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# GRIEF, SMELL AND THE OLFACTORY AIR OF A PERSON

BY

BECKY MILLAR  AND LOUISE RICHARDSON 

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**Abstract:** Philosophical research into olfaction often focuses on its limitations. We explore instead an underappreciated capacity of the sense of smell, namely, its role in interpersonal experience. To illustrate this, we examine how smell can enable continuing connections to deceased loved ones. Understanding this phenomenon requires an appreciation of, first, how olfaction's limitations can facilitate experiences of the deceased person and, second, how olfaction enables experiences of what we refer to as the 'olfactory air' of a person. This way of experiencing someone privileges their status as an environmentally situated human animal.

## 1. Introduction

Many who have suffered a bereavement report smelling the possessions, clothes, pillows and perfumes of their deceased loved one in order to feel a sense of continued connection to them. The prevalence of these smell-related experiences and behaviours suggests that smell is well suited to making us feel close to a person who has died. It is puzzling, however, that the sense of smell should play this role. This sensory modality is often taken to be relatively unimportant and limited in the roles it can play for us, especially when compared with senses such as sight and hearing. This might be thought to be supported by the majority philosophical opinion that the sense of smell is representationally impoverished, allowing, for example, only for the experience of *odours* and their *olfactory*

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*properties*.<sup>1</sup> In this paper, we suggest that the sense of smell is however particularly well placed to provide a sense of closeness to the dead and in part because of its representational limitations. The explanation we give of the capacity of smell to provide this sense of closeness does not require us to deny that odours are the primary object of olfactory experience, nor to embrace an implausibly inflated account of the properties that olfactory experience can represent. On the contrary, we suggest that it is partly because smelling the smell of another person, even in life, is (at least in the first instance) an experience of an olfactory quality of an odour that we can have the same experience after that person's death. Furthermore, we argue that the sense of smell also allows for the experience of what we shall call a person's 'olfactory air' – an overlooked way of experiencing another person that privileges their bodily and environmentally situated nature. This kind of person experience, and thus, the role of olfaction in interpersonal cognition, has been obscured by the widespread assumption that knowing and experiencing other people is a matter of understanding their mental lives.

This is how we shall proceed. In Section 2, we begin by describing the *prima facie* tension between widely accepted limits of the sense of smell and our example of the role that smell plays in interpersonal cognition – namely, in enabling continuing connections with deceased loved ones. In Section 3, we explore the extent to which this phenomenon can be explained by appealing to odour-evoked memory experiences. We argue that whilst this may explain *some* olfactory experiences of continuing bonds with the dead, there are others that are not naturally explained in this way. In Section 4, we explore how we can come to have perceptual experiences of the smell of particular people, which can be veridical even following their death. Section 5 draws upon a comparison with portraits to argue that these olfactory experiences can also contribute to a more overarching experience of another person: their 'olfactory air'.

## 2. *The role of smell in grief*

Much has been made of the limitations of the sense of smell, with philosophical research exploring the ways in which olfactory experience is impoverished in comparison with vision. For example, many philosophers take olfactory experience to be aspatial or at least to possess very minimal

<sup>1</sup>According to some, even this is an overstatement of the smell's representational capacity (see, e.g., Barwich, 2014; Keller, 2016). For the purposes of this paper, we take the capacity of smell to represent worldly properties as a fixed point. For defence of this position (in light of inter- and intra-subjective variation), see, for example, Batty (2009) and Martina (2021).

spatial content (e.g., Batty, 2014; Carvalho, 2014; Lycan, 2000; Matthen, 2005; Wilson & Stevenson, 2006).<sup>2</sup> Moreover, the sense of smell is often taken to – at least in the first instance – only allow for the perception of odours, olfactory particulars distinct from their sources, rather than allowing the perception of those sources (e.g., see Batty, 2010; Lycan, 1996; Richardson, 2013; Young, 2016, 2020). According to this ‘odour view’, taking odours to be the immediate objects of smell perception provides the best account of olfactory accuracy conditions, for example, because smell is well attuned to the presence and absence of odours, but not to the presence and absence of ordinary objects like roses and rubbish bins. Whilst some are willing to allow for the possibility that smell in some more indirect sense represents sources (e.g., Lycan, 1996; Roberts, 2016), others maintain that smell *only* represents odours and the properties of odours (e.g., Cavedon-Taylor, 2018).

As, on such views, the content of olfactory experience is much more restricted than that of other senses, it is perhaps unsurprising that the sense of smell is also often treated, either explicitly or by omission, as comparatively limited in the roles it can play.<sup>3</sup> Of particular relevance to us here is the fact that it is not typically mentioned in philosophical discussions of our knowledge and experience of other people.

But the idea of smell being very limited in its role in our lives sits ill with descriptions of using smell in order to feel close to someone who has died. Consider the following passage from Juliet Rosenfeld’s (2020) autobiographical account of the loss of her husband, which recounts how in the early days of her grief, she would sit in the wardrobe and inhale the smell of two of his unwashed shirts:

I would gently shake one of them off the hanger from my position below it and sniff deeply. I rotated the two of them strictly so as to not run out of the smell in either of them. I would then strip off my pyjama top to put the shirt on and pull the collar up so it touched the base of my skull, rubbing my head on it. Did I lick them? Yes, I think I might have done on occasion. I know I often kissed the fabric, rubbed it on my face. On his collar was his aftershave, on the armpits, his safe clean scent, and on the cuffs more of it, a little greying on one of them, the dark patch from his Lamy ballpoint on the other. The wardrobe door had to be shut to stop his smell escaping while I sat inside. If it was left open I shut it immediately. The smell would be wasted! [...] I did not, at the time, see the relationship I had with the two shirts as at all odd or abnormal. On the contrary, I saw it as a preservation of him, a duty, a way of keeping him with me. (pp. 32–33)

<sup>2</sup>A notable exception is Aasen (2019), according to which distance and direction are represented in some olfactory experiences.

<sup>3</sup>Beyond philosophy, Broca, Darwin and Freud provide prominent examples of explicitly denying smell significant roles in human life (Roberts *et al.*, 2020, pp. 1–2; Shiner, 2020, p. 81). Within philosophy, smell is rarely mentioned in discussions of the epistemological role of perceptual experience, and until recently (e.g., Brozzo, 2020; Shiner, 2020), it was often said to be of at best minimal aesthetic or artistic significance.

