

Blur

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Abstract This paper presents an ‘over-representational’ account of blurred visual experiences. The basic idea is that blurred experiences provide too much, inconsistent, information about objects’ spatial boundaries, by representing them as simultaneously located at multiple locations. This account attempts to avoid problems with alternative accounts of blurred experience, according to which blur is a property of a visual field, a way of perceiving, a form of mis-representation, and a form of under-representation.

Keywords Blurred vision · Perception · Transparency · Intentionalism · Representationalism

1 Blur and the transparency of experience

When a short-sighted person removes their glasses, things appear blurry. The experience is similar to looking with normal vision at an object close to your face whilst focussing on a point in the distance. What do these kinds of experience tell us about the nature of perception?

Recently, a number of writers have argued that blurred visual experiences present a serious problem for the claim that visual experience is transparent, and hence for theories of perception that entail the transparency thesis.¹ To say that experience is transparent is to make two claims, one positive and one negative. The *positive claim*

¹ See, for instance, Boghossian and Velleman (1989, pp. 92–93); Robinson (1994, p. 31); Bach (1997, p. 467); Crane (2006, pp. 130–131); (2007, p. 483); Pace (2007); Smith (2008). Boghossian and Velleman are the starting point for recent discussions of blurred vision, but the example was earlier used by Price (1932, p. 28) and Anscombe (1965, p. 169), amongst others.

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is that we when reflect on our experiences we are aware of public mind-independent objects, their properties, and relations. The *negative claim* is that when we reflect on our experiences we are not aware of anything other than public mind-independent objects, their properties, and relations; in particular, we are not aware of properties of the experience itself.²

Blurred experiences do not present an immediate problem for the *positive* transparency thesis. When we reflect on blurred experiences, we still appear to be aware of mind-independent public objects, their properties, and relations. For instance, if I remove my glasses and look at a cat in the alleyway, so long as the cat is not too far away from me and the conditions are otherwise normal, my experience will still be of the cat. After all, my experience is suitably sensitive to the cat's presence, and will differ if the cat moves or is joined in the alley by another cat. However, blurred experiences present a problem for the *negative* transparency thesis, because reflection on blurred experiences appears to suggest that blur is a property of experiences that we can be introspectively aware of. As Tim Crane puts it:

blurriness does seem to be a property of some kind, which does seem to be instantiated somewhere. Unlike when things are seen *as* blurry, it doesn't seem to be instantiated by the objects of experience. So what is wrong with saying that it is instantiated (in some way) in the experience itself? (2006, p. 131)

In challenging the claim that visual experience is transparent, blurred vision presents a problem for two popular types of theory about the nature of perception that derive their support from the transparency thesis. The first is 'pure' intentionalism (or representationalism), according to which the phenomenal character of a perceptual experience—'what it is like' to have an experience of that kind—is wholly determined by its intentional (or representational) content: by how it represents objects in the subject's environment as being.³ The second type of theory that blur presents a problem for is naïve realism, according to which perceptual experiences do not *represent* objects, their properties, and relations, but are instead *constituted* by these objects, their properties, and relations.⁴

This article proposes an 'over-representational' account of blurred visual experiences that is consistent with a pure intentionalist theory of perception. The basic idea, developed in more detail in Sect. 6, is that blurred experiences provide too much, inconsistent, information about objects' spatial boundaries, by representing them as being simultaneously located at multiple locations. This over-representational theory is motivated by considering problems that arise for alternative accounts of blurred vision. Sections 2 and 3 consider some different ways of understanding the proposal that blurriness is a property instantiated by experiences, and—in response to Crane's question in the passage above—I make some suggestions about what might be wrong with these views. Sections 4 and 5 then consider two attempts to account for blurred experiences that are consistent

² For further discussion, see Harman (1990), Tye (2000), Martin (2002), Crane (2007), Smith (2008).

³ See, for instance, Harman (1990), Dretske (1995), Tye (2000), and Byrne (2001).

⁴ See, for instance, Campbell (2002), Martin (2002), and Fish (2009).

with the positive transparency thesis: the first appeals to mis-representation, the second appeals to under-representation. The account of blur as a species of over-representation attempts to capitalise on the advantages of these representationalist accounts, whilst avoiding their problems.

2 Blur as a property of the visual field

Boghossian and Velleman use blurred vision—along with double vision and seeing after-images without illusion—to argue (following Peacocke 1983) for the existence of a subjective visual field with intrinsic properties:

by unfocussing your eyes, you can see objects blurrily without being able to seem them as being blurry. None of these experiences can be adequately described solely in terms of their intentional content. Their description requires reference to areas of colour in a visual field, areas that...become blurry without anything's being represented to you as doing so (1989, pp. 92–93).

