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Introduction

A sketch of the sources and nature of belief, justification, and knowledge

Before me is a grassy green field. It has a line of trees at its far edge and is punctuated by a spruce on its left side and a maple on its right. Birds are singing. A warm breeze brings the smell of roses from a nearby trellis. I reach for a tall glass of iced tea, still cold to the touch and flavored by fresh mint. I am alert, the air is clear, the scene is quiet. My perceptions are quite distinct.

It is altogether natural to think that from perceptions like these, we come to know a great deal – enough to guide us through many of the typical activities of daily life. But we sometimes make mistakes about what we perceive, just as we sometimes misremember what we have done, or infer false conclusions from what we believe. We may then think we know something when in fact we do not, as where we make errors through inattention or are deceived by vivid dreams. And is it not possible that vivid dreams occur more often than we think?

Perception, belief, and justification

Philosophers have given a great deal of thought to these matters, especially to the nature of perceiving and to what we can know – or may mistakenly think we know – through perception or through other sources of knowledge, such as memory as a storehouse of what we have learned in the past, consciousness as revealing our inner lives, reflection as a way to acquire knowledge of abstract matters, and testimony as a source of knowledge originally acquired by other people. In approaching these topics in epistemology – the theory of knowledge and justification – it is appropriate to begin with perception. In my opening description, what I detailed was what I *perceived*: what I saw, heard, smelled, felt, and tasted. In describing my experience, I also expressed some of what I *believed*: that there was a green field before me, that there were bird songs, that there was a smell of roses, that my glass was cold to the touch, and that the tea tasted of mint.

It seems altogether natural to believe these things given the kind of experience I had, and I think I *justifiedly* believed them. I believed them, not in the way I would if I accepted the result of wishful thinking or of my making a sheer guess, but with justification. By that I mean above all that the beliefs I refer to were *justified*. This a good thing; justified beliefs are of a kind it is reasonable to hold.

Justification as process, as status, and as property

Being justified, in the sense illustrated by my beliefs about what is clearly before me, need not be the result of a process. Being justified is not, for instance, like being purified, which requires a process of purification. My beliefs about what is before me are not justified because they have been through *a process of being justified*, as where one defends a controversial belief by giving reasons for it. They have not; the question whether they are justified has not even come up. No one has challenged them or even asked why I hold them. They are justified – in the sense that they have the *property of being justified (justifiedness)* – because there is something about them in virtue of which they are natural and appropriate for me as a normal rational person.

We can see what justifiedness is by starting with a contrast. Unlike believing something one might arrive at through a wild guess in charades, our justified perceptual beliefs are justified for us simply through their arising in the normal way they have from our clear perceptions. Roughly, they are justified in the sense that they are quite in order from the point of view of the standards for what we may reasonably believe. That, in turn, is roughly what we may believe without being subject to certain kinds of criticism, say as intellectually lax, sloppy, overhasty, or the like. Justified beliefs are also a kind that we tend to expect to be true. Imagine someone's saying 'His belief is justified, but I don't expect it to turn out to be true'. Without special explanation, this would be to take away with one hand something given by the other.

In saying that I justifiedly believe there is a green field before me, I am implying something else, something quite different, though it sounds very similar, namely, that I am *justified in believing* there is a green field before me. To see the difference, notice that we can be justified *in* believing something without believing it at all, quite as we can be justified in doing something, such as criticizing a person who has failed us, without doing it. Similarly, I might be justified in believing that I can do a certain difficult task, yet fail to believe this until someone helps me overcome my hesitation. I may then see that I *should* have believed it.

Being justified in believing something is having justification *for* believing it. This, in turn, is roughly a matter of having ground for believing it (and we sometimes speak of having *a* justification or *a* reason). Just as we can have reason to do things we do not do, we can have reason to believe things we do not believe. You can have reason to go to the library and forget to, and I can have reason to believe someone is making excuses for me but – because I have no inkling that I need any – fail to believe this. Our justification for believing is basic raw material for actual justified belief; and justified belief is commonly good raw material for knowledge.

The two justificational notions are intimately related: if one justifiedly believes something, one is also justified *in* believing it (hence has justification for believing it). But converse does not hold: not everything we are justified *in* believing is something we *do* believe. When I look at a lawn, I

am justified in believing it has more than ten blades of grass per square foot, but I would not normally have any belief about the number of blades per square foot. We have more justificational raw material than we need or use.

There are many things we are justified in believing which we do not actually believe, such as the proposition that normal people do not drink 100 liters of water a day. Let us call the first kind of justification – justifiedly believing – *belief justification*, since it belongs to actual beliefs (it is also called *doxastic* justification, from the Greek *doxa*, translatable as 'belief'). Call the second kind – being justified *in* believing – *situational justification*, since it is based on the informational situation one is in. It is a *status* one has in virtue of that situation. This situation includes not just what one perceives, but also one's background beliefs and knowledge, such as the belief that people drink at most a few liters of water a day.

In any ordinary situation in waking life, we have both a lot of general information stored in memory and much specific information presented in our perceptions. We do not need all this information, and our situational justification for believing something is often unaccompanied by our having an actual justified belief that it is so. We have situational justification for vastly more justified beliefs than we actually have. Here nature is very generous. In forming beliefs, we can often draw on far more information than we normally need to use.

Without situational justification, such as the kind that comes from seeing a green field, there would be no belief justification. I would not, for instance, justifiedly believe that there is a green field before me. We cannot have a justified belief without being in a *position* to have it. Without situational justification, we are not in such a position. Without belief justification, on the other hand, we would have no beliefs of a kind we want and need, those with a positive status – being justified – that makes them appropriate for us as rational creatures and warrants us in expecting them to be true. Belief justification, then, is more than the situational kind it presupposes.

Belief justification occurs when there is a certain kind of connection between what yields situational justification and the justified belief that benefits from it. Belief justification occurs when a belief is *grounded in*, and thus in a way supported by, something that gives one situational justification for that belief, such as seeing a field of green. Seeing is of course perceiving; and perceiving is a basic source of knowledge – perhaps our most elemental source, at least in childhood. This is largely why perception is so large a topic in epistemology and such a natural subject with which to begin thinking about knowledge and justification.

Knowledge and justification

Knowledge would not be possible without belief justification (or something very much like it). If I did not have the kind of justified belief I do – if, for instance, I were wearing dark sunglasses and could not tell the difference

between a green field and a smoothly ploughed one that is really an earthen brown – then on the basis of what I now see, I would not know that there is a green field before me.

To see how knowledge fits into the picture so far sketched, consider two points. First, justified belief is important for knowledge because at least the typical things we know we *also* justifiedly believe on the same basis that grounds our knowing them. If I know someone is making excuses for me, say by the way she explains my lateness, I do not just believe this but justifiedly believe it. Second, much of what we justifiedly believe we also know. Surely I could have maintained, regarding each of the things I have said I justifiedly believed through perception, that I also knew it. And do I not know these things – say that there is a lawn before me and a car on the road beyond it – on the *same* basis on which I justifiedly believe them, for instance on the basis of what I see and hear? This is very plausible.

As closely associated as knowledge and justified belief are, there is a major difference. If I know that something is so, then it is *true*, whereas I can justifiedly believe something that is false. If a normally reliable friend tricked me into believing something false, say that he has lost my car keys, I could justifiedly believe that he has lost them even if it were not true. We may not assume, then, that everything we learn about justified belief applies to knowledge. We should look at both concepts independently to discern their differences, and we should consider them together to appreciate their similarities.

I said that I *saw* the green field and that my belief that there was a green field before me arose from my seeing it. If the belief arose, under normal conditions, from my seeing the field (so that I believed it is there simply because I saw it there), then the belief was true, justified, and constituted knowledge. Again, however, we can alter the example to bring out how knowledge and justification may diverge: the belief might remain justified even if, unbeknownst to me, the grass had been burned up since I last saw it, and there were now a perfect artificial replica of it spread out there in grassy-looking strips of cloth (perhaps put there to hide the ugly charred ground). Then, although I might think I know the green field is there, I would only falsely believe I know this. Such a bizarre happening is, to be sure, extremely improbable. Still, a justified but false belief *could* arise in this way.

Memory, introspection, and self-consciousness

As I look at the field before me, I *remember* carefully cutting a poison ivy vine from the trunk of the spruce. Surely, my memory belief that I cut off this vine is justified. I think I also know that I did this. But here I confess to being less confident than I am of the justification of my perceptual belief, held in the radiant sunlight, that there is (now) a green field before me.

As our memories become less vivid, we tend to be correspondingly less sure that our beliefs apparently based on them are justified. Still, I distinctly

recall cutting the vine. The stem was furry; it was bonded to the tree trunk; the cutting was difficult and slightly wounded the tree. By contrast, I have no belief about whether I did this in the summer or in the fall. I *entertain* the proposition that it was in the summer; I *consider* whether it is true; but, having too little to go on, all I can do is *suspend judgment* on it. I thus neither believe it nor *disbelieve* it, that is believe it is false. My stance is one of *non-belief*. I need not try to force myself to resolve the question and judge the proposition either way. I might need to resolve it if something important turned on when I did the pruning; but here suspended judgment, with the resulting non-belief, is not uncomfortable.

As I think about cutting the vine, it occurs to me that in recalling that task, I am vividly imaging it. Here, I seem to be looking into my own consciousness, thus engaging in a kind of *introspection*. I can still see, in my mind's eye, the furry vine clinging to the tree, the ax, the sappy wound along the trunk where the vine was severed from it. I have turned my attention inward to my own imagery. The object of my attention, my own imaging of the scene, seems internal and is present to my consciousness, though *its* object is external and long gone by. But clearly, I believe that I am imaging the vine; and there is no apparent reason to doubt that I justifiedly believe this and know that it is so. This is a simple case of *self-knowledge*.

Reason and rational reflection

I now look back at the field and am struck by how perfectly rectangular it looks. If it is perfectly rectangular, then the angles at its corners are all ninety degrees. Here I believe something different in kind from the things cited so far: that if the field is rectangular, then its angles are all ninety degrees. This is a geometrical belief. I do not hold it on the same sort of basis I have for the other things I have mentioned believing. My conception of geometry as applied to ideal figures seems to be the crucial basis. On that basis, my belief seems to be firmly justified and to constitute knowledge.

I can see that the spruce is taller than the maple, and that the maple is taller than the crab apple tree on the lawn closer by. I now realize that the spruce is taller than the crab apple. My underlying belief here is that if one thing is taller than a second and the second taller than a third, then the first is taller than the third. And, perhaps even more than the geometrical belief, this abstract belief seems to arise simply from my grasp of the concepts in question, above all the concept of one thing's being taller than another.

Testimony

The season has been dry, and it now occurs to me that the roses will not flourish without a good deal of water. But this I do not believe simply on the basis of perception. One source from which I learned it is repeated

observation. But there is another possible source: although much knowledge comes from our own experience in observing its subject matter, much knowledge also originates with *testimony* from others. I have received testimony as to where on the stem to trim off dead roses. If I did not learn about watering roses from my own experience, I could have learned the same things from testimony, just as I learned from a friend how far back to clip off dead roses.