For Rosenfeld, smelling her late husband's shirts helped her to maintain a connection with him. Other first-person accounts we collected as part of an online survey of grief experiences are consonant with Rosenfeld's descriptions.<sup>4</sup> When respondents were asked 'Since the person died, is there anything that you have been doing in order to feel close to them?', many described engaging in olfactory activities. The most common smell-related themes within these testimonies were the following. (a) Some reported smelling the clothes or pillows of the deceased, as in the excerpt from Rosenfeld's memoir above. For example, one respondent says, 'When he died I kept his cotton shirts to make a memory quilt that I could wrap around myself, snuggle and smell his smell' (#85). (b) Second, some talked about smelling the loved one's perfume or aftershave, for example, 'I still have his aftershave and so I smell it from time to time. It was a scent he used for many years and just conjures him up. It brings me warmth and comfort to smell it' (#79). (c) Finally, others who did not explicitly reference the sense of smell still highlighted activities that very likely have an olfactory component, such as wearing their loved one's clothes: 'I still have his pillowcases on' (#36); 'At the beginning I used to wear odd clothes jumpers etc' (#117).<sup>5</sup> According to the influential model of grief known as the 'continuing bonds' framework, rather than healthy grief requiring detachment from the deceased, it very often involves some kind of continued relationship or connection with the dead (e.g., see Klass *et al.*, 1996).<sup>6</sup> For this reason, we refer to the olfactory experiences that enable feelings of closeness to the dead as *olfactory continuing bonds experiences*.

On the face of it, there is a tension between the occurrence of olfactory continuing bonds experiences and majority philosophical opinion about olfactory content as representing only odours and their olfactory qualities. How would an experience of an odour – a particular in the air – and its olfactory qualities make for a continued connection to a person? It might seem that in order to resolve this tension, we would need to adopt one of two

<sup>4</sup>The survey was designed and conducted in 2020–2021, as part of the project 'Grief: A Study of Human Emotional Experience' at the University of York. Participants were invited to provide open-ended, free-text responses to 21 questions concerning their past or current experience of grief. Two hundred and sixty-five responses were received in total. For full details, see Millar *et al.* (2022). We make use of these responses in this paper as examples of the phenomenon with which we are concerned and do not claim to be offering any quantitative or qualitative analysis of the survey data.

<sup>5</sup>Though they were not mentioned by survey respondents, it seems likely that there are other contexts in which such experiences are sought: For example, one might seek closeness to a loved one by smelling the air in their undisturbed bedroom. Thank you to an anonymous reviewer for this suggestion and to Dave Ingram for pointing out that the main character in the 2022 film *The Whale* does just this.

<sup>6</sup>This model is widely accepted among psychologists and has also been endorsed by various philosophers of grief (e.g., Cholbi, 2018; Higgins, 2013; Norlock, 2017).

options.<sup>7</sup> We might (A) deny that apparent olfactory continuing bonds experiences are olfactory, thus resisting the idea that the sense of smell plays a hitherto neglected role in interpersonal cognition. Alternatively, we might (B) adopt a controversially liberal account of the content of olfactory experience. Such an account would be one on which – in opposition to philosophical orthodoxy – we can olfactorily represent particular people, and not merely odours and their properties. Option B might instead (or also) involve an account on which we olfactorily represent odours as having implausibly ‘high-level’ properties, such as the property of having been produced by a particular person or even the property of having been produced by someone to whom one is close.<sup>8</sup> We consider Option A in the next section and Option B in Sections 4 and 5, ultimately proposing that we need not go down either route.

### 3. *Odour-evoked memory*

Smell is, as Ann-Sophie Barwich (2020) puts it, married to memory in popular imagination (p. 123). Poets and other authors have frequently highlighted the capacity of odours to evoke experiences of the past. This phenomenon has come to be known as the ‘Proust effect’, after Proust’s lengthy description of such an experience in *Swann’s Way*, the first volume of *Remembrance of Things Past*. However, as Avery Gilbert (2014) points out, the effect had been noted by others, including Edgar Allen Poe and Nathaniel Hawthorne, long before Proust drew attention to it (pp. 192–193).<sup>9</sup>

We might then hope to resolve the tension described above by arguing that so-called olfactory continuing bonds experiences are in fact experiential memories of the person or events involving them, brought about by, but not identical to, olfactory experiences.<sup>10</sup> This seems a particularly promising way in which to pursue Option A (denying that olfactory continuing bonds

<sup>7</sup>Might a third plausible option be, as suggested by an anonymous reviewer, that olfactory experiences consist in smelling the unique biological composition of someone’s odour? We think not. For one thing, this is not obviously distinct from Option B, as it is unclear – in the absence of further argument – whether it could be defended without commitment to high-level olfactory content. But in addition, whilst we agree that odorants with biological origins play an important role in constituting the smell of a person, we do not, especially given the frequency with which perfume was mentioned in our testimonies, want to exclude olfactory qualities with other origins from the personal smell that can yield a sense of closeness to someone who has died.

<sup>8</sup>For representative discussion in the case of visual experience, see Siegel (2006) and Bayne (2009). On Bayne’s view, strictly speaking, it is *content* rather than *properties* that is either low or high level.

<sup>9</sup>Proust describes an example of the evocative power of *tasting* (a mixture of lime [linden] flower tea and madeleine crumbs) rather than *smelling*.

<sup>10</sup>As we are interested in whether certain *conscious experiences* are to be understood as memories, it is explicit (or declarative) memory with which we are concerned in this section, as opposed to implicit (or nondeclarative) memory. More specifically, the proposal under consideration is whether olfactory continuing bonds experiences are *episodic* memories.

experiences are olfactory), due to the content and character of memories produced in this way. For example, it has been argued that odour-evoked memories are typically 'significantly more emotional than memories triggered by any other sensory cue', including music (Herz, 2011, p. 270, although see Larsson & Willander, 2009, p. 320). There is also (and arguably 'more stable') evidence that they are accompanied by a 'stronger' feeling of being brought back in time (Larsson & Willander, 2009, p. 321) than memories triggered by verbal or visual cues. If this is right, then we can see why odour-evoked memories would be especially fit to make a subject feel close to the person who has died: Such memories may be more likely than those generated in other ways to have emotional and transportive aspects.<sup>11</sup>

And indeed, some of our survey participants do mention memory when they describe using odour to feel close to their deceased loved one, typically when perfume or aftershave is involved.

I have some of his favourite aftershave he frequently wore and sometimes I like to sniff it. It immediately transports me back to happier times and happy memories, this does not upset me but rather comforts me. (#85)

I also like to smell the aftershave(s), even deodorant he used because it brings back strong memories of him. (#180)

I have a bottle of his favourite aftershave, the smell of which reminds me of us going for an evening out. (#61)

One difference between these cases and odour-evoked memory as it occurs in typical discussions of the phenomenon is that what our survey participants describe is *deliberately* evoking the memory of the person by smelling the aftershave. Typically, odour-evoked memory is presented as occurring in contexts in which the memory is an unexpected effect of the odour, taking the subject by surprise. But this difference does not disqualify the cases from being ones of odour-evoked memory: Grieving subjects who make use of smell in this way can be seen as deliberately harnessing an effect that is still, once set in motion, out of their control. The generation or retrieval of the memory is caused by the odour with no further action required or the subject's behalf.

