat is quite different from the visual appearance of a lamp. Moreover, the

⁵ Even a picture of a cat can have a cat-like appearance from the right point of view; see Dokic (2012).

supervenience principle formulated above has an analogue at the level of experience: we cannot experience an object changing its visual appearance without experiencing the object changing some of its low-level visual properties.

As noted in the previous section, the subject can experience a visual appearance without being visually aware of it as such. When we see a cat, we are normally aware of the cat, and rarely of its cat-like appearance. The cat's specific appearance still shapes the phenomenal character of our visual experience, but it need not figure in the content of visual awareness. Moreover, we can experience a cat-like appearance without being visually aware of a cat. In special circumstances at least, we might be visually aware of the cat's appearance as a complex property shared by both cats and fake cats. Similarly, we might be visually aware of Mary's visual appearance as a property that her twin sister instantiates too. Perhaps we can even be visually aware of a fake cat as such. Suppose that we are visiting Cinecittà, where we know and expect that many things are not as they look. We might be visually aware of a fake cat as such, i.e., as something that looks exactly like a cat but is not a cat. Similarly, when we know that we are looking at Mary's twin sister, we might be visually aware of a person as someone who is not Mary but looks just like her.⁶

A given thing can look like an F and look like a G at the same time, where F and G are incompatible predicates. A platypus has the visual appearance of a duck (from a certain point of view) but it also has the visual appearance of a beaver (perhaps from another point of view). Something can even look like an F and look like a G from the *same* point of view. Consider a 3D version of the duck-rabbit figure, or one of the ambiguous sculptures designed by the Swiss artist Markus Rätz. This object can look like a duck and look like a rabbit from the same, fixed perspective. It does not follow that the property of looking like a duck and the property of looking like a rabbit are the same property, or even that they are co-extensive. The very same duck-like look can be a rabbit-like look, but not all duck-like looks are rabbit-like looks. Some things look like a duck but not like a rabbit, and the other way around.

Consider the duck-rabbit sculpture again. It both looks like a duck and looks like a rabbit, but it does not follow that we will experience both visual appearances at once. Typically, we will have a bistable experience, alternating from one visual appearance to the other. It might be thought that such an experience violates the supervenience principle formulated above. We

⁶ See Dokic (2010). Indeed, this seems to be the visual experience of Capgras patients, who are under the delusion that one of their relatives has been replaced by an identical-looking impostor, or a robot (see, e.g., Coltheart & Davies 2000, Coltheart 2007).

can experience a rabbit-like look followed by a duck-like look without experiencing any low-level visual change. However, this is not a genuine counter-example to the supervenience principle. As Wittgenstein put it with respect to the original duck-rabbit figure, “I see that nothing has changed” (Wittgenstein 1953, xi). In other words, we do not experience the object itself changing its appearance. The duck-rabbit sculpture does not cease to have the visual appearance of a rabbit when we switch from the rabbit aspect to the duck aspect. It has both visual appearances at once independently of our changing experiences.

The present account of visual appearances might seem to raise a puzzle at this point. Many philosophers, including Wittgenstein, have observed that the duck-like and the rabbit-like experiences *exclude* each other. We cannot see something both as a rabbit and as a duck at the same time. Note that the sense of exclusion at stake here is not due to the fact that the relevant properties, namely being a rabbit and being a duck, are ontologically incompatible, in the sense that nothing can be both a rabbit and a duck. We cannot see the famous Mach figure both as a square and as a diamond at the same time, although being a square and being a diamond are not ontologically incompatible: indeed, the Mach figure is both a square and a diamond. The puzzle concerns the nature of the experiential exclusion, if there is indeed one, between looking like a rabbit and looking like a duck to the same subject at a given time.