To be sure, I need perception, such as hearing what I am told, to acquire knowledge on the basis of testimony, just as I needed perception to *learn* these things about roses on my own; and I need memory to *retain* them whatever their source. They are, however, generalizations and hence do not arise from perception in the direct and apparently simple way my visual beliefs do, or emerge from memory in the way my beliefs about past events I witnessed do. But do I not still justifiedly believe that the roses will not flourish without a lot of water? The commonsense view is that I both justifiedly believe and know this about roses, and that I can know it either through generalizing – a kind of reasoning – from my own observations or from testimony, or both.

Basic sources of belief, justification, and knowledge

The examples just given represent what philosophers have called perceptual, memorial, introspective, a priori, inductive, and testimony-based beliefs. The first four kinds are basic in epistemology. My belief that the glass is cold to the touch is *perceptual*, being based as it is on tactual perception. My belief that I cut the poison ivy vine from the spruce is *memorial*, since it is stored in my memory and held because of that fact. My belief that I am imagining a green field is called *introspective* because it is conceived as based on "looking within" (the etymological meaning of 'introspection'); but it could also be called simply *self-directed*: no "peering" within or special concentration is required. My belief that if the spruce is taller than the maple and the maple is taller than the crab apple, then the spruce is taller than the crab apple is called *a priori* (meaning, roughly, based on what is "prior" to observational experience) because it apparently arises not from experience of how things actually behave but simply in an intuitive way. It arises from a rational grasp of the key concepts one needs in order to have the belief, such as the concept of one thing's being taller than another.

By contrast, my belief that the roses will not grow well without abundant water does not arise directly from one of the four basic sources just mentioned: perception, memory, introspection, and a priori intuition (reason, in one sense of the term). It is called *inductive* because it is formed (and held) on the basis of a generalization *from* something more basic, in this case what I learned from perceptual experiences with roses. Those experiences, apparently through my beliefs recording them, "lead into" the generalization about roses, to follow the etymological meaning of 'induction'. For instance, I remember numerous cases in which roses have faded when dry, and I eventually concluded that they need abundant water.

Each of the four basic kinds of belief I have described – perceptual, memorial, introspective, and a priori – is grounded in the source from which it arises. The nature of this grounding is explored in detail in the first four chapters, concerning perception, memory, consciousness, and reason. These sources are commonly taken to provide raw materials for inductive generalizations, as where observations and memories about roses yield a basis for generalizing about their needs.

Any of the beliefs we considered could instead have been grounded in testimony (the topic of Chapter 5), had I formed the beliefs on the basis of being given the same information by someone I trust. That person, however, would presumably have acquired it through one of these *other* sources (or ultimately through someone's having done so), and this makes testimony a different kind of source. This is why testimony is not a basic source of knowledge. It is still, however, incalculably important for human knowledge and unlimitedly broad. It can, for instance, justify a much wider range of propositions than perception can. We can credibly tell others virtually anything we know.

Three kinds of grounds of belief

Our examples illustrate not only grounding of beliefs *in* a source, such as perception or introspection, but also *ways* in which they are grounded in these sources. There are at least three important kinds of grounding of beliefs – ways they are grounded. These are causal, justificational, and epistemic grounding. All three are important for many major epistemological questions.

Consider my belief that there is a green field before me. It is *causally grounded* in my experience of seeing the field because that experience produces or underlies the belief. It is *justificationally grounded* in that experience because the experience, or at least some element in the experience, justifies my belief. And it is *epistemically grounded* in the experience because in virtue of that experience my belief constitutes knowledge that there is a green field before me ('epistemic' comes from the Greek *episteme* meaning, roughly, 'knowledge'). These three kinds of grounding very often coincide (though Chapter 8 will describe important cases in which knowledge and justification do not). I will thus often speak simply of a belief as *grounded* in a source, such as visual experience, when what grounds the belief does so in all three ways.

Causal, justificational, and epistemic grounding each go with a very common kind of question about belief. Let me illustrate.

Causal grounding goes with 'Why do you believe that?' An answer to this, asked about my belief that there is a green field before me, would be that I see it. This is the normal kind of reply; but as far as mere causal

production of beliefs goes, the answer could be brain manipulation or mere hypnotic suggestion. If, however, mere brain manipulation or hypnotic suggestion produces a belief, then the causal ground of the belief would not justify it. If, under hypnosis, I am told that someone is angry with me and as a result I believe this, the belief is not thereby justified.

Justificational grounding goes with such questions as 'What is your justification for believing that?' or 'What justifies you in thinking that?' or 'Why should I accept that?' ('Why do you believe that?' *can* be asked with this same justification-seeking force.) Again, I might answer that I see it. I might, however, have a justification (the situational kind) that, unlike seeing the truth in question, is not a *cause* of my believing it.

The justification I cite could also be the testimony of a credible good friend. It could be this even where, by a short circuit, brain manipulation does the causal work of *producing* my belief and leaves the testimony like a board that slides just beneath a roof beam but bears none of its weight. This shows that an element that provides only situational justification for a belief may play no role in producing or supporting the belief, even if this element, like the auxiliary unstressed beam, stands ready to play a supporting role if the belief is put under pressure by a challenge.

Epistemic grounding goes with 'How do you know that?' Once again, saying that I see it will commonly answer the question. Here, however, it may be that a correct answer *must* cite something that is *also* a causal ground for the belief (a matter discussed in Chapter 8). Certainly a justificational ground need not be a ground of knowledge. One can justifiedly believe a proposition without knowing it.

Clearly, the same sorts of points can be made for the other five cases I have described: memorial beliefs are grounded in memory, self-directed ("introspective") beliefs in consciousness, inductively based beliefs in further, premise-beliefs that rest on experience, a priori beliefs in reason, and testimonially based beliefs in testimony.

Fallibility and skepticism

Even well-grounded beliefs can be mistaken. We can be deceived by our senses. We are fallible in perceptual matters as in our memories, in our reasoning, and in other respects. One might now wonder, as skeptics do, whether we *know* even that it is improbable that we are now deceived by our senses. One might also wonder whether we are even *justified* in our belief that no such mistake has occurred as we take ourselves to see green grass.

Suppose that I am in a public park in an unfamiliar city. I do not know or even justifiedly believe that artificial grass has not been put in place of the natural grass I take to be before me. (I may have heard of such substitutions and may have no good reason to believe this has not happened, though I do not consider the matter.) In that case, am I justified in believing that there is a green field before me?

Suppose that I am not justified in believing there is a green fiel
me. If not, how can I be justified in believing what appear to be
obvious truths, such as that my home is secure against the elements.
safe to drive, and my food free of poison? And how can I know the many things I need to know in life, such as that my family and friends are trustworthy, that I can control my behavior and can thus partly determine my future, and that the world we live in at least approximates the structured reality portrayed by common sense and science?

These are difficult and important questions. They indicate how insecure and disordered human life would be if we could not suppose that we possess justified beliefs and knowledge. We stake our lives every day on what we take ourselves to know. It would be unsettling to revise this stance and retreat to the view that at best we have justification to believe. But if we had to give up even this moderate view and to conclude, say, that what we believe is not even justified, we would face a crisis. Much later, in discussing skepticism, I will explore such questions at some length. Until then I will assume the commonsense view that beliefs with a basis like that of my belief that there is a green field before me are not only justified but also constitute knowledge.

Once we proceed on this commonsense assumption, it is easy to see that there are many different kinds of circumstances in which beliefs arise in such a way that they are apparently both justified and constitute knowledge. In considering this variety of circumstances yielding justification and knowledge, we can explore how beliefs are related to perception, memory, consciousness, reason, and testimony (the topics of Chapters 1 to 5, respectively).

Overview

There is a great deal more to be said about each of these sources of belief, justification, and knowledge and about what it is for them to ground what they do ground. The first five chapters will explore, and in some cases compare, the most basic sources of belief, justification, and knowledge.

In the light of what those chapters show, we can discuss the development and structure of knowledge and justification (the task of Part Two). Much of what we believe does not come directly from perception, memory, introspection, or reflection of the kind appropriate to knowledge of such truths as those of elementary mathematics or those turning on our grasp of simple relations, for instance the proposition that if the spruce is taller than the maple, then the maple is shorter than the spruce, which we know by virtue of understanding the relations expressed by 'taller' and 'shorter'. We must explore how inference and other developmental processes expand our body of knowledge and justified beliefs (this is the task of Chapter 6). Moreover, once we think of a person as having the resulting complex body of knowledge and justified belief, we encounter the questions of what structure that

large and intricate body has, and of how its structure is related to the amount and kind of knowledge and justification it contains. As we shall see in Chapter 7, these structural questions take us into an area where epistemology and the philosophy of mind overlap.

On the basis of what Part One shows about sources of knowledge and justification and what Part Two shows about their development and structure, we can fruitfully proceed to consider more explicitly what knowledge and justification are and what kinds of things can be known (the task of Part Three). It is true that if we had no sense at all of what they are, we could not find the kinds of examples of them needed to explore their sources and their development and structure. If we do not have before us a wide range of examples of justification and knowledge, we lack the data appropriate to seeking a philosophically illuminating analysis of them. It is in the light of the examples and conclusions of Parts One and Two that Chapter 8 clarifies the concept of knowledge, and, to a lesser extent, that of justification, in some detail.

With a conception of knowledge laid out, it is possible to explore the apparent extent of knowledge and justification in three major territories – the scientific, the ethical, and the religious. In exploring these domains, Chapter 9 applies some of the epistemological results of the earlier chapters. In doing this I continue to take the commonsense view that we have a great deal of knowledge and justification. If, however, skepticism is in the end a sound position, then the commonsense assessment that the first nine chapters make regarding the extent of knowledge and justification must be revised. Whether it is sound is the focus of Chapter 10.

Along the way in all ten chapters, there is something to be learned about concepts that are important both in and outside epistemology, especially those of belief, causation, certainty, coherence, explanation, fallibility, illusion, inference, intellectual virtue, introspection, intuition, meaning, memory, reasoning, relativity, reliability, truth. There are also numerous epistemological positions to be considered, sometimes in connection with historically influential philosophers. But the main focus will be on the major concepts and problems in the field, not on any particular philosopher or epistemological text. This may well be the best way to facilitate studying philosophers and epistemological texts; it will certainly simplify an already complex task.

Knowledge and justification are not only interesting in their own right as central epistemological topics; they also represent positive values in the life of every reasonable person. For all of us, there is much we want to know. We also care whether we are justified in what we believe – and whether others are justified in what they tell us. The study of epistemology can help in making this quest, even if it often does so indirectly. It can certainly help us assess how well we have done in the quest when we look back on our results.

Well-developed concepts of knowledge and justification can play the role of ideals in human life: positively, we can try to achieve knowledge and

justification in relation to subjects that concern us; negatively, we can refrain from forming beliefs where we think we lack justification, and we can avoid claiming knowledge where we think we can at best hypothesize. If we learn enough about knowledge and justification conceived philosophically, we can better search for them in matters that concern us and can better avoid the dangerous pitfalls that come from confusing mere impressions with justification or mere opinion with knowledge. This is not to say that epistemological knowledge can be guaranteed to yield new knowledge in everyday concerns. But the more we know about the constitution of knowledge and justification, the better we can build them through our own inquiries, and the less easily we will fall into the pervasive temptation to take an imitation to be the real thing.