Another apparent difference is that odour-evoked memory seems typically to be thought of as episodic memory, which is to say, experience in which a specific episode from one's past is recalled. For example, Herz (2011)

<sup>11</sup>However, Larsson and Willander (2009) report that ratings of emotionality and being brought back in time were lower 'when participants were aware of the odor's identity' (p. 322), as of course subjects are when they deliberately make use of a smell to feel close to someone who has died.

defines the phenomenon as one in which an ‘odor triggers the recollection of a specific episodic event from one’s past’ (p. 265). And, Theresa White is quoted by Barwich (2020) thus: ‘When people say it’s the best sense for memory, I think what they’re trying to indicate is its episodic nature. That feeling of actually being back in the experience’ (p. 129). However, none of the three first-person accounts above explicitly mention particular episodes. Rather, they describe *multiple* memories (‘happy memories’) or the memory of a *type* of event (‘going for an evening out’) or just remembering *the person* (‘memories of him’). Does this exclude these from being cases of odour-evoked memory? One reason for answering ‘not’ is that it may be a mistake to define the phenomenon so narrowly, at least if one wants it to capture all the ways in which odours are good at generating experiences of the past. That this is not always a matter of episodic memory is not only evident from the testimonies included above. For example, in Avery Gilbert’s (2014) discussion of the phenomenon are examples of the odours that remind one of ‘a score of dead summers’ (p. 193) or ‘many springtimes’ (p. 194). And in Waskul *et al.*’s (2009) questionnaire study, respondents’ descriptions of the relationship between their favourite odours and their past also mentioned types of event (‘doing laundry’), life stages (childhood) and people (mothers and grandmothers).

However, most of our respondents who report using smell to feel close to the person who has died do not mention memory at all. Instead, these reports describe feeling close by smelling the smell of the person or the person themselves:

I did wear some of her clothes on occasion wanting to smell her. (#133)

I used to hug his coat every time I came home from somewhere and breathe in his smell. (#127)

I wear his jumpers and socks because I can still smell him then. (#82)

So, whilst *some* olfactory continuing bonds experiences might be explained as experiential memories triggered by smelling (at least if we are willing to understand odour-evoked memory more expansively than is usually the case), it is not on the face of it plausible that *all* their experiences can be explained in this way.<sup>12</sup> At least, it is worth considering whether some olfactory continuing bonds experiences might be explained in another way.

<sup>12</sup>Another reason for scepticism that all olfactory continuing bonds experiences are odour-evoked memories is that bereaved subjects sometimes describe remembering their deceased loved one as making them feel painfully absent rather than evoking a sense of closeness. See Debus and Richardson (2022).



#### 4. *Perceiving the smell of a person*

In Section 2, we saw that it might seem that in order to accommodate olfactory continuing bonds experiences, we must either (A) deny that apparent olfactory continuing bonds experiences are olfactory or (B) adopt a controversially liberal account of the content of olfactory experience on which it represents either people or at least high-level properties of odours. In the previous section, we argued against a plausible version of Option A. In this section, we will argue that we can take some olfactory continuing bonds experiences to be olfactory perceptual experiences whilst avoiding Option B. That is, we give an account of smelling ‘the smell of a person’ that does not commit us to olfactory perception of odour sources or to high-level olfactory content.

To begin with, let us consider what the smell of a person is. That is, when we have an experience that we would find natural to describe as the smell of a person, what in the world is it that we are smelling? We are taking it for granted that the particular with which we are in olfactory contact (most directly, anyway) will be an odour. This odour will be or supervene on a cloud of molecules that will be related to the person in various ways, when the person is the source of the odour.<sup>13</sup> For example, some of what constitutes the cloud will be the result of the person’s bodily secretions – especially those of sebaceous and apocrine glands – as well as the bacteria that live on the skin (e.g., Natsch & Emter, 2020). However, the smell of a person, or ‘how that person smells’, often outstrips such biological odorants. Some components of the odour that has this olfactory quality might be the result of a person’s habitual activities and the places they frequent: odorants associated with tobacco smoke, cleaning products, cooking or gardening, for example. Third, there may be odorants associated with their clothing such as leather, wool or fabric softener. And fourth, some components of the cloud of molecules may be the result of scented substances applied more or less intentionally: perfume or aftershave of course, but also shampoo, soap, toothpaste or sun cream. As Roberts *et al.* (2020) put it, the populations of many Western and/or industrialised societies are ‘deodorized-reodorized’ (p. 4) to such an extent that such applied odiferous substances may contribute more to how they smell than do biological odorants. That the smells of such substances can become an aspect of how someone smells to those close to them shows up in the testimonies of grieving subjects, but also in the fact that young children recognise not only their mother’s biological odours but also her perfume (Schaal *et al.*, 2020, p. 4).

<sup>13</sup>The position defended here is neutral on whether odours are to be identified with clouds or plumes of molecules (see Young, 2016, 2020) or whether (see Richardson, 2018) odours merely supervene on such clouds.



In a sense then, the smell of a person is a complex affair – it is related to a potentially very varied mixture of molecules, and it is also a blend of the natural and the artificial, the intentional and the unintentional. Furthermore, it seems likely that it is something that we have to learn to single out and recognise as a person's smell. That is because the capacity to single out someone's smell in a way that enables you to recognise it as theirs is restricted to those with whom you are familiar. Whilst you may be able to connect an odour to an unfamiliar person by non-olfactory means if, for example, they are the only person on the bus or you can see them smoking, it is only the quality of the odour produced by those with whom we have some level of intimacy that we are able to experience in a way that would immediately elicit the description 'John's smell', or 'the way John smells'.

Note however that though we are using the locutions such as 'the smell of a person' or 'the way John smells', there is no reason to think that this olfactory quality is something we olfactorily represent as possessed by a person rather than an odour. Furthermore, the potential chemical and aetiological complexity of the odour that bears this quality and the role of learning in our ability to single it out is also no obstacle to thinking that it can be represented in olfactory experience without this content being implausibly high level. For this is how we stand with respect to most if not all properties that we are happy to think of as represented olfactorily such as coffee smell or rose smell. Outside of laboratory settings, we rarely encounter pure odorants: quantities of a single molecule type that smell some way to us. Instead, the molecule clouds we encounter (such as that given off by coffee or roses) are mixtures, often with a very large number of types of component molecule at different concentrations.<sup>14</sup> When we encounter such a mixture a few times, a template is stored, which makes it possible for us to pick up on that mixture again, and even in the absence of some components (Batty, 2014; Wilson & Stevenson, 2006, 2007). That the smell of a person is chemically complex and requires learning to single out does not then make it at all unusual: This is true of most of what we encounter olfactorily and already accept that we can olfactorily perceive. The low-level/high-level property distinction in olfaction is not to be made on the basis of chemical complexity or a role for learning on pain of counting most or all olfactory content as high level.

One more plausible way to identify high-level properties for a modality would be in contrast to observability.<sup>15</sup> Preliminarily, let us say that

<sup>14</sup>See Young *et al.* (2014, sect. 2) for a discussion of the molecular complexity of typical odours in the context of assessing the prospects of creating an olfactory quality space. For discussion of how we may experience these kinds of chemical mixtures in a holistic manner, allowing for perceptual stability amid variation in their precise features, see, for example, Carvalho (2014), Young (2016) and Millar (2019).