Note that the relevant experiential incompatibility concerns at best what we might call *perfect* appearances, in contrast to *imperfect* appearances. Something can look *a bit* like a duck but also *a bit* like a rabbit to the same subject at once. The puzzle seems to arise with respect to cases in which the same thing looks *exactly* like a rabbit and *exactly* like a duck. Part of the explanation of the apparent exclusion here is probably due to incompatible *attentional* demands. Suppose that experiencing a perfect rabbit appearance requires visual attention to relevant parts of the perceived object. Then perhaps such visual attention is incompatible with experiencing a perfect duck appearance, to the extent that the latter would require visual attention to different parts of the perceived object. Similarly, experiencing the diamond-like look of a Mach figure requires attending to the angles of the figure, while experiencing its square-like look requires attending to its sides (Peacocke 1992), but it is cognitively too demanding to attend to both aspects at once.

Of course, the foregoing account of visual appearances remains sketchy, and more has to be said about the ontological nature of visual appearances. What this account assumes is that the instantiation of a visual appearance does not depend on the co-instantiation of a visual

experience, since something can have a visual appearance of an F without looking like an F *to* anyone. This is true even if at least some visual appearances are relative to a point of view.⁷ This assumption is still compatible with the hypothesis that visual appearances are response-dependent properties. For instance, they might constitutively depend on features of *possible* visual experiences. It is also compatible with the alternative hypothesis, which I myself favour, that visual appearances are *worldly* properties, i.e., properties which can be fully characterized without any essential reference to features of (possible or actual) visual experiences (Millar 2000, see also Martin 2010, Matthen 2010b). Which hypothesis is the correct one can be left open in this essay.

Two other important issues will also be put to one side here. The first concerns the psychological capacities that are needed for visual appearances to enter our experience. To begin with, it does not seem that the perceptual capacity to discriminate looks hinges on the possession of relevant *concepts* on the subject's part. The experience of a given visual appearance requires a capacity to discriminate it from other visual appearances, but as Alan Millar puts it, "a capacity to discriminate Fs is not necessarily a capacity to bring Fs under the concept of an F" (2000, p. 85). As a consequence, "someone might have the capacity for visual perceptual knowledge that an apple is there, without having the conceptual resources for forming beliefs pertaining to the look of apples" (2000, p. 85). In our terminology, a child can be visually aware of an apple without having the concept of an apple-like look or appearance.

There remains the question of *how* the phenomenal character of our visual experience is shaped by visual appearances. One view is that the phenomenal character consists of non-representational perceptual relations to mind-independent appearances. On this view, so-called "Naïve Realism" (see, e.g., Martin 2002, Nudds 2009) has a limited application to the perception of visual appearances construed as worldly properties, even if it is fair to say that most proponents of Naïve Realism have not acknowledged the dual nature of perceptual experience. An alternative view is that the phenomenal character results from explicit perceptual representations of visual appearances. The first view (which I myself favour) is arguably more congenial to the claim that we need not be visually aware of the way the perceived object visually appears to us. As we shall see below, visual awareness is essentially

⁷ See, e.g., what Noë (2004) calls "perspectival properties", which are both objective and relative to a point of view. For instance, a tilted coin might look elliptical from a given point of view which can be characterized in a purely geometric way. Note that visual appearances as discussed in this essay might not be perspectival properties in Noë's sense. In the phenomenal sense of "look" at stake here, a titled coin can still look circular (and tilted) from the relevant point of view.

representational, and the second view should involve some explanation of how an explicit visual representation of an appearance can fall short of visual awareness.

The second issue that I mention only in passing concerns the phenomenology of particularity (Soteriou 2000, Schellenberg 2010). This essay concerns primarily repeatable appearances, i.e., complex properties that can have multiple instantiations. However, one might wonder whether particular and not merely repeatable appearances can enter our perceptual experience. For our purposes here, what is visually apparent to us might always, or at least typically, be *particular* instantiations of repeatable visual appearances. For instance, when we see Mary, Mary herself as a particular person might contribute to shaping the phenomenal character of our experience. Since we are not normally aware of visual appearances, this might be true even if we are not visually aware of Mary herself just by experiencing her particular appearance.