There are at least two ways of thinking of a subjective visual field. One way of thinking of the visual field is like a private photograph or television screen, whose intrinsic properties represent mind-independent objects and their properties.⁵ An alternative way of thinking of the visual field is suggested by (a misreading of) St. Paul's famous remark that 'we see through a glass, darkly' (1 *Corinthians* 13). (This is a misreading because by 'glass' St. Paul means 'looking glass', or mirror.) We are familiar with the way that transparent or translucent objects placed in front of the eye can affect the character of experience. For instance, transparent coloured objects, like glasses with coloured lenses, affect the way that the colours of things in the environment appear. Translucent objects, like glass bottles or pebbled glass windows, distort the appearance of shapes. Conversely, correcting lenses can make things appear clear and distinct to people who are short- or far-sighted. By analogy, we might think of the visual field as being like a pair of private spectacles that affect, for better or worse, the character of perceptual experience.

Although appealing to a visual field to account for the phenomenal character of blurred experiences can seem attractive, the commitment to a subjective visual field with intrinsic properties is problematic. According to either model of the visual field, the visual field is a private, possibly mental, entity. This raises Wittgensteinian worries about privacy, and is questionable on naturalistic grounds if the visual field is taken to be mental. More importantly in the present context, neither model of the visual field is entirely consonant with the phenomenon of blur used to motivate it. On the one hand, the private television model goes beyond what reflection on

⁵ This appears to be how Boghossian and Velleman (1989) and Pace (2007, p. 343) think of it. Pace differs from Boghossian and Velleman in combining an appeal to a subjective visual field with an intentionalist theory of perception, arguing that intrinsic properties of the visual are amongst the intentional contents of experience. I will not consider this view directly. But whatever its other merits, it shares with non-intentionalist theories what I will argue is a problematic commitment to a subjective visual field with intrinsic properties.

blurred experiences licences, and in so doing comes into tension with the positive transparency thesis. On the other hand, the private spectacles model respects the positive transparency thesis, but falls short of providing a fully intelligible explanation of blurred experiences.

Consider the private television model first. It would beg the question against the existence of a subjective visual field simply to appeal to the negative transparency thesis: whether we can be aware of properties that are not properties of public mind-independent objects is precisely what is at issue. But even if blurriness is a property of experience, it does not follow that it is a property that we are aware of by virtue of being aware of ‘areas of colour in a visual field that...become blurry’, as Boghossian and Velleman suggest. The appeal to subjective colour properties—Peacocke’s (1983) primed properties—represents an additional, and controversial, commitment. After all, reflection on blurred experiences does not seem to support the claim that the *colours* we are aware of are properties of the visual field. When we reflect on blurred experiences—just as when we reflect on experiences that are clear and distinct—the colours that we are aware of appear to be properties of public mind-independent objects, not properties of the visual field: whether I am wearing my glasses or not, the instance of jet black that I am aware of when I see a cat in the alleyway appears to be a property of the cat, not my experience.⁶ Moreover, the televisual model of the visual field faces well-known problems when it comes to explaining how (direct?) awareness of areas of colour in a private visual field is supposed to ground (indirect?) perceptual awareness of mind-independent objects. Although I will not attempt to argue that this explanatory obligation *cannot* be discharged here, the worry is that this model of the visual field may turn out to be inconsistent with the positive transparency thesis, the truth of which blurred experiences do not call into question.⁷

The private spectacles model of the visual field is more obviously consistent with the positive transparency thesis, as the private spectacles model does not treat the visual field as an opaque intermediary between subject and object. The converse problem with this view, however, is that this model of the visual field offers a less readily intelligible explanation of the phenomenal character of blurred experiences. Because this model forswears the existence of intrinsic shape and colour properties of the visual field, blurred experiences are unlike blurred photographs or paintings, which are blurred in virtue of the distribution of shapes and colours in the representational medium. But then what explains the phenomenal character of blurred experiences? The claim that the eyes are a ‘window’ onto the world is a metaphor, and we need to know how to interpret it. The house across the road might

⁶ As Smith notes, an indication that ‘the issue raised by blur is quite distinct from [the] general issue raised by qualia...is the fact that whereas we have no words for the peculiarly subjective sensory qualities postulated by the advocates of qualia, the everyday term ‘blurred’ does apply quite literally to experiences’ (2008, p. 202).

⁷ There might be independent reasons to reject the positive transparency thesis, such as the possibility of subjectively indistinguishable hallucination (e.g., Crane 2006). But this requires further argument, and besides, arguably favours intentionalism over views that appeal to a subjective visual field insofar as intentionalism offers a simple account of the apparent world-directedness of hallucinations in terms of their intentional content.

appear blurred because of Vaseline smeared on my window. But what is ‘mental Vaseline’ (to paraphrase Block), and exactly what is it smeared onto?

3 Blur as a way of perceiving

Appealing to properties of a visual field is one way of understanding the claim that blur is a property instantiated in experience itself. But consistent with the assumption that the phenomenal character of blurry experiences is not wholly determined by the objects of those experiences, it is possible to avoid the problems raised by subjective visual fields by thinking of blurry experiences instead in terms of ‘ways of perceiving’.

