

## **A Proprioceptive Account of the Sense Modalities**

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### **Abstract**

Representationalist theories of sensory experience are often thought to be vulnerable to the existence of apparently non-representational differences between experiences in different sensory modalities. Seeing and hearing seem to differ in their *qualia*, quite apart from what they represent. The origin of this idea is perhaps Grice's argument, in "Some Remarks on the Senses," that the senses are distinguished by "introspectible character." In this chapter I take the Representationalist side by putting forward an account of sense modalities which is consistent with that view and yet pays due regard to the intuition behind Grice's argument. Employing J.J. Gibson's distinction between *exploratory* and *performatory* behaviour, I point to a proprioceptive element in perceptual experience, and identify this as crucial in any account of what makes a particular way of perceiving a *sense modality*.

### **<1> Introduction**

On what do we base our judgements about the sense modality of occurrent perceptual experiences? Part of the interest in this question arises not intrinsically but in virtue of its connection with another issue, namely the truth or otherwise of the Representational Theory of Experience (RTE). That connection motivates this paper. According to the RTE, the *contents* of a perceptual experience are all that we are aware of in having it, and therefore all that a theory of experience needs to explain.<sup>1</sup> Those opposed to RTE tend to hold that in addition to what a perceptual experience is *of*, we are also aware of what the experience *feels like*, and that therefore any theory of experience needs to account for *both* elements. A major source of disagreement between representationalists and their opponents is therefore not so much the extent to which experiences can be explained in terms of their content, as the sorts of properties had by experiences that *need* to be explained.

One reason to think that anti-representationalists are right to insist that experiences have a 'feel' in addition to their content comes from an argument given by Grice (1962) that unless we acknowledge that we can be aware of the "introspectible character" of perceptual experience in addition to its content, there is no way to properly account for the division of the senses into different modalities. Grice argued that it is a conceptual truth that what makes a perceptual experience *visual, auditory, tactile, olfactory or gustatory* is its distinct

introspectible character. If Grice is right, the representational theory of experience is in trouble.<sup>2</sup>

This makes it an interesting question, what is it about a visual perception—if anything—such that it is, specifically, visual? Here I will discuss the standard answers to this question, and the problems with each, before offering a novel answer that is consistent with an appropriately broad construal of RTE, and yet accepts the common intuition that drives Grice's conclusion. The account I'll offer draws, in a way to be explained, on a Gibsonian insight that perceptual experience is proprioceptive as well as exteroceptive.

### <2> The Gricean Options

Grice's paper, as it were the *locus classicus* of this issue, is a fascinating early attempt to understand how transparency considerations (that we seem to see "through" an experience to its object) can be made consistent with the intuition that experiences have an introspectible "feel", some decades before the issue received anything like the attention it now enjoys. For reasons I won't explore here, I think it is a failed attempt, but a far more interesting failure than recent attempts to do the same thing. Indeed Grice was in effect trying to bridge what Block has infamously labeled "the greatest chasm in philosophy of mind," something attempted as rarely as the label implies.

The discussion in "Some Remarks on the Senses" is ostensibly confined to the issue of the distinction between the senses; of what it is about a visual experience, for example, such that it is, specifically, a visual experience. He concludes, in part, that all visual (etc) experiences share a special introspective character (a "generic resemblance") that non-visual experiences lack, and that a difference in this respect makes for a difference in respect of sense modality. But this sits uneasily with his acceptance that experiences are transparent, and so there follows a discussion, which I will not describe here, of how these could be made compatible.

Was Grice right that in order to distinguish between the senses we must impute a "special introspectible character" to sense experience? This is the question to be explored in this paper. An obvious place to begin the exploration is with a clear sense of the alternatives. In this respect Grice's paper is an ideal starting point; he presents us with a list that has survived discussion of the issue over the last forty years. These are the possible alternatives according to Grice (1962; 135)(I am paraphrasing):

1. The properties we are made aware of by the experience (colours, sounds, etc) – the kinds of *intentional content*, as we would now put it.
2. The "special introspectible character" of the perceptual experience itself, which we might reasonably translate as the "qualia" of the experience.
3. The external conditions, or stimuli, connected with the perception.

