Distinctions between the senses and bodily sensation types

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1. The distinctions between the senses

Let's consider first the question of whether the (usual candidates for the) senses — vision, hearing, smell, taste, and touch — each involve their own phenomenal relation.

If this sort of view were true, it would be bad news for the theorist who wanted to identify phenomenal and representational properties so that she could go on to give a naturalistically acceptable account of the latter (and hence also of the former). Such a theorist would owe some some account of the distinctions between the modalities of sensory representation; and this, from the point of view of intentionalism, is not easy to do.

Three candidates: (1) by phenomenal character; (2) by represented properties; (3) by sense organ. Why all are either independent implausible or inconsistent with the conjunction of the identity of phenomenal and representational properties with the denial of the claim that each of the senses involves the same phenomenal relation.

Bad news though it may be, it might seem as though there is a pretty difficult to resist argument in favor of the view that each sense involves its own phenomenal relation. I've already argued that a local interpersonal intentionalist thesis is true of each of these senses. But if such theses are true, then it seems that for any of these senses, corresponding to any difference in phenomenal character there must be a difference in content. Hence if all of the senses involve the same phenomenal relation to a content, any difference in phenomenal character between an experiences in one modality and an experience in another modality must also correspond to some difference in content between the two experiences.

But one might think that any view of this sort runs into an obvious problem with common sensibles: qualities which are represented by more than one sense modality. Consider a visual experience of a square and a tactile experience of a square. Both cases are instances of sensing a certain property: squareness. So it seems that if phenomenal character supervenes on content, there must be some phenomenal commonality between the two experiences. But, if we think about the two experiences, it is very hard to see what this phenomenal commonality could be — there just seems to be nothing in common between the way that shapes look, and the way that they feel.

There is a standard reply to this objection, and that is just to note that, as it stands, it is not an objection to any of the intentionalist theses we've discussed. These are

supervenience theses to the effect that any pair of mental states (from some delimited set) with the same content must also have the same phenomenal character. But the example of tactile and visual experiences of shape is not even an attempt to provide a counterexample to any thesis of this sort, since there is no argument that the relevant visual and tactile experiences will have the same content, rather than just contents with something in common. And, pretty obviously, they won't, since, for example the visual experience will represent the shape as having some color, and the tactile experience won't.

(Aanalogy to global vs. strong supervenience claims; connection to issues about color contrast.)

What would it take for an example of this sort to be convincing? Focusing on the example of vision and touch, what we would need, it seems, is a case in which a visual experience and tactile experience had exactly the same content, and in which there was a difference in phenomenal character. This sort of case really would force us (so long as we hold to intentionalism) to posit distinct phenomenal relations for vision and touch.

Stated more generally, this can give us a sufficient condition for two phenomenal relations to be distinct:

> If R, R* are phenomenal relations, then R≠R* if possibly, there are a pair of subjects, *A* and *B*, which are such that: (a) the only representational difference between A and B is that there are one or more contents to which A is R-related and which B is R*-related, and (b) the phenomenal property instantiated by A ≠ the phenomenal property instantiated by B

It's at least not easy to see how the distinctions between senses could give us a case of a sort which, given this test, would deliver the result that the senses are associated with genuinely distinct phenomenal relations.

2. Intermodal binding

Moreover, there are facts about the relations between the senses which provide strong evidence that we should not think of the distinct senses as each associated with their own phenomenal relation. Consider how the proponent of that view should think of the content of a total perceptual experience, which involves input from more than one sense. A very natural view for this sort of intramodal intentionalist to take is that the total content of one's perceptual state is simply the conjunction of the propositions which are visually represented, those which are auditorially represented, and so on.

This is a view of the relationship between the senses which Casey O'Callaghan has aptly dubbed the "composite snapshot" conception of experience. However, as O'Callaghan has argued, this view of the relationship between the senses seems inadequate to handle the phenomenon of intermodal binding.

Cases of perceptual binding are cases in which a perceptual experience represents several properties as properties of a single object. Intramodal examples are familiar. When I look at a tomato, I don't just see that redness and roundness are both instantiated in my environment, but rather that both are instantiated by the same thing — and, crucially, no view of the contents of my visual experience can neglect the fact that, in such an experience, I do more than visually represent that there is something red and that there is something round; I also visually represent that there is something which is both red and round.

As is often the case, we can argue for this conclusion using the veridicality conditions of such an experience. Consider a visual experience which, intuitively, represents something as both red and round. We would consider this experience to be illusory if had in a situation in which there is red object which is not round and a round object which is not red in the environment of the subject. But then it follows that there must be more to the content of my visual experience than that there is something red and that there is something round, since both of these propositions are true. A very natural suggestion is that the false proposition — the proposition in virtue of which the experience counts as illusory — is the proposition that something is both round and red.