1 Perception

As I look at the green field before me, I might believe not only that there is a green field there but also that I *see* one. And I do see one. I visually perceive it, just as I tactually perceive the glass in my hand. Both beliefs, the belief that there is a green field there, and the self-referential belief that *I* see one, are grounded, causally, justificationally, and epistemically, in my visual experience. They are produced by that experience, justified by it, and constitute knowledge in virtue of it.

The same sort of thing holds for the other senses. Consider touch. I not only believe, through touch (as well as sight) that there is a glass here, I also feel its coldness. Both beliefs – that there is a glass here and that it is cold – are grounded in my tactual experience. I could believe any of these things on the basis of someone's testimony. My beliefs would then have a quite different status. For instance, my belief that there is a glass here would not be *perceptual*, but only a belief *about a perceptible*, that is, a perceivable object, the kind of thing that can be seen, touched, heard, smelled, or tasted. Through testimony we have beliefs about perceptibles we have never seen or experienced in any way.

My concern here is not with the hodgepodge of beliefs that are simply about perceptibles, but with perception and perceptual beliefs. Perceptual beliefs are not simply *beliefs about perceptibles*; they are *beliefs grounded in perception*. We classify beliefs as perceptual by the nature of their roots, not by the color of their foliage. Those roots may be visual, auditory, and so forth for each perceptual mode. But vision and visual beliefs are an excellent basis for discussing perception and perceptual beliefs, and I will concentrate on them and mention the other senses only occasionally.

Perception is a source of knowledge and justification mainly by virtue of yielding beliefs that *constitute* knowledge or are justified. But we cannot hope to understand perceptual knowledge and justification simply by exploring those beliefs by themselves. We must also understand what perception is and how it yields beliefs. We can then begin to understand how it yields knowledge and justification or – in some cases – fails to yield them.

The elements and basic kinds of perception

There are apparently at least four elements in perception, all evident in our example: (1) the perceiver, me; (2) the object, the field I see; (3) the sensory experience, say my visual experience of colors and shapes; and (4) the relation between the object and the subject, commonly taken to be a causal

relation by which the object produces the sensory experience in the perceiver. To see the field is apparently to have a certain sensory experience as a result of the impact of the field on our vision.

Some accounts of perception add to the four items on this list; others subtract from it. To understand perception we must consider both kinds of account and how these elements are to be conceived in relation to one another. But first, it is essential to explore examples of perception.

There are three quite different ways to speak of perception. Each corresponds to a different way of perceptually responding to experience. We often speak simply of what people perceive, for instance see. We also speak of what they perceive the object to be, and we commonly talk of facts they know through perception, such as that the grass is long. Visual perception most readily illustrates this, so let us start there.

I see, hence perceive, the green field. Second, speaking in a less familiar way, I see it *to be* rectangular. Thus, I might say that I know it looks different from that hill, but from the air one can see it to be perfectly rectangular. Third, I see *that it is* rectangular. Perception is common to all three cases. Seeing, which is a paradigm case of perception, is central in all of them.

The first case is one of *simple perception*, perception taken by itself (here, visual perception). I see the field, and this experience is the visual parallel of hearing a bird (an auditory experience), touching a glass (a tactual experience), smelling roses (an olfactory experience), and tasting mint (a gustatory experience). If the first case is simply *perceiving of* some object, the second is a case of *perceiving to be*, since it is seeing something to be so: I do not just see the field, as when I drive by at high speed and do not even realize what sort of green is in my peripheral vision; I see the field to be rectangular. The third case is one of *perceiving that*; it is seeing that a particular thing is so, namely, that the field is rectangular.

These cases represent three kinds, or *modes*, of perception. Perception of the simplest kind (or in the simplest mode), such as seeing, occurs in all three; but, especially because of their relation to knowledge and justified belief, they are significantly different. We can best understand these three kinds (or modes) of perception if we first focus on their relation to belief.

Perceptual belief

The latter two cases – perceiving that, and perceiving to be – are different from the first – perceiving of – in implying corresponding kinds of beliefs: seeing that the field is rectangular implies believing that it is, and seeing it to be green implies believing it to be green. If we consider how both kinds of beliefs – beliefs *that* something is so and beliefs *of* (or *about*) something – are related to perception, we can begin to understand how perception occurs in all three cases, the simple and the more complex. In my second and third examples of perception, visual perception issues in beliefs that are then grounded in it and can thereby constitute visual knowledge.[1]

In the first example, that of simple perception, my just seeing the field provides a basis for both kinds of beliefs. It does this even if, because my mind is entirely occupied with what I am hearing on the radio as I glance over the field, no belief about the field actually arises in me. The visual experience is in this instance like a foundation that has nothing built on it but is ready to support a structure. If, for example, someone were to ask if the field has shrubbery, then given the lilacs prominent in one place, I might immediately form the belief that it does and reply affirmatively. This belief is visually grounded; it comes *from* my seeing the field though it did not initially come *with* it. When beliefs do arise from visual experiences, as they usually do, what kinds of beliefs are they, and how are they specifically perceptual?

Many of my beliefs arising through perception correspond to perception *that*, say to seeing that something is so. I believe that the field is lighter green toward its borders where it gets less sunlight, that it is rectangular in shape, and that it has many ruts. But I may also have various beliefs about it that are of the second kind: they correspond to perception *to be*, for instance to seeing something to be a certain color. Thus, I believe the field to be green, to be rectangular, and so on. The difference between these two kinds of belief is significant. As we shall shortly see, it corresponds first of all to two distinct ways in which we are related to the objects we perceive and, second, to two different ways of assessing the truth of what, on the basis of our perceptions, we believe.

The first kind of belief just described is the kind people usually think of when they consider beliefs: it is *propositional*, since it is a case of believing a proposition – say, *that* the field is rectangular. The belief is thus true or false depending on whether the proposition that the field is rectangular is true or false. In holding the belief, moreover, in some way I think of what I see as a field which is rectangular: in believing that the field is rectangular, I *conceive* what I take to be rectangular *as* a field.

The second kind of belief might be called *objectual*: it is a belief regarding an object, say the field, with which the belief is actually connected. This is an object *of* (or about) which I believe something, say that it is rectangular. If I believe the field to be rectangular, there really is such an object, and I have a certain relation to it. A special feature of this relation is that there is no particular proposition I must believe about the field. To see that there is no particular proposition, notice that in holding this objectual belief I need not think of what I see *as* a field, for I might mistakenly take it to be (for instance) a lawn or a huge canvas or a grasslike artificial turf, yet still believe it to be rectangular. I might think of it just in terms of what I believe it to be and not in terms of what else it actually is.

Thus, although there is *some* property I must take the field to have – corresponding to what I believe it to *be* – there is no other particular way I must think of it. With objectual belief, then, there is no particular notion

that must yield the subject of any proposition I believe about the object: I do not have to believe that the field is green, that the grass is, or any such thing. Perception leaves us vast latitude as to what we learn from it. People differ markedly in the beliefs they form about the very same things they each see.[2]

The concept of objectual perception, then, is very permissive about what one believes about the object perceived. This is one reason why it leaves so much space for imagination and learning – a space often filled by the formation of propositional beliefs, each capturing a different aspect of what is perceived, say that the field is richly green, that it is windblown, and that it ends at a line of trees.

A different example may bring these points out better. After seeing a distant flare and coming to believe, of something blurry and far away, that it glowed, one might ask, 'What on Earth was it that glowed?' Before we can believe the proposition that a *flare* glowed, we may have to think about where we are, the movement and fading of the glow, and so forth. The objectual belief is a guide by which we may arrive at propositional beliefs and propositional knowledge.

Perception, conception, and belief

The same kind of example can be used to illustrate how belief depends on our conceptual resources in a way that perception does not. Suppose I had grown up in the desert and somehow failed to acquire the concept of a field. I could certainly still see the green field, and from a purely visual point of view it might *look* the same to me as it does now. I could also still believe, regarding the field I see – and perhaps conceive as sand artificially covered with something green – that it is rectangular. But I could not believe that the *field* is rectangular. This propositional belief as it were portrays what I see *as* a field in a way that requires my having a concept of one.

There is a connection here between thought and language (or at least conceptualization). If I believe (think) that the field is rectangular, or even simply have the thought that it is, I should be able to *say* that it is and to know what I am talking about. But if I had no concept of a field, then in saying this I would not know what I am talking about.[3] Similarly, a two-year-old, say, Susie, who has no notion of a tachistoscope, can, upon seeing one and hearing its fan, believe it to be making noise; but she cannot believe specifically that the tachistoscope is making noise. Her propositional belief, if any, would be, say, that the thing on the table is making noise. Since this is true, what she believes is true and she may know this truth, but she need not know much about the object this truth concerns: in a way, she does not know just what it is she has this true belief *about*.

The general lesson here is important. A basic mode of learning about objects is to find out truths about them in this elementary way: we get a

handle on them through perception; we form objectual (and other) beliefs about them from different perspectives; and (often) we finally reach an adequate concept of what they are. From the properties I believe the flare in the distance to have, I finally figure out that it is a flare that has them. This suggests that there is at least one respect in which our knowledge of (perceptible) *properties* is more basic than our knowledge of the substances that have them; but whether that is so is a question I cannot pursue here.

Unlike propositional beliefs, objectual beliefs have a significant degree of indefiniteness in virtue of which it can be misleading simply to call them true or false; they are accurate or inaccurate, depending on whether what one believes of the object (such as that it is rectangular) is or is not *true of* it. Recall Susie. If she attributes noise-making to the tachistoscope, she truly believes, *of* it, that it is making noise. She is, then, *right about it*. But this holds even if she has no specific concept of what it is that is making the noise. If we say unqualifiedly that her belief about it is true, we invite the question 'What belief?' and the expectation that the answer will specify a particular proposition, say that the tachistoscope is making noise. But it need not, and we might be unable to find any proposition that she does believe about it. She can be right about something without knowing or even having any conception of what kind of thing it is that she is right about. Knowledge is often partial in this way. Still, once we get the kind of epistemic handle on something that objectual belief can provide, we can usually use that to learn more about it.[4] Suppose I see a dog's tail projecting from under a bed and do not recognize it as such. If I believe (and know) it to be a slender furry thing, I have a place to start in finding out just what else it is. I will, moreover, be disposed to form such beliefs as that there is a slender furry thing before me. I will also have justification for them; but I need not form them, particularly if my attention quickly turns elsewhere.

Corresponding to the two kinds of beliefs I have described are two ways of talking about perception. I see *that* the field is rectangular. This is (visual) *propositional perception*: perceiving *that*. I also see it *to be* rectangular. This is (visual) *objectual perception*: perceiving *to be*. The same distinction apparently applies to hearing and touch. Perhaps, for example, I can hear that a piano is out of tune by hearing its sour notes, as opposed to hearing the tuner say it needs tuning. As for taste and smell, we speak as if they yielded only simple perception: we talk of smelling mint in the iced tea, but not of smelling that it is minty or smelling it to be minty. Such talk is, however, intelligible on the model of seeing that something is so or seeing it to be so. We may thus take the distinction between perceiving *that* and perceiving *to be* to apply in principle to all the senses.