4. The internal processes – the sense organs and so forth – connected with the perception.

Let me call these respectively the *Content* criterion, the *Qualia* criterion, the *Stimulus* criterion and the *Sense Organ* criterion. Before going further, it is worth mentioning a modern response to Grice's quest for the *criteria* for distinguishing the senses, namely that "sense modality" may be a "cluster" concept, such that several criteria are relevant to the concept, but none necessary, and in different contexts, different criteria may be weighted differently. This response would be a misreading of what is at stake. Even if "sense modality", or "vision" is a cluster concept in this sense, the question of *which* cluster remains relevant to contemporary discussions, since one of the main foci of debate on the distinction between the senses is, in effect, whether there are *any* circumstances in which qualitative character as distinct from content is relevant to the distinction— or, in other words, whether the cluster *includes* qualitative character. Grice succeeds in showing that it is if he can show that there are *some* contexts in which qualitative character plays a deciding role. And, of course, to show that qualitative character sometimes plays such a role is enough to show, among other things, that at least some sense experiences really do have it.

For the next four sections I will discuss each possibility in turn, in the light of recent debates. I begin with the least defended, the Stimulus criterion.

### <3> The Stimulus Criterion

So-called sensory substitution systems create an interesting problem for the Stimulus criterion. These are apparati which transform one sort of stimulus into another. The most well known of these is Bach-y-Rita's TVSS (Tactile Vision Substitution System), which detects light waves and produces pressure signals on a grid on the skin. Other mechanisms detect light and produce sounds or mild electric shocks. In these cases it seems an open question what the stimulus really is; whether, in the case of TVSS, the stimulus is light waves or sound waves. It depends on whether we are inclined to include the mechanism itself as part of the perceiver. If the nature of the stimulus is the crucial criterion for deciding the sense modality, then it should be an equally open question whether the wearer of these devices *sees* the obstacles in her environment or hears them or feels them. It is, however, clear that visual sensory substitution systems are not, literally, a *cure* for blindness. They are merely *aids* for the blind, and this is not merely a question of detail. Although it is true that sensory substitution systems provide poorer information than are typically available through the eyes, I take it that it would be no less absurd to say that these systems are restoring *partial* sight to the blind, though clearly they are restoring certain *abilities*.

A second, but it seems to me equally decisive problem, is there is actually a far from perfect correlation between types of stimuli and the sense modalities. The light waves responsible for seeing can also be responsible for the tactile

feeling of heat—give or take a few nanometres of wavelength; sound waves can be felt tactilely; and so on.

#### <4> The Content Criterion

There are a number of ways we might, as per the *intentional content* criterion, try to draw the distinction between the senses using the contents of perception. For a first attempt we might go through the list of properties we perceive and divide them up into five groups according to the modality that perceives them. This won't work, however, because a lot of properties—they even have a collective name, the *common sensibles*—are common to different senses. These are mostly spatial properties—size, shape, location, and so on; but we might also include sweetness here, since arguably it is perceived by smell and by taste.

Another way is to distinguish each sense by a single property which is unique to that sense. So, for example, what makes sight *sight* is that it is a perception of—among other things—colour; hearing is a perception of, among other things, *sound*. The problem with *this* is that some senses perceive more than one property uniquely. Touch, for example, includes the perception both of pressure *and* of temperature, uniquely in both cases. The “unique property” criterion would make it mysterious why pressure and temperature aren't considered unique senses. One might respond here that they *ought* to be, but even sight, a single sense if there is such a thing, perceives more than one property uniquely—*hue* and *brightness*, to name two. This way isn't going to work either. A third way to try to use the content criterion is in terms of a *range* of properties. This is actually Fred Dretske's proposal. According to this, we identify a sense modality with a unique *range* of properties perceived. So, for example, we characterise sight by the fact that when we see we are aware of size, shape, location, movement, hue, brightness and saturation, and maybe a few more. The different lists for the different sense modalities will overlap, particularly in respect of the common sensibles, but there will be a unique list for each modality.

