

Cambridge University Press

0521397375 - Sensations: A Defense of Type Materialism

Christopher S. Hill

Excerpt

[More information](#)

PART ONE

Introduction

Cambridge University Press

0521397375 - Sensations: A Defense of Type Materialism

Christopher S. Hill

Excerpt

[More information](#)

1

Topics and themes

In these pages we will be concerned with sensations themselves (that is, with concrete sensory events) and also with certain of the characteristics that sensations exemplify. Although we will consider characteristics of other kinds as well, we will be primarily concerned with characteristics that are *qualitative*. Qualitative characteristics include *being a pain* and *being an itch*. They also include the sensory characteristic that is exemplified by the gustatory sensations one has when one tastes orange juice, and the sensory characteristic that is exemplified by the olfactory sensations one has when one smells gasoline.¹

A terminological point. Ordinary language does not contain many names for qualitative characteristics of sensations (or *qualia*, as I shall sometimes call them). In addition to “*being a pain*” there is “*being an itch*” and “*being a case of pleasure*.” But there are not many others. In most cases we pick out qualitative characteristics of sensations by resorting to descriptions, and this is what I have done in giving the last two examples in the first paragraph. However, it can seem that descriptions like “the sensory characteristic that is exemplified by the gustatory sensations one has when one tastes orange juice” suffer from crippling ambiguities. If, for example, one tastes orange juice right after brushing one’s teeth with mint flavored toothpaste, one experiences a sensa-

1 At this point it is best to explain “qualitative” by appealing to examples; to do otherwise would prejudice an important metaphysical question about the nature of qualitative characteristics.

In using the term “qualitative,” I mean to single out the class of characteristics that includes *being a pain*, *being an itch*, and all others of the same metaphysical type. As I see it, the most salient common features of the members of this class are, first, that they are intrinsic characteristics, and second, that they determine membership in sensory kinds. Hence, if I were asked to define the notion of a qualitative characteristic, I would give a definition that was based on these two features. On the other hand, most philosophers who favor the view known as functionalism would wish to deny that *being a pain* can appropriately be described as an intrinsic characteristic. For this reason, it seems best to work with a loose and intuitive conception of a qualitative characteristic until we have examined functionalism. After Chapter 3, which is devoted to functionalism, we will be in a position to adopt a definition of the sort just mentioned.

Cambridge University Press

0521397375 - Sensations: A Defense of Type Materialism

Christopher S. Hill

Excerpt

[More information](#)

tion – a most unpleasant sensation – that is quite different than the one that is normally associated with tasting orange juice. And one has a sensation of yet another kind when one tastes orange juice right after drinking scotch. And so on. In view of these considerations it seems that the foregoing description fails to pick out a unique qualitative characteristic. Evidently, in order to guard against this ambiguity, it is necessary to use a more elaborate description – a description like “the sensory characteristic that is exemplified by the gustatory sensations that a normal person has when he or she tastes orange juice under standard perceptual conditions.”

Perhaps I have not yet added enough qualifications to eliminate all ambiguities. After all, what counts as a normal person varies from possible world to possible world, and the perceptual conditions that count as standard in one world tend to be different than the conditions that count as standard in other worlds. We can, for example, imagine a possible world in which human nervous systems are sufficiently different that the normal taste of orange juice is quite different than it is in the actual world. Accordingly, one might think that even a complicated description like the one cited at the end of the last paragraph stands ambiguously for the members of a set of qualia, one for each of the possible worlds that is relevantly different from ours. So perhaps it is necessary to make use of certain very complicated descriptions – descriptions like “the sensory characteristic that is exemplified by the gustatory sensations that a normal person has when he or she tastes orange juice under conditions that are standard in the actual world.”

I

When we approach sensations and their qualitative characteristics from a theoretical perspective, we encounter a number of questions that either have a philosophical dimension or fall entirely within the purview of philosophy. Most of these questions can be assigned to one of the following five categories.

1. QUASI-EMPIRICAL QUESTIONS

Is there an interesting correspondence or dependency relationship between qualitative characteristics and physical characteristics of some sort?

Cambridge University Press

0521397375 - Sensations: A Defense of Type Materialism

Christopher S. Hill

Excerpt

[More information](#)

Take, for example, the relationship of *universal correlation* – the relationship that would obtain between a qualitative characteristic and a physical characteristic if it were true that, for any being x , x experiences a token of the qualitative characteristic when and only when a token of the physical characteristic occurs in x 's brain. Is there a set of physical characteristics that are universally correlated with the set of qualitative characteristics?

