

SENSORY MEMORIES AND RECOLLECTIVE IMAGES¹ [Late Draft]

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1. Introduction

We talk about what we ‘remember’ in a pretty wide range of circumstances. Some of what we remember has no special connection to our own pasts, as it amounts simply to things we have previously learned: I remember in this way that York is north of Sheffield. But many of our memories are bound much more tightly to our awareness of our own histories. In particular, our memories often revolve around sensory mental images that seem to us to correspond to how things were on specific occasions during our own lives.

I recall spending most of last Saturday morning on my bike, for instance. The memories which I thereby summon incorporate sensory mental images of various sorts; the images show things as looking, sounding, smelling, and feeling certain ways. And the ways that those images show things as looking, sounding, smelling, and feeling serve to determine the nature of what I recall: it seems to me that things then looked, sounded, smelled, and felt the relevant ways. The contents of the sensory mental images thus fix the contents of the past-directed appearances that form an essential part of the memories; and those appearances augment my sense of my recent life.

Memories of the sort just roughly characterised are *sensory memories*.² *Recollective images* are the sensory mental images which, in the course of sensory memories, fix how

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² See Debus (2007), section 1—whose ‘recollective memories’ seem to correspond to my ‘sensory memories’—for a helpful survey of the relationships between the memorial phenomena being discussed in this paper and those handled elsewhere in the psychological and philosophical literature using some different but related terms (such as, for instance, Tulving’s contrast between ‘semantic’ and ‘episodic’ memories).

things seem to us once to have been. Sensory memories are thus memorial episodes in which, first, it seems to us that things once looked or sounded or otherwise ‘stood sensorily’ certain ways; where, second, the relevant ways that things seem to us once to have stood sensorily are the ways that the recollective sensory mental images featuring in the episodes show things as standing sensorily.

While sensory memories are all alike in featuring imagistically-presented appearances relating to the past, they seem sometimes to differ in the broad nature of what is apparently recalled. Many of our sensory memories seem to reflect the ways that things once were for us in the course of sensory episodes that we ourselves underwent. I am able to recall some of the ways that things looked to me in the past few hours, for instance. For I have sensory memories whose accompanying recollective visual mental images apparently show how things looked to me in the recent past. But it seems that our sensory memories may also have a less subjective cast, in that they need not seem to mirror the felt character of previous sensory episodes.

Many of our sensory memories are ‘observer memories’, for instance: sensory memories whose accompanying recollective visual mental images display oneself as part of the recalled scene.³ But—just to take the cases that I know best—my own observer memories do not involve its seeming to me that things once looked *to me* the ways that the visual mental images show things as looking; I do not seem to be recalling episodes in which I somehow saw myself. Rather, they involve its seeming to me that there were once past scenes in which I played a certain part and which looked—‘from somewhere’ rather than ‘to someone’—the ways that the visual mental images show things as looking.

Faced by the apparent variations remarked in the previous two paragraphs, one might despair of identifying an interesting unified category of ‘sensory memories’. It might be

³ See, for example, Nigro and Neisser (1983), Robinson and Swanson (1993), and McIsaac and Eich (2002) for psychological discussion; see Debus (2007) for interesting philosophical discussion.

denied that observer ‘memories’ are capable of really being memories, for instance.⁴ But that should surely be an option of last resort, given the extent to which it clashes with our ordinary ways of thinking. I take it, then, that we should aim either to account for the possibility of the various kinds of sensory memories described above or to find very compelling reasons indeed for denying that there can be sensory memories of those different types. The current paper takes the first of those paths, by developing some ideas concerning the representational functions of recollective images within sensory memories.

Before proceeding, a terminological remark. It is often important to distinguish between ‘genuine’ sensory memories—sensory memories whose accompanying recollective images actually reflect and appropriately derive from ways that things once stood sensorily in the course of our pasts—and ‘merely apparent’ sensory memories.

For convenience’s sake, however, I shall typically ignore that distinction in what follows, speaking simply of ‘sensory memories’ when I wish to discuss both genuine sensory memories and merely apparent sensory memories. So, for instance, this paper’s claims concerning ‘the representational functions of recollective images in sensory memories’ should be taken to apply to the recollective images featuring in merely apparent sensory memories as well as to those figuring in genuine sensory memories. There will be some points at which the ‘genuine’ vs. ‘merely apparent’ distinction is needed, however, and they will be marked by explicit uses of those verbal qualifications.

⁴ See Debus (2007), pp. 194 – 8 and Sutton (2010) for critical surveys of some reasons that might be provided for denying that observer memories can ever really be memories.

2. Internal and external sensory memories

As noted in the previous section, it is natural to think that our sensory memories come in two varieties: first, those which ostensibly capture the subjective nature of sensory episodes that we ourselves underwent; and, second, those which merely purport to reflect what the world was once like.

Suppose that a certain sensory memory involves its seeming to the remember that he or she once underwent sensory episodes in which things looked, or sounded, or otherwise stood sensorily the ways that the memory's accompanying recollective images show things as standing sensorily. Then the sensory memory is an *internal* sensory memory. Internal sensory memories correspond to the first of the two kinds of cases distinguished in the previous paragraph; they purport to capture 'from the inside' past sensory episodes enjoyed by their subjects.