It is useful to think of perceptual beliefs as *embedded* in the corresponding propositional or objectual perception, roughly in the sense that they are integrally tied to perceiving of that kind and derive their character and perhaps their authority from their perceptual grounding. Thus, my belief that the field is rectangular is embedded in my seeing that it is, and Susie's

believing the tachistoscope to be making noise is embedded in her hearing it to be doing so. In each case, without the belief, there would not be perception of that kind. These kinds of perception might therefore be called *cognitive*, since belief is a cognitive attitude: roughly the kind that has a proposition (something true or false) as its object.[5] The object of the belief that the field is rectangular is the specific proposition that the field is rectangular, which is true or false; and the object of believing the tachistoscope to be making noise is some proposition or other to the effect that it is making noise, which (though left unspecified by the ascription of the belief) is also true or false. In this respect, belief is unlike attitudes of approval or admiration or indignation, which are evaluated as, say, appropriate or inappropriate rather than true or false.[6]

Both propositional and objectual beliefs are grounded in simple perception. If I do not see a thing at all, I do not see *that* it has any particular property and I do not see it *to be* anything. Depending on whether perceptual beliefs are propositional or objectual, they may differ in the kind of knowledge they give us. Propositional perception yields knowledge both of *what* it is that we perceive and of some *property* of it, for instance of the *field's* being *rectangular*. Objectual perception may, in special cases, give us knowledge only of a property of what we perceive, say that it is green, when we do not know what it is or have any belief as to what it is.

In objectual perception, we are, to be sure, in a good position to come to know *something* or other about the object, say, that it is a green expanse. Objectual perception may thus give us information not only about objects of which we have a definite conception, such as home furnishings, but also about utterly unfamiliar, unconceptualized objects or about objects of which we have only a very general conception, say 'that noisy thing'. This is important. We could not learn as readily from perception if it gave us information only about objects we conceive in the specific ways in which we conceive most of the familiar things we see, hear, touch, taste, and smell.[7]

Seeing and believing

Both propositional and objectual perceptual beliefs are quite commonly grounded in perception in a way that apparently connects us with the real, outside world and assures their truth. For instance, my visual belief that the field is rectangular is so grounded in my seeing the field that I veridically (truly) see it is rectangular; my tactually believing the glass to be cold is so grounded in my feeling it that I veridically feel it to be cold.

Admittedly, I might visually (or tactually) believe that something is rectangular under conditions poor for judging it, as where I view a straight stick half submerged in water (it would look bent whether it is or not). My visually grounded belief might then be mistaken. But such a mistaken belief is not *embedded* in propositional perception that the stick is bent – that proposition is false and hence is *not* something one sees is so (or to be so). The

belief is merely *produced* by some element in the simple perception of the stick: I see the stick in the water, and the operation of reflected light causes me to have the illusion of a bent stick. I thus do not see that the stick is bent: my genuine perception is of it, but not of its curvature. Seeing that curvature or seeing that the stick is bent would entail that it *is* bent, which is false. If the stick is not bent, I cannot see that it is.

As this suggests, there is something special about both perceiving *that* and perceiving *to be*. They are *veridical experiences*, i.e., they imply truth. Specifically, if I see that the field is rectangular, or even just see it to be rectangular, then it truly is rectangular. Thus, when I simply see the rectangularity of the field, if I acquire the corresponding embedded perceptual beliefs – if I believe that it is rectangular when I see that it is, or believe it to be rectangular when I see it to be – then I am correct in so believing.

Perceiving *that* and perceiving *to be*, then, imply (truly) believing something about the object perceived – and so are *factive*, as it is sometimes put. Does simple perception, perception *of* something, which is required for either of these more complex kinds of perception, also imply true belief? Very commonly, simple perception does imply truly believing something about the object perceived. If I hear a car go by, I commonly believe a car is passing. But could I not hear it, but be so occupied with my reading that I form no belief about it? Let us explore this.

Perception as a source of potential beliefs

As is suggested by the case of perception overshadowed by preoccupation with reading, there is reason to doubt that simple perceiving *must* produce any belief at all. But it is not only when there is an overshadowing that simple perception need not produce beliefs. It normally does not produce beliefs even of what *would* be readily believed if the question arose. Suppose I am looking appreciatively at a beautiful rug. Must I believe that it is not producing yellow smoke, plain though this fact is? I think not; there seems to be a natural economy of nature – perhaps explainable on an evolutionary basis – that prevents our minds being cluttered with the innumerable beliefs we would have if we formed one for each fact we can see to be the case.

This line of thought may seem to fly in the face of the adage that seeing is believing. But properly understood, that may apply just to propositional or objectual seeing. In those cases, perception plainly does entail beliefs. Seeing that golfball-size hail is falling is believing it.[8] This fact, however, is not only perceptible; it is striking.

In any event, could I see the field and believe nothing regarding it? Must I not see it to be something or other, say, green? And if so, would I not believe, of it, *something* that is true of it, even if only that it is a green object some distance away? Consider a different example.

Imagine that we are talking excitedly and a bird flies quickly across my path. Could I see it, yet form no beliefs about it? There may be no clearly

correct answer. For one thing, while there is much we *can* confidently say about seeing and believing, 'seeing' and 'believing' are, like most philosophically interesting terms, not precise. They have an element of vagueness. No standard dictionary definition or authoritative statement can be expected either to tell us precisely what they mean or, especially, to settle every question about when they do and do not apply.[9] Still, we should be wary of concluding that vagueness makes any significant philosophical question unanswerable. How, then, should we answer the question whether seeing entails believing?

A negative response might be supported as follows. Suppose I merely see the bird but pay no *attention* to it because I am utterly intent on what we are discussing. Why must I form any belief about the bird? Granted, if someone later asks if I saw a blue bird, I may assent, thereby indicating a belief that the bird *was* blue. But this belief is not perceptual: it is about a perceptible and indeed has visual content, but it is not grounded in seeing or any other mode of perception. Moreover, it may have been formed only when I recalled my visual experience of the bird. Recalling that experience in such a context may *produce* a belief *about* the thing I saw even if my original experience *of* the thing did not. For plainly a recollected sensory experience can produce beliefs about the object that caused it, especially when I have reason to provide information about that object. Perhaps one notices something in one's recollected image of the bird, an image merely recorded in the original experience, but one formed no belief about the bird. Granted, perception must produce a sensory experience, such as an image, and granted such an image – and even a recollection of it – is raw material for beliefs; it does not follow that perception must produce beliefs.

It might be objected that genuinely seeing an object must produce beliefs, even if we are not *conscious* of its doing so. How else can perception guide our behavior, as it does where, on seeing a log in our path, we step over it?

One answer is that not everything we see, including the bird that flies by as I concentrate on something else, demands or even evokes a cognitive response: one entailing belief-formation. If I am cataloguing local birds, the situation is different. But where an unobtrusive object we see – as opposed to one blocking our path – has no particular relation to what we are doing, perhaps our visual impressions of it are simply a *basis* for forming beliefs about it should the situation call for it, and it need not produce any belief if our concerns and the direction of our attention give the object no significance.

Despite the complexity I am pointing to in the relation between seeing and believing, clearly we may hold what is epistemologically most important here. Suppose I can see a bird without believing anything about (or of) it. Still, when I do see one, I *can* see it to be something or other, and my perceptual circumstances are such that I might readily both come to believe something about it *and* see that to be true of it. Imagine that someone suddenly interrupts a conversation to say, 'Look at that bird!' If I see it, I am

in a position to form some belief about it, if only that it is swift, though I need not actually form any belief about it, at least not one I am conscious of.

To see these points more concretely, imagine I am alone and see the bird in the distance for just a second, mistakenly taking it to be a speck of ash. If there is not too much color distortion, I may still both know and justifiedly believe it to be dark. Granted, I would misdescribe it, and I might falsely believe that it is a speck of ash. But I could still know something about it, and I might point the bird out under the misleading but true description, 'that dark thing out there'. The bird *is* that thing I point at; and I can see, know, and justifiedly believe that there is a dark thing there.

My perception of the bird, then, gives me a ready *basis* for some knowledge and justification, even if the perception occurs in a way that does not cause me to believe, say, that there is a *bird* before me and so does not give me *actual* knowledge of it. Seeing *is* virtual believing, or at least potential believing. It is similar with the other senses, though some, such as smell, are in general less richly informative.[10]

The perceptual hierarchy

Our discussion seems to show that simple perceiving need not produce belief, and objectual perceiving need not always yield propositional perceiving. Still, this third kind of perception is clearly not possible without the first and, I think, the second as well. I certainly cannot see *that* the bird is anything if I do not see it at all; and I must also see it in order to see it *to be* something, say a speck of blue. Thus, simple perceiving is fundamental: it is required for objectual and propositional perceiving, yet does not clearly entail either. If, for instance, you do not perceive in the simple mode, say see a blue speck, you do not perceive in the other two modes either, say see a speck to be blue or see that it is blue. And since objectual perceiving seems possible without propositional perceiving, but not conversely, the former seems basic relative to the latter.

We have, then, a perceptual hierarchy: propositional perceiving depends on objectual perceiving, which in turn depends on simple perceiving. Simple perceiving is basic, and it commonly yields, even if it need not always yield, objectual perceiving, which, in turn, commonly yields, even if it need not always yield, propositional perceiving. Simple perceiving, such as just seeing a green field, may apparently occur without either of the other two kinds, but seeing something *to be* anything at all, such as rectangular, requires seeing it; and seeing *that* it is something in particular, say, green, requires both seeing it to be something and, of course, seeing it.

Thus, even if simple perception does not always produce at least one true belief, it characteristically does put us in a position to form any number of true beliefs. It gives us *access* to perceptual information, perhaps even *records* that information in some sense, whether or not we register the information conceptually by forming perceptual beliefs of either kind.

As this suggests, perception by its very nature is *informational*; it might even be understood as equivalent to a kind – a sensory kind – of receipt of information about the object perceived.[11] The point here is that not all perceptually given information is *propositional* or even conceptualized. This is why we do not receive or store all of it in the contents of our beliefs. Some of the information is imagistic. Indeed, if we think of all the senses as capable of images or their non-visual counterparts for the other senses – of *percepts*, to use a technical term for such elements in perceptual experience – it is in these sensory impressions they give us that the bulk of perceptual information apparently resides. Hence the idea that a picture is worth a thousand words – which is not to deny that, for some purposes, some words are worth a thousand pictures. A single report of smoke may avert a catastrophic fire; a single promise may alter a million lives.

It is in part because perception is so richly informative that it normally gives us not only imagistic information but also situational justification. Even if I could be so lost in conversation that I do not form any belief about the passing bird, I am, as I see it pass, normally justified in believing something about it, concerning its perceptible properties, for instance that it glides.[12] There may perhaps be nothing highly specific that I am justified in believing about it, say that it is a cardinal or that it has a wing span of ten inches, but if I really see it, as opposed to its merely causing in me a visual impression too indistinct to qualify me as seeing it, then there is something or other that I may justifiably believe about it.

When we have a clear perception of something, it is even easier to have perceptual justification for believing a proposition about it without actually believing it. Just by taking stock of the size and texture of the field in clear view before me, I am justified in believing that it has more than 289 blades of grass; but I do not ordinarily believe – or disbelieve – any such thing about grassy fields I look at. It was only when I sought a philosophical example about perception and belief, and then arbitrarily chose the proposition that the field has more that 289 blades of grass, that I came to believe this proposition. Again, I was justified in believing the proposition before I actually did believe it.