Questions about correspondence and dependency relationships between qualitative and physical characteristics are quasi-empirical rather than purely empirical because they presuppose answers to certain questions about the distribution of sensations – questions that cannot be adequately answered on the basis of empirical information alone.

Thus, suppose that pain is distributed quite broadly. Specifically, suppose that it would be correct to ascribe pains to certain androids whose brains differ from ours both in structure and in material composition. (Suppose that the pain-behavior of these androids is indistinguishable from ours. Suppose also – probably contrary to fact – that a similarity of this sort counts as a sufficient reason for ascribing pain to other beings.) Suppose further that there is one and only one physical state-type whose instances are correlated with pain in human beings, and that the internal differences between ourselves and the androids are sufficiently great that it is obviously wrong to say that this state-type is exemplified by any of the events that take place in the brains of the androids. Clearly, in combination with these latter assumptions, our assumption about the correctness of ascribing pain to these androids implies that there is no physical state-type whose instances are universally correlated with pains.

To settle questions about the distribution of sensations it is not enough to conduct an empirical investigation. Empirical inquiry can give us all the information we might like to have about the behavior and nervous systems of, say, earthworms, but unsupplemented empirical inquiry cannot settle the question of whether earthworms can experience pain. Nor can it tell us whether shrimps, or crickets, or silicon-based androids can feel pain. To determine how widely pain is distributed we must first determine what counts as an adequate reason for ascribing a sensory state to a being other than oneself. We must obtain a list of criteria that can be used to distinguish between ascriptions that are legitimate and ascriptions that are not, and we must assign appropriate weights to the criteria on the list. The task of drawing up a list of this sort falls within the province of philosophy. It is not a scientific task.

Cambridge University Press

0521397375 - Sensations: A Defense of Type Materialism

Christopher S. Hill

Excerpt

[More information](#)

2. METAPHYSICAL QUESTIONS

What is the ultimate nature of sensory events? Are they ultimately physical in nature or do they belong to a nonphysical realm?

Materialists maintain that we obtain a simpler and more straightforward picture of the universe if we assume that sensory events are identical with physical events. We are obliged to make this assumption, they contend, because we have a general duty of reason to refrain from multiplying entities beyond necessity, and because we have a duty of reason to prefer theories that are clear and informative to theories that are obscure and sketchy. (It has generally been assumed by materialists that if we deny that sensory events are identical with physical events, we will not be able to give an illuminating account of the connections between them. We may be able to say that they are connected by causal ties, but it will prove impossible to give an intellectually satisfying account of the nature of these ties.)

On the other hand, dualists have called attention to a number of obstacles to identifying sensory events with physical events, some of which are quite serious. One of these obstacles can be expressed by saying that the relationship between sensations and physical events seems to be similar to the relationship that obtains between the lights one sees when one views a city at night, and the dark spaces that lie between the lights. Sensations are colorful and luminous; physical events are colorless, dark, and lifeless. Accordingly, dualists claim, they cannot be the same. Another obstacle derives from the fact that the connections between sensory events and physical events can seem to be radically contingent. This obstacle is captured by the following Cartesian argument:

First premise. Conceivability is an adequate test for possibility. That is to say, if we can clearly and distinctly conceive of its being the case that p , then it is genuinely possible for it to be the case that p .

Second premise. Where x is any sensory event and y is any physical event (even one that materialists might claim to be identical with x), it is possible to conceive clearly and distinctly of x occurring without being accompanied by y , and it is possible to conceive clearly and distinctly of y occurring without being accompanied by x .

Third premise. If it is possible for an entity to exist without being accompanied by a second entity, the first entity cannot be identical with the second.

Conclusion. Sensory events are not identical with physical events.

Cambridge University Press

0521397375 - Sensations: A Defense of Type Materialism

Christopher S. Hill

Excerpt

[More information](#)

It may be that materialism is capable of surmounting or circumventing these two obstacles, and also all of the other obstacles that dualists have pointed out. But this is not obvious. There is a case for dualism that is *prima facie* quite strong.

In addition to asking about the ultimate metaphysical nature of sensory events, it is necessary to ask about the ultimate nature of qualitative characteristics.

There are at least three answers to this second question that deserve to be taken seriously. One answer asserts that qualia are identical with straightforwardly physical characteristics – that is, with characteristics that things have by virtue of their physical structure and/or their material composition. The second answer begins by explaining the notion of a functional characteristic. Very roughly speaking, a characteristic is functional if (1) it is exemplifiable by certain of the internal states of a system, and (2) the internal states that exemplify it do so purely by virtue of their causal and counterfactual relations to inputs, to outputs, and to other internal states. According to the second answer, qualitative characteristics are identical with certain functional characteristics. The third answer is the one that is favored by dualists. It claims that qualia cannot be reduced either to physical characteristics or to functional characteristics. Qualia comprise a third realm of characteristics, a realm whose constituents cannot be fully grasped by the sort of analytical techniques that are used in the sciences. Rather, they can be fully grasped only by being felt or experienced.