Suppose, by contrast, that a certain sensory memory involves its seeming to the remember merely that a portion of the world was once certain sensorily-characterised ways, ways for the world to be that are encapsulated by the memory's accompanying recollective imagery. Then the sensory memory is an *external* sensory memory. External sensory memories correspond to the second of the two kinds of cases distinguished above. Observer memories seem to be examples of external sensory memories, for instance.

While there seem to be both internal and external sensory memories, some simple thoughts might make one wonder how there could be sensory memories of both types. As noted in the previous section, recollective images serve to fix the nature of what is recalled during sensory memories. Consider an internal sensory memory. The memory's accompanying recollective imagery somehow ensures that the memory pertains to a past sensory episode; the imagery's occurrence in the subject's mind involves its seeming to the

subject that things once, say, looked to him or her the ways that the images show things as looking. But now consider an external sensory memory. In that case, the memory's accompanying recollective imagery somehow ensures that the memory pertains merely to what the world was once like; the imagery's occurrence in the subject's mind involves its seeming to the subject merely that the world was once the ways that the images show things as, say, looking.

How are recollective images able to serve both of those fundamentally different representational functions? How are they able sometimes to present past sensory episodes as the objects of recall in sensory memories, while in other instances merely presenting past worldly scenarios?

That puzzle is exacerbated by the fact that someone might apparently have an *internal* sensory memory featuring a recollective image that shows things as, say, looking some way, where someone else has an *external* sensory memory featuring a recollective image that shows things as looking the very same way. (Perhaps the recollective images figuring in some of my observer memories capture what someone else remembers seeing, for instance.) How can a recollective image that shows things as standing sensorily a certain way form the basis of an internal sensory memory, when a recollective image that shows things as standing sensorily the very same way also forms the basis of an external sensory memory?

Perhaps those sorts of worries have influenced the propensity that philosophers have shown for being *exclusivists* with regards to sensory memories; for assuming that either sensory memories are invariably internal or that sensory memories are invariably external.

Husserl moves from one extreme to the other, for instance. He writes at one time that '[t]he following is an evident proposition: Every memory of an A is at the same time the memory of an earlier perception of the A'⁵. Yet he comments at a later date that '[m]emory

⁵ Husserl ([1898 - 1925] 2005), p. 236, writing around 1898.

does actually imply a reproduction of the earlier perception, but the memory is not in the proper sense a representation of it: the perception is not meant and posited in the memory; what is meant and posited is the perception's object and the object's now, which, in addition, is posited in relation to the actually present now⁶. And Broad, after outlining something like the view that sensory memories are always internal, puts alongside it something like the hypothesis that they are always external, eventually stating that he does 'not feel able to make up [his] mind on the question'⁷ which of the approaches is correct—having ignored the possibility that some sensory memories are internal but some are external.

The exclusivist tendency is most commonly embodied, however, in the more specific belief that sensory memories must always be internal. Locke, for instance, asserts that memory is the mind's capacity 'to revive Perceptions, which it has once had, with this additional perception annexed to them, that it has had them before'⁸. Owens construes Locke as stating that 'something experienced as a memory presents itself as an experience one has previously enjoyed'⁹, a proposal which Owens himself endorses. Martin claims, meanwhile, that 'memory ... [is] the representational recall of [a past] experiential encounter'¹⁰.

There are compelling intuitive reasons for discarding exclusivism, though: there just seem to be both internal and external sensory memories. Furthermore, the dual representational functions apparently displayed by recollective images seem also unproblematically to be exhibited by other, intuitively related, kinds of representations. I might use a photo to supply you with information about what things were once like visually for me, for instance. Yet it seems that I might also use the very same photo to inform you

⁶ Husserl ([1893 - 1917], 1990), p. 60, writing in 1905.

⁷ Broad (1929), pp. 240 – 1.

⁸ Locke ([1690] 1975), p. 150.

⁹ Owens (1996), p. 323. Owens's Lockean view seems to me to conflate the recollective sensory mental images which figure in sensory memories with aspects of the contents of those images. For, while the relevant sensory mental images serve to present *the ways for things to stand sensorily* figuring in their distinctively sensory contents as ways that things once stood sensorily, it seems wrong to state that the sensory mental images are *themselves* presented to one as being past experiences which one enjoyed.

¹⁰ Martin (2001), p. 270.

simply about what the world was once like. Analogous auditory representational tasks could be performed using playbacks of audio recordings. These last points might make one suspect that the very general questions posed earlier concerning internal and external sensory memories will be answerable.

3. Some challenges

The apparent possibility of both internal and external sensory memories presents us with a philosophical challenge: to provide a fuller account of the representational functions of recollective images within sensory memories, one that explains how there can be sensory memories of both sorts. The resulting ideas should help us to understand how some recollective images may, by showing how things once stood sensorily, characterise past sensory episodes while others, again by showing how things once stood sensorily, merely characterise past states of the world.