But this way also fails. Although each sense might be said to involve the perception of a unique list of properties, without some principle tying the members of the list to one another, there seems no reason for favouring the lists we all agree on for random alternatives. Grice saw this problem, and he considered the following answer. Under certain conditions each member of a “modality list” will share what he called a *detection-link* with the other members of the list. So, for example, we are always perceptually aware of either *both* hue and brightness, or of *neither*. The perception of them goes together. When our only contact with an object is visual, it will likewise be the case that we're either aware of the object's colour, shape *and* size, or we'll be aware of neither; all three properties will thereby share a detection link. Grice's reply to this idea—the right one it seems to me—is that the detection link isn't always there. When we are seeing *and* touching a coin, for example, the perception of shape remains even

when one closes one's eyes, so the detection link between the members of the visual list is lost. In these cases, however, there isn't all of a sudden any confusion about whether we're seeing the shape of the coin. To put the point in another way—in the way Grice put it—the detection link idea implies that in some cases we'll have to follow a certain procedure to figure out whether we're seeing or touching a certain properties; but, he wrote “it seems certain that we never do use any such method”—that the question “never seems in the slightest doubt.” (Grice; 140)

Of course when you are seeing and touching an object, and you close your eyes, even if you are still perceptually aware of the objects' shape by touch, clearly you no longer *see* its shape. So there is still a detection link between the object's colour and its *visible* shape. But there doesn't seem to be any way of characterising visible shape without presupposing the idea of a sense modality—at least if the only resources at one's disposal are the properties perceived. Whatever it is to be *visibly* square, presumably it's to be *square* in the exactly the same way that tactile squares are square. That is to say, there is only one relevant way in which the object itself can have the property squareness. There is no such *property* as visible squareness as distinct from tactile squareness.

In the absence of further ideas that lack one or other of these problems, we have to conclude that the content approach fails.

#### <5> The Qualia Criterion

According to *Qualia criterion*, experiences within a sense modality share, or at least resemble in respect of, qualitative character, and it is by that character that we can recognise an experience as belonging to one sense modality or another.

This is in fact Grice's proposal, though he saw a significant problem with it. If perception of some property is an instance of seeing just in case it has a particular feel—which is different to the property perceived—then it ought to make sense to say that the perception of exactly those properties we hear could have the feel that sight actually has, and we would in that case *see* sounds. Grice had the strong intuition—one I think most share—that whatever is the relationship between content and character, it can't be *that* easy to change the modality of a perceptual experience.

Grice did, however, argue that despite this difficulty, a difference in phenomenal character, irrespective of the content of a perception, *could* mean a difference in modality. The basis of his argument is a thought experiment. In this thought experiment, we are asked to imagine meeting a Martian who looks very like the typical human, with the single exception that it possesses four eyes—one pair in the normal place, and another immediately above on the forehead. The pairs of eyes are physiologically the same, and mediate the perception of the very same properties: colours, shapes, and so on. However, it happens that the Martian uses different verbs to describe seeing through the bottom pair and seeing through

the top pair—say, x-ing and y-ing. Moreover, and crucially, when asked whether x-ing and y-ing feel any different, the Martian responds “Oh yes, there is all the difference in the world!”

In this case, Grice claims, we should surely say that x-ing and y-ing are different senses, and therefore that the question of whether there is an introspectible difference between two perceptual states is indispensable to the question of whether they are in different modalities, and consequently that introspectible character is in general relevant to the distinction between the senses.

What Grice is attempting to do is to try to get around the question of our actual experiences, and in particular the vexed question of the relationship between content and character. So he describes a creature for whom content and character *are* distinct, putting aside the question of whether that creature is *us*. Since in this case a difference in qualitative character, keeping the content constant, *does* seem to mean a difference in sense modality, our *concept* of a sense modality must be sensitive to qualitative character as distinct from content. Moreover since our concept of a sense modality is based, by hypothesis, on experience, it must be the case that we *experience* qualitative character as distinct from content.

There are a number of problems with this argument, not least of which is the idea that phenomenal character and intentional content *might* be distinct if they are *actually* the same thing. But the main problem that I want to raise is best brought out by a variation on the thought experiment. Here is the variation: rather than possessing two sets of eyes, we imagine that the Martians are from all appearances exactly like us. So there is no x-ing *and* y-ing; there is just x-ing. Now instead of proclaiming “all the difference in the world” between using one set of eyes and the other, however, these Martians proclaim all the difference in the world between using their eyes in the *morning* and using them in the *afternoon*. In this case, despite the qualitative difference, I take it that there is no temptation to suggest that in the morning they are using one sense modality and in the afternoon they are using another. So whatever is going on in Grice’s thought experiment, we cannot draw from it the simple conclusion that a difference in qualitative character makes for a difference in sense modality.