Although materialism has in the twentieth century come to replace dualism in the affections of philosophers, we do not yet have an unanswerable justification for this preference. Nor do we have an adjudication of the dispute among the three schools of thought about qualitative characteristics. Thus, even after centuries of discussion, the main metaphysical questions about sensations and their qualitative characteristics are open.

Preserving what I believe to be the main strand in the history of its use, I will employ the term “mind–body problem” as a label for these questions.

3. EPISTEMOLOGICAL QUESTIONS

What is the nature of introspective awareness of sensations? Is there an “inner eye” – some sort of scanning device that can sweep across the sensory firmament and zoom in on particular items that are of interest

Cambridge University Press

0521397375 - Sensations: A Defense of Type Materialism

Christopher S. Hill

Excerpt

[More information](#)

for one reason or another? If not, what alternative theory should we accept?

What is the epistemological status of our beliefs about sensations? Many philosophers have claimed certainty and incorrigibility for our introspective beliefs. Are these claims correct? If so, how can we explain this fact? And if not, what degree of reliability should we assign to introspection? Should we say, with many contemporary psychologists, that introspection is completely untrustworthy? Should we abandon the view, held by William James and many nineteenth-century psychologists, that introspection is capable of playing a useful role in the scientific study of the mind?

Are we omniscient about our sensations, as many philosophers have claimed? When a sensation occurs, is its owner inevitably aware of it – at least to some degree? Or are there sensations that lie beyond our ken?

Finally, although it has generally been assumed that it is impossible to raise systemic doubts about our beliefs concerning sensations that parallel the familiar skeptical doubts about our beliefs concerning the external world, this assumption has never received a fully adequate defense. Is the assumption correct? If it is, why?

4. SEMANTIC QUESTIONS

How do our sensory concepts acquire their contents? And what is the nature of their contents?

It has often been held that sensory concepts acquire their contents from internal ostensive definitions, and that their contents are largely or entirely ostensive (in the sense that the question of whether one is entitled to apply a sensory concept to a given sensation depends largely or entirely on the immediate qualitative nature of the sensation). The appeal of this position is obvious. We are all inclined to say that it is possible for someone to determine correctly whether a sensory concept applies to one of his or her own sensations simply by focusing introspectively on its qualitative characteristics.

An alternative view asserts that the contents of our sensory concepts derive from the roles they play in a commonsense psychological theory. According to this view, we cannot be said to have acquired a concept of pain until we know some facts about the typical causes and effects of pain. We must know, among other things, that pain is typically caused by bodily damage or by dangerous extremes of temperature and pres-

Cambridge University Press

0521397375 - Sensations: A Defense of Type Materialism

Christopher S. Hill

Excerpt

[More information](#)

sure, and that pain typically causes crying and various forms of avoidance behavior. Like the first view, this view can seem highly attractive.

There are a number of other views about the contents of our sensory concepts, several of which enjoy at least as much *prima facie* plausibility as the two I have already cited.

Which of these views should be accepted? And on what grounds?

5. QUESTIONS ABOUT OTHER MINDS

In addition to the foregoing epistemological questions about introspective awareness of one's own sensations, there are several extremely difficult epistemological questions concerning beliefs about the sensations of others. Can one appropriately claim to know that other human beings have sensations? If so, can one appropriately claim to know that they have sensations that are much like one's own? Further, can one appropriately claim to know that members of other biological species have sensations? If so, which species? And which sensations? How far can one proceed down the evolutionary scale before it becomes inappropriate to ascribe sensations? And what about androids?

There are also some important metaphysical questions about other minds. Consider these two situations: In the first, I am feeling a pain and experiencing the taste of orange juice; in the second, I am feeling a pain and *you* are experiencing the taste of orange juice. What is the difference between these situations? That is, in what does the otherness of your sensations consist? In general, what is the difference between a situation in which two sensations belong to a single state of consciousness (or a single sensory field) and a situation in which two sensations belong to two different states of consciousness (or two different sensory fields)? That is to say, what is the nature of unity of consciousness?

II

The questions I have been reviewing are the main topics of this work. In the hope that doing so will enhance the accessibility of later chapters, I will now provide a brief summary of the positions I will take in responding to them.