For instance, Crane (2006; 2007) develops this idea within the context of defending a version of ‘impure intentionalism’. According to impure intentionalism, the phenomenal character of an experience is determined by its entire intentional structure. This consists of two aspects. First, there is the *intentional content* of the experience, or how its intentional object (what the experience is *about*) is represented as being. Second, there is the *intentional mode*, or the attitude towards the content: modes are what differ across *believing* that it is raining, *hoping* that it is raining, and *seeing* that it is raining, and what are the same in *believing* that it is raining and *believing* that it is summer. Extending the basic idea of impure intentionalism to account for blurred experiences, Crane argues that we can think of blur as a property of experiences that is itself ‘something like the intentional *mode*’ (2006, p. 143, n. 12). On this view, just as there are different attitudes that one can take towards a proposition—believing, hoping, entertaining, etc.,—so there are different modes of perceiving—seeing, hearing, touching, tasting, smelling, sensing, etc.. The mode of perception partly determines the phenomenal character of an experience, and thereby at least partially explains phenomenological differences between different ways of perceiving the same object (for instance, by sight and touch). In addition to different *ways* of perceiving, there are also different *ways of ways* of perceiving, and these ways of ways of perceiving in turn also partly determine the phenomenal character of the experience. So, seeing clearly and distinctly is one way of seeing, and seeing blurrily is another, phenomenally distinct, way of seeing. (Presumably there will also be different ways of perceiving associated with the different perceptual modes.) Given that visual experiences can be blurry to a greater or lesser extent—depending on the subject’s level of short-sightedness or the object’s distance from the eye—the impure intentionalist will naturally want to allow that ways of ways of perceiving can come in degrees. By analogy with the degree theory of belief, we can therefore say that for the impure intentionalist there are *degrees of perceiving*.

A variation on this approach is consistent with naïve realist theories of perception. To say that public mind-independent objects, their properties, and relations are constituents of perceptual experiences is not yet to say that these objects, properties, and relations *completely* determine the phenomenal character of experience. According to Martin (2002), for instance, the way objects are presented in perception and sensory imagination makes a phenomenal difference to these

mental events. By extension, a naïve realist might claim (although Martin himself does not) that blurred experiences present objects in a different way to clear and distinct experiences.

Either way, for this strategy to be successful, it is not sufficient to show that we are able to reliably identify blurred experiences. The challenge for either ‘impure’ view is to justify the claim that introducing distinct ‘ways of perceiving’ provides the best account of blurred experiences; better, that is, than explaining the phenomenal difference in terms of differences in the object of awareness or properties of the visual field. In the case of impure intentionalism (although similar points apply to ‘impure’ naïve realism), to show that the property we are tracking is the intentional mode (or something like it), it needs to be shown that our ability to identify this way of perceiving does not depend on our ability to distinguish these experiences from clear and distinct experiences in virtue of differences in either their intentional content or their non-intentional properties. However, it might seem that some further explanation of the phenomenal differences between these experiences is required, and that the materials necessary to furnish such an explanation are available.⁸

The problem is a variation on an objection to the impure intentionalist’s appeal to brutally different ways of perceiving to explain phenomenological differences between sensory modalities. On the one hand, positing brute differences between the senses to explain phenomenological differences can seem ad hoc: as Bain protests in the course of defending a version of pure intentionalism, it seems to ‘give up without fight’ (Bain 2003, p. 517; but for a reply, see Crane 2007, p. 481). On the other hand, materials that are sufficient to explain the phenomenological differences between the senses might appear to be available; appealing to intentional modes, or even distinct non-representational properties associated with the different modalities, therefore appears unnecessary. In the case of sight and touch, for example, it might seem that the beginnings of an explanation of the phenomenological differences can be traced to differences in the properties that the experiences represent: in the case of sight, colour, illumination, depth (perhaps amongst others); and in the case of touch, temperature.

Whether or not this explanation of differences between the senses is ultimately adequate, a structurally similar problem arises for the distinct claim that blur is (something like) an intentional mode, or a way of a way of perceiving. To say that seeing blurrily is a way of seeing seems to demand further explanation. First, we might hope for some explanation of why blurred experiences come in degrees, particularly when differences between the senses are discrete, and degrees of belief appear to lack any associated phenomenology whatsoever. Second, we might hope for some explanation of the phenomenal similarities between blurred experiences and certain other kinds of experiences. For instance, what explains the phenomenal

⁸ A further problem with impure intentionalism, stressed by Pace (2007), is that it is inconsistent with the transparency thesis often used to argue for intentionalism in the first place. For an argument for intentionalism that does appeal to the transparency of experience, see Crane (2007, pp. 484–486), drawing on Byrne (2001). The hope that intentionalism (either pure or impure) will provide a way of ‘naturalizing the mind’ (as in the title of Dretske 1995) also often provides a motivation (although not universally, e.g., Crane 2007, pp. 486–487).

similarities between blurred experiences of objects with determinate boundaries, like tables and chairs, and clear experiences of fuzzy objects with indeterminate boundaries, like shadows or clouds? Or what explains the phenomenal similarities between blurry experiences of clear representations, like in-focus photographs and hyper-realist paintings, and clear experiences of blurred representations, like blurred photographs or impressionistic paintings? It would seem that the best the impure intentionalist can do is to take these similarities as brute. Besides, it might seem that the materials needed to further explain the phenomenological character of blurred experiences are available—and are available even without appealing to intrinsic properties of a visual field. In particular, there are often differences in the content of blurred and clear experiences, at least in respect of the location of an object's spatial boundaries, its shape, texture, and colour. The impure intentionalist therefore needs to show that these differences in content are not sufficient to explain the phenomenal differences.