#### <6> The Sense Organ Criterion

Finally, the *Sense Organ criterion* has been defended by a number of people, on a number of grounds. Here I focus on a recent argument by Brian Keeley, its main proponent. Though I will argue that Keeley’s argument fails, I go on to propose an alternative type of sense organ account.

Keeley (2002) arrives at the sense organ criterion via a process of elimination. He writes that the problem of distinguishing the senses isn’t merely an abstract philosophical problem; it is also a *biological* one, discussed at length by biologists in relation to the star-nosed mole. It is controversial whether this mole’s nose—or what looks like a nose—is part of a sense of smell or a novel

sense, such as an electrical sense. This problem looks very much like Grice's original problem, namely of how to assess a claim that a creature possesses a novel sense, so it is very interesting to see how biologists actually try to solve it.

For our purposes the most significant thing they do is to dismiss psychology entirely. The move isn't defended by the biologists who are party to the debate, but Keeley defends it for them, in the following way. In order to use the contents of experiences to differentiate the senses, we need to distinguish direct from indirect content. For example, although the perception of temperature is, in us, a kind of tactile sense, when we see a glowing red hot plate we often say that it *looks* hot; alternatively we might say of a rose that it *looks* fragrant. We need to be able to ignore these indirect contents if we are to be able to use the content criterion. Grice also saw this problem for the content view and Keeley endorses Grice's solution, which is to make the distinction in terms of qualitative character; so, to directly perceive redness is for redness to be part of the qualitative character of the experience. In cases of indirect perception there is no associated qualitative character. So, in order to distinguish the senses in virtue of the *contents*, we need to be able to refer to the phenomenal character of the experiences (Dretske 1999, at least, has since addressed this problem, successfully I take it, by introducing a distinction between property-awareness and fact-awareness; but I grant the point here for the sake of the argument).

The problem, then is this: in the case of the star-nosed mole, for familiar reasons it is impossible to say what the character of its experiences are; or, crucially, whether the mole even *has* experiences with phenomenal character. But even if we supposed that the mole in fact has no phenomenal experiences, that doesn't seem to dissolve the problem. It *still* makes sense to ask whether the mole's nose is part of a sense of smell or of electricity. Therefore neither psychological criteria will work, leaving the sense organ criterion as the only one left standing. This doesn't mean that the problem is solved, since it remains to discover what distinguishes *sense organs* from one another. Keeley gives an interesting and detailed account of what that distinction amounts to, but I won't follow that up here. Instead I want to focus on Keeley's argument that psychology doesn't really matter to the distinction.

It seems unarguable that our actual basis for judging of ourselves that we are using one modality rather than another is *experiential*. Compare, for example, the difference between being touched on the tongue and being touched on the nose, with the difference between a sweet taste and a sweet smell. In the former case the difference is simply a matter of location; but the latter difference is clearly more than that. Or take the difference between feeling a vibration with one's skin and *hearing* it. Again, the fact that one is an instance of touch perception and the other is an instance of auditory perception is just obvious—the nature of the respective experiences makes it plain.

To say this isn't to go out on a limb—the idea is extremely common in the literature. Nudds (2003; 31) takes as given “the obviousness of the fact that we

have five senses”); Grice (1962; 140) on the question of whether any given perception of a spatial property is visual or tactile, writes that “the answer to such a question asked about ourselves never seems in the slightest doubt”; most revealing of all, even Keeley himself (2002; 5), in the very beginning of his paper, makes the claim that “one of the most striking phenomenological facts about the human perceptual experience of the world is that it is divided into *modes*”. So even for Keeley one can *make sense* of the division into sense modalities in terms of the phenomenology of perceptual states.

Some further evidence for this comes from cross-cultural research. If the division into five senses is a constant across cultures, this would *suggest* that it is based more or less directly on experience. This is what we find. According to Jütte (2005), the list of five senses that we are familiar with is the same list we find being taken for granted in records from ancient Greece, India and China. One would expect cross-cultural variation if the list we have of the five senses is compiled through even a small amount of theorizing (or even, for that matter, a small amount of arbitrariness). Since this seems to be lacking, we can take this lack as support for the idea that the list is based more or less directly on experience.