4. Visual awareness

Let us recapitulate. The phenomenological contrast that can be drawn within our visual experience is partly explained by reference to visual appearances. The relevant contrast is between, on the one hand, what the subject is visually aware of and, on the other hand, what is visually apparent to her. Typically what we are visually aware of goes beyond what is visually apparent. For instance, when I see my cat at home, what is visually apparent is a cat-like appearance that is shared by many real cats but also by fake cats. As we have seen, it does not follow that I am visually aware of a mere appearance of a cat. On the contrary, I am visually aware of a cat. In the Cinecittà case, I might be visually aware of a fake cat, but even in that case, the content of my visual awareness goes beyond what is visually apparent to me, namely a cat-like appearance. My visual awareness of a fake cat, if it is veridical, *excludes* the presence of a real cat. In contrast, the fact that the fake cat looks like a cat does *not* exclude the presence of a real cat.

What about the other term of the contrast? How should we characterize the nature of visual awareness? A simple view is that visual awareness is a *sui generis*, primitive capacity, i.e., a perceptual competence that cannot be reduced to or explained by a set of other psychological competences. This view seems to have been Merleau-Ponty's. Merleau-Ponty

(1964, p. 14) introduced the example of a lamp, which we feel as present as a whole even though a significant part of the lamp is hidden from view. He then commented that the back of the lamp is “present in its own way”, explicitly excluding the hypothesis that other mental states or activities essentially contribute to our visual awareness of the lamp as a whole.

Of course the simple view of visual awareness should be preferred only if there are no theoretically more economical alternatives. Indeed, many philosophers have attempted to explain visual awareness in terms of the operations of other psychological competences. Among these competences figure most saliently imagination, sensorimotor abilities, and judgments. The idea is that the content of visual awareness is fixed at least partly by the contents of imaginings, sensorimotor knowledge, or judgments. Let me briefly survey these alternatives and identify the main problems that they meet. These problems are perhaps not insuperable, but I think that they are serious enough to motivate an alternative approach.

4.1. Imagination

One might suggest that visual imaginings contribute to determining the content of visual awareness. When we see a whole cat, we experience a cat-like visual appearance, which is common to real and fake cats, but we visually imagine hidden parts of the cat. Here is another example, offered by Wilfrid Sellars:

How can a volume of white apple flesh be present *as actuality* in the visual experience if it is not seen? The answer should be obvious. It is present by virtue of being *imagined*.
(Sellars 1978, §16)

Here Sellars clearly acknowledges the duality of visual experience and suggests that imagination is an essential aspect of the latter. Of course there are many variations on this suggestion. For instance, Nanay (2010) also claims that hidden surfaces of 3D objects are represented in imagination, although unlike Sellars he does not insist that the relevant imaginings are internal to our visual experiences.

Three general objections can be levelled against the claim that imagination is an integral part of perception. The first objection is that visual awareness is passive, while imagination is active. The passivity of visual awareness is linked to its ability to justify or warrant ordinary perceptual judgments. In contrast, imaginings are mental actions (Arcangeli 2011; Dorsch

2012). Of course some imaginings are spontaneous, and seem to dawn on us, but this only means that we have not intended or decided to form them, not that they are passive. As an analogy, consider actions such as tapping one's foot to the beat, which are active (tapping our foot is something we do) but not decided (we do it spontaneously). The essential activity of imaginings implies that they cannot ground knowledge, at least directly. If visual awareness is constituted, even partly, by visual imaginings, its epistemological role will be greatly diminished. It will be determined at best by mere visual appearances.

The second objection is that the phenomenology of visual awareness is not well served by the suggestion that it is constituted, even partly, by visual imagination. It seems that we can persist in being aware of a whole cat while imagining seeing a cat façade (*de dicto* imagining), or even while imagining *of* what we see that it is a cat façade (*de re* imagining). The content of visual awareness seems to be determined independently of what we concomitantly happen to imagine.