In defence of the claim that blurred vision is a way of perceiving, Crane suggests that differences between blurred and clear experiences simply amount to differences in subjects' perceptual acuity: 'After all, individuals differ in their perceptual acuity; it is hardly surprising that this should affect the phenomenal character of the experience' (2007, p. 483). Now we might wonder whether 'acuity' is in fact sufficiently fine-grained to capture just the phenomenon that we are interested in: for instance, because of the high concentration of retinal receptors in the centre of the eye, visual acuity diminishes in peripheral vision, yet arguably things do not look blurred when we see them out of the corner of our eye. (I will return to this in Sect. 5). But even setting that aside, the important question is what a difference in acuity amounts to? If 'acuity' means 'sharpness', then differences in acuity are just what we want to explain. An alternative is to understand 'acuity' in terms of a range of discriminations or judgements a subject is able to make on the basis of their experience: for instance, the smallest target a subject can correctly recognise, like a letter on the ophthalmologist's chart (Sekuler and Blake 1994, p. 92). But then it seems natural to explain these differences in terms of the intentional content of the subject's experience.

The claim that it is possible to explain differences between perceptual modes in terms of differences in their intentional content is further supported by considering the differing utility of these modes. Amongst the sensory modalities, vision is normally the most highly valued, and of the different ways of seeing, we normally prefer seeing clearly to seeing blurrily. An obvious explanation of this preference is that the preferred ways of perceiving, and ways of ways of perceiving, are representationally superior: they provide more accurate and detailed information about the environment. If so, then what differentiates these ways of perceiving will be differences in what they are experiences of.

4 Blur as mis-representation

According to the account of blurred experience I will suggest in Sect. 6, blur is a species of 'over-representation'. This proposal builds on two alternative accounts of

blurred experiences: as mis-representation and under-representation. I will consider these accounts in the next two sections; although as these alternatives have been criticised in detail elsewhere, my discussion will be comparatively brief.⁹

According to the first alternative, blurred vision involves a kind of *illusion*: we perceive objects *to be* fuzzy, even though they are not.¹⁰ Of course, we do not normally believe that things *are* fuzzy when we are not wearing our glasses, still less that removing our glasses makes them *become* fuzzy. But this is because perception is belief-independent (e.g. Crane 1992, pp. 149–151). Although perception might typically incline us to believe that things are the way they appear, and indeed perhaps necessarily so (as Smith 2001 argues), the content of perception is strictly independent of the content of belief. This, for instance, explains the robustness of visual illusions to background beliefs: for example, the fact that even when you believe that the Muller-Lyer lines are the same length, they nevertheless continue to look different lengths. Given our actual background beliefs, seeing things as blurry does not lead us to form the belief that they are fuzzy. However, this account predicts that had our background beliefs been different, then that we could have come to believe that things were blurry on the basis of visual experience.¹¹

There are clear advantages to the mis-representation account of blurred experiences. For one thing, the mis-representation account captures the intuition that blurred experiences are somehow representationally deficient, and so offers a clear explanation of our preference for sharp experiences. It also provides a simple explanation of differences in degree of blur. Different degrees of blur reduce to different degrees of mis-representation: the fuzzier objects appear to be, the blurrier the experience. At the same time, the mis-representation account of blurred experiences offers a straight-forward explanation of phenomenological similarities between blurred experiences and experiences of other kinds. For instance, a blurred experience of an object with determinate boundaries and a clear experience of a fuzzy object with indeterminate boundaries are phenomenologically similar because both represent the object as fuzzy. Likewise, a blurred experience of a clear representation is similar to a clear experience of a blurred representation because both experiences present the representation as blurred. This, in turn, offers a straightforward explanation of how it is possible to mistake an experience of something fuzzy for a blurred experience, and conversely to mistake a blurred experience for an experience of something fuzzy: for instance, if you put on your

⁹ See, for instance, Pace (2007) and Smith (2008).

¹⁰ Smith (2008, pp. 200–205) distinguishes ‘fuzzy’, which is a property objects can be represented as having, from ‘blurred’, which applies only to experiences and representations (like photographs or paintings), and suggests that ‘blurry’ is ambiguous between the two. I will follow Smith in this.