The comments at the end of the previous section suggest, too, that the representational functions of recollective images are intimately related to appropriate uses of suitably ‘imagistic’ representations like photos, paintings, and playbacks of audio recordings. It would therefore be nice if our eventual account of recollective images were to link up with accounts of those cases as well. Perhaps, for example, all of the relevant examples belong to some interesting common kind. Any putative account of how there may be both internal and external sensory memories—any *catholic* account of sensory memory, for short—will also need to respond to some further concerns arising from the very idea of an external sensory memory.

First, it is surely obvious that genuine sensory memories must have their roots in a subject’s own experiences. One cannot genuinely remember, by means of an apparent

sensory memory, some event that one did not witness oneself. How are we to accommodate that fact without accepting that sensory memories are always episodes in which one seems to recall sensory episodes from one's own past?

After all, external sensory memories are meant to be ones whose accompanying recollective images purport merely to capture what the world was once like. But then the appearances involved in external sensory memories will not generally place any conditions on the experiences that were once enjoyed by the subjects of those very memories. Won't a person then be able genuinely to remember, by means of an apparent external sensory memory whose accompanying past-directed appearances are accurate, occurrences that he or she never witnessed?

That line of argument is too quick. Suppose that we are given an apparent external sensory memory. The accuracy of the appearances of pastness figuring in the memory may not ensure that the memory's subject witnessed the relevant past events. But nor does their accuracy evidently ensure that the apparent external sensory memory is genuine. For the mere accuracy of the past-directed appearances featuring in the episode may be insufficient for it to count as a genuine external sensory memory; as we will see below, that is in fact the case. In particular, it may be that the episode needs to satisfy a causal requirement whose satisfaction entails that the episode's subject did indeed witness the events seemingly being recalled.¹¹

The fact that genuine sensory memories must derive from a subject's own past experiences does not immediately show that apparent external sensory memories are problematic, then. But advocates of catholic accounts of sensory memory should not rest content with that negative point; they should try to say *something* helpful about the role of past sensory episodes in genuine external sensory memories. In particular, I take it that they

¹¹ Relatedly, Broad remarks that '[s]ince we all believe strongly that nothing can be remembered unless it has been perceived by us, we shall almost inevitably infer when we remember an event that we must have perceived it. And we may very well confuse this natural and immediate inference with a genuine memory-belief; and thus think that the proposition: "I have perceived this" was part of the content of the original memory-belief, when really it is a reflective and inferential addition' (Broad (1929), p. 240).

should try to shed light on the relations obtaining between the recollective images figuring in genuine external sensory memories and the past sensory life of the memory's subject.

Second, it seems clear that sensory memories are in some ways essentially *de se*: one's sensory memories relate to oneself, where the memory's contents identify one in a manner that is akin to the way that one is identified by the contents of those thoughts that one would naturally express in the first-person.¹² Now consider an internal sensory memory of your own. In that case, it seems to you that you yourself once enjoyed certain sorts of sensations. The first-personal aspects of the memory's content are therefore obvious; the memory relates to some putative sensations of which you were the subject.

By contrast, consider a putative external sensory memory of your own. Given that the memory is an external case, it seems to you merely that the world was once a certain way. But it may then look—unacceptably—as though the memory's content need have no special connection to you yourself. (Maybe your observer memories always identify you as an actor in the recalled episodes. But there was nothing in the previous discussion which required that external sensory memories are always observer memories; and I do not in fact think that external sensory memories are always observer memories.) How then are catholic accounts of sensory memory to cater for the essentially *de se* component of sensory memories?

Third, attempted accounts of sensory memory need to help us to understand the ways in which sensory memory differs from various somewhat related phenomena. In particular, they should help us to appreciate ways in which sensory memories differ from genuine sensory episodes, and from nonmemorial episodes like recognisings in which our sensory powers play supplementary roles. But some advocates of the view that sensory memories must be internal have argued that the relevant contrasts may be properly handled only if we deny that there can be external sensory memories.

¹² See, for instance, Burge (2003) for further exploration of some of these matters; the general point may be familiar to the reader from discussions of 'psychological criteria' for personal identity.

Owens, for example, argues that his brand of exclusivism enables us to understand the difference between sensory episodes proper and sensory memories, and also to understand the difference between mere recognition and sensory recollection.¹³ And Martin constructs a complex argument for his related position which hinges upon the rejection of an assumption which, he claims, will lead its advocates ‘to insist that any distinction in kind between [apparent sensory] recall and perceptual experience would have to be drawn in terms of something extrinsic to the experiential character of the episodes’.¹⁴ Catholic accounts of sensory memory need to show that they are able to handle the sorts of contrasts cited by Martin and Owens.

This section outlined three broad explanatory challenges which are faced by Catholic accounts of sensory memory. It also suggested that accounts of sensory memory are naturally embedded within broader frameworks for handling related representational phenomena involving, say, pictures and playbacks of audio recordings. The following two sections take their cue from that last suggestion, in developing a Catholic account of sensory memory. Later sections then use the resulting theory to address the three explanatory challenges outlined above.¹⁵

4. Some uses of a picture

Consider a drawing of a rural landscape. There are many representational uses to which you might put the drawing. You could suppose that things will someday look from somewhere the ways that the drawing shows things as looking, for instance; or you could suppose that things will never look those ways from anywhere. Alternatively, you could imagine that things once

¹³ See Owens (1996), pp. 325 – 9.