Now it does happen to be the case, of course, that a difference in sense modality comes with *some* physiological difference or other at the periphery. So there is perhaps some room for arguing that while, as it were, our “surface judgements” about sense modality are phenomenologically based, what those judgements actually end up picking out are the physiological differences—on analogy with the distinction between surface judgement about the presence of water and the chemical kind that those judgements actually pick out. The big problem with this is that while the surface properties of water are also the surface properties of H<sub>2</sub>O, it is very implausible that the surface properties of a sense modality—by hypothesis its phenomenology—are the surface properties of sense organs. Sense organs may cause experiences, but it would be a very odd view according to which sense organs themselves had experiential properties.

To this problem we can also add the implausible consequence of Keeley’s view that prosthetic devices cannot restore perception in a sense modality; at most they can add a new modality. By all accounts, however, hearing implants really can enable a deaf person *literally* to hear.

So what about the star-nose mole problem? Without access to its psychology, does this mean that the sense modality associated with its nose is inaccessible? I think the answer is yes. But there is an analogous problem that isn’t inaccessible. Let me call this the Physiological Problem of the Senses. This is more or less the question that occurs to us when we see the star nose on the mole, namely “What on Earth does that thing *do*?” Is it a limb or a sense organ, and if the latter what information is it collecting and how? These are all interesting questions to ask, and indeed they *are* the focus of the star-nose mole problem as it is discussed in biological circles. But because none of them are



straightforwardly linked to *how*, if at all, the mole becomes aware of whatever information is being detected, they are at most analogous to the traditional question of whether the nose indicates some novel sense modality. Which is not, obviously, to say that the biologists' questions aren't fascinating question their own right; they are simply different questions.

Although the problem of the star-nose mole is insoluble for what we can now recognise as the traditional sense of sense modality, this was only so on the assumption that we lack access to the mole's psychology. But we don't—or won't always—*completely* lack access to the mole's psychology, so we can still ask what we would *have* to know about it in order to know which senses to attribute to it. And this is in effect to ask what it is about *our* psychology—about, in particular, our perceptual experiences—upon which we make judgements about sense modality. In the next section I draw on suggestions made independently by D.M. Armstrong and J.J. Gibson.

#### <7> Perceptual Experience and the Sense Organs

It is usual to treat the Sense Organ criterion as physiological. One fairly obvious reason for this is that sense organs are generally themselves thought of in physiological terms; as eyes, ears, and so forth. Keeley (2002) has shown that the notion of a sense organ is poorly understood, and although he nevertheless assumes a biological notion as well, it seems to me that there is room for a partly *psychological* notion of a sense organ. Take, for example, Armstrong's (1968; 211-213) characterisation of a sense organ (noted by Keeley) as “a portion of the body which we...move at will with the object of perceiving what is going on in...our environment.”<sup>3</sup> This seems to me a perfectly plausible characterisation of a sense organ in the ordinary sense of the phrase. Now although sense organs so characterised are *portions of the body*, and so physiological, they are portions picked out psychologically, by reference to a “will”. I think this is exactly right: the eyes are what we *use* to see, the ears are what we *use* to hear, and so on, where “use” must be treated intensionally. I use my eyes to see but I do not use—not in the same sense—my orbital muscles to see, even though it is *in fact* my orbital muscles that I am using when I swivel my eyes in their sockets. Armstrong's characterisation of a sense organ is really a sort of subjective characterisation, that is to say an account of the psychological significance of sense organs. Though Armstrong does not say so, it is plausible that this significance arises early in the cognitive chain; indeed, it seems to me, at the level of the perceptual experience itself. The eyes are characterised *in perceptual experience* not as biological entities but rather, as it were, as tools. Or so I will argue.

What is the significance of this? Note again that the main difference between Grice's “martian” thought experiment and my variation is that in the former the Martian has two sets of eyes, and in the latter only one. This is the key difference between the two scenarios, and it seems to make all the difference to our intuitions. *Given* that there are different sense organs involved, qualitative

character really does make a difference to our intuitions about sense modality. I think there is a reason that our intuitions are sensitive to this combination in particular; that there is a specific aspect of our experience which captures the combination—what I will call, for want of a better name, the *feeling of using a sense organ*.

Writing of the “feeling” of using a sense organ will be provocative to some. I might equally have used the term “awareness” rather than “feeling”. Part of a perceptual experience is an *awareness* of the sense organ being used. I use the term “feeling” to express some agreement with anti-representationalists who claim that a perceptual experience involves more than just awareness of the object of the perception. Plainly, being aware when you are seeing *that you are using your eyes* is to be aware of more than what you are seeing. The idea, to borrow a phrase of Gibson’s, is that perceiving is *proprioceptive* as well as *exteroceptive*, and that the senses themselves are distinguishable proprioceptively.

