

## Sniffing and smelling

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**Abstract** In this paper I argue that olfactory experience, like visual experience, is exteroceptive: it seems to one that odours, when one smells them, are external to the body, as it seems to one that objects are external to the body when one sees them. Where the sense of smell has been discussed by philosophers, it has often been supposed to be non-exteroceptive. The strangeness of this philosophical orthodoxy makes it natural to ask what would lead to its widespread acceptance. I argue that philosophers have been misled by a visuocentric model of what exteroceptivity involves. Since olfaction lacks the spatial features that make vision exteroceptive the conclusion that olfaction is nonexteroceptive can appear quite compelling, particularly in the absence of an alternative model of exteroceptivity appropriate to olfaction. I offer a model according to which odours seem to be external to the body because they seem to be brought into the nose from without by sniffing and breathing through the nostrils. I argue that some natural-seeming objections to this model rely on substantive assumptions about how the senses are distinguished from one another, and how perceptual experience is put together out of its modality-specific parts, that require defence.

**Keywords** Perception · Perceptual experience · Distinguishing the senses · Olfactory experience · Visuocentrism

The philosophy of perception is largely focussed on vision. It is sometimes suggested that this is an obstacle to understanding perception in other modalities, or even to understanding perception *in general*.<sup>1</sup> In this paper I shall argue that

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<sup>1</sup> See O'Callaghan (2011) for an interesting discussion of this claim.

visuocentric thinking misleads us about the sense of smell, and explains the prevalence of a strange and unintuitive view of the phenomenal character of olfactory experience.

The sense of smell has some claim to be the sensory modality that's been given the least philosophical attention. But where it has been remarked upon by philosophers, it has often been supposed to be non-exteroceptive. By this I mean that philosophers have thought that olfactory experience is like bodily sensation in not seeming to be as of anything independent of the perceiver's body. That's not we usually think about smelling. We tend to think that smelling is like seeing in presenting to us things that appear to be 'out there' in the world beyond our noses. And if olfaction is alone amongst our five senses in being non-exteroceptive, we might wonder why we count it as a sense at all.

The strangeness of the philosophical orthodoxy about olfaction makes it natural to ask what would lead to its acceptance. I offer a diagnosis in visuocentric thinking. I argue that philosophers are misled by a visuocentric model of what exteroceptivity involves, namely the presentation of objects as at a distance and in a direction. I argue that smell is an example of an exteroceptive sense which does not involve the presentation of objects in this way. In order to acknowledge the exteroceptivity of olfaction, I suggest, we need to recognise that sniffing does more than just carry odours up the nose. Olfactory experience is exteroceptive, I shall argue, in that it involves smells seeming to be brought in from without by sniffing.

The visuocentric model of exteroceptivity does not just mislead us about smelling. It misleads us about the significance to perception in general of certain spatial features peculiar to vision. The rich spatiality of visual phenomenology is amongst the reasons why it has been and continues to be so philosophically fascinating, and its spatial features are relevant to a full account of the epistemology and metaphysics of visual perception. But having these features also makes vision a quite unrepresentative form of perceiving. Recognising this is essential to developing an adequate account of the epistemology and metaphysics of perception in general, and not just of its most rarefied variety.<sup>2</sup> We'll also see that thinking about the exteroceptivity of olfaction requires us to consider the question of how the senses are distinguished from one another, and the tricky, much under-considered question of how our overall experience is made up out of its component, modality-specific parts.

In the first section I address some preliminary issues. It isn't possible to say anything about olfactory experiences without saying which experiences I take those to be. And in order to argue that the objects of those experiences are presented as being external to the body, we had better know which objects we're talking about.

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<sup>2</sup> In a series of recent papers, Clare Batty has argued that representationalism is true of olfaction (see especially her 2010a, b). In her 2010c she argues that accounts of representational content cannot, if they are to be true of olfaction, be based on a visual model. Tye (2000) also suggests, though in passing, that his representationalism can be extended to both taste and smell. The features of olfactory experience I will be concerned with here are ones that can be characterised independently of any theory of perception.

## 1 Preliminaries

The experiences with which I'll be concerned here are just those we usually think of as olfactory. Psychologist Rozin (1982) suggested that smell is a 'dual' modality. In the kind of perceiving that we usually think of as olfactory, what we might call orthonasal olfaction, the olfactory stimulus is brought in through the nostrils by breathing or sniffing. In retronasal olfaction, which is involved in what we usually think of as tasting flavours, the stimulus reaches the receptors through the retronasal passage (part of the throat). On Rozin's view, our thinking of flavour perception as just taste, rather than as partly smell, is mistaken (1982, p. 397). If he's right then there are olfactory experiences that we don't usually think of as such and about which the account given here is not intended to be true.<sup>3</sup>

The feature of these experiences that will concern us is whether their objects (what they are 'as of') seem to be external to our bodies. I will take it that the objects in question are the things we call smells or odours. Whilst we usually use these terms interchangeably, I use the term 'odours' here so as to avoid confusion with other uses of the term 'smell'—for example, as a verb, or as the name for the modality. When we say, for example, that there is a funny odour in the room, odours feature as the objects of perception—the things that olfactory experience is *of*. We also treat them as 'objects' in the loose sense of their being not the olfactory qualities that we attribute to something else, but rather that to which olfactory qualities are attributed. For example, in at least some of our thought and talk, odours are the things that are or seem 'funny' or 'vanillary' or 'musty'.<sup>4</sup>

For our purposes here I'm taking odours to be the objects of olfactory experience, and not the objects and stuff that produce them. We do sometimes talk as if we smell the bars of soap and quantities of coffee that are the sources of smells. But there are reasons to doubt whether our contact with these odour-sources is really perceptual. If it's not perceptual, then our contact, via olfaction, with bars of soap and the like is instead 'mere thought contact'. This would imply that perceiving odour-sources is perceiving *that* they are around, where this implies the necessity of having a cognitive attitude, such as belief, that the source is present.<sup>5</sup> One reason to think we have only thought contact with the sources of odours is that olfactory

<sup>3</sup> See Richardson (forthcoming) on the question of whether flavour perception is partly olfactory. For more general discussion of the role of science in determining what senses we have and which ones we're using in any given instance of perceiving see Keeley (2002), Nudds (2004, 2011) and Gray (2011). See Grice (1962) and Nudds (2004), for representative discussion of the question of how the senses are distinguished from one another. I return to this issue in Sect. 6.