Seeing and seeing as

What is it that explains why seeing the bird or the field justifies us in believing something about what we see, that is, gives us situational justification for such a belief? And does the same thing explain why seeing something enables us to know various facts about it? One possible answer is that if we see something at all, say a bird, we see it *as* something, for instance black or large or swift, and we are justified in believing it to be what we see it as being. The idea is that all seeing and perhaps all perceiving is *aspectual perception* of a kind that confers justification. We see things by seeing their properties or aspects, for instance their colors or their front

sides, and we are justified in taking them to have the properties or aspects we see them as having.

Let us not go too fast. Consider two points, one concerning the nature of seeing *as*, the other its relation to justification.

First, might not the sort of distinction we have observed between situational and belief justification apply to seeing itself? Specifically, might not my seeing the bird imply that I am only in a *position* to see it *as* something, and not that I *do* see it as something? It is true that when we see something, we see it *by* seeing some property or aspect of it; but it does not follow that we see it as *having* this property or aspect. I might see a van Gogh painting by its distinctive brush strokes, but not see it as having them because my visual experience is dominated by the painting as a whole. Someone might reply that if I see it by those strokes, I am disposed to believe it has them and so must see it as having them; but this disposition implies at most a capacity to see it as having them. There may, to be sure, be a sense in which if we see something aright, for example see a van Gogh with recognition, then we must see it as what we recognize it to be. Seeing *as* can also be a matter of conceptualization – roughly, *conceiving as*. But these are both different from the perceptual seeing as in question here. The distinction between seeing *as* and seeing *by* remains.

Second, suppose that seeing the bird did imply (visually) seeing it *as* something. Clearly, this need not be something one is justified in believing it to be (and perhaps it need not be something one *does* believe it to be). Charles might erroneously see a plainly black bird as blue, simply because he so loves birds of blue color and so dislikes black birds that (as he himself knows) his vision plays tricks on him when he is bird-watching. He might then not be justified in believing that the bird is blue.

Assume for the sake of argument that seeing implies seeing *as* and that typically, seeing as implies at least objectually believing something or other about the thing seen. Still, seeing an object as having a certain property – say, a stick in the water as bent – does not entail that it has the property. Nor does it always give one (overall) situational justification for believing it to have that property.

Seeing as and perceptual grounds of justification

Whether or not seeing always implies seeing *as*, it is clear that seeing something normally puts one in a position to form at least one justified belief about it. Suppose I see the bird so briefly and distractedly that I do not see it as anything in particular; still, my visual impression of it has some feature or other by which I am justified in believing something of the bird, if only that it is a moving thing. Even Charles would be justified in believing something like this. His tendency to see black birds as blue is irrelevant to his perception of movement and does not affect his justification for believing moving objects to be in motion.

Suppose, however, that for hours Charles had been hallucinating all manner of unreal things, and he knows this. Then he might not be justified in taking the bird he sees to be *anything* real, even though it is real. For as a rational person in this position he should see that if his belief is true, it may well be true only in the way a lucky guess is. Thus, the best conclusion here – and I suggest that this is an important justification principle concerning perception – is that *normally*, seeing an object gives one situational justification for believing something or other about it.

More broadly, it is very plausible to hold that *the evidence of the senses* – including above all the sensory experiences characteristic of perception – normally provides justification for beliefs with content appropriate to that evidence. If your experience is of a green expanse, you are justified in believing there is something green before you; if it is of something cool in your hand, you are justified in believing there is something cool in your hand; and so on.

One might also say something slightly different, in a terminology that is from some points of view preferable: seeing an object (always) gives one *prima facie* justification for believing something or other about it, where prima facie justification is roughly justification that prevails unless defeated, for instance by such factors as a strong justification for believing something to the contrary. If I see a green field, I have a justification for believing it to be green, but I may not be justified, *overall*, in believing this if credible friends give me compelling reason to believe that despite appearances the field is entirely covered by blue grass, or that I am not seeing a field at all but hallucinating one.[13]

If seeing is typical of perception in (normally) putting us in a position to form at least one justified belief about the object seen, then perception in general normally gives us at least situational justification. This is roughly justification *for holding* a belief of the proposition for which we have the justification. As our examples show, however, it does not follow that every perceptual belief *is* justified. Far from it. Some perceptual beliefs, like perceptual beliefs that are evidentially undermined by one's having formed similar beliefs based on hallucinations, are not. As with the biased bird-watcher, belief can be grounded in perception under conditions that prevent its being justified by that grounding.

Nevertheless, there is a simple principle of justification we can see to be plausible despite all these complexities: normally, a visual belief that is constituted by seeing *that* something is so or by seeing it *to be* so is justified (and it is always prima facie justified). If I see that a field is rectangular and, in virtue of seeing that it is rectangular, believe that it is, then (normally) I justifiedly believe that it is. Call this *the visual justification principle*, since it applies to cases of belief based on seeing that what is believed is true (or seeing it to be true).

I say *normally* (and that the justification is prima facie) because even here one's justification can be *defeated*. Thus, Charles might see that a bird is blue and believe on this basis that it is, yet realize that all morning he has been

seeing black birds as dark blue and thus mistaking the black ones for the blue ones. Until he verifies his first impression, then, he does not justifiedly believe that the bird is blue, even though it in fact is. (We could say that he has *some* justification for believing this, yet better justification for not believing it; but to simplify matters I am ignoring degrees of justification.) He does indeed see a bird and may justifiedly believe that, but his belief that the bird is black is not justified.

Suppose, on the other hand, that Charles has no idea that he has been hallucinating. Then, even when he does hallucinate a blue bird, he may be justified in believing that there is one before him. This suggests a related principle of justification, one that applies to visual experience whether it is a case of seeing or merely of visual hallucination: when, on the basis of an apparently normal visual experience (such as the sort we have in seeing a bird nearby), one believes something of the kind the experience seems to show (for instance that the bird is blue), normally this belief is justified. Call this the *visual experience principle*, since it applies to cases in which one has a belief based on visual experience even if not an experience of actually seeing (the veridical kind). The visual principle takes us from seeing (vision) to justification; the visual experience principle takes us from visual experience – conceived as apparent seeing – to justification.

Similar principles can be formulated for all of the other senses, though the formulations will not be as natural. If, for example, you hear a note to be flat and on that basis believe that it is flat, normally your belief is justified. It is grounded in a veridical perception in which you have discriminated the flatness you believe the note has. And suppose, by contrast, that in what clearly seem to be everyday circumstances you have an utterly normal-seeming auditory hallucination of a flat note. If that experience makes it seem clear that you are hearing a flat note, then if you believe on the basis of the experience that this is a flat note, normally your belief would be justified. You have no reason to suspect hallucination, and the justification of your belief that the note is flat piggybacks, as it were, on the principle that normally applies to veridical beliefs.[14]

Seeing as a ground of perceptual knowledge

Some of what holds for the justification of perceptual beliefs also applies to perceptual knowledge. Seeing the green field, for instance, normally yields (for someone who has the concept of a field) knowledge about the field as well as justified belief about it. This suggests another visual principle, a visual knowledge principle. It might be called an *epistemic principle*, since it states a condition for the visual generation of *knowledge*: at least normally, if we see that a thing (such as a field) has a property (say is rectangular), we (visually) know that it has it. A parallel principle holds for objectual seeing: at least normally, if I see something to have a property (say to be rectangular), I know it to have the property.

There are, however, special circumstances that explain why these epistemic principles may have to be restricted to "normal" cases. It may be possible to see that something is so, believe on that basis that it is, and yet not know that it is. Charles's case *seems* to show this. For if, in the kind of circumstances he is in, he often takes a black bird to be blue, then even if he sees that a certain blue bird is blue and, on that basis, believes it is blue, he apparently does not know that it is.[15] He might as well have been wrong, one wants to say; he is just lucky that this time his belief is true and he was not hallucinating. Since he has no reason to think he has been hallucinating, and does not realize he has been, one cannot fault him for holding the belief that the bird is blue or regard the belief as inappropriate to his situation. Still, knowledge apparently needs better grounding than is provided by his blameless good fortune. This kind of case has led some philosophers to maintain that when we know that something is so, our being right is not *accidental*.

There is an important difference here between knowledge and justification. Take knowledge first. If Charles is making errors like this, then even if he has no idea that he is and no reason to suspect he is, he does not know that the bird he believes to be blue is blue. But even if he has no idea that he is making errors, or any reason to suspect he is, he *may* still justifiedly believe that the bird is blue. The main difference between knowledge and justification here may be this: he can have a true belief which does not constitute knowledge because there is something wrong for which he is in no way criticizable (his errors might arise from a handicap which he has no reason to suspect, such as sudden color blindness); but he cannot have a true yet unjustified belief without being in some way criticizable. The standards for knowledge, one might say, permit fewer unsuspected weaknesses in discriminating the truth than those for justification, if the standards for knowledge permit any at all.

This difference between knowledge and justification must be reflected in the kinds of principles that indicate how justification, as opposed to knowledge, is generated. Justification principles need not imply that the relevant basis of a belief's justification assures its truth; but since a false belief cannot be knowledge, epistemic principles (knowledge principles) cannot capture elements that generate knowledge unless they rule out factors that may produce a false belief (or at least factors that have a significant chance of producing one). A ground of knowledge must, in *some* way, suffice for the truth of the proposition known; a ground of justification must, in some way, *count toward* the truth of the proposition one is justified in believing, but need not rule out its falsehood.

On the basis of what we see, hear, feel, smell, and taste, we have a great many beliefs, propositional and objectual. We have seen no reason to doubt that these perceptual beliefs are commonly justified or that, quite often, they are true and constitute knowledge. But to see that perception is a basis of justification and knowledge is to go only part way toward

understanding what perception, justification, and knowledge are. Here the main question is what constitutes perception, philosophically speaking. Until we have a good understanding of what it is, we cannot see in detail how perception grounds belief, justification, and knowledge. These problems cannot be fully resolved in this book, but we can achieve partial resolutions. I want to discuss (further) what perception is first and, later, to illustrate in new ways how it grounds what it does. Let us start by considering some of the major theories of the nature of perception. Again, I concentrate on vision, and I want to discuss mainly simple perceiving, the fundamental kind.

Some commonsense views of perception

One natural thing to say about what it is for us to see the green field is appealingly brief. We simply see it, in an ordinary way: it is near and squarely before us; we need no light to penetrate a haze or a telescope to magnify our view. We simply see the field, and it is as it appears. This sort of view, called *naive realism*, has been taken to represent untutored common sense: it says roughly that perception is simply a matter of the senses telling us about real things, and it presupposes that no philosophical account of how they do this is needed.

The view is naive because it ignores problems of a kind to be described in a moment; it is a form of realism because it takes the objects of perception to be real things external to the perceiver, the sorts of things that are "out there" to be seen whether anyone sees them or not.