<sup>15</sup>Another and for our purposes here unhelpful way to distinguish high- from low-level properties is to take the latter to be 'the ones standardly taken to be' represented by experience in a modality (Siegel, 2006, p. 482).

observational properties in the case of sight are those one can – all being normal with viewing conditions and the perceiver's perceptual equipment – 'tell by looking' are instantiated, such as something's colour or shape in contrast to, for example, natural-kind properties such as being a panda or a pine tree. For low-level properties such as redness or sphericity, there is, as Martin (2010) puts it, 'a necessary coincidence between having the look of that property and having that property' (p. 206). In contrast, even to unimpaired perceivers in normal viewing conditions, something can look to be a panda and not be one, because there could be a perfect visual duplicate of a panda that is not a panda. Hence, being a panda is a non-observational and thus high-level property (and it is of course up for grabs whether it can be visually represented). Due to the role of learning in smell, observability is likely relative to subjects: What you and I can each typically tell by smelling, all being normal, will vary depending upon what we have learned to smell. Nevertheless, once one has learned to smell coffee smell or the smell of John, such properties can be thought of as for you observational: If all is normal with you and the world in relevant ways, then you can tell by smelling if something has that quality. 'The smell of John' then can, for the right perceiver, be an observational and not a high-level property.

Accepting that the coffee smell or the smell of John are observational properties does require thinking of them as individuated qualitatively.<sup>16</sup> By this, we mean that, for example, rose smell is to be thought of as an olfactory property that can be had by qualitatively similar odours produced both by roses and by things that are not roses, such as a rose-scented candle. The property that we might call 'actual rose smell', which would only be had by an odour produced by roses, is clearly non-observational: It is not the case that, all being normal, we can tell by smelling that something has that property. This qualitative construal of olfactory qualities is not objectionable because it reflects how we usually think of smells. However else they differ, Chanel No. 5 and an excellent fake have the *same smell* (Martin, 2010, p. 187).

We suggest then that some olfactory continuing bonds experiences are not experiential memories (or any other non-perceptual experience) merely caused by olfactory experiences, but rather perceptual experiences of someone's smell, and that accepting this does not require accepting that olfactory experience represents people rather than odours, nor that it represents odours as having high-level properties. Even some of the cases involving perfume or aftershave could be understood in this way. If a subject has learned to experience the smell of a person, then they will have a template encoding the mixture of molecules that makes up the relevant cloud of molecules. One feature of template matching as a perceptual mechanism is that it allows for

<sup>16</sup>This is consistent with, but does not commit us to, a physicalist view of olfactory properties on which they are disjunctive types of chemical property. See Richardson (2021).

‘reintegration’ of a molecular mixture – the recovery of the whole from a part or parts.<sup>17</sup> A person’s perfume might be part of this mixture and responsible for some part of the template that encodes the person’s smell. Thus, when they sniff the perfume, they might experience not only the perfume but also the more complex smell of the person of which it is part.<sup>18</sup>

Thus far, in this section, we have argued that we can understand the smell of a person as an olfactory quality of an odour rather than a person and that we need not think of this quality as ‘high level’. If this is right, then we do not need to adopt a controversially liberal account of the content of olfactory experience in order to understand olfactory continuing bonds experience (Option B). We end this section by proposing that far from being an obstacle to smell facilitating or constituting a continuing bond, on the ‘odour view’ (on which what we – at least in the first instance – smell are odours rather than their sources), olfactory experience is actually especially well placed to preserve a sense of closeness to the person.

First, if the odour view is correct, then all one was ever able to smell of a person, directly, was their odour. Thus, as far as olfaction alone is concerned, one’s relation to the dead can be as it always was: One has an experience of an odour that really is there in one’s environment (or at least, some ‘components’ of it are), just as one did when the person was alive. Furthermore, not only can the post-bereavement experience constitute genuine perceptual contact with an odour, but it can also represent its olfactory quality – the smell of a particular person – accurately. This distinguishes this kind of olfactory continuing bonds experience from another, common, kind of perceptual experience that occurs during grief and is also associated with continuing bonds, namely, ‘sensed presence’ experiences, sometimes called ‘bereavement hallucinations’. Such experiences of the presence of the dead are, unlike the olfactory continuing bonds experiences we are considering, typically non-veridical.<sup>19</sup>

Second, an odour produced by a person – unlike their look, feel or a sound they have made – is something that very plausibly they can quite literally leave behind them to be perceived when they are gone. In perfumery, the ‘sillage’ of a perfume is the degree to which it lingers in the air when worn. Particularly high sillage perfumes can be smelled in a room long after the

<sup>17</sup>This can also be understood as a kind of amodal completion. See Young and Nanay (2022) and Millar (2019).

<sup>18</sup>Such a case may be said to involve memory, in that it depends on the use of stored information. This role of *implicit* memory in olfactory perceptual processing does not however provide any support to the idea that olfactory continuing bonds experiences are odour-evoked memories in the sense of experiential memories caused by olfaction.

<sup>19</sup>For discussions and analyses of sensed presence experiences, see, for example, Castelnovo *et al.* (2015), Ratcliffe (2021), Millar (2021), Rees (1971, 1975) and Steffen and Coyle (2017). In noting that sensed presence experiences are typically non-veridical, we do not suggest that they are abnormal or pathological. Research into continuing bonds emphasises that these experiences are often normal, healthy and adaptive for the bereaved (e.g., Klass *et al.*, 1996).

wearer has left or at some distance from their current location. Whilst *sillage* is used to describe a feature of perfumes, it is not only in virtue of the perfumes we wear that we leave odours behind us in space and time, most frequently by leaving our traces on things that have been in close contact with us such as clothes or bedding.

Arguably, these two features are distinctive to the sense of smell. Hence, olfactory continuing bonds experiences provide a case in which smell, far from being comparatively limited, is especially well placed to play a significant role for us. Even if we accept that we can literally perceive an absent person by seeing their image or hearing a recording of their voice, these ‘person experiences’ are quite different to those we would typically have by sight and audition in their presence.<sup>20</sup> For instance, the experience that you might have of someone when looking at their image in a photograph or listening to their voice on an answering service does not refer to your current surroundings; these sights and sounds are thus decontextualised in a way that the smell of the other person is not. The odour that carries this smell is represented as being there in the space around the perceiver. Additionally, we owe these visual and auditory phenomena to (as poet Linda Pastan puts it) ‘the accidental mercy of machines’, without which we cannot leave behind our look or sound.<sup>21,22</sup>

Of course, not all cases of using smell to feel close to a person who has died (and other than those involving odour-evoked memory) will involve smelling an odour that was in fact left behind by the person, or left behind in quite the same way. Subjects might in principle smell an odour qualitatively indistinguishable from one that might have been left behind by their loved one and still experience a sense of closeness. However, this does not undermine the claim that olfactory continuing bonds experiences do not misrepresent. For one thing, as we have said, we should think of olfactory qualities such as ‘the smell of John’ as had by odours that John left behind *and* other qualitatively indistinguishable odours too. And, whilst an experience of an odour qualitatively indistinguishable to one left behind by a person would misrepresent if it represented the presence of the source of the odour or its causal history, it is no commitment of ours that such things figure in olfactory content.