<sup>4</sup> This is consistent with odours being thought of as events of some kind, as O'Callaghan (2010), and Casati (2005) argue we should think of sounds. I put aside here the question of the relationship between odours and the clouds of odiferous molecules that are the stimuli for olfaction, which Batty discusses in her 2009. The account given here could be adapted, *mutatis mutandis*, to accommodate the view that odours are properties of something other than the source, perhaps of the air, or of this cloud of molecules. See Martin (2010) for the view that odours are universals.

<sup>5</sup> The phrase 'mere thought contact' is from O'Shaughnessy (2002, p. 453): this is the kind of contact he thinks we have with the sources of sounds. If one thinks that perception itself is a cognitive attitude then 'perceiving that...' will imply the necessity of having a cognitive attitude other than the perceptual state itself. Whether one *should* think that is, of course, beyond the scope of this paper.

experience is too insensitive to their comings and goings to count as perceiving them. For example, cooking odours linger in the kitchen long after the food is eaten, and the *sillage* of your perfume is the scented wake you leave in the elevator after you've stepped out of it.

We do sometimes say that we perceive objects, such as stars, that are no longer present at their apparent locations, or even ones that have been destroyed at the time of perception. The time-lag argument against direct realism about perception concludes from these sorts of cases, and more generally, from the fact that the causal processes involved in seeing take time, that what we see most directly are not ordinary objects, but something else (something mind-dependent).<sup>6</sup> One direct-realist response to the time-lag argument is to deny the supposition that we can only perceive things that are present at the time at which experience occurs. This response would also be an appropriate one to the argument offered here, if that argument was just that we don't smell the sources of odours because these things are often no longer present at the time of olfactory experience. But though vision may not keep exact time with the ordinary, everyday objects we think of ourselves as seeing, it is nevertheless sensitive to these objects' presence, absence and changes over time in a way that the sense of smell is not, even if this visual sensitivity sometimes involves considerable delay. The difficulty with saying that the objects of olfaction are the sources of odours is not just that olfactory experience outlives the presence of those sources.

Your visual experience of a star occurs when it does, and for the length of time that it does because of the star and its doings. This is partly why we should still say that we see the star, despite the time-lag. In olfaction, there's not only a delay between the presence, absence or change in the source of an odour and this being reflected in one's olfactory experience, but, more generally, olfactory experience is insensitive to these things. The comings and goings of, and changes in the particular sources of odours just don't make very much difference to olfactory experience. Furthermore, there is in olfaction some other mind-independent object that does make the difference, and which we can think of as being perceived—namely, the odour.

Another reason to want to avoid thinking of the sources of odours as the objects of olfactory experience is that finding out about the sources of odours depends upon perceiving the source in another modality, as well as on extra-perceptual, and specifically conceptual resources.<sup>7</sup> For example, had I not the ability to recognise *this* odour as that characteristically produced by roses, and were I not also able to see the roses in the room, my olfactory experience would be no guide at all to the presence of roses in my vicinity.<sup>8</sup> I could just as easily conclude that there was something else rose-scented about, such as air-freshener or a perfume-wearing friend.

<sup>6</sup> See Robinson (1994, pp. 80–84).

<sup>7</sup> See also Smith (2002, p. 143). This would not be an obstacle to olfactory perception of sources if one was happy to think of the relevant conceptual or cognitive resources as built into perception itself.

<sup>8</sup> See Herz and Von Clef (2001) for evidence that how we perceive an odour can be significantly influenced by the verbal label provided for it.

So I'll take it, here, that the objects of olfactory experience, and thus that which I'll be arguing seems to be external to our bodies in such experience, are odours. These preliminaries completed, in the next section I introduce the contrast between exteroceptive experience, such as seeing, and non-exteroceptive experience, such as pain.

## 2 Exteroceptive experience

As I shall use the term here, to say that some experience is *exteroceptive* is to say something about that experience's phenomenal character. Visual experience is exteroceptive: visible qualities, such as colour, seem (unless of course what one seems to see is one's own body) to be qualities of objects distinct from our bodies—objects such as apples and tables and computer-screens.<sup>9</sup> Visual experience is as of things distinct from our bodies, in that we seem to see those things, and even parts of our own bodies, when we see those, 'from' a bodily location, roughly, that of the eyes. We'll say more about what this involves later, in Sect. 4. This is one thing we might mean by saying that we see 'with' the eyes. Of course, this bodily location is not itself *seen*, as an apple is seen. Rather, the place from which you see the apple is, as M. G. F. Martin puts it, marked implicitly 'in one's...experience through it being the point to which the objects perceived are presented' (2002, p. 410). There is a place from which things seem to be seen even when what is seen is a part of one's own body. It is intuitive to think that olfactory experience is exteroceptive, too. Olfactory qualities, such as vanillaryness, seem to be qualities of things distinct from our bodies, namely, odours. Correlatively, just as we see things 'with' the eyes by their location being that 'from' which we seem to see things, so, we think, we smell 'with' the nose.