But it is very plausible that there are also cases of intermodal binding. Sometimes we represent a sound as coming from some object which we also visually perceive to have a certain color, or feel a surface as cold that we also visually represent as blue. Think about a case in which I hear a barking sound as coming from a black and white dog. My visual experience represents there as being a black and white dog in such and such location relative to me, and my auditory experience represents there being a barking sound in my vicinity. But there must be more to the content of my experience than this, since I perceptually represent the white-and-blackness as a property of the source of the barking — and this content cannot be visually represented (since you can't visually represent a barking noise) and cannot be auditorially represented (since you can't auditorially represent colors). This indicates that there is at least one proposition — that something is both black and white and barking — which is a part of the content of my perceptual experience, but is not represented by any one of my senses. This is a problem for the composite snapshot conception of perceptual representation, since it indicates that there is more to the content of my perceptual experience than the conjunction of the propositions that I visually represent, auditorially represent, etc.

As above, we can defend this view of the content of the barking dog experience by considering the veridicality conditions of the experience. If it turns out that there is something barking in my vicinity, but not the dog, we would count the experience as illusory, which means that there must be some false perceptual representation going on. But the relevant proposition visually represented — that there's a black and white dog there — is true, as is the relevant auditorially represented proposition — that there is a barking sound in my vicinity. A very natural candidate for the false proposition is then the "intermodal" proposition: the one that predicates barking and black-and-whiteness of

the same thing. And if there is such a thing as perceptual representation of such propositions, the composite snapshot picture is false, since such propositions can't be represented by propositional attitudes associated with any of the five individual senses.

Reply on behalf of the composite snapshot view: the contents of perceptual experiences are not general propositions that something or other is white and black and that something or other is barking, but rather singular propositions which predicate barking, and black and whiteness, of some particular dog *d*. This version of the composite snapshot picture has the resources, it would seem, to handle the datum about illusions just mentioned. After all, if the subject described above has a visual experience which has the singular content that *d* is white and black and an auditory experience which has the content that *d* is barking, then, if the white and black thing is not the barking thing, either the visually represented or the auditorially represented singular proposition will be false — which is the result the proponent of the composite snapshot conception should want.

However, there are three reasons why this sort of reply seems inadequate.

1. The first begins with the observation that capturing the veridicality conditions of an experience is necessary but not sufficient for capturing its content. To see this, consider by way of analogy the belief states of two subjects. The first might believe of some object *o* that it is *F*, and also believe of *o* that it is *G*; the second might believe both these things, but also do something else: she might integrate the two beliefs, thus forming the belief of *o* that it is both *F* and *G*. This is a genuine difference in the beliefs of our two subjects; in general, there is no true closure principle to the effect that if a subject believes two propositions, he also believes their conjunction. However, the difference between their beliefs is not accompanied by a difference in the truth conditions of the belief sets of the two subjects; one's beliefs are true iff the other's are.

   There is surely room for an analogous difference in perceptual content without a difference in veridicality conditions. One can't, however, demonstrate the existence of such a difference using illusions, which play upon our intuitions about misrepresentation; so how can we argue that the picture provided by the composite snapshot theorist who relies on singular propositions is still missing something?

   There are two very different ways of arguing that the contents of the experience include not just the pair of singular propositions recognized by the composite snapshot conception, but also the conjunctive singular proposition which predicates both color and sound properties of the dog:

   [a] As noted above, we have a grip on the distinction between, on the one hand, believing that of some object that it is black and white and believing of the same

object that it is barking, and, on the other hand, believing of some object that it is both black and white and barking. While believing and perceptually representing aren't the same thing, we can sometimes use the former as a rough test for the latter, by asking: what beliefs would I form if I simply took my perceptual experience at face value? In the case described above, one of the beliefs I would thus form would, it seems, be the belief which predicates of the dog the conjunctive property of both being black and white and barking. This is some indication that this conjunctive proposition is also part of the content of the experience.

Contrast this with a case in which I visually represent that d is black and white and auditorially represent that d is barking, but do *not* perceptually represent d as both barking and black and white. (Suppose that, unbeknownst to me, I'm seeing d's reflection in a mirror, and therefore visually represent him as to my right, but that I (correctly) auditorially represent the bark as coming from the left.) If I took this experience at face value, I would not form the conjunctive belief which predicates black and whiteness and barking of d.

It is plausible that this difference in the beliefs formed on the basis of these two experiences reflects a difference in the contents of the experiences themselves. And it is plausible that this difference consists in the fact that part of the content of the first experience, but not the second, is the conjunctive proposition which predicates both white and blackness and barking of d.