<sup>20</sup>According to Martin (2012), audio recording allows us to hear the same sounds that were present in the past, at the time of recording. Kendall Walton (1984) has argued that when we see a photograph, we see the objects photographed. Whilst we have argued here that smell is especially well placed to provide for feelings of closeness, we do not want to rule out that more could be said about how, under certain conditions, hearing someone’s voice might also generate such feelings.

<sup>21</sup>For Pastan’s poem ‘The Answering Machine’, see <https://www.poetryfoundation.org/poetrymagazine/poems/40937/the-answering-machine-56d21ee37d0ad>.

<sup>22</sup>This is not to deny that the odour of a person will likely dissipate and thus the experience of the smell of a person diminish over time, something which the bereaved subject may well experience as a further loss.

Thus far, we have argued that though some olfactory continuing bonds experiences might be memories caused by olfaction, some others are perceptual phenomena and that this does not commit us to an implausibly liberal account of olfactory content. Hence, Options A and B are not exhaustive. However, a worry remains. It seems plausible that what is most valued by at least some subjects reporting olfactory continuing bonds experiences is something that goes beyond an experience of an olfactory quality – the smell of a person – of an odour. The question answered by our survey respondents asked about what they do to feel *close* to the person who has died. This suggests that the experience reported involves a feeling of *closeness* and also that this feeling does take, in some way, *the person* as its object. One might think that we are then committed to an inflated account of olfactory content after all: If the person is represented, then the odour view – at least if it allows that *only* odours are represented – would be false. And, were we to accept that ‘closeness’ in the relevant sense were represented olfactorily, then we would be committed to accepting that such content can extend to the richly affective and relational: kinds of content that might seem out of olfaction’s reach.<sup>23</sup> We respond to this worry in the next section by arguing that another reason why the sense of smell is suited to providing continuing bonds experiences is that olfactory experience is also prone to partly constitute a more encompassing experience of another person.

### 5. *The olfactory air of a person*

Research into portraiture and the expressive power of visual images has highlighted that it is possible for such phenomena to capture what has been referred to as the ‘air’ of a person – something important about the person’s nature (Barthes, 1981; Freeland, 2010). We argue that something analogous applies to the olfactory case, but rather than smell enabling an experience, or understanding, of another’s mental life, it is especially apt for capturing one’s status as a particular, environmentally situated, human animal. We refer to this as the ‘olfactory air’ of a person and take it to be an important albeit neglected aspect of the identity of a person. In this way, the sense of smell is especially good at putting you in touch with an important facet of *who someone is*.

It is helpful to begin with a visual analogue of what we have in mind. In his *Camera Lucida* (1981), Roland Barthes discusses the capacity of photography to capture the nature of a loved one. Looking through photographs of

<sup>23</sup>Whilst there are views on which olfactory perceptual experience has an affective dimension (e.g., Skrzypulec’s, 2023, ‘olfactory evaluativism’), they are intended to capture sensory pleasure and displeasure and thus seem unlikely to accommodate the richer emotional experience of feeling close to someone. As an anonymous reviewer pointed out, it is an interesting empirical question whether an olfactory experience of something one found unpleasant could constitute an olfactory continuing bond.

his deceased mother, he finally finds a blurry photo of her as a child that captures what he refers to as her ‘air’ – a supposedly unanalysable quality that causes him to cry out, ‘There she is!’ (p. 99; p. 109).<sup>24</sup> For Barthes, this photograph more than any other conveyed the ‘real her’. Drawing upon this idea, Cynthia Freeland explores how a portrait might manifest the ‘air’ of its subject.<sup>25</sup> According to Freeland (2010), ‘portraiture in general is thought to have originated in the desire to preserve likenesses of the dead’ (p. 46). And, as she notes, portraits are often used in funerals and memorial events because ‘they sustain our connections with people, offering up a kind of immortality and contact with loved ones when they are absent’ (p. 43).

Portraits, obviously, depict or represent people (and sometimes non-human animals). But they also, according to Freeland (2010), can have a ‘manifestation’ function, which ‘supplies the viewer with a sense of contact with the represented subject’ (p. 48). What is manifested in such portraits is the ‘air’ of the person. Whilst Barthes suggests that the notion of a person’s ‘air’ is unanalysable, he adds that the air of a person as manifested in a picture is more than outward appearance. It conveys something of the person’s ‘essential nature’ (Freeland, 2010, p. 44). But what might that be? Freeland provides her own illustration of a photograph that manifests an ‘air’ – an image of her grandmother. It having this power, she suggests,

... had to do with the way in which she combined a witty and observant twinkle with a slight ducking of the head. She seemed to be on the verge of giving way to a broad wink of humor to accompany a penetrating observation, but to be cutting it off out of politeness or decorum. (p. 44)

It seems as if what this photograph does is to depict an event or action that typifies the person’s character or ‘personality’, which she describes earlier in the chapter (p. 39) as that which, in addition to appearance, a portrait is able to present. Perhaps then, it is in these terms that we can understand the ‘essential nature’ that is conveyed when a picture manifests someone’s air and thus supplies us with a sense of contact with a person. It is important to recognise that in using Freeland’s term ‘essential nature’, we do not mean that a person’s air is something that is essential to their identity over time – that which typically concerns philosophers writing about personal identity. For example, the aspect of Freeland’s grandmother’s character or personality

<sup>24</sup>See Ratcliffe and Byrne (2022) for further discussion of this notion of one’s ‘air’ in the context of grief. They argue that the air of the person is not generally best captured by accurate images but instead involves a kind of indeterminacy allowing for a kind of openness to relational possibilities: ‘An accurate image can actually erode this indeterminacy and openness, replacing it with something determinate, inflexible, inanimate’ (p. 13).

<sup>25</sup>Relatedly, paintings are also able to capture something of the essential nature of the *artist*. Merleau-Ponty (1964), for example, highlights that artworks can capture what he refers to as one’s ‘style’ – a distinctive mode of existing in and navigating the world. What makes a Vermeer painting distinctive is, he says, that it ‘speaks the language of Vermeer’.

captured in the quotation above might have been something that characterised her only in her later years. Instead, 'essential nature' here should be taken to indicate aspects of the notion of 'identity' or 'essential nature' that we are concerned with when answering what Marya Schechtman (1996) has called the 'characterisation question': aspects of 'who one really is' in the ordinary and practically significant sense that is more likely to concern the non-philosopher. Neither need a person's 'air' be an aspect of their practical identity (Korsgaard, 1996), where that involves the categories such as sex, occupation or political affiliation that one *thinks* of or *describes* oneself as falling under: Freeland's grandmother may not have thought of herself as witty or observant. In the sense with which we are concerned with here, 'who one really is' and is experienced as being by others, may not be who one thinks one is. Portraits that successfully manifest someone's air then, whether photographs or paintings, make present to us aspects of a person's personality that are in this sense crucial to someone's identity.