Bodily sensations of pain, or itchiness, in contrast, are not exteroceptive. Such sensations do not attribute pain or itchiness to anything beyond the limits of the body. They are not 'as of' anything extra-bodily. In turn there is in bodily awareness no place from which things seem to be sensed, nothing 'with' which the sensation is felt. An ache in my head is not felt 'from' or 'with' my head, or any other body part. On some philosophical views of bodily sensation, the pain is 'in' my head.<sup>10</sup> According to such views, when I have a headache, the pain seems to be a quality of my head—a part of my body. And when I have an itchy nose, it's my nose that seems to itch. If we accept the view that pains, itches and other bodily sensations are felt *in* body parts, then bodily sensations are as of mind-independent objects, but are nevertheless not exteroceptive. It's important to emphasise this point: for an experience to be exteroceptive it is not sufficient for it to seem to have a mind-independent object.

<sup>9</sup> Even those who deny that colours are really 'in' the objects we see allow that that's where they seem to be. See, for example, Boghossian and Velleman (1989).

<sup>10</sup> For such views of bodily sensation see, for example, Armstrong (1962), Martin (1998) and Crane (2003).

Whether or not an experience is exteroceptive is relevant for how that experience helps us to find out about things external to our bodies. In exteroceptive experience, such as visual experience, we find out about the visible qualities of objects like cats and apples by their seeming to have the qualities in question. If olfactory experience is exteroceptive then likewise, we find out about the vanillarity of an odour when it, the odour, seems to be vanillary. Though bodily sensations do not seem to be of anything extra-bodily there is a way in which having such sensations can allow us to find things out about things other than our bodies. For example, we can imagine an allergy sufferer who experiences a distinctive itchy sensation in the nose whenever they are in the presence of cats. It seems likely that the sufferer will quickly learn that the itchy sensation and the presence of cats are correlated. Then, they'll find out that cats are around when they have that sensation. But whereas the visual experience is, we have said, *as of* a red apple, distinct from the body, our allergy sufferer's experience is not an experience as of cats, or of anything distinct from the sufferer's body. If anything, it is an experience as of their nose.

As we shall see in the next section, the philosophically orthodox view of olfactory experience is that it, like bodily sensation, is not exteroceptive. Thus, on this view, we find out about odours only in a way analogous to that in which an allergy sufferer finds out about cats in their vicinity.

### 3 The orthodox view of olfaction

Since the philosophically orthodox view that olfaction is non exteroceptive is a negative one, it is consistent with more than one positive account of what olfactory qualities seem to be qualities of. Consider Reid's claim that when someone smells an odour, he:

...cannot give it a place, any more than he can give a place to melancholy or joy: nor can he conceive it to have any existence, but when it is smelled. So that it appears to be a simple and original affection or feeling of the mind, altogether inexplicable and unaccountable. (1983, p. 37)

Similarly, William Lycan writes:

...considered only phenomenologically, a smell seems a modification of our own consciousness rather than a property of a perceptual object that would exist unperceived. (2000, p. 277)<sup>11</sup>

It's not entirely clear what, if anything, these philosophers would say that olfactory qualities seem to be qualities of. C. D. Broad was overtly equivocal about the location of olfactory qualities. He placed smell at the midpoint of a scale running from vision, at the top, to 'bodily feeling', at the bottom. The closer to the top of this

<sup>11</sup> Whilst Lycan denies that olfactory experiences seem to present their subjects with any mind-independent object or quality, he argues that olfactory perception does, nevertheless, *represent* odours, which are extra-bodily, mind-independent phenomena (2000, p. 281).

scale a type of experience is, the more plausible, on Broad's view, an act-object analysis of that kind of experience was: an analysis on which the object of sense-experience is independent of the act of sensing it, or of the experience. Such an analysis was, he thought, implausible at the bottom of the scale. The closer to the bottom of the scale a type of experience is, the less plausible such an analysis for that kind of experience, and the more akin to bodily feeling, for which, on his view, the distinction between 'act' and object' is not to be made. So on Broad's view, it's equally plausible to describe an olfactory experience either as one in which something else, distinct from the experience seems to have a certain quality, or as one that has no such structure.<sup>12</sup> Perhaps we can take Reid and Lycan, in the quotations above, as espousing this second sort of view, according to which olfactory experience is neither exteroceptive, nor even of anything distinct from itself.

Kant appears to have had a different and more positive account of the apparent location of olfactory qualities. On his account, olfactory experience, like taste experience, is 'more subjective than objective', 'stirring up' consciousness of an organ more than consciousness of an external object (2006, p. 46). On this view, unlike Reid's or Lycan's, olfactory experience is of something distinct from itself: the subject's own body. A. D. Smith might also be interpreted as holding a similar view. He writes:

Whereas you see and hear things *at* a distance, and feel spatially located objects *with* your hands, you typically experience smells *in* (or just behind) your nose. (Smith 2002, p. 139)

Now, one might believe that odours seem to be *in* the nose only in the way in which a pebble seems, tactually, to be *in* the hand that holds it. A pebble held in the hand is, and is experienced as being, enclosed by part of your body—your hand. But it doesn't seem to you, in this case, just as if your hand has some quality. You seem to feel the pebble, which seems to be something not part of one's body. The pebble is felt, in this respect, 'with' and not merely 'in' the hand. One might hold, then, that odours seem to be enclosed within the nose in a similar way. I'll suggest in Sect. 7 that there is some truth in this position, which would be consistent with olfactory experience being exteroceptive. In contrasting smelling with cases in which we perceive things 'with' parts of our body, Smith implies that this is not what he has in mind. Whether or not this is the correct interpretation of Smith's view, the point is that it is consistent with denying that olfactory experience is exteroceptive to say that olfactory qualities seem to be qualities of one's nose.