A third objection, inspired by Husserl (1907, §18), is that visual imaginings recreate whole visual experiences, including what we call here “visual awareness”. When we visually imagine the hidden surface of the cat, we imagine being visually aware of the whole cat from *some* point of view. As a consequence, visual imagination cannot be invoked to *explain* visual awareness, since it actually presupposes it.

Note that the first two objections are directed at the specific view that what explains visual awareness is imagination considered as separable part of visual experience. They do not refute the different view that visual perception can be cognitively penetrated by imagination (MacPherson 2012). On this view, the phenomenal character of visual experience can be modified or enriched by imagination, but it does not follow that it is *constituted* in any way by the phenomenal character of self-standing imaginings. However, if the third, Husserlian objection is correct, even this view presupposes an independent account of visual awareness, which is still missing.

4.2. Sensorimotor abilities

Another suggestion is that visual awareness is constituted, at least partly, by sensorimotor abilities. For instance, one might claim that the sense of seeing a volumetric object as opposed

to a mere façade results from the unconscious operations of the visuomotor system, which grounds our ability to reach for and grasp or manipulate objects in our immediate environment (see Matthen 2005, 2010a). When I see my cat, I may not actually reach for it and stroke it, but my visuomotor system prepares or poises my body for action relative to the cat as a whole. On the present suggestion, this bodily preparation somehow surfaces at the level of perceptual phenomenology, and makes me visually aware of a whole cat (extended in all three dimensions of egocentric space) as opposed to a mere cat façade.

A different suggestion, which also emphasizes the role of sensorimotor abilities in visual awareness, is due to Alva Noë (see also O'Regan & Noë, 2001):

In what does your visual sense of the cubicalness of a cube consist? It consists in your implicit expectation that its appearance would change in the characteristically cubical way as you move in relation to it. To experience something as a cube, [...] is to experience it as exhibiting a characteristic *sensorimotor profile*. (Noë 2005, p. 23)

Of course, much depends on what is meant by “implicit expectation” here. What do we expect when we see our familiar cat at home? We certainly expect that it will still look like a cat if we change our visual perspective on it. In contrast, we expect that the fake cat in Cinecittà will manifest a non-cat appearance from a suitable, “backstage” point of view. These expectations are said to be implicit presumably in the sense that they are not constituted by occurrent beliefs or judgments about what we see.

Still, one might claim that even though the relevant expectations are implicit, they *are* beliefs, or at least inclinations to believe. They are grounded on practical abilities, such as the ability to visually track the same object while moving around it, but they are not *themselves* pieces of practical knowledge. So on the face of it, Noë's suggestion falls under a different umbrella, which will be discussed below (§4.3).

One worry with both suggestions is that seem to lack the generality required to deal with the nature of visual awareness. Our spontaneous inclination to grasp a volumetric object, or to uncover hidden aspects of the latter by changing our perspective on it, cannot explain all relevant cases of visual awareness. For instance, I am visually aware of my cat not only as a volumetric object (as opposed to a mere façade), but also as a real, living cat (as opposed to a cat robot, or an alien disguised as a cat). The visuomotor system is helpless in this respect, and no amount of sensorimotor knowledge having to do with other sensory perspectives seems to

fit the bill. What actually makes the difference between real cats and cat-like entities is DNA, and this is something that is necessarily or at least deeply hidden from view. No change of visual perspective on the cat will reveal its feline DNA.⁸

4.3. Beliefs

A quite different suggestion is that visual awareness is in fact a judgment. We judge that a real cat is present on the basis of experiencing a cat-like visual appearance. This suggestion is often criticized on the grounds that we can be visually aware of an F without actually judging that an F is present, perhaps because we independently have better reasons to judge that no F is present and that our visual experience is illusory or hallucinatory. In other words, visual awareness is belief-independent (Evans 1982, Fodor 1990).

I am sympathetic with this criticism, but it does not address a more promising variation on the previous suggestion, according to which visual awareness is not a judgment but involves what I shall call a “doxastic inclination”, namely an inclination or propension to judge (or believe). When a cat-like appearance is visually apparent to me, I may be inclined to judge that a real cat is present. We can have an inclination to judge that an F is present without actually forming the judgment that an F is present, so the previous criticism does not hold.