When a portrait manifests someone's air, and we experience it, we have a distinctive kind of person experience that involves a sense of contact with the portrait's subject. Is this a visual experience? We need not accept that the content of the experience of someone's air is wholly visual: That is, we need not commit to the view that aspects of (as Freeland puts it) 'inner' life and a sense of closeness to them can figure in the content of a visual perceptual experience. Seeing aspects of 'inner' life may be only 'seeing that p': a kind of seeing that requires that the subject has a belief or other cognitive attitude with p in its content. Furthermore, the sense of closeness or contact it involves may for other reasons be due to a more extensive portion of the subject's stream of experience than the merely and strictly visual. For example, it may be that the experience of being 'in contact with the person' is an affective experience that is the result of seeing something one knows or takes to be an aspect of someone's essential nature in the way described above. So, the idea of the visual experience of someone's air does not require a controversially rich or liberal account of visual perceptual content. But even so, this is a kind of person experience that might seem a long way from olfaction's capabilities. In particular, if (as Freeland repeatedly says) essential nature is a matter of the 'inner' life of a person, then it seems clear that this is something inaccessible even to 'smelling that': I may be able to see that someone is witty or polite or about to make a penetrating observation but I certainly cannot 'smell that' these things are the case. Even emphasising the external aspects of an 'inner' life does not help. The expressions and manifestations of emotion and thought ('ducking of the head ... broad wink of humor ...') cannot in the ordinary course of things be olfactorily perceived, nor even inferred on the basis of smelling.

Nevertheless, the notion of an 'air' as something that might be manifest to us in certain experiences and involve an affective experience of contact may



be useful to understanding some olfactory continuing bonds experiences. To see this, it needs to be recognised that there are many things that might be deemed 'essential' to a person in the way that some aspects of their personality might be. As well as psychological characteristics, human beings have a bodily nature that is partly that of human animals.<sup>26</sup> We secrete sweat, blood and sebum, for example. As we mentioned above, our clothing, activities and the places we frequent also contribute to the ways we each characteristically smell, as do scented products. Our embodied and environmentally situated nature are no less part of our essential nature – in the relevant sense – than our inner lives.<sup>27</sup> Furthermore, there is evidence from studies of so-called human olfactory 'communication' that we can and do pick up information about such aspects of our nature on the basis of smelling. For example, babies are differentially responsive to their mothers' milk, and human children (like other young mammals) are soothed by the smell of their mother (Schaal *et al.*, 2020). Smell can also play a role for us in identifying some features even of strangers.<sup>28</sup> We know from everyday experience that we can often tell on the basis of smell if someone has been smoking, drinking alcohol or in the vicinity of frying food. Where such things contribute to a person's smell over a long period of time, they might even play a role in our picking up on facts about someone's habits and living conditions. Thus, we propose that the smell of a person described in the previous section can be a manifestation of a person's essential nature, even if it cannot typically convey her inner life. We can therefore think of what is (or can be) manifested of someone's essential nature in smell as their 'olfactory air'.<sup>29</sup>

There are some important features that the olfactory air of a person shares with the air of a person that can be manifest in a portrait. First, both seem to be relational. Barthes suggests that a picture will not convey an air to all viewers – not even to all viewers who know the person depicted in a portrait. The blurry photo that for him captured the 'air' of his mother may have no significance to anyone else.<sup>30</sup> This likewise seems to be true of the olfactory case. For one, a child, partner, sibling or close friend may all be acquainted with different aspects of the smell of the same person due to the different

<sup>26</sup>This is not to commit to animalism, the view that our persistence conditions are those of animals. As explained above, the 'logical' question of personal identity is orthogonal to our concerns here.

<sup>27</sup>According to Freeland (who in turn cites West, 2004) prior to the 17th century and the influence of Locke, personal identity was 'more purely physical' (p. 86). Furthermore, she argues, when 16th century portraitists attempted to present aspects of personality, they 'often did so more through symbols and hints rather than through intimations of some sort of internal emotional life' (p. 87).

<sup>28</sup>For example, Zhou *et al.* (2014) demonstrated that two steroids communicate gender information to human perceivers.

<sup>29</sup>It may also be possible for one's olfactory air, especially where the person's smell includes perfume, to convey some aspects of personality or character via, for example, conventional associations.

<sup>30</sup>We might agree with Freeland that this is not always the case: Some portraits of well-known figures might manifest their subject's air to any viewer such as Velazquez's portrait of Pope Innocent X (he has 'the air of someone cunning and ruthless') and Lucian Freud's portrait of Queen Elizabeth II: 'stubborn as a bulldog ... admirably majestic' (pp. 44–45).

circumstances in which they spend time together. So, qualitatively different smells may be recognisable as the smell of the person to each of them. But also, in the context of different kinds of relationships, each of these people may be familiar with different aspects of the person's essential nature and how it manifests in their smell. So the olfactory air of the person manifest in their smell will likewise be their air *to* (or *for*) X, Y and Z who each know the person intimately, but differently. Second, the content of the experience of the olfactory air of a person need not be thought of as wholly olfactory. As we saw above, neither does the experience of the air of a person we might have when looking at a portrait need to be construed as wholly visual. In both cases, the experience may be constituted by a more extensive portion of the subject's stream of experience than that which we can be considered perceptual. In particular, the 'closeness' that characterises an experience of someone's olfactory air can be thought of as the content of an affective experience.<sup>31</sup> Hence, the notion of experiencing someone's olfactory air allows us to resist the suggestion, made at the end of the previous section, that explaining all olfactory continuing bonds experiences fully would after all require accepting that olfactory experiences have rich affective and relational content. Nevertheless, though neither is wholly perceptual, the overarching experience of both the (visual) air and the olfactory air of a person is importantly *perception like*. To the subject, the experience manifests as an exercise of passive receptivity to what is there rather than a result of conscious inference or deliberation.

Despite the features common to the visual and olfactory air, it should be emphasised that the olfactory air of a person is in other ways distinctive. In particular, the feelings of connection involved in experiencing another's olfactory air expose a kind of interpersonal experience that is overlooked in the literature on knowing and experiencing others, and of which we can only offer an initial sketch in the current discussion. Whilst there has been wide-ranging philosophical work on how we come to know, relate to and perceive other social agents, much of this research has focused upon how we come to have an awareness of others' mental lives. For example, discussions of social cognition have often focused upon our abilities to attribute propositional attitudes to others through theorising about, or simulation of, mental states (for different perspectives in this debate, see, e.g., Davies & Stone, 1995). Although we may sometimes use such mechanisms to understand what someone who has died would have thought or believed were they still alive (e.g., see discussion in Ratcliffe, 2016), the kinds of continued connection with the dead manifested and forged by olfactory experiences do not seem to be explained by such accounts. It is implausible that our olfactory experiences of another generally involve an attribution of beliefs, desires

<sup>31</sup>As an anonymous reviewer pointed out to us, it seems likely that in the olfactory case, the feeling will frequently be one not just of closeness but of intimacy.

and other mental states to that person. It seems even less likely that we are in the business of attributing propositional attitudes on the basis of smell once the person in question has died.