¹⁴ Martin (2001), p. 270; see pp. 269 – 79 of Martin’s paper for the argument.

¹⁵ The next few sections contain a fairly compressed presentation of ideas developed in much more detail in Gregory (2013). Gregory (2010a – c) also apply some of the ideas to various philosophical questions.

looked the relevant ways to someone; or you could imagine that things never looked those ways to anyone.

Those various potential representational employments of the drawing build upon shared foundations. In particular, each of the different uses of the picture starts from the common basis provided by the ways that the drawing shows things as looking. Some of the uses of the picture then relate to ways in which things may or may not look ‘from somewhere’; while the other uses relate to ways in which things may or may not look ‘to someone’. What is to be said about those shared foundations?

Suppose that you were to show someone the drawing, where the person takes the drawing to be meant to show ways that things look ‘to someone’, even though the person does not have anybody in particular in mind as the representation’s intended target. The person then takes you to be ascribing certain properties to some unidentified visual sensations. More fully, he or she presumes that you are characterising certain visual sensations as instances of appropriate types of visual sensations; as ones in which things look to someone the ways that the drawing shows things as looking.

The ways that the drawing shows things as looking are thus naturally identified with types of visual sensations.¹⁶ (Two visual episodes in which things look the same way, where that way for things to look is among the ways that our drawing shows things as looking, are thereby instances of a shared type.) More generally, the ways that pictures and many related distinctively sensory forms of representations show things as standing sensorily—as looking, or sounding, or smelling, ...—are types of sensations. The drawing may then be taken to

¹⁶ As a number of people have commented to me in discussion, there are different usages of phrases like ‘the way that things look’; and, on some of those usages, ‘ways for things to stand sensorily’ are not to be identified with types of sensations. (Talk of ‘the way that the tree looks’ may be used merely to pick out properties that the relevant tree looks to possess, for example, like gnarliness.) But our talk of ways that things stand sensorily sometimes does just make reference to types of sensations: I may talk about ‘the way that things look’ to someone who is suffering a total hallucination, for example, thereby just singling out a type of visual sensations that the person is currently having.

shows things as looking certain ways ‘in the course of some visual sensations’, because it may be taken to characterise some visual sensations as being of certain types.

Now suppose that the person had instead taken the drawing to be meant to show the ways that things look ‘from somewhere’, where again the person does not identify any specific location as the intended focus of the representation. There too, the person takes you to be ascribing certain properties. But this time, he or she presumes that you are using the ways that the drawing shows things as looking—certain types of visual sensations, as I have claimed—to characterise what the world is like around some unidentified place, rather than to characterise some sensory episodes as being ones in which things look the relevant ways.

In each of the circumstances just described, the person to whom you showed the drawing construed you as employing the picture to ascribe certain properties to suitable items, without identifying any particular items as being the ones to which the properties were being ascribed. The person’s comprehension of your communicative act was thus akin to your understanding of what this next assertion—that Nyirimana is a boy—says ‘about someone’. For there too you take me to have ascribed a certain property to a suitable item, without identifying any particular thing as that to which the property is being ascribed.

To borrow a famous and suggestive metaphor from Frege, we might take the content which you associated with my assertion of ‘Nyirimana is a boy’ to contain a ‘gap’ that may be ‘filled’ using contents that denote specific objects. When the relevant gap is filled, we end up with a content that ascribes boyhood to whatever is denoted by the content that has been used to fill the gap.¹⁷ The gap’s presence in the content reflects the fact that you took my assertion to ascribe boyhood to something, without identifying any particular thing as that to which I was ascribing boyhood.

¹⁷ Frege ([1891] 1980), ([1892] 1980) and ([1904] 1980).

Similarly, we might take there to be gaps in the contents grasped by the person to whom you showed the earlier drawing of a rural landscape. So, in the first case, the person took the drawing to show things as looking certain ways W, X, Y, \dots in the course of a visual sensation. Using a single underlining to symbolise a gap that may be filled by contents that denote specific sensations, we might then regard part of the content grasped by the person as being very roughly the following: things look way W in the course of $\underline{\quad}$.¹⁸ The content which the person associated with your communicative act thus characterised a property that visual episodes may possess, without in itself ascribing that property to a specific visual episode.

In the second case, the person took you to be ascribing a property to a region of the world: the drawing was being used to show how things look from somewhere. We might therefore regard part of the content grasped by the person in the second case as being very roughly the following: things look way W from $\underline{\quad}$. There, the single underlining symbolises a gap that may be filled by contents that denote specific visual perspectives; and when the relevant gap is filled, the result is a content that characterises things as looking a certain way from a particular perspective. But what is it for things to look a certain way ‘from a perspective’?¹⁹

Consider the way that things look to you right now: more precisely, consider the type *Your View* of visual sensations covering all and only those possible visual sensations whose subjective character is indiscernible from the subjective character of your current visual sensation. Given that your *Your View*-sensation is a genuine seeing, the way that things look

¹⁸ The ‘very roughly’ deserves emphasis. The general form provided is an attempt to sketch, using linguistic resources, the nature of a certain distinctively sensory content; it should not be assumed that the relevant content really involve the conceptual materials mobilised by the language used in the text. (Similarly, one might attempt to give a rough idea of the form instantiated by the contents of the visual appearances which one is enjoying, by saying that ‘here is how things look to me: there’s an F with a G just next to it, and there’s an H off to the right, and ...’, without thereby committing oneself to holding that the concepts expressed by, for instance, ‘next to’ plus ‘and’ are really contained within the contents of the visual appearances being described.)