The view that olfaction is non-exteroceptive is widely held enough to warrant our interest, all the more so since it is such a counterintuitive view both of the phenomenal character of olfactory experience, and, by implication, of the role of that experience in informing us of the world beyond our noses. This makes it natural to ask what motivates the view—what has made it seem, despite its strangeness, so

<sup>12</sup> See Broad (1927, pp. 254–257; 1942, pp. 10–11). For discussion see Price (1959, p. 458).

appealing. In the next section I want to diagnose the appeal of the orthodox view of olfaction in a visuo-centric model of exteroceptivity.<sup>13</sup>

#### 4 Distance and direction in visual exteroceptivity

It is plausible to think that the phenomenal exteroceptivity of visual experience involves things seeming to be at distances and directions from the location of one's eyes. Smith points out that in presenting objects as at distances and in directions, visual experience presents objects as 'literally external to' (2002, p. 134) one's body. By 'literally external to' I take it that Smith means *spatially separated from*. Vision represents apples and tables and computer screens as being spatially separated from the perceiver—there seems, in visual experience, to be some space between the place from which the apple is perceived, and the location of the apple itself.

We don't smell odours at a distance, and there seems little reason to think that we smell them to be in directions—as being left, or right, or straight ahead, say.<sup>14</sup> There is reason to think that other animals do. For example, rats smell—as it were—in stereo, their olfactory systems utilising differences between an odour's time of arrival and intensity at each nostril in a similar way as our auditory systems do for sounds (Rajan et al. 2006). And in tightly controlled experimental conditions, some studies have suggested that we can, as one author puts it, 'lateralize' an olfactory stimulus (Radil and Wysocki 1998).<sup>15</sup> This means that we can, in such conditions, and with some substances, tell to which nostril an olfactory stimulus has been delivered.<sup>16</sup> It's not clear what we ought to take from such studies about the phenomenology of olfactory experience. One problem is that, as Gottfried (2005) has emphasised, we cannot tell whether the equipment used in these studies is exaggerating a pre-existing ability or instituting an entirely new one. The data leaves intact the claim that at least typically, odours do not seem to be any distance or direction from some bodily location, such as that of one's nose.

We can make this vivid by considering what we do in tracking odours, for example, to their sources. In vision, I simply see an object's distance and direction from me and walk towards it. There being no distance and direction in olfactory experience, olfactory tracking can be compared to playing the HOT/COLD game in

<sup>13</sup> This is not to deny that there might be other sources of motivation, too. Kant thought that taste and smell made one aware (predominantly) of one's sense organs, because '...the idea obtained from them is more a representation of enjoyment than of cognition of the external object' (2006, p. 46), pleasure and displeasure being 'determinations of the subject, and so cannot be ascribed to external objects' (2006, p. 136).

<sup>14</sup> See Hopkins (1998, Chap. 7) and Batty (2010a) for discussion of differences in the spatial character of experience in different senses.

<sup>15</sup> See, for example, von Bekeasy (1964), Kobal et al. (1989), Radil and Wysocki (1998) and Frasnelli et al. (2009).

<sup>16</sup> There seems to be a near-consensus that olfactory stimuli can only be lateralized 'when the substances additionally or mainly excited the trigeminal nerve, i.e. if they elicited side effects such as pain, cooling/warming, or pressure' (Kobal et al. 1989, p. 130). Frasnelli et al. (2009, p. 142) suggest that 'if an odorant can be localized, it is an indication that it also stimulates the trigeminal nerve'.



which a hider guides a finder to a hidden object by calling out ‘hotter’ as they move nearer and ‘colder’ as they move away. When tracking an odour to its source, such as a department store perfume counter or a piece of cheese, we do not find out which direction in which we should move ‘all at once’ as we do in vision. Rather, we smell an odour of a certain intensity where we are, then pick a direction in which to move, and find out if the odour is more or less intense over there. If more intense, we keep moving in that direction. If less intense, we move away.<sup>17</sup>

In not presenting its objects as at distances and directions from the subject, olfactory experience does not present its objects as ‘literally external to’ the body in the way that vision does. There is no spatial separation between oneself and a vanillary odour represented in olfactory experience. As we have seen, visual experience representing its objects as at a distance and in a direction is, plausibly, that which accounts for visual exteroceptivity. An apple is seen from a bodily location, and thus as external to the body, in that it seems some distance away, in a certain direction. If one takes the exteroceptivity of vision as a model for the exteroceptivity of perceptual experience in general, then one will be precluded from thinking of olfaction as exteroceptive. This then is the diagnosis I offer for the orthodox view of olfaction introduced in the previous section.

If you accept this diagnosis of the appeal of the orthodox view of olfaction, you may still be reluctant to allow that olfaction is exteroceptive. Perhaps, you might think, the visual model of exteroceptivity is appropriate, since there is no other way in which exteroceptivity can be achieved. The absence of an alternative model is an obstacle to recognising the exteroceptivity of olfaction. In the remaining sections I offer an account of olfactory exteroceptivity. I argue that in order to allow that olfaction is exteroceptive, we need to recognise the significance to smelling of sniffing.