A more thoughtful commonsense view retains the realism without the naivety. It is quite commonsensical, for instance, to say that I see the field *because* it is before my open eyes and stimulates my vision, thereby *appearing* to me as a green, rectangular shape. Stimulating my vision is a causal relation: the field, by reflecting light, causes me to have the visual experience that is part of my seeing that very field. Moreover, the field apparently must cause my visual experience if I am to *see* it. Since the more thoughtful commonsense view specifies that the object of perception must be a real external thing, we might call it a *perceptual realism*. Most – but not all – theories of perception incorporate this kind of realism.

To understand why perception must have a causal element, suppose I am looking at the field and, without my noticing, someone instantaneously drops a perfect picture of the field right in front of me. If the picture is shaped and textured just right, my visual experience might not change. What appears to me might look just as the field did. Yet I no longer *see* the field. Instead, I see a picture of it. (I do see the field *in* the picture, but that is secondary seeing and not the kind I am talking about.) The reason I do not now see the field is roughly that it has no (causal) effect on my visual experience.

Perception as a causal relation and its four main elements

Examples like this suggest that *perception is a kind of causal relation* between whatever is perceived and its perceiver, wherein the object perceived produces a sensory experience in the perceiver. This is a plausible, commonsensical, and important point, though it does not tell us precisely what perception is. I call any theory of perception which incorporates the point *a causal theory of perception*. Most theories of perception are causal.

We can now better understand the four elements I have described as among those crucial in perception: the perceiver, the object perceived, the sensory experience in which the object appears to the perceiver, and the causal relation between the object and the perceiver, by virtue of which the object produces that experience. Thus, if you see the field, there is a distinctive way, presumably through light transmission to your eyes, in which the field produces in you the visual sensory experience of a green, rectangular shape characteristic of your seeing it. If a picture of the field produces an exactly similar visual experience in the same way, it is the picture you see, not the field. Similarly, if you hear a piano piece, there is a special way in which it causes you to have the auditory sensations of chords and melody and harmony that go with it.

It is difficult, though fortunately not necessary for a general understanding of perception, to specify precisely what these causal paths from the object to the perceiver are. Some of the details are the business of the psychology and neurophysiology of perception. Others are determinable by philosophical inquiry. Philosophical reflection shows us, for instance, that not just any causal chain is the right sort for perception. Suppose the piano sounds cause a special machine, created by a prankster, to produce in me both temporary deafness and a faithful auditory hallucination of the piece. Then I do not *hear* it, though my sensory experience, the auditory experience I live through in my own consciousness, is just what it would be if I did hear it. Nor do I hear it if, though the sound waves reach my brain and cause me to believe a piano is playing just the piece in question, I have no auditory experience. Even such a highly informed inner silence is not musical.

Illusion and hallucination

We can make progress by pursuing the question of why naive realism is naive. Suppose there is a gray haze that makes the green field look gray. Or suppose the cup I am holding appears, from a certain angle, as if its mouth were an ellipse rather than a circle, or feels warm only because my hand is cold. These are *perceptual illusions*. They illustrate that things are not always as they seem. The cup's mouth is neither elliptical nor warm.

Now imagine that the field burns up. I sorely miss its rich green and the spruce and maple, and on waking from a slumber in my chair I have a

hallucination in which my visual experience is just as it would be if I were seeing the field as it originally was. Here the grass I seem to see is not there at all. The point is not that something I see is not as it seems (as in the case of illusion) but that there seems to be something where there is nothing. With illusion, as illustrated by a partly submerged stick's looking bent, experience distorts what is there and is perceived; with hallucination, it appears that something is there when there is nothing there at all.

Illusions and hallucinations are possible for the other senses too. When they occur, we do not just see (or hear, taste, smell, or touch) the object. Either we do not see it as it is or (perhaps) do not see anything at all. Not everything we perceive is as it appears to be, and naive realism does not account for this point.

One way to deal with illusion and hallucination is to stress how they show the need to distinguish appearance from reality. In a visual illusion, one sees something, but it does not appear as it really is, say circular. In a hallucination, if anything appears to one, it is in reality even less what it appears to be than is the object of an illusion, or is not what it appears to be at all: instead of a blue spruce tree's appearing blue to me, for instance, perhaps the conical section of space where it stood appears "bespruced."

The theory of appearing

The sort of account of perception just sketched as an improvement over naive realism has been called *the theory of appearing*: it says roughly that perceiving an object, such as a book, is simply its appearing to one to have one or more properties, such as being rectangular. Thus, one perceives it – in this case, sees it – *as* rectangular. The theory can also provide the basis of an account of the sort of experience we have in hallucination as opposed to normal perception: that experience, too, the theory takes to be a case of something's appearing to one to have a set of properties; the object that appears is simply a different kind: it is hallucinatory.[16]

The theory of appearing is initially plausible. For one thing, it incorporates much reflective common sense, for instance the view that if one sees something, then it appears to one in some way, say as a red barn or at least as a visually experienced rectangular patch. The theory says nothing, however, about the need for a causal relation between the object and its perceiver. If, consistently with its commonsense motivation, one stipulated that the crucial relation of appearing to the perceiver to have a property – say, to be rectangular – is or implies a causal relation, one would then have a different theory (of a kind to be discussed shortly).

In addition to the question of how the theory can do justice to the causal element in perception, it faces a problem in accounting for hallucinations in which there is no object to appear to the person at all. I could, after all, hallucinate a green field when I see nothing physical at all, say because it is pitch dark or my eyes are closed. In such an *empty hallucination* – one that

occurs despite my perceiving nothing – what is it that appears green to me? There is a plausible answer, but it is associated with a quite different theory of perception. Let us explore that contrasting view.

Sense-datum theories of perception

Once we think seriously about illusion and hallucination, we begin to question not only naive realism but also any kind of *direct realism* in the theory of perception, any perceptual realism which, like the theory of appearing, says that we see (or otherwise perceive) external objects directly, rather than *through* seeing (or at least visually experiencing) something else. After all, not only do light rays come between us and what we see, there are also brain events crucial for seeing. Perhaps these events or other intermediaries in perception produce or indicate an interior object, presumably a mental object that plays an intermediary role in perception.

Hallucination illustrates most readily how such an intermediary might figure in understanding perception. Imagine that you vividly hallucinate the field just as it would be if it were before you. This seems quite possible. If such a "faithful" hallucination occurs, your visual experience – roughly, what you are aware of in your visual consciousness – is exactly like the experience you have when you see the field. Does it not then seem that the difference between ordinary seeing and visual hallucination is simply in what *causes* the visual experience, rather than in what you directly see? When I see the field, *it* causes my visual experience. When I hallucinate it, something else (such as my deep desire to have it back) causes my visual experience. But apparently what I directly see, that is, the immediate object of my visual experience, is the same in both cases. This point presumably explains why my visual experience – what occupies my visual consciousness – is the same whether I am hallucinating the field or really seeing it. If it were not the same, we could not say things like 'It was exactly as if I were seeing the tree in normal light'.

The argument from hallucination

We might develop these ideas by considering an argument from hallucination. It consists of two connected arguments. The first constituent argument attempts to show a parallel between hallucination and ordinary perception:

1 A perfectly faithful (visual) hallucination of a field is intrinsically indistinguishable from an ordinary experience of seeing that field, that is, not distinguishable from it just in itself *as* a visual experience, as opposed to being distinguishable through verifying one's visual impression by touching the things around one.

Hence,

2 What is *directly* seen, the immediate object of one's visual experience, is the same sort of (non-physical) thing in a perfect hallucination of a field as in an ordinary experience of seeing a field.

But – and we now come to the second constituent argument, which builds on (2) as its first premise – clearly,

3 What is directly seen in a hallucination of a field is not a field (or any other physical thing).

Indeed, no field is seen at all in a hallucinatory visual experience, so (3) seems plainly true. Hence, putting (1) – (3) together, we may infer that

4 What is directly seen in an ordinary experience of seeing a field is not a field.

The overall idea is that when we ordinarily see an everyday perceptible object such as a field, we see it through seeing something else *directly*: something not seen *by* seeing anything else. What we see directly – call it a *sense-datum* – might be an image. One may prefer (as some philosophers do) to say that we do not *see* such things but are only visually acquainted with them. To simplify, let us just bear this alternative in mind but use the more natural term 'see'.

Just what is directly seen when one sees a field, then, and how is the field *in*directly seen? Why not say that what is *directly* seen is a two-dimensional object consisting of the same sorts of colors and shapes one sees in the hallucinatory experience? After all, nothing, not even (physical) light, intervenes between us and them. There is no "space" for intermediaries. Hence, no intermediaries can misrepresent these special objects. These objects are apparently internal to us: as traditionally conceived, they could exist even if we were disembodied minds in an otherwise empty world. The only space they need is in the mind. Yet we do see the field *by* seeing them; hence, we see it indirectly.

The idea that experiencing sense-data is required for perception is nicely expressed in Emily Dickinson's poem 'I Heard a Fly Buzz When I Died'. In the final moment of her terminal experience,

> There interposed a fly,
>
> With blue, uncertain stumbling buzz,
> Between the light and me;
> And then the windows failed, and then
> I could not see to see.

The external light from the window blocks her eyesight, but this leaves inner seeing – portrayed here as a condition for ordinary seeing – still possible. Until the end, she can see *to* see. It is sense-data that are conceived as the direct objects of such inner sight.

A sense-datum theory is perfectly consistent with a causal theory of perception: the field causes the colors and shapes to arise in my visual consciousness in a way that fully accords with the view that perception is a causal relation between something external and the perceiver. Perception is simply a *mediated*, hence *indirect*, causal relation between external objects we perceive and us: the object produces the mediating colors and shapes that appear in our visual fields, and, through seeing them, we see it.

The theory I am describing is a version of a *sense-datum theory of perception*. Such theories are so called because they account for perception by appeal to a view of what is directly given *in* sense experience, hence is a *datum* (a given) for such experience – the sort of thing one is visually aware of in hallucinating a field. This sense-datum thesis (unlike the phenomenalist sense-datum view to be discussed shortly) is a realist view; but its realism, by contrast with that of naive realism and the theory of appearing, is indirect.[17]

Sense-datum theory as an indirect, representative realism

A sense-datum theory is a kind of *representative realism* because it conceives perception as a relation in which sense-data represent perceived external (hence real) objects to us. On some conceptions of sense-data, they are copies of those objects: shape for shape, color for color, sound for sound. John Locke held a view of this kind (and in 1689 published it in *An Essay Concerning Human Understanding*, especially Books II and IV), though for him sense-data are copies ('resemblances') only of the *primary qualities* of physical things – solidity, extension (in space), shape, and mobility – not of their *secondary qualities*, above all colors, sounds, smells, and tastes. (He took the primary qualities to be objective and of the kind that concern physical science; and he considered the secondary ones to be in a sense subjective, not belonging to physical things but something like representational mental elements that they cause in us. Color, then, disappears in the dark, though the physical object causing us to see it is not changed by the absence of light.) Our question is whether any sense-datum version of representationalism is sound, and we need not pursue the interesting question of how these two kinds of qualities differ.

Sense-datum theories have had brilliant defenders down to the present age. The theory has also had powerful opponents. To appreciate it better, let us first consider how it takes perception to be indirect. Sense-datum theorists might offer several reasons to explain why we do not ordinarily notice the indirectness of perception (I speak generally here, not solely of Locke's version of the theory). Here are two important ones.