Indeed the idea that the phenomenology of an experience is directly informative of the sense organ involved has similarities with a position put forward by J.J. Gibson (1966). Gibson is most well known for a thesis about the content of perceptual experience—that it is not directly of objects and properties but rather of possibilities for action, or “affordances” as he put it. This is *not* the idea of Gibson’s that I have in mind. One of his less radical proposals was that it is wrong to think of the psychology of perception in purely passive terms. Some of our behaviours—some of the actions we perform—are distinctly perceptual. An obvious example is moving one’s eyes – that is to say *looking around*. Gibson called these sorts of behaviours “exploratory behaviours”, and called attention to a history within psychology of noting this special class of perceptual actions, going back at least to Pavlov (1927), who termed them “investigatory responses”. He argued that each of the five senses involve a distinct set of exploratory behaviours, and that, moreover, for any perceptual experience, implicit in the experience itself is an awareness of the corresponding set of behaviours.

Now these different sets of exploratory behaviours have what we might call different *foci*. In the case of vision, the focus of behaviour is the eyes. The head is involved, of course, but clearly it is no accident that in the vernacular “to look” is “to use your eyes”. We can roughly identify this focus of action with *sense organs*—not in the sense simply of the parts of the body that sense things, but rather as the parts of the body which we *use* to sense things.

So how do we get from an awareness of the appropriate set of exploratory behaviours, as I had originally put it, to awareness of *using your eyes*. There seems to me a natural translation between the two. To see is not simply to be having an experience that represents that things are thus and so in the world in front of one—though of course it is partly that. It is also to know what to *do* to see what the world is like to one’s right or left. And this involves being aware that I am doing something in order to see exactly what I am seeing; that my awareness that the world is thus and so in front of me is made possible by what I am doing

with my eyes. In seeing, I am aware that the world is thus and so, *and* that my eyes are responsible for my being so aware. As Gibson put it:

The perceptual systems, as it turns out, correspond to the organs of active attention with which the organism is equipped. They bear some resemblance to the commonly recognised sense organs, but they differ in not being anatomical units capable of being dissected out of the body. Each perceptual system orients itself in appropriate ways for the pickup of environmental information... Head movements, ear movements, hand movements, nose and mouth movements, and eye movements are part and parcel of the perceptual systems they serve. These adjustments constitute modes of attention...and *they are the senses only as the man in the street uses the terms*, not as the psychologist does. (My emphasis; Gibson, 1966; 58)

There are a number of further reasons for thinking that perceptual experiences really do include an awareness of sense organ as part of their phenomenology, and that this grounds our intuitions about sense modality, which in turn explains why there are traditionally only five senses.

Firstly, although the idea that perceptual experiences include an awareness of using a sense organ is not explicitly raised in the philosophical literature, it is suggested by various remarks. Norton Nelkin (1990), for example, argues that we might historically have distinguished the senses according to a noticed correlation between the phenomenal character of a perception and the sense organ responsible; Peter Ross (2001; 504), getting a bit closer, holds that “it is obvious to us which sensory organ we use to perceive a particular property”, meaning in the context that it is obvious in *experience*. Dominic Lopes (2000; 45), closer still, asserts that “it seems that the phenomenal character of each sense includes or makes possible an awareness of the organs by which the sense operates. What it is like to touch things tells us that we touch with the skin, as what it is like to see makes us aware that we see with the eyes.” Indeed Lopes’ assertion is exactly my position, *sans* the “or makes possible” clause.

Secondly, if we accept that some of our actions are “exploratory” in Gibson’s sense, it is necessary to posit some kind of proprioceptive awareness of the source of sensory information. Actual exploration of the world tends to require at least an implicit knowledge of the link between the information that is coming in and the means to control the appendage responsible for its coming in. This is of course Gibson’s point, and it is this that in our case constitutes, I claim, the ‘feeling’ of using a sense organ that is part of perceptual experience.

Thirdly, as mentioned earlier, it is an odd fact that some rather obvious senses were never included in the traditional five. The account I’m proposing can explain this: in these cases there is no *feeling* of using any sense organ at all. The clearest examples of this are proprioception and the senses of balance.