## 5 The role of sniffing in smelling

In order to smell or taste something, we must take it into our bodies. In smell, or at least, in what we usually think of as smell, this happens when we breathe in through the nose, which is to say, when we sniff. For brevity I will use ‘sniffing’, here, to include breathing through the nose, except if otherwise indicated. When we sniff, odiferous molecules are drawn up through the nostrils to the nasal cavity, and the receptive cells of the nasal epithelium. Sniffing harder increases the rate of flow through the nasal cavity—up to hurricane speeds with vigorous sniffing—and directs it upwards to the olfactorily receptive cells. As a result, more odiferous molecules reach the olfactory receptors.

Sniffing is not however ‘merely a stimulus carrier’ (Mainland and Sobel 2006, p. 192). In order to understand how olfactory experience can still be exteroceptive whilst not representing distance and direction we need to appreciate its role in

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<sup>17</sup> See also the discussion in Smith (2002). The HOT/COLD game example is from Pasnau’s (1999) discussion of hearing. He points out that Gibson (1966) seems to think of hearing in this way—and argues that he is wrong to do so.

smelling, a role that is increasingly being recognised in psychology. The ways in which sniffing has been found to contribute to olfaction are many and, as one author puts it, 'not fully understood' (Proctor 1982, p. 280). For example, sniffing affects the apparent intensity of perceived stimuli in a way that suggests some kind of constancy phenomenon is operative. Whilst taking a big sniff results in more of an odour reaching the olfactorily receptive cells than does taking a small one, the odour will not seem more intense when a big sniff is taken. One model of what is going on here is that the olfactory system maintains constancy by computing perceived effort during sniffing.<sup>18</sup> There is also evidence that whilst we can detect substances reaching the olfactory epithelium by having been injected into the bloodstream, we can only do so when we sniff (Bocca et al. 1965).

I want to suggest that another way in which sniffing is not merely a stimulus carrier is this: the involvement of sniffing in smelling is manifest to us in the conscious character of olfactory experience. Olfactory experience does not just involve awareness of certain qualities, such as vanillarity or mustiness or whatever. It also involves odours that have these qualities seeming to be brought into the nose when we sniff. To see this, consider how things seem to you when either breathing normally, or sniffing vigorously, never mind for now whether in so doing you're aware of anything odiferous. The experience you have is one of air being brought *into* the nostrils, *from without*, though the air is not represented as being at any distance or direction from you. Your experience of the air you breathe then is exteroceptive, even though the visual model of exteroceptivity is not appropriate to it. The point I want to make is that this is part of normal olfactory experience, too. In olfaction, odours seem to be brought into the nostrils, from without. In this way, olfactory experience, despite differing in its spatial character from vision, is nevertheless also exteroceptive: odours seem to be brought *into the nose from without*, and thus seem to be extra-bodily.

Thus stated, there are some natural objections to this model of olfactory exteroceptivity. For one, you might wonder why you should accept that 'being brought in from without' is a way that things seem to you olfactorily, rather than an aspect of a tactile experience that accompanies your olfactory experience of an odour. Also, it might be objected that 'being brought in from without' is a cognitive, rather than a perceptual seeming. If that's right then, again, olfactory experience itself might be left non-exteroceptive. In Sect. 6 I argue that these objections have much less force than they appear to, because they rely on substantial commitments that are at best non-obvious, and are thus in need of defence. First though, it will be helpful to make two brief clarificatory points.

Firstly, it might appear that the claim that odours seem to be brought into the nose when sniffing is inconsistent with there being no distance in olfactory experience (see Sect. 4). This is because one way in which something might seem to be brought into the body, or to a bodily location is by its first seeming to be at some distance from one's body, and then to move towards it, in the way that a ball seems visually to move towards your outstretched hands as you try to catch it. But if

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<sup>18</sup> The model is Teghtsoonian's—see Mainland and Sobel (2006) for a review of scientific literature on the role of sniffing in olfaction.

distance is not represented in olfactory experience, then odours cannot seem to be brought into the nose in this way. However, that doesn't mean they can't seem to be brought into it at all. Consider a non-visual example of something seeming to be brought into or to the body, namely, the tactile experience of a breeze blowing against your face. Distance is not represented in this case. One is not aware of some distance that the air that touches your face has travelled. But nevertheless, it does seem as if the breeze is coming to the body from somewhere beyond it—from without. Likewise with the experience one has of the air one breathes.

The second thing that requires immediate clarification is what it is about sniffing that is supposed to be doing the work. For it might be said either that awareness of engaging in the *activity* of sniffing is what makes olfaction exteroceptive or alternatively that it is the just the feeling of the air as it passes up one's nostrils. I don't claim that it is awareness of the activity of sniffing that is responsible for the exteroceptivity of olfactory experience, because I don't want to rule out that an olfactory experience that is the result of an odour being puffed up the nose without one's actively sniffing it in might be exteroceptive.<sup>19</sup>

## 6 Touch and cognition

### 6.1 The objection

It might be objected, to what I have said to far, that the experience of air passing through the nostrils (the experience of sniffing) is *tactile* and not olfactory. As such, one might argue that I have not given an account of the phenomenal exteroceptivity of *olfactory* experience, but only a partial account of the role of *touch* in our 'taking' olfactory qualities to be qualities of things independent of our bodies. Furthermore, if this is all I've established, then it would seem, also, that if there is some sense in which odours seem independent of the body, this is a *cognitive*, rather than a *perceptual* seeming.