¹¹ See, for instance, Dretske (2003) and Crane (2001, pp. 143–144). A slightly different way of developing this approach is suggested by Anscombe (1965, p. 169). Anscombe uses the example of blurred vision (‘I see the print very blurred: is it blurred, or is it my eyes?’), to argue for a distinction between the intentional and material objects of sight, and correlatively for a distinction between two senses of ‘see’, only the latter of which requires the existence of its object. Anscombe differs from Dretske and Crane because she is concerned with the intentionality of sensation considered only as a ‘grammatical feature’ of our concepts.

glasses to read a piece of text, only to realise that the text is blurred, or conversely if you try to adjust the focus on a data projector, only to realise that it is your eyesight that is to blame.

Still, it is questionable whether blurred vision involves illusion in precisely this way. Although blurred experiences can sometimes be the occasion for forming mistaken beliefs, we might wonder whether these errors are occasioned by our experiences representing things *as being* fuzzy. The problem is that there does not appear to be much inclination in general to believe that things *are* fuzzy on the basis of blurred experiences, as we might expect if the content of experience were illusory in the way suggested—just as there is typically the lingering inclination to believe that the Muller-Lyer lines are of unequal length on the basis of how things look, even if we do not in fact come to believe this.

For instance, as a local feature of an otherwise clearly perceived scene, blur can function as a depth cue, with blurred objects and blurred edges appearing either closer to, or further away from, in-focus objects. Yet there appears little inclination to believe that those objects really are blurred, not least because you can come to see the object that once appeared blurred as clear simply by shifting your focal attention. By comparison, variations in apparent size can also function as depth cues, but arguably objects do not standardly appear *to be* different sizes depending on their distance from the eye. Because size exhibits perceptual constancy, we typically perceive them *to be* roughly the size they are, but just to *appear* smaller because they are further away.¹²

Even when all the objects in a scene appear blurred because you are short-sighted and are not wearing glasses, it is unclear whether your experience is best described as one in which you perceive things as *being* fuzzy. For one thing, blur still functions as a depth cue: objects that are further away appear more blurred than those that are closer to you, and the degree of blur your experience exhibits differs if either of you move, and can be eliminated entirely by eyeballing the object or putting on a pair of glasses. Indeed, if globally blurred experiences did represent everything as being fuzzy, then it seems that we should be able to make sense of a person with a God complex, who believes that things become fuzzy when they remove their glasses. Yet the hypothesis seems far-fetched.

Rather than coming to believe that things *are* fuzzy, the instinctive reaction to blurred experiences is simply to refrain from forming beliefs about the objects of your experience, at least until you are able to get a better view of them. It still needs to be explained how it is possible to make occasional mistakes if blurred experiences do not represent objects as being fuzzy, and the over-representational account of blur that I present in Sect. 6 attempts to do just that. The point that I want to make here is just that the typical lack of connection of blurred experiences to belief suggests that we do not ordinarily think of blurred experiences as illusory in quite this way, but as representationally deficient in some other way.¹³

¹² Consistent with the positive transparency thesis, differences of this kind can be explained in terms of relational properties of objects, such as 'apparent sizes', determined by real size and distance from the eye. For further discussion, see e.g., Harman (1990, p. 38).

¹³ See also Pace (2007, pp. 336–340) and Smith (2008, pp. 201–205).

5 Blur as under-representation

An alternative attempt to identify a difference in intentional content sufficient to account for the phenomenal character of blurred experiences is suggested by Tye. Tye argues that cases of blurred vision are not cases of mis-representation, but cases of under-representation. Seeing sharp objects as blurred involves error: one's visual experience 'says' that the boundaries [of the object] themselves are fuzzy when they are not'. But according to Tye: 'In cases of seeing blurrily, one's visual experience...makes no comment on where exactly the boundaries lie' (2003, p. 18). Considering a case in which he is looking without his glasses at a watercolour painting with sharp lines, Tye suggests:

my experience represents that the edges of the coloured shapes [of the painting] definitely fall between [spatial regions] A and B [of the paper the watercolour is painted on] while failing to represent exactly where it is between A and B the edges lie. (2003, p. 20)

A variation on this approach is again consistent with naive realism—although insofar as naive realists typically deny that perceptual experiences have representational content, blurred experiences will be cases of under-perception, rather than under-representation. For instance, according to Fish's version of naive realism, the phenomenal character of a veridical visual experience is determined by 'the array of facts that inhabit that tract of the environment' (2009, p. 55) which the subject is acquainted with. Given this, blurred visual experiences amount to a reduction in acuity, such that the precise array of facts that we are aware of decreases.

There is certainly something appealing about the proposal that blurred experiences involve a loss of information. On the basis of blurred experiences, we are often unable to precisely localise an object's spatial boundaries, or discriminate distinct shapes that in other conditions are discriminable. Moreover, the suggestion that information about the location of an object's boundaries is absent from experience offers a ready explanation of why we often have no inclination to form corresponding beliefs about the location of the object's boundaries on the basis of these experiences.