Elsewhere, such as within '4E' and phenomenological approaches to the mind, social cognition research has tended to reject the attribution of propositional attitudes as central to our engagement with others, instead emphasising interaction with other social agents and intersubjective practices and skills (e.g., De Jaegher & Di Paolo, 2007; Gallagher & Hutto, 2008; Hutto, 2008; Ratcliffe, 2006). Whilst such accounts emphasise embodiment (which is likewise our focus here) and reject the traditional philosophical focus upon theorising about, or simulating, others' mental states, they still aim primarily to explain how we come to perceive or understand aspects of others' mental lives. Again, the kind of interpersonal connection enabled by the sense of smell seems not to be captured. As we have emphasised, the experience of another enabled by the sense of smell does not privilege their mental life but rather involves other aspects of their embodied and environmentally situated personhood that have received little philosophical attention. Whilst Barthes' notion of one's 'air' is helpful in gesturing towards how one's smell might convey something important about the person, the olfactory case differs importantly from the portraiture case. One's olfactory air does not manifest one's inner life but is instead a matter of one's status as a human animal, replete with viscera, sweat, blood and bacteria and imbued with the scents of where and how one lives.

## 6. *Conclusion*

To sum up, we have argued that in order to understand the way in which people use smell to maintain a sense of closeness to the dead, we need not deny that the experiences that allow them to do so are (wholly or significantly) olfactory, nor adopt an overinflated account of olfactory content on which olfactory experience represents particular people or high-level properties. Instead, whilst some olfactory continuing bonds experiences may be experiences of odour-evoked memory, others are simply olfactory experiences of a person's smell, construed as a quality of an odour. Moreover, such experiences can be veridical and amount to the same kind of perceptual contact one had with a loved one in life. That is one reason why the sense of smell is, we have argued, especially fit for maintaining continued connections to deceased loved ones. Hence, whilst smell is often thought of as comparatively limited in the roles it can play for us, there is at least this one task, of great significance to the grieving subject, that it is particularly well suited to carry out.

In addition, the olfactory experience of someone's smell can (somewhat analogously to a visual experience of a photograph or portrait of a loved

one) constitute a more encompassing experience that manifests aspects of someone's essential nature and that thus involves a sense of closeness to them. That smell can play this role is obscured by a focus in work on interpersonal cognition on our awareness of someone's mental life. The aspects of our nature that smell makes manifest relate instead to our bodily and environmentally situated natures. This brings into view a role that smell may play in our awareness and knowledge of others in other contexts outside of our responses to bereavement (and other losses), as well as a mode of interpersonal relatedness that may also take non-olfactory forms, and is worthy of further attention.<sup>32</sup>

Becky Millar  
School of English, Communication and Philosophy  
Cardiff University

Louise Richardson  
Department of Philosophy  
University of York

#### REFERENCES

- Aasen, S. (2019). 'Spatial Aspects of Olfactory Experience,' *Canadian Journal of Philosophy* 49 (8), pp. 1041–1061.
- Barthes, R. (1981). *Camera Lucida: Reflections on Photography*. New York: Hill and Wang.
- Barwich, A. S. (2014). 'A Sense So Rare: Measuring Olfactory Experiences and Making a Case for a Process Perspective on Sensory Perception,' *Biological Theory* 9(3), pp. 258–268.
- Barwich, A. S. (2020). *Smellosophy: What the Nose Tells the Mind*. Cambridge, MA: Harvard University Press.
- Batty, C. (2009). 'What's That Smell?' *The Southern Journal of Philosophy* 47(4), pp. 321–348.
- Batty, C. (2010). 'A Representational Account of Olfactory Experience,' *Canadian Journal of Philosophy* 40, pp. 511–538.
- Batty, C. (2014). 'Olfactory Objects,' in D. Stokes, M. Matthen and S. Biggs (eds) *Perception and Its Modalities*. Oxford: OUP, pp. 222–224.
- Bayne, T. (2009). 'Perception and the Reach of Phenomenal Content,' *The Philosophical Quarterly* 59(236), pp. 385–404.
- Brozzo, C. (2020). 'Are Some Perfumes Works of Art?' *The Journal of Aesthetics and Art Criticism*, 78(1), pp. 21–32.
- Carvalho, F. (2014). 'Olfactory Objects,' *Disputatio* 6(38), pp. 45–66.
- Castelnovo, A., Cavallotti, S., Gambini, O. and Agostino, A. D. (2015). 'Post-Bereavement Hallucinatory Experiences: A Critical Overview of Population and Clinical Studies,' *Journal of Affective Disorders* 186, pp. 266–274.

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- Cavedon-Taylor, D. (2018). 'Odors, Objects and Olfaction,' *American Philosophical Quarterly* 55(1), pp. 81–94.
- Cholbi, M. (2018). 'Regret, Resilience, and the Nature of Grief,' *Journal of Moral Philosophy* 16 (4), pp. 486–508.
- Davies, M. and Stone, T. (eds) (1995). *Folk Psychology*. Oxford, UK: Blackwell.
- De Jaegher, H. and Di Paolo, E. (2007). 'Participatory Sense-Making: An Enactive Approach to Social Cognition,' *Phenomenology and the Cognitive Sciences* 6(4), pp. 485–507.
- Debus, D. and Richardson, L. (2022). "'Rather Than Succour, My Memories Bring Eloquent Stabs of Pain': On the Ambiguous Role of Memory in Grief,' *Journal of Consciousness Studies* 29(9–10), pp. 36–62.
- Freeland, C. (2010). *Portraits and Persons*. Oxford: OUP.
- Gallagher, S. and Hutto, D. (2008). 'Understanding Others Through Primary Interaction and Narrative Practice,' in J. Zlatev, T. Racine, C. Sinha and E. Itkonen (eds) *The Shared Mind: Perspectives on Intersubjectivity*. Amsterdam: John Benjamins, pp. 17–38.
- Gilbert, A. (2014). *What the Nose Knows: The Science of Scent in Everyday Life*, 2nd edn. Synesthetics, Inc.
- Herz, R. S. (2011). 'Odor Evoked Memory,' in J. Decety and J. T. Cacioppo (eds) *The Oxford Handbook of Social Neuroscience*, pp. 265–275.
- Higgins, K. (2013). 'Love and Death,' in J. Deigh (ed.) *On Emotions: Philosophical Essays*. New York: Oxford University Press, pp. 159–178.
- Hutto, D. (2008). *Folk Psychological Narratives: The Sociocultural Basis of Understanding Reasons*. Cambridge, MA: MIT Press.
- Keller, A. (2016). *Philosophy of Olfactory Perception*. Palgrave Macmillan.
- Klass, D., Silverman, P. R. and Nickman, S. L. (1996). *Continuing Bonds: New Understandings of Grief*. New York: Routledge.
- Korsgaard, C. (1996). *The Sources of Normativity*. Cambridge: Cambridge University Press.
- Larsson, M. and Willander, J. (2009). 'Autobiographical Odor Memory,' *International Symposium on Olfaction and Taste: Annals of the New York Academy of Sciences* 1170, pp. 318–323.
- Lycan, W. (1996). 'Layered Perceptual Representation,' *Philosophical Issues* 7, pp. 81–100.
- Lycan, W. (2000). 'The Slighting of Smell,' in N. Bhushan and S. Rosenfeld (eds) *Of Minds and Molecules: New Philosophical Perspectives on Chemistry*. New York: Oxford University Press, pp. 273–290.
- Martin, M. G. F. (2010). 'What's in a Look?' in B. Nanay (ed.) *Perceiving the World*. Oxford University Press, pp. 160–225.
- Martin, M. G. F. (2012). 'Sounds and Images,' *British Journal of Aesthetics* 52(4), pp. 331–351.
- Martina, G. (2021). 'Contextual Variation and Objectivity in Olfactory Perception,' *Synthese*.
- Matthen, M. (2005). *Seeing, Doing, and Knowing*. Oxford: Oxford University Press.
- Merleau-Ponty, M. (1964). 'Indirect Language and the Voices of Silence,' in R. McCleary (ed.) *Signs*. Evanston: Northwestern University Press.
- Millar, B. (2019). 'Smelling Objects,' *Synthese* 196, pp. 4279–4303.
- Millar, B. (2021). 'Grief's Impact on Sensorimotor Expectations: An Account of Non-veridical Bereavement Experiences,' *Phenomenology and the Cognitive Sciences* 22, pp. 439–460.
- Millar, B., Ratcliffe, M., Richardson, L. and Hughes, E. (2022). *Experiences of Grief: A Phenomenological Survey, 2020 [Data Collection]*. Colchester, Essex: UK Data Service.
- Natsch, A. and Emter, R. (2020). 'The Specific Biochemistry of Human Axilla Odour Formation Viewed in an Evolutionary Context,' *Philosophical Transactions of the Royal Society B* 375, 20190269.
- Norlock, K. J. (2017). 'Real (and) Imaginal Relationships With the Dead,' *The Journal of Value Inquiry* 51(2), pp. 341–356.