This is because our 'taking' an odour to be external to the body when we have the tactile experience of sniffing would seem (according to my objector) to be a matter of our having the belief, or other cognitive attitude, that the odour is extra-bodily. For example, what might happen is that having learnt that olfactory experience is correlated with the tactile experience of sniffing, we come in individual cases to *believe* that odours are independent of the body, borne by the air we are tactually aware of breathing and sniffing. For example, Batty (2010b) suggests that cases in which we hold our breath to avoid breathing-in a bad odour alert us to the fact that we are taking in portions of the world when we smell:

[b]y contrasting the phenomenology of breathing in the case where we smell something and the case where we do not, we see that olfactory experience

<sup>19</sup> As a reviewer for this journal pointed out, it would be interesting to know whether there are cases in which subjects are (temporarily) incapable of feeling air in their nostrils yet still have olfactory experience. At least on the face of it, the experience of such subjects would be a test case for the view presented here.

involves our being directed towards the world in a significant way. (2010b, p. 6 [reference is to online page number])

Thus understood, tactile awareness of sniffing would appear to be to make us *believe*, or acquire some other cognitive attitude to the effect that, as Batty puts it, we are ‘directed towards the world’ in olfactory experience.<sup>20</sup> And if that’s right, then any way in which odours seem to be extra-bodily, will be *cognitive*. I argue, in this section, that though the sense of touch can be thought of as playing a role in the phenomenal exteroceptivity of olfactory experience, there is no reason to believe that on the account I’ve offered, it is only touch, and not olfactory experience itself that is exteroceptive. This, in turn, will be to deflate what looked to be a reason for thinking that the exteroceptivity of olfaction is merely cognitive, and not perceptual.

It’s worth pausing at this point to say something more about this argumentative strategy. We can in principle ask about any item of putatively perceptual phenomenology whether it is, instead, cognitive. And this is very often a difficult question to answer. There doesn’t seem to be any universally applicable and agreed-upon method which we can apply to any given item of phenomenology so as to answer it.<sup>21</sup> But it doesn’t follow from this that any item of phenomenology can be as plausibly thought of as cognitive as perceptual. For it to be plausible that some item of phenomenology is cognitive in the way that’s relevant to us here we need some reason to think that a belief or other cognitive attitude is essentially involved in the particular case under consideration. In the olfactory case, we’ve said, the involvement of touch, in the way described at the beginning of this section, would provide such a reason. So, I’m going to show that there’s no reason to think that touch has this role in our taking odours to be extra-bodily. In this way, a reason for thinking the exteroceptivity of olfaction a cognitive matter will have been deflated. Of course, there might be other reasons for thinking that odours seeming to be external to the body is an item of cognitive phenomenology, and I won’t have said anything in response to those. But one has to start somewhere. And it’s far from clear that the burden of proof should always lie with one who thinks of some item of phenomenal character as perceptual, to show that it is.

In what follows, I’ll argue that the natural-seeming thought that things seeming to be ‘brought in from without’ when sniffing is tactile and not olfactory relies on two sorts of substantial commitments that at the very least, are non-obvious. Thus we don’t have to accept this thought. The first sort of commitment has to do with answering the question of how the senses are distinguished from one another: the *individuation question*.

## 6.2 The individuation question

Whilst there is no universally accepted answer to the question of how the senses are distinguished from one another, the experience of sniffing comes out as tactile

<sup>20</sup> Her interest here though is with whether olfactory experience has any mind-independent object, rather than with whether it has an extra-bodily one.

<sup>21</sup> For discussion of some methods of determining whether some property is represented in perception, see Siegel (2006) and Kriegel (2007).

according to most if not all of the standard criteria offered in answer to it.<sup>22</sup> For example, two of the standard criteria are:

- (i) The conscious character criterion, and
- (ii) The internal mechanisms and processes criterion.

According to (i) what distinguishes the senses are differences in the conscious character of experience, and according to (ii) what distinguishes the senses are differences in the internal mechanisms and processes that subserve perception.

Accepting (i) or (ii) as our criterion for distinguishing the senses might lead to the view that the experience of sniffing is tactile. Take a paradigmatic example of tactile perception: the one you have if you pass your hand lightly over the surface of your desk. This instance of perception involves some receptors and other internal mechanisms of the same kind as does the experience of the air in your nostrils, and it might well be said to share with the experience of sniffing some ‘tactile’ phenomenology. For example, in both cases it seems as if something is making contact with one of your bodily surfaces.

However, there are well-known objections to (i) and (ii). Accepting (ii) leads to a vast multiplication of senses, with touch being subdivided into senses of pressure and temperature, for example. If we accept (ii) even the notion of vision as a single sense appears threatened: why not a distinction between dorsal and ventral visual senses, or between cone-mediated colour vision in bright light, and rod-mediated vision in lower light levels? And if we accept the familiar thought that perceptual experience is diaphanous, we are likely to be uncomfortable with (i). To say that perceptual experience is diaphanous is to say that when we turn our attention to it, all we find are properties of the things we seem to perceive, such as the redness of an apple, or the vanillarity of an odour. We do not find any qualities of experience itself.<sup>23</sup> If that’s right, then there are no features of the conscious character of perceptual experience available to distinguish between the senses—nothing to distinguish a tactile experience of a sphere from an experience of seeing it. Since these criteria for distinguishing the senses face serious difficulties, we need not be concerned if, according to these criteria, the experience of air passing up your nostrils comes out as tactile.

There are of course other criteria of individuation than these, according to some of which the experience with which we are concerned is tactile. If we’re to be persuaded by any such criteria that sniffing is not integral to olfactory experience itself, the following claim requires defence:

- (A) An answer to the individuation question ought not to appeal to convention.

(A) is rejected by Nudds (2004, 2011), and it’s by no means obviously true. If (A) is false then we can say that one’s overall experience when smelling, including awareness of both the vanillary quality and the air passing up one’s nostrils, counts as olfactory, just because we have a convention of counting it as such. This being the case, one who claims that the experience of sniffing that usually occurs when

<sup>22</sup> See references in footnote 3 for representative discussion.