Still, the claim that blurred vision *simply* involves a loss of spatial information is insufficient to explain the phenomenal character of blurred experiences. For one thing, as Pace (2007) and Smith (2008) point out, this difference in intentional content does not of itself account for the phenomenological differences between blurred vision and other kinds of informationally depleted perceptual experience, like experiences of objects in peripheral vision. For instance, we are often unable to precisely localise an object's spatial boundaries or discriminate distinct shapes that are otherwise discriminable when we see them out of the corner of our eye. But despite this similarity in intentional content, the phenomenal character of parafoveal vision arguably differs from the phenomenal character of blurred vision. Correlatively, the distinctive type of behaviour that we instinctively engage in to remedy the inadequacies of these experiences also differs. In the case of parafoveal vision, we fixate on the object in the periphery of the visual field, perhaps by moving our eyes, head, or body. In the case of blurred vision, we move in relation to the object,

moving the object in relation to ourselves, or else moving our eyes to bring the object into focus.

Short of denying the introspective claim that the phenomenology of peripheral vision differs from that of blurred vision, the most promising response to this problem is to try to distinguish peripheral vision from blurred vision in terms of the different properties about which information is lost. This is analogous to attempting to distinguish the senses in terms of the different properties that they represent. For instance, the ability to discriminate colour and shape decreases dramatically in parafoveal vision, but the ability to perceive motion does not. In contrast, the available information about an object's colour is not significantly reduced in blurred vision—though minor local variations in colour do sometimes become imperceptible—whereas information about the location of the object's spatial boundaries and surface texture is affected, along with information about depth and motion.¹⁴ This response introduces a distinction between different ways of under-perceiving that is needed to distinguish blurred vision from parafoveal vision. However, it is not clear that it draws the distinction in quite the right way. In particular, it fails to account for a distinctive feature of the phenomenology of blurred experiences: the 'haloes' that objects appear to have around their edges.¹⁵ This is a positive feature of the phenomenology, that does not seem to be explained simply by pointing to differences in the type of properties about which information is lost. Although the suggestion that blurred experiences are informationally depleted is an important part of an adequate account of blurred vision, a more specific account of the way in which information is lost is required.

6 Blur as over-representation

The account of blurred experiences that I want to suggest has affinities to both the mis-representation and under-representation accounts, but it appeals to a distinct species of representation that I will call 'over-representation'. The central idea of the over-representational account is that blurred visual experiences provide too much, internally inconsistent, information about the spatial boundaries of objects: blurred visual experiences locate the boundaries of objects at points A, B, and all the points in-between. The net effect of over-representation is the same as the net effect of under-representation: you cannot identify the location of the object's boundary on the basis of the experience, except as falling within a relatively broad range. But this effect is achieved by different means. Specifically, unlike under-representation, over-representation involves a substantial degree of mis-perception. Moreover, this mis-perception is of a particularly pathological kind, because a single, determinate boundary is represented as being simultaneously located at many different places, even though the same single, determinate, boundary cannot be simultaneously located at many different places.

¹⁴ Thanks to Tom Stoneham for suggesting this response.

¹⁵ The haloes around objects are a feature of blurred experiences noted by Smith (2008, p. 200, n. 7), although he offers no explanation of them.

By analogy, the intentional content of experience on this view is like the content of a collection of reliable witness reports that each identify a single event with a brief temporal duration (such as the firing of a single shot) as occurring at different times between 4 and 5 p.m.: at 4.03, 4.24, 4.32, 4.40, 4.51, etc.. The net effect of being presented with this collection of witness reports is the same as if the total evidence under-represented the time of the event, because each witness testified that the event occurred sometime between 4 and 5 p.m.. Either way, the evidence does not allow you to say exactly when the event occurred, even if it is nevertheless reasonable to believe that it occurred sometime between 4 and 5 p.m.. But in the two cases, the effect is realized in a different way. Assuming that the event cannot in fact have occurred at all the times it is identified as occurring at, the evidence that over-represents the time of the event involves a substantial degree of misrepresentation—and misrepresentation of a particularly pathological form.¹⁶

There are two basic ways in which experience could lay down inconsistent correctness-conditions. According to the first, the content of experience is demonstrative, and so the single, determinate boundary of an object is represented using the demonstrative, *that boundary*. Assuming that locations are also represented demonstratively, then the content of the experience is: *that boundary is there, there', there"*..., where the primed predicates pick out different locations. According to the second account, the content of experience is given by an existentially quantified proposition, and so the single, determinate boundary of an object is represented descriptively: part of the content of experience is that there is a single, determinate, boundary, and the single, determinate boundary is located at *L1, L2, L3...*, where *L1...* pick our different locations.¹⁷ The choice between these alternatives will depend in part on general views about the intentional content of perceptual experience. This is not something that I will consider here. Instead, I will conclude by considering how the over-representational account deals with the problems facing the competing accounts of blurred vision considered so far.