¹⁹ And what is a visual perspective? I take sensory perspectives simply to be groups of contextual features relative to which the contents of sensory appearances are capable of being accurate or inaccurate. (The nature of, say, visual perspectives may then be discerned by reflecting upon the nature of the contextual factors which are capable of combining to determine the conditions under which some visual appearances count as either accurate or inaccurate; see chapter 2 of Gregory (2013) for more discussion of these issues.)

to you really is a way that things look from your current viewpoint. For things look to you to be *thus*, as you yourself might put it; and, relative to the visual perspective that you actually occupy, things are indeed *thus*.

Generalising, take some type of *T* visual sensations, where part of what it is for a subject to have a possible *T*-sensation is for things to look a certain way: *such-and-such*, let's say. Suppose, finally, that there are no further elements that are inevitably common to the ways that things may look to be to the subjects of possible *T*-sensations. Then the *appearance-content* of *T* is *things being such-and-such*. The appearance-content of *T* thus captures the total shared way that things must look to be the subjects of possible *T*-sensations. The appearance-content of *Your View* was *things being thus*, for example: for things look to be precisely *thus* to those who have *Your View*-sensations.

Your View is a way that things look from your current perspective, because that way for things to look captures what things really are like at your current perspective: things are *thus* relative to it. *Your View* is therefore a way that things look from your current perspective because the type's appearance-content is true relative to your viewpoint. More generally, consider some way for things to look. That way for things to look is a way that things look from some viewpoint just in case it captures what things really are like around the viewpoint. Again, then, the way for things to look is a way that things look from the viewpoint just in case its appearance-content is true relative to the viewpoint.

In the light of all that, let's revisit the representational uses of a landscape drawing that were previously envisaged. The first of the construals placed upon your communicative act by our imagined viewer—that you were attempting to capture ways that things looked to someone—is easy to handle, as noted above. In that case, the person takes you to be characterising certain unidentified visual sensations as being ones in which things look the ways that the picture shows things as looking; that is, as being instances of certain types of

visual sensations. The content grasped by the person is thus a gappy adjectival content, in which the ways that the drawing shows things as looking play a predicative role in characterising properties that visual sensations may possess.

But the second construal—that you were attempting to capture ways that things looked from somewhere—is now also fairly easily understood. There, the person takes you to be characterising certain unidentified visual perspectives as being ones from which things look ways that the picture shows things as looking. That is, the person interprets you as characterising the appearance-contents of ways that the picture shows things as looking as being true relative to visual perspectives, and as thereby identifying various ways for things to look as capturing the layout of the world around some unidentified viewpoints. Once more, then, the content grasped by the person is a gappy adjectival content. But this time the ways that the drawing shows things as looking play a predicative role in characterising the layout of the world.²⁰

The two construals of your representational use of the picture thus exploit the availability of two ‘modes’ under which pictures are able to show things as looking certain ways. Pictures may show things as looking certain ways in the course of visual sensations; or they may show things as looking certain ways from viewpoints. When pictures do the first thing, they ascribe properties to visual sensations. But when they do the second thing, they just characterise what the world is like around some viewpoints.

²⁰ A representation’s content may involve types of sensations even though the representation does not ‘show’ things as looking or sounding or otherwise standing sensorily certain ways: verbal descriptions of ‘the way that things look’ to people do not typically *show* things as looking the relevant ways, for instance. What accounts for the difference between those representations that ‘show’ things as standing sensorily certain ways and those representations whose contents involve ways for things to stand sensorily in a more anaemic manner? That question is not relevant to this paper but I think that the contents of the representations in the former category single out types of sensations in a special way: see chapter 3 of Gregory (2013) for more discussion.

5. A catholic account

Visual mental images show things as looking certain ways, as do many pictures: they are therefore a distinctively visual form of representation. Other kinds of representations are especially sensory in an analogous manner, even though they are not distinctively *visual*. We may use playbacks of audio recordings to show things as sounding certain ways, for instance; gustatory mental images show things as tasting certain ways; tactile and kinaesthetic mental images show things as feeling certain ways; and so on. Any representation that shows things as looking or sounding or otherwise standing sensorily certain ways is *distinctively sensory*.

Distinctively sensory representations have contents of an especially sensory kind. Note that this particular form of sensoriness does not reflect any part that our senses characteristically play in making the contents of the representations available to us. The special visualness of pictures obviously flows in part from the roles played by our eyes in enabling us to comprehend pictures. But the fact that pictures show things as looking certain ways does not itself reflect those points. For visual mental images show things as looking certain ways too; yet we do not literally look at visual mental images. The distinctive sensoriness of distinctively sensory representations *per se* flows instead from the nature of the information which we apprehend by grasping their contents.