<sup>23</sup> See Moore (1903).

one has an olfactory experience is just tactile, owes us some answer to the individuation question according to which this is true, and this will mean showing that (A) is true, too.

### 6.3 Building experiences

My objector also relies on a certain way of understanding how one's overall experience is put together out of its modality-specific parts. On my objector's view, my olfactory experience when I smell the vanillary odour is the experience I would have in the absence of the 'tactile' experience of sniffing. Thus construed, the olfactory experience itself is not, presumably, exteroceptive. The tactile experience, in turn, is the same experience I would have in the absence of that of the olfactory qualities. My overall perceptual experience when I sniff a vanillary odour is then construed as a conjunction of these two independently specifiable experiences.

There's much more to be said about this conjunctive view than I'll be able to, or indeed need to say here. I want to suggest just that this conjunctive view is not compulsory, and that it leads to difficulties. It's not compulsory because we could instead think of the 'tactile' experience involved in the air seeming to be drawn up your nose, and the 'olfactory' experience of apparent vanillarity as abstractions from something that is greater than the sum of these two experiential parts. To see that one could have a non-conjunctive view, and also to give you some idea of why one would want to think of experience non-conjunctively, consider a different example, one in which you burn your hand on a hot oven.

On a conjunctive view, your overall experience in this case is a conjunction of three, independently specifiable elements: an experience of pain, an experience of heat, and an experience of the surface of the oven, each of which you could have without the other. But if we're interested in capturing the phenomenology of this case, precisely, we will want to be able to say that the pain you suffer is pain of a certain kind: *burning* pain, as opposed to the sharp pain of salt in a paper cut, or the dull ache of a bruised knee. And when you touch the oven, it seems to you that that hot surface is hurting you. A non-conjunctive view of how your experience is put together offers one way of capturing the burning quality of the pain, and the fact that it seems to be the pain of touching a surface that's hot. The non-conjunctivist can say that to fully characterise how the pain, heat and oven-surface seem in this case, we ought to view our experiences of each as elements of an overarching experience in terms of which each is characterised. The experience is one of the burning-pain-of-touching-a-hot-surface. This allows us to characterise each element (the pain, the heat, how the surface seems), by mentioning the others, too, and thus to capture the 'burning' quality of the pain, and so on.

How would a non-conjunctive view apply in the olfactory case? Note, first, that the non-conjunctive view is consistent with allowing that when you sniff a vanillary odour it's true to say that you have a tactile experience, and true to say that you have an olfactory experience, whatever the right answer to the individuation question might be. But your overall experience is not, on this view, thought to be a conjunction of two independently specifiable elements. The olfactory experience of

the vanillariness, and the tactile experience of the air in your nostrils are both abstractions from the overall experience. To characterise the phenomenal character of each fully, we mention the other. Take the tactile experience. On the non-conjunctive view, this is not the tactile experience you would have were you to strip away how things seem to you olfactorily: an experience of air passing through the nostrils. It's an experience the phenomenal character of which cannot be fully specified without mentioning the odour: an experience of air bearing a vanillary odour passing through the nostrils, say. Take now the olfactory experience. This is not the experience you would have if you were to strip away the tactile component: an experience of olfactory qualities alone. It, in turn, is an experience the conscious character of which can't be fully specified without mentioning the air that bears the qualities (or rather, the air that bears the odour that has the qualities) seeming to pass up the nostrils. This olfactory experience itself, and not merely the tactile experience that accompanies it, will be exteroceptive.

So, we need not accept the conjunctive view upon which the objection relies. Furthermore, there is reason to think that a non-conjunctive view of experience leads to difficulties in understanding olfaction. Consider what's being said of what, on a conjunctive view, is olfactory experience *proper*— experience just of the olfactory qualities, stripped of all else. The problem with this, and thus with the conjunctive view, is that it's very difficult to understand what our experience of the olfactory qualities, on this view, is supposed to be like. The problem here is not just that we never (normally) have the supposedly 'pure' olfactory experience and thus find it difficult to imagine. The point, instead, is that there don't seem to be any plausible options for a conjunctivist account of purely olfactory experience. The conjunctivist might say that the qualities, such as vanillariness, are just qualities of experience, or that they are experienced as qualities of the perceiver's *nose*. A. D. Smith thinks that gustatory experiences, such as experiences of sweetness or mintiness are also non-exteroceptive. He thinks that flavours are 'in the mouth' in the same way that odours are in the nose. But he sees the need to qualify this. He writes: 'it is not that your mouth tastes minty, in the sense in which we say that a mint does' (2002, p. 139). But in what respect then, does your mouth appear minty, or your nose vanillary? If one's nose, or one's experiences are supposed to be the bearers of the olfactory qualities in some other way than having the qualities in the way that an odour has them, then we need an account of what this way is. Without one, provided we accept a conjunctive view of experience, the claim that olfactory qualities are attributed in olfactory experience to these things is left mysterious.

Let's recap, briefly. A natural-seeming objection to the model of exteroceptivity that I've suggested is appropriate to olfaction is that the exteroceptivity, in that model, is all tactile. It seeming that the air (that bears the odour) is brought in from without when sniffing is a tactile experience, and the olfactory experience of the vanillary odour remains, itself, non-exteroceptive. I've argued that this natural-seeming objection relies on substantive commitments in need of defence, commitments about how the senses are distinguished from one another, and how one's overall experience is composed out of its modality-specific parts. Thus this objection is far from decisive. Given this, we have also deflated a reason for thinking that on the model of olfactory exteroceptivity being offered, odours

seeming to be external to the body requires that one has the belief that they are. In the next and final section I consider one last objection to the model. Doing so will allow us to end by saying something of a more positive nature about the spatial character of olfactory experience.