First, the over-representational account is preferable to the simple under-representational account because it suggests a way of distinguishing blurred vision from other kinds of indeterminate perceptual experience. Specifically, over-representation involves a substantial element of mis-perception. Peripheral vision under-represents objects by failing to comment on the location of an object's spatial boundaries. Blurred vision, in contrast, fails to provide precise information about the location of an object's spatial boundaries by over-representing them, and providing too much, inconsistent, information about their location. The over-representational

¹⁶ Blurred experiences are intuitively thought of as vague experiences, and the similarity of under-representation to over-representation accounts of blur mirrors formal symmetries between truth-gap (e.g., supervenientist) and truth-glut (e.g., dialetheist) accounts of vagueness. For instance, according to truth-gap theories, rejecting *A* does not entail accepting *not-A*, because *A* might be neither true nor false; according to truth-glut theories, accepting *not-A* does not entail rejecting *A*, because *A* might be both true and false (e.g., Parsons 1990). However, despite these formal symmetries, truth-gap and truth-glut theories are usually considered to be distinct theories.

¹⁷ These basic approaches can be combined. If boundaries are represented demonstratively and locations are represented descriptively, then the content will be: *that boundary is at L1, L2, L3*. Or, if boundaries are represented descriptively but locations are represented demonstratively, then the content will be: there is a single, determinate, boundary, and the single, determinate boundary is *there, there', there"*....

account thereby gives an account of the particular way in which blurred visual experiences are informationally depleted.

This account of the way in which information is lost in turn provides a promising explanation of a distinctive feature of the phenomenology of blurred experiences: the ‘haloes’ that appear around the edges of objects. The ‘halo’ is a result of the distinctive way in which the object’s boundary is over-represented. The extent of an object’s ‘halo’ is determined by the range of locations at which an experience locates the boundary of an object as falling. But experience does not specify the range simply by specifying the inner and outer values of the range. Rather, the entire halo appears ‘filled in’. This ‘filling in’ reflects the fact visual experience represents the location of the boundary at numerous points in-between the inner and outer boundaries of the halo. Moreover, the specific character of the halo around an object varies in relation to the degree to which the experience is blurred—and in this respect the over-representational account discharges an explanatory obligation that the view of blur as a way of perceiving failed to. In experiences that are only slightly blurred, the halo around objects is small, and the inner edge of the halo appears comparatively thick. As the experience becomes increasingly blurred, the size of the halo increases and the inner boundary becomes thinner.

This treatment of blurred experiences can be extended to give an account of blurred representations more generally, and thereby explain the phenomenological similarities of blurred experiences of sharp representations to sharp experiences of blurred representations—something else that the account of blur as a way of perceiving failed to explain. The obvious suggestion is that blurred representations also over-represent the boundaries of objects. By way of illustration, consider Merleau-Ponty’s description of the technique Cezanne employed to depict his famous apples: he uses ‘modulated colours and indicates *several* outlines in blue’ (1964, p. 15). Merleau-Ponty mentions this to make a slightly different point: that by using multiple outlines, Cezanne successfully depicts the apples’ depth, ‘the dimension in which the thing is presented not as spread out before us but as an inexhaustible reality full of reserves’. But the description of Cezanne’s technique is suggestive, not least because the experience of Cezanne’s apples is phenomenologically similar to a blurred experience of (a sharp representation of) some apples: like the apples seen in a blurred experience, Cezanne’s apples are surrounded by haloes.

The over-representational theory of blur avoids the problems with the simple under-representation model by incorporating an element of mis-representation. At the same time, it avoids the problems with the simple mis-representation account by treating the mis-representation as mis-representation of a particularly pathological kind. The reason why we generally lack the *inclination* to form beliefs about objects’ boundaries on the basis of blurred experience—and in particular the belief that the boundaries are fuzzy—is that *no* object’s boundaries could be the way that they are represented as being by blurred experiences. Blurred experiences lay down correctness-condition that cannot be satisfied by objects, and so there is no way that the object could be consistent with how it is represented: the very same boundary could not simultaneously be located at many different points.

One of the advantages of the simple mis-representation view is that it explains why blurred experiences of objects with determinate spatial boundaries are

phenomenologically similar to—and so can occasionally be mistaken for—clear experiences of objects with indeterminate spatial boundaries: both experiences represent their objects as having indeterminate spatial boundaries. Although this explanation is not available on the over-representational account, a similar explanation is: namely, there is only a fine distinction between seeing an object as having an indeterminate boundary that extends from A to B, and seeing an object as having a single determinate boundary multiply located between A and B.

Is the distinction between an experience of a single determinate boundary multiply located and an experience of an indeterminate boundary singularly located *too* fine—a distinction without a difference? This depends upon whether, despite their similarities, there are reasons to distinguish the two experiences. At least in outline, it seems that there might be. Indeterminate boundaries are comparatively rare in the natural environment. Perhaps the most convincing examples are luminance edges (variations in light intensity) in diffuse lighting conditions, such as the fuzzy penumbra of a shadow cast in an environment with no single point light source. It is controversial whether even *this* counts as a case of seeing a single object with an indeterminate boundary: according to Sorensen (2007, p. 179), for example, shadows always have perfectly determinate boundaries, it's just that shadows often overlap with 'filtows', or bodies of filtered light, that create the shadow's apparent penumbra. But even setting this aside, luminance edges are not standard objects of conscious visual attention. The processing of information about luminance edges, and shadows more generally, is very important for object perception. But at the conscious level, it is objects, and not their shadows, that are normally the focus of our attention. Given that objects are normally the focus of our conscious attention, and objects tend to have single determinate boundaries, we might suspect that there is a default presumption on behalf of the visual system that the objects we are perceiving have determinate edges—albeit determinate edges that cannot be located at any one single place.