First, normally what we directly see, say, colors and shapes, roughly corresponds to the physical objects we indirectly see by means of what we see directly. It is only when there is an illusion or hallucination that we are forced to notice a discrepancy between what we directly see and the object commonly said to be seen, such as a book.

Second, the beliefs we form on the basis of perception are formed spontaneously, not through any process requiring us to consider sense-data. Above all, we do not normally *infer* what we believe about external objects from what we believe about the colors and shapes we directly see. This is why it is easy to think we "just see" things, directly. Perceiving is not inferential, and for that reason (perhaps among others) it is not *epistemically indirect*, in the sense that *knowledge* of external objects or beliefs about them are based on knowledge of sense-data, or beliefs about them. I know that the field is green through *having* rectangular green sense-data, not through *inference from* propositions about them.[18]

Perception is not, then, inferentially indirect. But, for sense-datum theorists, it is nonetheless causally and objectually indirect. The perceived object is presented to us via another object, though not by way of a *premise*. Let me describe a bit differently how the sense-datum view conceives the indirectness of perception.

Perception is causally indirect because perceived physical objects cause sensory experience, say of colors and shapes, *by* causing the occurrence of sense-data, with which we are directly (and presumably non-causally) acquainted in perceptual experience. Perception is objectually indirect because we perceive external things, such as fields, *through* our acquaintance with other objects, namely, sense-data. Roughly, we perceive external things through perceptual acquaintance with internal things.

By contrast, we normally do not use information about sense-data to arrive at perceptual beliefs inferentially, say by an inference from my directly seeing a grassy, green rectangular expanse to the conclusion that a green field is before me. Ordinarily, when I look around I form beliefs about the external environment and none at all about my sensory experience. That experience causes my perceptual beliefs, but what they are *about* is the external things I perceive. It is when the colors and shapes do not correspond to the external object, as where a circle appears as an ellipse, that it seems we can understand our experience only if we suppose that the direct objects of sensory experience are internal and need not match their external, indirect objects.

Appraisal of the sense-datum approach

Let us focus first of all on the argument from hallucination, whose conclusion suggests that what is directly seen in visual perception of external objects is a set of sense-data. Suppose I do have a hallucination that is intrinsically just like the normal experience of seeing a field. Does it follow that

what is directly seen in the hallucination is the same sort of thing as what is directly seen in the normal experience? At least two problems confront the sense-datum theory here.

First, why must anything be seen at all in a hallucination? Imagine that you see me hallucinate the burned-up field. I might get up, still half asleep, and cry out, 'It's regrown!,' pointing to the area. You might conclude that I *think* I see the field again. My *initial* reaction to realizing I had hallucinated the field might be that, hallucination or no, I *saw* it. But I might just as easily slump back in my chair and mumble that I wish I had seen it.

A compromise view would be that I saw the hallucinated grass *in my mind's eye*. But suppose I did see it in my mind's eye, and again suppose that the hallucination is intrinsically just like the ordinary seeing. Does it follow that what I directly see in the ordinary experience is the same as what I see in the hallucination, namely, something in my mind's eye? It does not. The notion of seeing in one's mind's eye is metaphorical, and such seeing need not imply that there is any real thing seen, in or outside the mind. However vividly I may, in my mind's eye, see myself standing atop a giant pyramid in Toronto, there is no pyramid there, nor need there be any pyramidal object in my mind.

There is a second reason for resisting the conclusion that something must be directly seen in hallucinations. Recall that my seeing a green field is apparently a causal relation between a sensory experience in me and the field that produces the experience. If this view is correct, why should the possibility that a hallucination can mimic my seeing the field tell us anything about what is directly seen (or is an object of visual acquaintance) when one sees that field? It is not as if we had to assume that only an experienced *object* can produce the relevant sensory experience, and must then conclude that it is an internal perceptual object, since there is no other candidate. Many things can have more than one cause, and the sense-datum theorist has no argument to show that only an internal perceptual *object*, as opposed, say, to an abnormality in the visual cortex (which need not be an object at all), can cause the hallucinatory experience.

Moreover, from the similarity of the internal, experiential elements in the hallucination and the internal ones occurring in genuine perception, one might as well conclude that since the ordinary experience is one of seeing only an external rather than an internal object, the hallucinatory experience is different only in the absence of the external object. Rather than add to the components that seem needed to account for the ordinary experience, we subtract one that seems needed to account for the hallucination. This yields a more economical theory of perception.

An analogy may help. Compare trying to infer facts about how we see an original painting from facts about how we see it in a photo of it. From the indirectness of the latter seeing, it certainly does not follow that ordinary seeing of the painting is indirect. And even if a photographic viewing can be so realistic that it perfectly mimics an ordinary viewing, it does not follow

that photographic, two-dimensional objects are components in ordinary seeing. Similarly, no matter how much like ordinary experiences hallucinations can seem, it does not follow that the former have all the internal elements (roughly, mental or mind-dependent elements) of the latter.

It will help to consider a different analogy. Two perfect ball-bearings, by virtue of being exactly the same in diameter and constitution, can be intrinsically indistinguishable, yet they can still differ significantly, one being on your left and one on your right. Their intrinsic properties can thus be identical, while their *relations* (to you) differ: one is left of you, the other right of you; hence they *do* differ in their relational properties. Similarly, the hallucination of a field and the ordinary visual experience of a field can be intrinsically indistinguishable, yet differ in their relations to me or to other things. One of them, the visual experience of a field, may be an element in a perceptual relation to the field; and the experience we call hallucination, which is not based on perceiving the external object hallucinated, may *not* be an element in any perceptual relation to the field, but only a process I undergo (an element simply "in" me on the plausible assumption that it is mental).

To account for the difference between the two kinds of experience, we might say this: the visual experience represents an external thing to me; the hallucinatory experience, though intrinsically just like the visual one, does not, but as it were only pretends to represent an external thing. Thus, for all the argument from hallucination shows, the ordinary experience of seeing might be a relation to an object such as a green field, namely the relation of directly seeing, while the hallucinatory experience of a green field is not a relation to that field, such as being an internal copy of it, or even a relation to any other object, such as a perceiver.

The points just made about the argument from hallucination indicate that it is not sound. Its first premise, (1), does not entail the conclusion drawn from it, (2). Nonetheless, the argument poses serious problems for alternative theories. What explanatory account of hallucinations and illusions besides the sense-datum account might we adopt? To see some of our alternatives, it is best to begin with illusion rather than hallucination.

Recall the mouth of the cup viewed from an angle. A sense-datum theory will say we directly see an elliptical shape and indirectly see the cup. The theory of appearing, however, can also explain this: it reminds us that things need not be what they appear to be and says simply that they can appear elliptical even if they are round.

Adverbial theories of perception

One could also combine the causal element in the sense-datum approach with the direct realism of the theory of appearing and move to a third theory, one that says the cup causes us to see it directly, rather than through producing sense-data in us, yet (because of our angle of vision) we see it as if

it were elliptical. To avoid suggesting that anything in one's experience *need* be elliptical, one could take this to mean that the cup visually "appears elliptically" to us. Here the adverb 'elliptically' describes a *way* in which we visually experience the cup. It does not imply that there is an object that appears to us and *is* elliptical.[19] Let us explore this idea in relation to the theory associated with it.

It should now be clear why we need not grant (what sense-datum theorists sometimes seem to assume about perception) that in order for an object to appear a given way to us there must *be* something we see that *is* that way, for instance an elliptical sense-datum. Suppose that one says simply that the cup appears elliptically, using this adverb to designate the way it appears, or (speaking from the perceiver's point of view) *how* one visually experiences it: elliptically. To say it appears elliptically is roughly to say it appears in the way an ellipse does (viewed from directly above its center), as opposed to the way a circle does.

If this adverbial interpretation of such statements as 'I see an ellipse' seems artificial, consider an ordinary analogy. If I say I have a fever, no one could plausibly insist that there is an object, a fever, which I have. 'I have a fever' is a way of saying I am feverish, i.e., my body is above a certain temperature. What our language seems to treat as a statement of a relation to an object, a fever, is really an ascription of a property: the property of having a temperature above a certain level. Just as 'having a fever' can ascribe a certain temperature, 'seeing a parallelogram' (in illusional and hallucinatory cases) can ascribe a certain visual experience.

On the basis of this move, one can construct what is called *the adverbial theory of perception*. Unlike the theory of appearing, which takes perception to be an unanalyzable relation in which things appear to us as having one or more properties, an adverbial theory conceives perception as an analyzable way of experiencing things. In what may be its most plausible form, it says roughly that to perceive an object is for that object (in a certain way) to produce in one a sensory experience of it: to cause one's experiencing it in a certain qualitative way, say to see a stick as straight (or, given the illusion induced by partial submersion, as bent). Both theories are, however, direct realist views. Other similarities (and some differences) between the two theories will soon be apparent.[20]

The adverbial theorist stresses that we see (or otherwise perceive) things in a particular qualitative way and that they thus appear to us in that way. Often they appear as they are; sometimes they do not. In each case they are seen directly, not through intermediaries. Even if I do not see the cup as circular, I do see *it*: it is seen directly, yet appears elliptically.

So far, so good, perhaps. But what about hallucinations? Here the adverbial theory again differs from the theory of appearing. Unlike the latter, it denies that all sensory experience is *of* some object. The importance of this denial is not immediately apparent, perhaps because we suppose that usually a person visually hallucinating does see *something*. Consider Shakespeare's

Macbeth, distraught by his murder of Duncan, hallucinating a dagger that seems to him to hover in mid-air:

> Is this a dagger which I see before me,
> The handle toward my hand? Come, let me clutch thee.
> I have thee not, and yet I see thee still.
> Art thou not, fatal vision, sensible
> To feeling as to sight? or art thou but
> A dagger of the mind, a false creation,
> Proceeding from the heat-oppressed brain?
> I see thee yet, in a form as palpable
> As this [sword] which now I draw.
>
> (Act II, scene i)

Perhaps Macbeth does see something in the place in question, say the wall behind "the dagger" or at least a chunk of space where it hovers. An adverbial theorist might thus posit an "object" where the "dagger" seems located, if only the section of space where it seems to be, for Macbeth to experience "daggerly." On one view, this object might be thought to play a role in causing him to have daggerish visual sensations, but it is not clear that there need be any such object in a hallucination. For the theory of appearing, the space before him, despite being transparent, might somehow appear to him to be a dagger. Indeed, in this case what the adverbial theorist calls experiencing "daggerly" might be roughly equivalent to what the theory of appearing calls having something appear to one to be a dagger.

Supposing we accept this adverbialist account, what happens if it is pitch dark and Macbeth's hallucination is therefore *empty*, in the sense that there is nothing he sees, and hence nothing to serve as an object distorted into an apparent dagger? Then, whereas the theory of appearing may have to posit something like a sense-datum (or other special kind of object) to serve as what appears to be a dagger, the adverbial theory can take a different line and deny that there is *any* kind of object appearing to him. It may posit some quite different account of his "bedaggered" visual experience, such as a psychological account appealing to the influence of drugs or of his "heat-oppressed brain."