## 7 Other, non-visual, exteroceptive experience

There are other kinds of experience that are spatially similar to olfaction, but do not involve anything seeming to be brought into the body by sniffing, and yet which are also exteroceptive. The (as we usually think of it) tactile perception of ambient temperature is a good example of this. When I perceive the warmth of the air in the room around me, I do not perceive anything at a distance from me, and need not perceive it at as being in any direction from me, either. Yet perception of ambient temperature is still exteroceptive, though in this case warm air isn't, and doesn't seem to be brought to my body by anything equivalent to sniffing. Given this, one might wonder whether the appeal to sniffing made in this paper is really necessary. Perhaps, indeed, I have the order of explanation the wrong way round: could it not be that we seem to bring odours in from without when sniffing because olfactory experience is already, and brutally exteroceptive?

One response to this objection is to deny that the exteroceptivity of the experience of ambient temperature (or thermal perception) is just a brute fact. The force of the appeal to the exteroceptivity of thermal perception is supposed to be that it is brute, and that therefore there is no reason to think that sniffing, or indeed anything else, explains the exteroceptivity of olfaction. But if the exteroceptivity of thermal perception is *also* explained in other terms, this move is blocked. Of course, explaining the exteroceptivity of thermal perception is something that would have to be done elsewhere—on A. D. Smith's view, it is to be explained by our awareness of our movements in relation to areas of warm and cool (2002, p. 143). Furthermore, though perceptual experience of ambient temperature and olfactory experience are spatially *similar* there are also spatial differences between the two, and the explanation offered here for the phenomenal exteroceptivity of olfaction accounts for these differences. To see this, we'll look first at the spatial similarities between smell and thermal perception, before turning to their dissimilarities.

It seems right to say, as Mohan Matthen does, that 'every odour of which I'm aware is simply *here*' (Matthen 2005, p. 284, my italics). Likewise, Batty writes: 'olfactory properties are presented 'out there' or 'around me'' (2010b, p. 112). Odours seem to be 'simply here' or 'around me' in that olfactory experience represents spatial location only very indeterminately. The odours one perceives seem to be spatially located in one's vicinity, but one's vicinity is not an area of determinate shape or extent. Likewise for some thermal perceptual experience. When I feel the warmth of the air around me on my skin, it seems as if the air is warm not merely in some narrow layer on the surface of my skin, but, more generally, 'around here', in the vicinity of my body, where this vicinity is an area of indeterminate extent.

Bear in mind that whilst I've denied that olfactory qualities are located in the nose in whatever way one might think that pains or itches are located there, this is



not yet to deny that odours seem to be in the nose in something like the innocent way in which a pebble seems to be in the hand. As we saw earlier, in Sect. 3, one could hold that olfactory experience is exteroceptive, and that odours seem to be in the nose in this way. But it ought to be clear now, if it was not clear earlier, that the spatial character of olfactory experience is not determinate enough to represent an odour as being located *just* in the nose. As we have said, odours, like regions of ambient warmth (or cool) seem to be located very indeterminately, ‘around here’. This is inconsistent with their seeming to have a location as precise as that of the nose. Nevertheless there is one thing that you might mean by saying that odours are in the nose (in this ‘innocent’ way), that seems to be true. And it’s in this respect that the spatial character of olfactory experience is different to that of thermal perceptual experience. Whilst odours and regions of ambient warmth both seem to be ‘around here’, odours seem to be in the vicinity, specifically, *of the nose*. The explanation offered here for the exteroceptivity of olfaction accounts for the fact that it’s in the vicinity of the nose, and not just of the body in general, that odours seem to be located. For it’s precisely into the *nose* that odours seem to be brought by sniffing, and not just to the body more generally. So, the fact that thermal perceptual experience is exteroceptive, and yet does not involve one’s seeming to sniff (or anything analogous) is not a threat to the model of olfactory exteroceptivity being offered. For one, there’s no particular reason to think that thermal exteroceptivity is just a brute fact—A. D. Smith has offered one account of what it involves. Furthermore, there are spatial differences between olfactory and thermal experience that the model of olfactory exteroceptivity I’ve offered can explain.

An important feature of this model of olfactory exteroceptivity is that it is one on which exteroceptivity and the representation of distance and direction come apart. Thus whilst *visual* experience is exteroceptive in that things seem to be at distances and in directions from one’s body when one sees them, it is not the case that, in general, *perceptual* experience as of things at distances and directions is necessary for those things to seem to be independent of one’s body. The exteroceptivity of thermal perception does not involve sniffing, but it, also, is exteroceptive whilst not involving the representation of distance and direction. So whilst the objection considered in this section does not go through, it reminds us that there are senses other than olfaction for which a visual model of exteroceptivity is inappropriate.

In Sect. 4 I offered a diagnosis of the appeal of the philosophically orthodox view that olfaction is non-exteroceptive in visuocentric thinking, and in particular, a visual model of exteroceptivity. The absence of an alternative model, appropriate to olfaction, was, I suggested, an obstacle to overturning this visuocentricism. According to the model of olfactory exteroceptivity for which I’ve argued here, odours seem external to our bodies in that they seem to be brought into the nose by sniffing. Thus olfaction differs from vision in the way in which it achieves exteroceptivity, but is like vision in being exteroceptive. I’ve considered some natural-seeming objections to the model and argued that they rely on substantive views—about individuating the senses, and the relationship between experiences in different modalities—that are in need of defence. There is of course much more to say about these issues than I have been able to say here. But thinking about them, too, will require taking care more care over the differences and similarities between

perceptual experience in our different senses than a visuocentric philosophy of perception allows us to do.

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