Of course, visual awareness cannot be a *mere* doxastic inclination, which might have nothing to do with visual experience. Non-perceptual intuitions have also been analysed as inclinations to believe (see, e.g., Earlenbaugh & Molyneux 2009), and the phenomenologically salient distinction between visual awareness and mere ungrounded intuitions must be dealt with. What must be clarified is the essential role of experienced visual appearances in the generation of visual awareness. This is what I shall attempt to do in the next section.

⁸ The worry expressed in this paragraph also applies to Husserl’s notion of a visual “horizon” if it is restricted to what is “visible from elsewhere” (see Merleau-Ponty 1964). The essence of the cat is not visible from anywhere. Of course, one might try to extend the notion of sensorimotor abilities to encompass actions, presumably of a scientific kind, which would reveal the cat’s DNA. Noë (2012) in fact suggests such an extension. He does not talk about this particular example, but he tries to explain his feeling that his friend is present while being in another city in terms of his knowledge of how to get there and meet his friend. The problem with extending the notion of sensorimotor knowledge is that we lose the idea of a distinctly *visual* (or more generally *perceptual*) way of being aware of the world. Noë’s friend is not perceptually present to him, and neither am I perceptually aware of my cat’s DNA (even if I knew how to discover it).

5. Cognitive habits: a doxastic account of visual awareness

Let us call a given sense of “look” “experiential” if it involves an essential reference to the subject’s visual experience (Lyons 2009, p. 103). Now the hypothesis that perceptual phenomenology is dual motivates a distinction between two experiential senses of “look”. On the first, *appearance* sense, an object x looks F to S iff F is a visual appearance and its instantiation by x is experienced by S . For instance, my cat looks a certain way to me (in the appearance sense), which supervenes on visually detectable facts, and is common to different cases of visual awareness (cases in which I am visually aware of a cat, but also cases in which I am visually aware of a fake cat). The second, *doxastic* sense, builds on the appearance sense but involves in addition an essential reference to a doxastic state such as belief. On this sense, an object x looks F to S iff the way x looks to S in the appearance sense causally inclines S to believe that x is F (in the relevant context). For instance, while at home my cat looks (in the doxastic sense) like a cat to me. In this context, I am indeed inclined to believe that a cat is present on the causal basis of how it looks (in the appearance sense).⁹

One might object that once visual awareness is defined in terms of doxastic inclinations, the appearance sense of “look” becomes irrelevant, and a non-experiential sense of “look” is all that we need. Lyons (2009) defines what he calls a “perceptual output sense” of “look”, according to which “ x looks F to S iff one of S ’s visual systems is outputting an identification of x as F ” (p. 103). In his view, basic perceptual beliefs are the outputs of perceptual systems and are not grounded on experiential states such as conscious visual experiences. As a consequence, visual experiences are both psychologically and epistemically irrelevant to the formation and epistemic status of perceptual beliefs.

Lyons’s view is challenging, but I think that it raises two problems. First, it is not clear how the mere fact that perceptual beliefs are the outputs of perceptual systems can have a phenomenological resonance. As a consequence, it is hard to understand how what it is like to have a perceptual belief can be very different from what it is like to have a non-perceptual ungrounded intuition.

⁹ The distinction between two senses of “look” as defined here is reminiscent of Dretske’s distinction between simple and epistemic perception (Dretske 1969). Dretske makes clear that there are non-epistemic phenomenological constraints on what can be simply seen (such as the fact that the object must be “visually differentiated” from the background), and he explicitly defines epistemic perception as involving a doxastic attitude (belief, in his view).