- Ratcliffe, M. (2006). ‘“Folk Psychology” Is Not Folk Psychology,’ *Phenomenology and the Cognitive Sciences* 5, pp. 31–52.
- Ratcliffe, M. (2016). ‘Relating to the Dead: Social Cognition and the Phenomenology of Grief,’ in D. Moran and T. Szanto (eds) *The Phenomenology of Sociality: Discovering the ‘We’*. London: Routledge, pp. 202–215.
- Ratcliffe, M. (2021). ‘Sensed Presence Without Sensory Qualities: A Phenomenological Study of Bereavement Hallucinations,’ *Phenomenology and the Cognitive Sciences* 20(4), pp. 601–616.
- Ratcliffe, M. and Byrne, E. (2022). ‘Grief, Self, and Narrative,’ *Philosophical Explorations* 25(3), pp. 319–337.
- Rees, W. D. (1971). ‘The Hallucinations of Widowhood,’ *British Medical Journal* 4, pp. 37–41.
- Rees, W. D. (1975). ‘The Bereaved and Their Hallucinations,’ in B. Schoenberg (ed.) *Bereavement, Its Psychosocial Aspects*. New York: Columbia University Press, pp. 66–71.
- Richardson, L. (2013). ‘Sniffing and Smelling,’ *Philosophical Studies* 162, pp. 401–419.
- Richardson, L. (2018). ‘Odours as Olfactibilia,’ in T. Crowther and C. Mac Cumhaill (eds) *Perceptual Ephemera*. Oxford: OUP, pp. 93–114.
- Richardson, L. (2021). ‘Smellosophy: What the Nose Tells the Mind, by A. S. Barwich,’ *Mind*. forthcoming.
- Roberts, T. (2016). ‘A Breath of Fresh Air: Absence and the Structure of Olfactory Perception,’ *Pacific Philosophical Quarterly* 97(3), pp. 400–420.
- Roberts, S. C., Havlíček, J. and Schaal, B. (2020). ‘Human Olfactory Communication: Current Challenges and Future Prospects,’ *Philosophical Transactions of the Royal Society B* 375, pp. 1–11.
- Rosenfeld, J. (2020). *The State of Disbelief: A Story of Death, Love and Forgetting*. London: Short Books Ltd.
- Schaal, B., Saxton, T. K., Loos, H., Soussignan, R. and Durand, K. (2020). ‘Olfaction Scaffolds the Developing Human From Neonate to Adolescent and Beyond,’ *Philosophical Transactions of the Royal Society B* 375, 20190261.
- Schechtman, M. (1996). *The Constitution of Selves*. Ithaca: Cornell University Press.
- Shiner, L. (2020). *Art Scents: Exploring the Aesthetics of Smell and the Olfactory Arts*. New York: OUP.
- Siegel, S. (2006). ‘Which Properties Are Represented in Perception,’ in T. Gendler and J. Hawthorne (eds) *Perceptual Experience*. Oxford: OUP, pp. 481–503.
- Skrzypulec, B. (2023). ‘Tracking Representationalism and Olfaction,’ *Mind & Language* 38(2), pp. 446–463.
- Steffen, E. and Coyle, A. (2017). ‘“I Thought They Should Know ... That Daddy Is Not Completely Gone”: A Case Study of Experiences in Bereavement and Family Meaning-Making,’ *OMEGA - Journal of Death and Dying* 74(4), pp. 363–385.
- Walton, K. (1984). ‘Transparent Pictures: On the Nature of Photographic Realism,’ *Critical Inquiry* 11, pp. 67–72.
- Waskul, D. D., Vannini, P. and Wilson, J. (2009). ‘The Aroma of Recollection: Olfaction, Nostalgia, and the Shaping of the Sensuous Self,’ *The Senses and Society* 4(1), pp. 5–22.
- Wilson, D. A. and Stevenson, R. J. (2006). *Learning to Smell: Olfactory Perception From Neurobiology to Behavior*. Baltimore: Johns Hopkins University Press.
- Wilson, D. A. and Stevenson, R. J. (2007). ‘Odour Perception: An Object-Recognition Approach,’ *Perception* 36, pp. 1821–1833.
- Young, B. D. (2016). ‘Smelling Matter,’ *Philosophical Psychology* 29(4), pp. 520–534.
- Young, B. D. (2020). ‘Perceiving Smellscapes,’ *Pacific Philosophical Quarterly* 101(2), pp. 203–223.
- Young, B. D., Keller, A. and Rosenthal, D. (2014). ‘Quality-Space Theory in Olfaction,’ *Frontiers in Psychology* 5, p. 1.

- Young, B. D. and Nanay, B. (2022). 'Olfactory Amodal Completion,' *Pacific Philosophical Quarterly* 103(2), pp. 372–388.
- Zhou, W., Yang, X., Chen, K., Cai, P., He, S. and Jiang, Y. (2014). 'Chemosensory Communication of Gender Through Two Human Steroids in a Sexually Dimorphic Manner,' *Current Biology* 24(10), pp. 1091–1095.