We saw in the previous section that the representational business of ‘showing things as looking certain ways’ may take two forms: first, there is showing things as looking a certain way in the course of a visual sensation; and, second, there is showing things as looking a certain way from a perspective. But what holds for looking will also hold for hearing and other forms of sensing.²¹ Distinctively sensory representations may thus, first,

²¹ This is a bit quick. Take some mode of sensing; smelling, for instance. It is possible for a representation to show things as smelling a certain way from a perspective—rather than in the course of a sensory episode—only if ways for things to smell may possess appearance-contents; and the latter holds, in turn, only if olfactory

characterise sensory episodes as being instances of ways that the representations show things as standing sensorily. And they may, second, characterise perspectives as being ones from which things stand sensorily the ways that the representations show things as standing sensorily; that is, as being perspectives relative to which the appearance-contents belonging to certain sensation-types are true.

The modal distinction just articulated allows us to understand why distinctively sensory representations—even those which show things as standing sensorily a single way—may come in both ‘subjective’ and ‘objective’ forms. They allow us to understand how it is that, for example, we are able to use auditory mental imagery both in imagining hearing things and in imagining sounds that may not have been overheard. But the distinction does not, in itself, account for the characteristically *past-directed* nature of the different sorts of contents that are presented to us as true by means of occurrences of recollective images within internal and external sensory memories; nor indeed does the distinction account for how, say, one might use a picture to assert that things will never look a certain way to anyone.

We may extend the previous ideas to cater for those additional phenomena, however. For the gappy adjectival nature of the distinctively sensory contents described previously means that they are able to form the basis for more complex contents, ones which exploit the predicative roles that are played by ways for things to stand sensorily within distinctively sensory contents. Those more complex contents may then be supposed to be true, they may be presented as true, they may be denied, and so on.

Consider the sentence ‘there was a large carrot’. We may regard the content of that sentence as resulting from the use of an ‘existential quantifier’ (*there was a carrot x such that ...*) to fill the gaps in a gappy content (*_ was large*) using a ‘bound variable’ (here x) thereby

sensations incorporate sensory appearances. The two modes of showing things as standing sensorily distinguished previously may therefore not be available for every form of distinctively sensory representations.

yielding the following overall: *there was a carrot x such that x was large*. More generally, the gaps in gappy adjectival contents—whether ones that are expressed linguistically, as in the case just considered, or using other means—may be completed by combining those adjectival contents with existential quantifiers and suitable contents of other sorts, to produce more complex contents.

So, use a visual mental image to imagine things as looking a certain way W in the course of a visual sensation. Then you can suppose, further, that things once looked that way to Frege. That is, you might suppose that the following content holds: for some visual sensation s enjoyed by Frege, things looked way W in the course of s . Alternatively, you might suppose that things once looked way W from a perspective to the left of Frege. You might suppose, that is, that the following content holds: for some visual perspective p to the left of Frege, things looked way W from p .

The gappy adjectival nature of distinctively sensory contents as identified above means, then, that they may form the basis for more complex contents. And those more complex contents come in distinct forms, ones which mirror the two different modes of showing—‘in the course of sensations’ and ‘from perspectives’—noted earlier. In particular, distinctively sensory representations may serve to express past-directed contents pertaining either, first, to the kinds of sensory episodes that there have been or, second, to the ways that the world has been laid out around perspectives. Playbacks of audio recordings may serve to show how things once sounded in the course of past auditory sensations, for instance; while pictures may be used to show how things once looked from certain places.

Let’s conclude this section by applying the foregoing ideas to recollective images. Occurrences of recollective images in sensory memories generate appearances of pastness. Past-directed contents of an especially sensory type are thus presented to us as true through occurrences of recollective images. But the distinction between internal and external sensory

memories then simply mirrors the distinction between the two sorts of past-directed contents identified in the previous paragraph. Recollective images therefore do indeed belong to a much broader family of representational phenomena.

So, consider an internal sensory memory. Suppose that the memory involves its seeming to the memory's subject that things were once auditorily a certain way W for him or her. Then the occurrence of the recollective image amounts to the presentation-as-true of a past-directed content: a content to the effect that, for some sensation s in a suitable domain of past sensations enjoyed by the rememberer, things sounded way W in the course of s . The 'subjective' character of the distinctively sensory content that forms the basis for that past-directed content means that the appearances of pastness enjoyed by the memory's subject relate to his or her own sensory life.

Next, consider an external sensory memory, one in which it seems to the memory's subject that things once sounded a certain way W from somewhere. The occurrence of the recollective image again amounts to the presentation-as-true of a past-directed content of one of the two kinds discussed above. But this time the relevant content is that, for some perspective p drawn from an appropriate domain of past perspectives, things once sounded way W from p . And the 'objective' nature of that content's underlying distinctively sensory content means that the appearances of pastness enjoyed by the remember relate solely to what the outside world was once like.