Not every object of standard visual attention has determinate boundaries: for instance, thick heads of hair, fluffy kittens, and clouds do not. But perceiving these objects as lacking determinate boundaries is arguably a relatively sophisticated achievement, that depends on a number of contextual factors. Objects that lack determinate boundaries generally do not have determinate surfaces, something that is often related to the lack of cohesion that they exhibit. A thick head of hair, for instance, is composed of a multitude of individual hairs that are more or less densely packed together, and which lack the cohesion of a material object. Being able to see the thick head of hair *as* a fuzzy object, without a determinate boundary, therefore requires the ability to see it as lacking a surface. A standard visual cue for this is its texture, as in the case of the frizzy texture of thick hair. So, to be able to see a thick head of hair as a fuzzy object you need to be able to see its texture. But amongst the information that is lost about objects in blurred vision is information about their texture. So perhaps your experience fails to represent a fuzzy object as having an indeterminate boundary because it fails to adequately represent the fuzzy object's texture.¹⁸

¹⁸ Providing a more complex account of blurred experiences than one that simply focuses on the location of objects' boundaries helps to account for another kind of problem case: blurred experiences of objects whose boundaries you cannot see because they occupy all of your visual field, and which themselves have no visible parts with boundaries the locations of which your experience might over-represented. Imagine,

A further advantage of the over-representational account is that it can be extended to account for other types of problematic perceptual phenomena, in a way that neither the mis-representational nor under-representational accounts can. Immediately prior to raising the problem of blurred vision, Boghossian and Velleman note that:

If you press the side of one eyeball, you can see this line of type twice without seeing the page as bearing two identical lines of type. Indeed, you cannot even force the resulting experience into representing the existence of two lines, even if you try. Similarly, you can see nearby objects double by focussing on distant objects behind them, and yet you cannot get yourself to see the number of nearby objects as doubling (1989, p. 92).

As Boghossian and Velleman suggest, it does not seem any more plausible to suppose that double vision involves mis-representation than blurred experience does: just as we appear to lack any general inclination to believe that objects are fuzzy on the basis of blurred experiences, we appear to lack any general inclination to believe that there are two identical lines of type when we press our eyeball, or two objects in front of us when we see something close to our nose.¹⁹ Nor does there seem to be any prospect of explaining double vision in terms of under-representation. However, on the over-representational view, double vision is simply the limiting case of blurred vision. Whereas blurred experiences represent a single object's spatial boundaries at many locations between two points, in perfectly sharp double vision a single object's spatial boundaries are represented as being at just two different locations. This in turn explains why we have no general inclination to believe that things really are double on the basis of double vision: a single boundary can no more be located at two locations, than it can be located at more than two locations.²⁰

Indeed, on the over-representational account, blurred experiences effectively turn out to be mundane examples of a perceptual phenomenon more strikingly illustrated by the waterfall illusion.²¹ The waterfall illusion is generated by looking at a

Footnote 18 continued

for instance, that you are seeing nothing but a large wall with no exposed brickwork. Seeing nothing but the wall doesn't stop your experience of the wall from being blurred. The over-representationalist can allow that your experience is still blurred, even if you cannot see the edges of the wall, so long as there is some further intentional difference between the experience you have with your glasses on, and the experience you have without your glasses. Difference in the perceived texture of the wall provides one potential difference.

¹⁹ Though we can perhaps imagine cases in which we are deluded by double vision: for instance, if your eye muscles are anaesthetised during sleep and you wake up in an unfamiliar place with involuntary double vision.

²⁰ For an account of double vision that is consistent with this, see Tye (2003, p. 25).

²¹ Smith considers the possibility that blurred vision is like the waterfall illusion, but dismisses it in a footnote: 'the hesitancy [about an object, that is the instinctive response to blurred vision] is different from that which we find in a paradoxical percept, such as the waterfall illusion (which is, perhaps, more than merely an unusual phenomenon). In such cases, a phenomenon is, apparently, internally inconsistent. Whatever we may wish to say about blurred vision, it is not that.' (2008, p. 211, n. 22). However, Smith's reasons for dismissing this possibility are unclear; hopefully what I have said makes the possibility seem more attractive.

moving object, like a waterfall, and then shifting your attention to a stationary object, such as a rock. When you shift your attention, the stationary object appears to move in the opposite direction to the moving object, and at the same time to remain stationary. This, of course, is impossible, and as such the waterfall illusion generates an experience whose content is internally inconsistent (e.g., Crane 1988). If the over-representational account of blur is correct, then the underlying problem with blurred experiences is the same. In both cases, the content of blurred experiences is internally inconsistent. To the extent that we should prefer theories that unify distinct phenomena, then this is a further reason to prefer the over-representational account of blurred vision.

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