[b] We can also argue using the "method of phenomenal contrast" discussed in connection with the representation of kinds. Think about the phenomenal character of an experience of a barking dog. There's something that it is like to see the dog, and something that it is like to hear the dog's bark, but also something it is like to see these as properties of the same object — there is something it is like to not just experience these qualities at the same time, but to experience them as unified in the world. We can imagine an experience which is just like the experience of the barking dog but for lacking the phenomenal character distinctive of the experience of these qualities as qualities of the same thing. This would be phenomenally distinct from the experience of the barking dog. Hence the two experiences must differ in content; and the natural suggestion is that this difference in content is that the barking dog experience represents the barking sound and the white-and-blackness as having their source in the same object. But this is the proposition for which the composite snapshot theorist can find no place.

So even if the composite snapshot picture can get the veridicality conditions right, it still seems as though it is missing out on part of the content of the perceptual experience.

2. That is an argument that even if the modified composite snapshot conception can get the veridicality conditions of the experience right, they're still not giving an adequate account of the contents of the experience. However, there's also reason to doubt that they *can* get the veridicality conditions right, because it is hard to see how they can get the right singular propositions to be the contents of the relevant visual and tactile experiences. Consider the illusory experience discussed above, in which the barking noise is in fact not produced by the dog, but instead by a small microphone hidden inside the dog's collar. The result that the composite snapshot theorist should want is that the content of the subject's auditory experience attributes barking to the dog. But why should this be the content of the subject's auditory experience? Why not think that, instead, the subject correctly represents the source of the sound as the dog's collar, rather than its mouth? After all, the auditory experience might well be produced by a causal chain of the sort characteristic of veridical auditory experiences.

3. Third, and last: we might reasonably doubt whether singular propositions can do all of the work for which they were introduced, because we can give a plausible argument for "intermodal" perceptual representations which are not cases of perceptual binding, and make no essential use of singular propositions. One way to do this is by adapting some examples from Susanna Siegel's discussion of the perceptual representation of causation. Here's one of Siegel's examples:

> "Suppose you are playing catch indoors. A throw falls short and the ball lands in a potted plant, with its momentum absorbed all at once by the soil. You see it land, and just after that, the lights go out. The ball's landing in the plant does not cause the lights to go out, and by hypothesis you do not believe that it does. Nevertheless it may seem to you that the ball's landing somehow caused the lights to go out. This is the first case. In the second case, you likewise see the ball land and the lights go out. But this case is unlike the first: you do not have any feeling that the ball's landing caused the lights to go out.. ... It seems plain that there can be a phenomenal difference between two such experiences."

   Siegel argues, plausibly, that corresponding to to this phenomenal difference is a difference in perceptual representation: in the first experience, the ball landing is perceptually represented as the cause of the lights going out and, in the second case, this is not represented.

   Siegel's example concerns a pair of visual experiences; but there's no reason why examples of this sort have to. Just replace the example of the lights going out with a loud booming noise — then, if Siegel's argument is sound, it follows that we perceptually represent a ball landing as the cause of a sound. But this can't be visually represented — since we can't visually represent loud booming noises — and it can't be auditorially represented, since we can't auditorially represent the noiseless path of a ball through the air. So we have a perceptual experience which represents a causal relation as obtaining between the instantiations of an exclusively visible quality

and an exclusively audible one; hence that perceptual experience can't belong to any of the five sense modalities.

The cases of cross-modal binding we've discussed have the following consequence: there are propositions which are the contents of experiences but are not the contents of any of the propositional attitudes which we imagined to be associated with each of the five senses. Possible response: the composite snapshot theorist should posit an extra, 'composite' sense to handle these propositions.

Let's call the propositional attitude associated with this extra composite modality of sense perception *C*-representation.

Think about a case of intermodal binding like those discussed above, in which a subject's visual system represents o as F, her auditory system represents o as G, and, intuitively, her perceptual experience as a whole also represents o as both F and G. In this case, the modified composite snapshot theorist will say that her visual experience has the content that o is F, that her auditory experience has the content that o is G, and that she also *C*-represents the proposition that o is both F and G.

Now, ordinary sorts of perceptual representation, just like belief and other propositional attitudes which aim to accurately represent the world, clearly distribute over conjunction. If I visually represent an apple as both round and red, it follows that I visually represent the apple as red, and that I represent it as round. And it is really not easy to see how a type of perceptual representation could fail to distribute over conjunction; surely, no matter what sort of perceptual representation we're talking about, if I perceptually represent, in any sense modality, an object as having both of two properties, I must also, in that sense modality, represent it as having each of those properties.