6. Causal chains

The previous section articulated a catholic account of sensory memory. According to the resulting position, the appearances of pastness figuring in internal and external sensory memories are alike in the following respect: they involve the presentation-as-true of complex

contents that are based upon the ways that recollective images show things as standing sensorily. Internal and external sensory memories differ fundamentally, however, with regards to certain aspects of the nature of the ‘showings’ performed by their accompanying recollective images.

The above ideas make it straightforward to account for the distinction between accurate and inaccurate sensory memories. Accurate sensory memories are ones whose accompanying appearances of pastness are correct; that is, they are cases in which the complex contents expressed by their accompanying recollective images hold. An internal sensory memory of things as once having smelled a certain way to you will be accurate, for instance, just in case, for some sensation of your own drawn from a suitable domain, things smelled in the course of that sensation the way that the recollective image shows things as smelling.

But the mere accuracy of a sensory memory is insufficient to ensure the genuineness of the sensory memory; similarly, merely apparent seeings may feature visual appearances that happen to be accurate. I might seem to remember things as looking a certain way to me, for example, as a result of having once vividly imagined episodes from my earlier life that were merely described to me by others. Yet it may be that things really did look to me the relevant ways in the course of the described episodes. I do not then count as actually *remembering* the ways that things once looked to me, however, because my apparent sensory memory does not derive in the right fashion from the past sensory episodes at issue.

To return to the first of the explanatory challenges outlined in section 3, is there also some convincing way of binding genuine *external* sensory memories to the subject’s own prior experiences? Listen for a moment to the things that are taking place around you. Next, use auditory mental images to recall what things were just like in your vicinity. The

recollective images which you conjured were the product of a causal chain which features the auditory sensations which you had a few moments ago, but which does not begin with them.

Let's suppose that those auditory sensations, in which things seemed to you to be certain ways, were auditory perceptions of things as being those ways. Then the ways that things sounded to you, in the course of the auditory sensations, were ways that things actually sounded from the perspectives at which your hearings occurred. Moreover, the causal conditions built into what it is for a sensation to be a genuine perception mean that the following holds: for each of the ways that things sounded to you in the course of your earlier auditory sensations, things sounded to you that way *because* things actually sounded that way from the perspective which you were occupying.

The ways that your earlier recollective auditory mental images showed things as sounding were, I shall assume, faithful to your initial auditory sensations. That is, the ways that the images showed things as sounding were ways that things did sound to you in the course of your recent auditory sensations. Furthermore, the fact that the auditory recollective images showed things as sounding those ways derived from the fact that things sounded those ways to you in the course of the earlier sensations.

There was therefore a short causal chain leading from the audible properties of the events in your recent environment to the auditory recollective images which you produced some moments ago. And the nature of the links in that chain ensured the following: that the ways that the recollective images showed things as sounding from some perspectives were ways that things really did sound from the past perspectives in which your recent auditory sensations occurred. The nature of the links ensured the accuracy, that is, of your recent external apparent auditory sensory memories. But I take it that the nature of the links—the fact that they trace a suitably nondeviant causal path from a genuine auditory perception to

the relevant recollective imagery—also ensured that those accurate external sensory memories were genuine memories.

The causal chain figuring in the previous case was particularly simple, in that the same ways for thing to stand sensorily were passed unchanging along the links of the chain. But more complex transformative causal chains of the same general type are possible, and they are relevant to one of the most important categories of external sensory memories, *viz.* observer memories.

Genuine observer memories are like genuine sensory memories of other sorts, in deriving from the subject's own sensory episodes. My genuine visual observer memories of my childhood, for instance, flow from seeings in which the ways that things looked to me were—and were owed to—ways that things did indeed look from the viewpoints that I happened then to occupy. The ways that the recollective images figuring in the observer memories show things as looking are not, however, the very ways that things looked to me on those earlier occasions. They are, rather, ways that things actually looked from perspectives which *overlooked* the perspectives that I myself occupied in the course of the earlier episodes.

The observer memories therefore accurately capture what the world was like at the relevant earlier times. But the observer memories are not merely accurate; they are genuine memories. For the ways that the recollective images show things as looking derive from the ways that things did once look to me, in a nondeviant manner; yet they do so through the operation of mental processes that reliably *transform* the ways that things looked to me into ways that things actually looked from nearby viewpoints which I did not occupy.²² In fact, the status of the prompting visual sensations as genuine seeings means that the genesis of the recollective images goes back further than that: the ways that the images show things as

²² Debus (2007), p. 198 suggests that 'even in cases of observer-memories, at least most of the subject's present experience might be causally determined by her earlier perceptual experiences of the original event'.

looking derive ultimately from the ways that things actually looked from the viewpoints which I occupied at the earlier times.