Proprioception, which used to be called “the muscular sense” in the 19<sup>th</sup> century, is the sense of where one’s limbs are positioned. It is how you know, when you close your eyes, where your arms and legs are. But whereas to look is to *use* your eyes, to propriocept isn’t to *use* anything; at least—and this is the crucial part—not consciously. You are simply *aware* of the position of your limbs (indeed people tend not to be aware that they *do* know the position of their limbs other than through sight or touch; try asking). Similarly with the sense of balance; you don’t need visual, tactile, or any other cues to know which way the ground is. But there is no part of the body that we’re aware of *using* to find that information out. If my account is correct, it makes sense that these were never counted as sixth or seventh senses.

Finally, and most importantly with regard to the debate about representationalism, it is important to point out that this account is compatible with RTE, since we can construe the feeling of using a sense organ as a *representation* of which sense organ is being used. To be aware that one’s eyes are responsible for an experience as of an apple is to represent that one’s eyes are so responsible. To be sure, this does not conform to the letter of RTE as some representationalists understand it<sup>4</sup> but it is certainly in keeping with its spirit, which I take to be that what we are aware of in having a perceptual experience is exhausted by the representational contents of that experience.

An important test for a representationalist theory—of anything—is how it deals with the possibility of *misrepresentation*. The representationalist story I having been telling mandates the possibility that I might be aware of using one sense organ in the perception of some state of affairs, while in actual fact another sense organ is really being used. Such a possibility might even be thought *likely* to come about on occasion, given the account I have proposed. Conversely, it is important evidence in favour of the theory if there are such cases describable as misrepresentation of this sort. Fortunately for my account, there are. These are phenomena known as “facial vision”.<sup>5</sup>

“Facial vision” is a phenomenon whereby some people—particularly blind people—are able to perceive the rough size, shape, and location of objects around them through a sensation that is described as one of “pressure” on the face. It turns out that the auditory system is responsible for these perceptions, by gathering echolocatory information about the space around the perceiver. Those who experience facial vision reportedly think of it as a tactile experience. And, indeed, we can believe that *is* a tactile experience, insofar as it is the skin on the face which it seems to them that they are using—and which, no doubt, the people in question move about in order to facially perceive better. But it is an *illusory* experience. The ears, not the facial skin, are the organs actually used in facial vision. In this case the behavioural consequences of the mistake are minimal, since the sort of movement one would perform knowing that the ears are the responsible organ, are more or less exactly the sort of movements actually performed in any case; the ears and the skin of the face not being capable of

independent movement and in close proximity. No doubt this is the reason the illusion is never discovered as such except through careful tests.

#### <8> Conclusion

The account I'm giving here allows us to *count* senses, but it doesn't yet allow us to answer Grice's question, or solve the star-nose mole problem. If it feels to the mole as though it is using its nose to perceive, then using our criteria for judging such things it counts as a distinct sense, on my view. But is it a sense of smell? The question is moot. What I am proposing is *not* primarily a claim about the best analysis of the *concept* of a sense modality. Rather, it is a claim about the phenomenology of experience, and in particular about that aspect of sense experience which is responsible for our judgements about sense modality. It is a claim about what it is about visual experiences such that we judge them as a group to be distinct from other experiences; and so on for auditory, tactile, olfactory and gustatory experiences.

If I am right that perceptual experience includes a proprioceptive element in the sense explained above, then we can account for Grice's intuition that we need more than simply the (exteroceptive) content of perception to account for judgements about sense modality without having to deny that in having a perceptual experience we are only aware of its content. Proprioceptive contents are still, after all, contents. The Representational Theory of Experience has its problems, but it the difference between the sense modalities is not one of them.<sup>6</sup>

#### Footnotes

1. See Drestke (1995), Lycan (1996) and Tye (1995).
2. Grice's argument has received recent attention by Ross (2001), Keeley (2002) and Nudds (2003).
3. Keeley (2002) points out Armstrong's characterisation.
4. See Tye (1995)
5. See Lopez (2002) for a discussion of facial blindness in a philosophical context, and Grantham (1996) for an introduction to the science.
6. Versions of this paper were presented at universities in Sydney, Canberra, Melbourne and Hong Kong. I am very grateful for all of the very useful comments and suggestions offered by those present.

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