So if, in a case of intermodal binding, I *C*-represent o as both F and G, I must also *C*-represent o as F and *C*-represent o as G. But then it looks like *C*-representation is swallowing up the other species of perceptual representation: in normal cases of intermodal binding, *C*-representation will redouble the representational efforts of the visual system, the auditory system, etc. But at this point those other systems of perceptual representation look redundant — why should we believe in visual representation, etc., if the work that they are supposed to do is already done by *C*-representation?

Here's another way to bring out the oddness of thinking about *C*-representation as a propositional attitude on par with propositional attitudes associated with the other five senses. Can one *C*-represent that something is, for example, red, without visually representing that it is red? It seems not, because if this were possible, it is hard to figure out what the phenomenal character of the experience would be. It can't have the phenomenal character distinctive of visual experiences of red things, since then it seems that it just would be a visual representation of redness, rather than a *C*-representation of redness. And it had better have *some* phenomenal character, if it is to be a modality of

perceptual experience. The best conclusion is that this is impossible, and that it is a necessary truth that if a subject is *C*-representing that *o* is red, that subject is also visually representing *o* as red.

Analogous remarks apply to the other senses. So it seems as though it must be a necessary truth that if one is *C*-representing something, one also must be having experiences in at least two other sense modalities. But this just shows that we can't think of *C*-representation as a type of representation independent of and distinct from visual representation, auditory representation, and the others. If it were, then we *would* be able to *C*-represent without visually representing, auditorially representing, etc. — just as we can visually represent a scene without auditorially representing anything. This suggests that *C*-representation is not an independent sense modality, but instead is an abstraction from a more fundamental and general level of perceptual representation.

But if we say this about *C*-representation, we should say the same about visual representation and the propositional attitudes we imagined to be associated with the other sense modalities. Otherwise, there would be no explanation for the necessary connections which obtain between *C*-representation and those propositional attitudes. But then the composite snapshot conception of experience, whether supplemented with *C*-representation or not, must be rejected.

3. Binding and bodily sensations

So cases of intermodal binding push us, with respect to the distinctions between the five sense modalities, away from an intramodal intentionalism and toward an intermodal intentionalism. But these sorts of cases can also be used to show more than this, since we can generate cases of intermodal binding not just between different modalities of perceptual experience, but also between perceptual experiences and simultaneous bodily sensations.

Imagine that you look down at your thigh as you feel a sharp, stabbing pain there; you see what seems to be a small but sharp knife protruding from just that part of your thigh where you feel the pain. In such a case, it may well perceptually seem to you that the knife — the object with just that color and shape — is the source of the pain you feel in your thigh.

As a test for this claim, we can, as above, turn to an illusion designed to mimic the case just described. Imagine that the grey object which seems to be protruding from your thigh is in fact a plastic toy knife with the end cut off which is pressed against your thigh, and that the stabbing pain was caused by a toxin placed in the cup of coffee you're drinking. In this sort of case, it again seems that the subject is misrepresenting his environment, and it is quite plausible that this misrepresentation is a sensory or perceptual misrepresentation rather than just (say) a false judgement. As usual, we can provide evidence for this classification by pointing out that illusions of this sort could

persist despite the subject's knowing that the relevant experience is not veridical, and hence abstaining from the relevant judgement.

Just as the cases of intermodal perceptual binding discussed in the previous chapter can be used to argue that the senses are not associated with distinct propositional attitudes, so cases of binding involving bodily sensations can be used to show that we should not think of perceptual experience, on the one hand, and various bodily sensations, on the other, as associated with distinct propositional attitudes. For, if we did, we would need some distinct propositional attitude — the analogue of *C*-representation — to have as its contents propositions like the proposition that that grey thing is the source of my pain, which can neither be the contents merely of visual experience (since you can't see pain) nor of my pain sensations (since you can't feel greyness). But then we would run into just the same problems making sense of the relationship between this new representational system, on the one hand, and perceptual experience and bodily sensations on the other, as we did making sense of the relationship between *C*-representation and the individual senses.

This gives us an argument against the the intramodal intentionalist thesis that (i) any two perceptual experiences with the same content must have the same phenomenal character, (ii) any bodily sensations with the same content must have the same phenomenal character, but that (iii) possibly, a bodily sensation and perceptual experience have the same content but differ in phenomenal character. This trio of claims presupposes that perceptually representing that ... and having a bodily sensation with the content that ... are distinct propositional attitudes; but this is the claim which our examples of binding show that we must reject.

Just as we should reject the thesis that perceptual representation is an amalgam of more fundamental propositional attitudes associated with each of the senses, so we should reject the thesis that sensory representation is an amalgam of perceptual representation and representation by various bodily sensations. Instead, we should take these distinctions, like the distinctions between the senses, to be abstractions from a more fundamental propositional attitude, which we can call simply *sensing that p*.