1. At this point in time it would be premature to attempt to answer the quasi-empirical questions. Today we are not even able to say for sure whether there is a law-like correlation between sensory states and

Cambridge University Press

0521397375 - Sensations: A Defense of Type Materialism

Christopher S. Hill

Excerpt

[More information](#)

neural states in human beings. However, there are two issues associated with the quasi-empirical questions that we *are* able to discuss.

First, we are in a position to get clearer about the criteria that are relevant to determining how widely sensations are distributed. I will show that the criteria in question are not only sensitive to behavioral and functional considerations, but to biological considerations as well. Thus, among other things, I will try to show that we are not entitled to ascribe determinate sensations to other beings unless certain biological conditions are satisfied. (If my arguments for this claim are sound, then we are not entitled to ascribe sensations to nonbiological androids. So the lines of thought that I will develop will suggest answers to *some* questions about the distribution of sensations.)

Second, we are in a position to get a bit clearer about the status of the *psychophysical correlation thesis*:

Where ϕ is any qualitative characteristic of sensations, it is possible to find a *neural* characteristic ψ such that the following proposition about ϕ and ψ expresses a law of nature: Where x is any being whatsoever, x has a sensation that exemplifies ϕ when and only when an event that exemplifies ψ takes place in x 's brain.

Although we are unable today to determine whether this thesis is fully compatible with the relevant empirical facts, I think we are in a position to clear away the objections that have convinced many contemporary philosophers that it is false. The objections are often taken to be empirical in character, but on closer examination they turn out to have an a priori dimension that makes them vulnerable to philosophical criticism. I will show that they are misguided, and that acceptance of the psychophysical correlation thesis is therefore a live option.

Other correlation theses might be considered. In fact, where K is any category of physical characteristics such that there is a one-to-one mapping between the category of qualitative characteristics and the members of K , there is a correlation thesis that claims that each member of the category of qualitative characteristics is universally correlated with its image in K . In this work, however, I will set all other correlation theses aside and focus on the one that is formulated in the preceding paragraph, for it is more in keeping than the others with my view that other beings must satisfy certain biological conditions before it can be reasonable for one to ascribe sensations to them.

No single part of this book is devoted to the members of the family of quasi-empirical questions. Most of what I have to say about them can

Cambridge University Press

0521397375 - Sensations: A Defense of Type Materialism

Christopher S. Hill

Excerpt

[More information](#)

be found in Part 2 and Part 5, but there are also some relevant arguments in Part 4.

2. In order to summarize my answers to the metaphysical questions, I must first distinguish between two forms of materialism.

Token materialism is the view that results from combining the proposition that every sensory event is identical with some physical event with the proposition that the characteristics by virtue of which events count as sensory are numerically distinct from the characteristics by virtue of which they count as physical (that is, with the proposition that qualitative characteristics are not identical with physical characteristics of any kind). Token materialism does not presuppose the existence of a universal correlation between sensory characteristics and physical characteristics, and it is therefore compatible with the possibility of there being two or more events of the same sensory type that are respectively identical with events that are of quite different physical types.² On the other hand, a token materialist does not deny the existence of a universal correlation. Token materialism is largely free from commitments concerning quasi-empirical issues.

Type materialism is like token materialism in claiming that sensory events are identical with physical events. However, it also claims that there is a set of physical characteristics with which qualitative characteristics are universally and lawfully correlated, and that every qualitative characteristic is identical with its physical correlate. As this description shows, type materialists have a certain amount of latitude. One option is to embrace the psychophysical correlation thesis and assert that qualitative characteristics are identical with the neural characteristics that this thesis claims to be correlated with them. However, it is also quite possible for type materialists to take a different line. They can deny that qualitative characteristics are correlated with neural characteristics and maintain that they are correlated instead with physical characteristics of some other sort. They can then

2 Here and elsewhere, when I speak of a correlation between sensory characteristics and physical characteristics, I mean a correlation between sensory universals and physical universals. (Roughly speaking, universals are characteristics that are responsible for the objective resemblances and the causal powers of particulars. See David Lewis, "New Work for a Theory of Universals," *Australasian Journal of Philosophy* 61 (1983), pp. 343–77. See also Lewis, *On the Plurality of Worlds* (Oxford: Blackwell, 1986), pp. 50–69. (Although the sense that Lewis assigns to the term "universal" corresponds pretty closely to the sense that I wish to assign to it here, it turns out that the closest Lewisian counterpart of "universal," as I wish to use it, is "natural property." See "New Work for a Theory of Universals," pp. 346–47.) I use "state-type" as an equivalent of "universal.")