Genuine external sensory memories thus arise from the subject's own past sensory episodes, just as genuine internal ones do. Genuine internal sensory memories feature recollective images that show things as once having stood sensorily, for the subject, ways that things did indeed once stand sensorily for the subject; and the recollective images are accurate *because* the subject once had sensations in which things stood sensorily those ways. By contrast, genuine external sensory memories feature recollective images that show things as having stood sensorily, from past perspectives, ways that things did indeed stand sensorily from suitable past perspectives; and the recollective images are accurate *because* things once stood sensorily suitable ways both to the subject and from the subject's perspective.²³

7. Further issues

It was noted in section 3 above that sensory memories are essentially *de se*: when someone has a sensory memory, it seems to the person that the past was certain sensorily-characterised ways in the course of his or her own life. According to the catholic approach to sensory memory developed previously, the recollective images featuring in internal sensory memories express contents pertaining to past sensory episodes enjoyed by the subjects of those very memories. The approach thus ascribes a crucial *de se* component to internal sensory memories, as required. The recollective images featuring in external sensory memories were taken to express contents relating to past perspectives, however. Where is their *de se* component?

²³ Accuracy-ensuring causal chains of the broad kind that underwrite genuine external sensory memories are present in a wide range of contexts: for instance, the ways that passages of documentary film footage show things as looking and sounding from past perspectives commonly both are, and result from, ways that things actually looked and sounded from the relevant perspectives. Chapter 8 of Gregory (2013) discusses at more length the general case thus exemplified by accurate external sensory memories.

Your internal sensory memories of the ways that things looked to you last week are *de se* because they relate to the ways that things looked *to you* last week. Their *de se*-ness is owed, that is, to the fact that the domains of past sensations invoked in the memories' appearances of pastness are characterised in relation to you. But a domain of past perspectives may just as easily be characterised in relation to oneself: I might use a photograph to show you how things looked from some past viewpoints near to ones that I myself once occupied, for instance. The *de se* character of external sensory memories in general therefore arises, I take it, from the *de se* characterisations of the domains of past perspectives invoked by the complex contents that the memories present as true.

The *de se* nature of sensory memory thus presents no difficulties for the approach to sensory memory elaborated previously. How about the last of the explanatory challenges identified in section 3? Does the acknowledgement of external sensory memories bar us from making out the ways in which sensory memories differ from the distinct but otherwise related sensory phenomena adduced by Martin and Owens? In particular, are we able to account for the phenomenologically striking differences between sensory memories, sensory episodes, and mere sensorily-based recognisings?

Sensory episodes and mere sensorily-based recognisings do not involve its seeming to us that things once stood sensorily certain ways, either from some past perspectives or in the course of some past sensations. There is therefore no danger of their being confused with sensory memories, whether external or internal ones. Indeed, the specifically past-directed nature of the appearances involved in external and internal sensory memories means that the purported relationships which the latter have to the past are written into their very phenomenologies. This paper's catholic account of sensory memories thus allows us to distinguish between sensory memories and sensory episodes proper without supposing that,

to re-quote Martin, the distinction between those cases must be drawn ‘in terms of something extrinsic to the experiential character of the episodes’ themselves.

Yet we may still recognise important relationships between external sensory memories and genuine sensations. The distinctively sensory nature of the contents which form the bases for the past-directed appearances involved in sensory memories in general means that sensory memories have a pronouncedly sensory phenomenological flavour, for instance.

Consider, too, a genuine external sensory memory whose accompanying recollective imagery directly reflects ways that things once stood sensorily to the memory’s subject in the course of genuine perceptions. We have seen that the ways that the memory’s accompanying recollective imagery shows things as standing sensorily directly mirror ways that things actually once stood sensorily from suitable past perspectives. The recollective imagery present in such genuine external sensory memories therefore stands in a notably quasi-perceptual relationship to past states of the world. By contrast, the transformative operations present in the production of genuine observer memories mean that genuine observer memories have a less properly quasi-perceptual character.

8. Conclusion

Introspection strongly supports the view that the recollective images featuring in sensory memories may seem both to capture sensory episodes from the inside and merely to reflect what the world was once like. But philosophers have sometimes tended to assume that sensory memories cannot ostensibly relate to the past in both of those ways. In particular, it has been claimed that sensory memories always purport to capture sensory episodes from the

inside. This paper has argued, however, that sensory memories may be both internal and external.

The resulting catholic account of sensory memories situated recollective images within a broader context. Sensory mental images—including, more specifically, recollective images—show things as standing sensorily certain ways. They are therefore ‘distinctively sensory’ representations. As explained above, there are two modes of showings performed by distinctively sensory representations: they may, first, show things as standing sensorily certain ways in the course of sensory episodes; and they may, second, show things as standing sensorily certain ways from perspectives.

The former ‘subjective’ mode of showing generates the possibility of internal sensory memories. And the latter ‘objective’ mode of showing generates the possibility of external sensory memories. More fully, the recollective images accompanying sensory memories of the two stated kinds present as true complex quantificational contents that exploit two different predicative roles that may be played by types of sensations within distinctively sensory contents.

We may then account for the differences between merely accurate sensory memories and genuine sensory memories, by citing suitable causal relationships holding between recollective images and previous sensory episodes within a remembering subject’s own life. We may also account for the *de se* nature of sensory memories, by appealing to *de se* characterisations of domains of past perspectives and sensations. Finally, we may account for the introspectible differences between sensory memories and various other related phenomena, by invoking the appearances of pastness that figure in sensory memories of all kinds.

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