Second, this view underestimates the context-sensitivity of visual awareness. What we are visually aware of depends on what we know about the context, and part of this knowledge is typically external to perceptual systems as they are defined by cognitive science. For instance, my knowledge that I am in Cinecittà may play a role in making me aware that a fake cat is present. Context-sensitive cognitive habits enable me to bridge the gap between what is visually apparent in my experience and what is really there in front of me. Perceptual systems as defined by cognitive science are much less flexible. At best one should conceive of their outputs as representations of visual appearances rather than what the subject is visually aware of, which is typically richer.

Consider the case in which we visually recognize Mary. It is not really plausible to suppose that the immediate output of our modular face-recognition system is the perceptual belief “It’s Mary”, or even the inclination to form such a belief. The formation of such a perceptual belief is sensitive to wider aspects of the context. Lyons argues that the face recognition system outputs a “minimal representation” of the individual, which he suggests might be “links to information about the person but contains no such information in itself” (2009, p. 105). However, this entails at best that the face recognition system produces a representation of the form “This person looks just like Mary”, or “This person has Mary’s face”, but not “This person *is* Mary”. Even if the former representations are produced in a relatively automatic way, the latter representation, which constitutes visual awareness, depends on acquired cognitive habits.¹⁰

In many cases, the relevant cognitive habits involve implicit heuristics governed by a simple rule of the form “If things are normal, what looks (in the appearance sense) just like an F is an F”. For instance, if things are normal, a person who looks just like Mary is Mary. Of course, if I had known for a long time that Mary has a twin sister who looks exactly like her, I

¹⁰ One might claim that the activation of the face recognition system is not mandatory and already shows some amount of context-sensitivity. Sperber (2005) gives the following example: “If I see just in front of me, in broad daylight, the face of my Paris dentist, Monsieur Durand, I cannot help but recognize him. My face recognition module (or my Monsieur-Durand-detection submodule) does its job. But suppose I am lecturing in London. Some 30 faces in front of me are each clearly visible. I look cursorily at all of them and I recognize some colleagues. Even though I have looked at his face as much as at those of the people I immediately recognized, it is only toward the end of the lecture that I suddenly recognize, sitting there in the second row, Monsieur Durand, whom I would never have expected to see in such a place.” This might be true, but the formation of the perceptual belief “It’s Monsieur Durand” might be sensitive to much more than just spatiotemporal considerations.

would have different cognitive habits, which would not allow me to be visually aware of Mary merely on the basis of her visual appearance.¹¹

Cognitive heuristics produce doxastic inclinations that can persist, at least for a while, even if the subject suspends her judgment, or forms a contrary one. For instance, if I am told by a reliable informant that I am facing a Japanese cat robot, I will refrain from judging that what I see is a cat. I may still have some inclination or temptation to believe that a cat is present. In other words, doxastic inclinations show some synchronic modularity effects, and can co-exist with the actual formation of contrary judgments.

Cognitive heuristics are often the products of learnt associations, and at least some of them might be cognitively penetrable, at least diachronically.¹² For instance, if I know that I am in an environment in which real cars have been systematically replaced by functionally idle car imitations, my inclinations to move from seeing a car-like appearance to judging that a real car is present might progressively disappear, as the relevant heuristics ceases to be effective.

Since cognitive heuristics are based on unconscious information-processing (they belong to so-called “System 1”, in the terminology introduced by Stanovich 1999), the phenomenology of doxastic inclinations is quite unlike the phenomenology of reasoning or deliberating. The subject does not have access to the reasons why he judges that a real cat is present as opposed to a fake cat. Still, what it is like to be inclined to form a perceptual belief is quite different from what it is like to have a mere ungrounded intuition. Our perceptual beliefs appear as intuitive rational responses to what is visually apparent to us. We do not have to go through an explicit representation of visual appearances as such, but we can move directly from what we see to what we judge what we see to be. Ordinary perceptual beliefs just *feel* like the right thing to believe about the sensible world. In general, doxastic inclinations, whether or not they actually lead to the formation of a perceptual belief, are not phenomenologically silent. They have a non-sensory, affective-like phenomenology, in the sense that we feel *motivated* to form specific judgments about what we perceive.¹³ Thus, in conformity with the duality

¹¹ For a more detailed account of the psychology of cognitive heuristics, see, e.g., Gilovich et al. (2002), Gigerenzer (2007), Kahneman (2011).

¹² See Fodor (1990, pp. 247-8) for the distinction between synchronic and diachronic modularity or cognitive impenetrability.

¹³ When this motivation is absent, as in the derealization syndrome, subjects do not form flat-out perceptual beliefs but report that their visual experience is like watching a movie, a representation of reality but not reality itself. For further discussion, see Dokic & Martin (forthcoming).

hypothesis, they can contribute to the phenomenal character of our visual experiences, in addition to what is visually apparent to us.

At this point, one might worry that the present account has not given justice to the duality of *perceptual* experience. What is genuinely perceptual is only the ground level of what is visually apparent to the subject. The upper level is called “visual awareness”, but it is really doxastic and not genuinely perceptual. Moreover, some philosophers and psychologists might complain that the context-sensitivity of visual awareness is incompatible with the modularity of perception.

This worry has a point, but perhaps the issue is only terminological. On the doxastic account, doxastic inclinations causally based on visual appearances are what drive ordinary self-ascriptions of perceptual experiences (“I see a cat over here”, “I see Mary approaching”, etc.). In this respect they clearly have a special relationship to perception as we commonly conceive it. Whether or not they are perceptual “strictly speaking” is perhaps not crucial once we acknowledge the role they play in the formation of perceptual beliefs on the basis of perceptual appearances.

Of course a substantial epistemological theory of visual awareness, and more generally cognitive habits or heuristics, remains to be given. Arguably, it will involve some externalist reliabilist component, just as in Lyon’s non-experiential doxastic account. Many cognitive habits are indeed reliable, and produce mostly true judgments in ecological contexts. However, it is important to be clear about the nature of the visual awareness, and its role in the duality hypothesis, before a convincing epistemological picture can be offered.

6. Conclusion

This essay started with a phenomenological datum about perceptual (especially visual) experience. In the terminology of this essay, the datum is that visual experience involves two distinct levels corresponding to visual awareness and visual appearances. That these levels are distinct is shown by the fact that the content of visual awareness typically goes beyond visual appearances properly speaking. What is visually present need not be phenomenally present. Beyond the phenomenological description, a correct analysis should be given of the scope and nature of both terms of the duality, and of the relationship between them.

On the one hand, visual appearances supervene on visually detectable facts, where what counts as a visually detectable fact is an empirical issue about the architecture of our perceptual systems. On the other hand, visual awareness is the upshot of an intuitive or heuristic-based method, which produces felt inclinations to believe on the causal basis of visual appearances. In contrast to so-called “early vision”, which is probably encapsulated from background knowledge, visual awareness is a fairly context-sensitive competence.

The doxastic account of visual awareness differs from other attempts to explain the contrast between visual awareness and visual appearances. The main alternatives discussed above consider that visual awareness results from imagination or from sensorimotor abilities. I have tried to show that neither attempt is entirely satisfactory. In a nutshell, the first attempt reverses the order of explanation (visual imagination should be explained in terms of visual perception rather than the other way around), while the second attempt lacks the generality needed to deal with the duality hypothesis (natural kind properties, for instance, are beyond the scope of sensorimotor abilities).

The next step is to give a convincing theory of the epistemological role of perceptual experience on the assumption that the duality hypothesis is correct. Part of such a theory should deal with the more general issue of the epistemological status of intuitive beliefs resulting from heuristic procedures. On the doxastic account defended here, perceptual beliefs are intuitive responses to perceived appearances. Even if the relevant heuristic procedures probably involve some implicit representations of perceptual appearances, as well as other representations pertaining to the wider context of perception, we do not have the impression that our perceptual beliefs are based on independent reasons. They still strike us as *prima facie* correct, though, just as many intuitive beliefs outside the perceptual domain. Exactly how feelings of correctness play a role in the justification of perceptual and more generally intuitive beliefs is a matter for further investigation.

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