Is it really plausible to hold, with the adverbial theory, that in this instance Macbeth saw nothing at all? Can we really explain how the normal and hallucinatory experiences are intrinsically alike without assuming they have the same direct objects? In the light of the special case of empty hallucination, then, the sense-datum theory may seem the most plausible of the three. It provides an object of Macbeth's visual experience even if it occurs in utter darkness, whereas the adverbial theory posits no objects at all to appear to one in empty hallucinations. Moreover, the sense-datum view postulates the same sort of direct object for ordinary perception, illusion, and hallucination, whereas the theory of appearing does not offer a uniform account of their direct objects and must explain why entities like sense-data do not occur in normal perception as well as in empty hallucination.

Perhaps, however, the hallucination problem seems more threatening than it should to the adverbial theory because hallucinations are felt to be *perceptual* experiences and hence expected to be *of* some object. But as we have seen, although hallucinatory experiences can be intrinsically indistinguishable from perceptual ones, all that can be assumed is that the former are *sensory experiences*. Hallucinatory experiences, on the adverbial view, are simply not cases of perceiving, at least not in a sense requiring that any object appear to one.

Thus, nothing at all need appear to one in hallucinations, though it may *appear to the subject* that something is there. The hallucinator may then be described as having a visual sensory experience, but – since nothing is perceived – not a genuine perceptual experience.

Adverbial and sense-datum theories of sensory experience

A perceptual experience is always sensory, and normally a sensory experience of the sort we have in perceiving is genuinely perceptual. But a kind of short-circuit can cause the sense-receptors to produce sensory experience that is not a normal perceptual experience (or even part of one). It is important to consider the debate between adverbial and sense-datum theories in relation to sensory experience. Both theories take such experience to be essential to perception; both offer accounts of sensory experience as well as of perception; and some in each camp may take the former as a more basic concern.

The most natural thing for adverbial theorists to say about hallucinatory experience is that it is not genuinely perceptual, but only sensory. They might, however, say instead that where a perceptual experience is hallucinatory, it is not a case of *seeing* (except perhaps in the mind's eye, or perhaps in the sense that it is seeing colors and shapes conceived abstractly as properties and not as belonging to sense-datum objects). The former description accords better with how seeing is normally understood: normally, we cannot be said to see what is not there.

The theory suggested by these responses to the hallucination problem might be called *the adverbial theory of sensory experience*. It says that having a sensory experience, such as a hallucination of a green field, is experiencing in a certain *way*, for example visually experiencing "green-fieldly." Our commonsense assumption is that hallucination is not usual (for normal people) and that most vivid sensory experiences are genuinely perceptual. They are of, and thus caused by, the external object(s) apparently perceived. But some sensory experiences are neither genuinely perceptual nor externally caused. People having them are in, say, a vision-like state, and what is going on in their visual cortex may be the same sort of process that occurs when they see things. Yet they are not seeing, and their visual experience typically has an internal cause, such as an abnormal emotion.

May we, then, regard sense-datum theories of perception as refuted by the points just made in criticism of the argument from hallucination and on behalf of the suggested adverbial theory and the theory of appearing? Certainly not. We have at most seen how one major argument for a sense-datum theory of perception fails and how alternative theories of perception can account for the apparently central elements in perception: the perceiver, the (ordinary) object perceived, the sensory experience, and the causal relation between the second and third.

Indeed, supposing that the argument from hallucination fails to show that sense-data are elements in normal everyday perception, sense-data might still be needed to account for non-perceptual sensory experience (sometimes loosely called perceptual experience because it is characteristic of that). In this limited role, one might posit a *sense-datum theory of non-perceptual sensory experience*. On this view, such experience is simply direct acquaintance with sense-data.

A sense-datum view may seem preferable to an adverbial theory of sensory experience. For one thing, there is something unsatisfying about the idea that even in a visual hallucination so vivid that, if one did not suspect error, one would stake one's life on the presence of the hallucinated object, one sees nothing, except either metaphorically in one's mind's eye, or in a sense of 'see' which does not require that any object be seen. Still, perhaps there is such a sense of 'see,' or perhaps one can experience colors and shapes in a visual way without seeing anything.

There is another aspect of the controversy. It concerns the *metaphysics* associated with adverbial and sense-datum theories of any kind, specifically, the sorts of things they require us to take as fundamental realities. In this respect, the adverbial theories of perception and sensory experience have a definite advantage over the counterpart sense-datum theories: the former do not posit a *kind* of object we would not otherwise have to regard as real. From the adverbial perspective, the objects that perception and sensory experience involve are simply perceivers and what they perceive. These are quite familiar entities which we must recognize and deal with anyway.

Sense-data are quite different from ordinary (presumably physical) objects of perception. Sense-data are either mental or at least depend for their existence on the mind of the subject. Yet they are unlike some mental phenomena in that no plausible case can be made for their being really brain phenomena, since they have properties, for instance green color and perfect rectangularity, not normally found in the brain.[21]

Moreover, there are difficulties in the way of fully understanding sense-data in any terms. Is there, for instance, even a reasonable way of counting them? Suppose my image of the green field gradually gets greener. Is this a sense-datum changing or a new one replacing an old one? There seems to be no way to tell. If there is no way to tell, how can we ever be sure we learn more about a sense-datum than what initially appears to us in experiencing it: how can one distinguish learning something more about *it* from learning about something new?[22]

Problems like these also affect the theory of appearing insofar as it must posit sense-data or similar entities to account for hallucinations. To be sure, such problems can also beset our understanding of ordinary objects. Can we always distinguish a mountain with two peaks from two mountains, or one snarled barberry bush from two? But these problems seem less serious, if only because there is no question that there are *some* things of the physical kind in question. The corresponding problems may in the end be soluble for sense-data, but they at least give us some reason to prefer a theory that does not force us to regard sense-data as the only objects, or as even among the objects, we are directly aware of when we see, hear, touch, taste, and smell.

Phenomenalism

If some philosophers have thought that perception can be understood without appeal to sense-data, others have conceived it as understandable in terms of sense-data alone as its objects. This view has the advantage of being, in at least one way, simpler than the adverbial and sense-datum theories. But the view is motivated by other considerations as well.

A sense-datum version of phenomenalism

Think about the book you see. It is a perceptible object. Suppose we may conceive a real perceptible object as a perceptible object that is as it is, independently of what we think it to be. Still, real perceptibles, such as tables and chairs and books, are also plausibly conceived to be, by their very nature, *knowable*. Indeed, it is doubtful that real objects of this sort could be unknowable, or even unknowable through the senses if lighting and other perceptual conditions are good. Now suppose we add to these ideas the assumption that our only genuine, certain knowledge of perceptibles is restricted to what directly appears to us and would be as it is even if we should be hallucinating. And what more does appear to us besides colors, shapes and other sensory properties? Further, how do we know that this book, for example, could even exist without someone's perceiving its sensory properties? Certainly we cannot *observe* the book existing unperceived. If you observe it, you perceive it.

Moreover, if you imagine subtracting the book's sensory properties one by one – its color, shape, weight, and so on – what is left of it? This is not like peeling an apple, leaving its substance. It is like stripping layer after layer from an onion until nothing remains. Might we not conclude, then, that the book is not only *known by* its sensory properties, as the other theories of perception also hold, but is *constituted by* a stable collection of such properties, a collection of visual, tactual, and other sense-data which recur in our experience, confronting us each time we have the sense-data corresponding

to, say, a certain bookcase in our home? Similarly, might it not be that to see the book is simply to be visually acquainted with such a stable collection of sense-data?

George Berkeley argued from a variety of angles that this is indeed what a perceptible object is. This view (which Berkeley developed in detail in his *Treatise Concerning the Principles of Human Knowledge*, published in 1710) is a version of what is often called *phenomenalism*, since it constructs external objects out of phenomena, which, in this use of the term, are equivalent to sense-data. The view is also considered a kind of *idealism*, since it construes physical objects as ideal, in the sense of being composed of "ideas" (an old term for sense-data) rather than material stuff that would exist even if there were no minds and no ideas.[23]

Adverbial phenomenalism

Phenomenalism as just described is focused on the nature of perceptible objects but implies a related view of perception. In the sense-datum version of phenomenalism we have been examining, the associated account of perception retains a sense-datum theory of sensory experience, but not a sense-datum theory of perception. The latter view posits external objects as causes of the sense-data experienced in ordinary perception, whereas sense-datum phenomenalism says physical objects *are* collections of sense-data.

Using the adverbial theory of sensory experience, one might also formulate an *adverbial phenomenalism*, which constructs physical objects out of sensory experience alone and says that to see (for instance) a green field is to experience "green-fieldly" in a certain vivid and stable way. To see such a thing is to have a visual experience that predictably occurs under certain conditions, say when one has the related experiences of walking out on the porch and looking ahead.

On this phenomenalist view, perception can occur without even sense-data; it requires only perceivers and their properties. Sense-datum versions of phenomenalism, however, have been more often discussed by philosophers, and I will concentrate on them.

Whereas the sense-datum theory is an indirect realism, phenomenalism is a *direct irrealism*: it says that perceptual objects are directly perceived, but it denies that they are real in the sense that they are mind-independent and can exist apart from perceivers. This is not to say they are not perceptually real – real items *in sensory experience*. The point is that they are not metaphysically real: things that are "out there," which are the sorts of things we think of as such that they would exist even if there were no perceivers.

Phenomenalism does not, then, deny that physical objects exist in the sense that they are both stable elements of our experience and governed by causal laws, such as those of physics. Nor does it deny that there can be

hallucinations, as where certain experiences, like those presenting Macbeth's hallucinatory dagger, are too unstable to represent a physical object, or occur in only one mode, such as vision, when they should have tactile elements as well, such as a cool, smooth surface. What phenomenalism denies is that physical objects are real in the classical sense, implying that their existence is independent of our experience.

One naturally wonders why things would not go in and out of existence depending on whether they are experienced, and why, when they do exist, they obey the laws of physics, which certainly do not seem to depend on our minds. Berkeley did not neglect to consider what happens to things when we cease to perceive them, as where we leave a book in an empty room. His answer has been put in a limerick:

> There was a young man who said "God
> Must think it exceedingly odd
> If he finds that this tree
> Continues to be
> When there's no one about in the quad."

Reply:

> Dear Sir:
>
> Your astonishment's odd:
> I am always about in the quad
> And that's why the tree
> Will continue to be,
> Since observed by Yours faithfully, God.

If the very existence of external objects is sustained by divine perception, it is not difficult to see how their behavior could obey laws of nature that are divinely ordained.

A phenomenalist need not be a theist, however, to offer an account of the stability of external objects and their lawful behavior. John Stuart Mill, writing in the same epistemological tradition as Berkeley but without any appeal to God, called external objects "permanent possibilities of sensation." To say that the book is in the room when no one is in there to perceive it is to say that there is a certain enduring possibility of the sensations, where having those sensations constitutes perceiving such a book. If one enters the room and looks in the appropriate direction, that possibility should be realized. By contrast, if one merely hallucinated, there would be no reason to expect this. A phenomenalist can, however, be more radical and take objects not to have any kind of existence when unperceived. They are born and die with the experiences in which they appear.

Appraisal of phenomenalism

Unlike the sense-datum theory of perception, phenomenalism is only occasionally defended by contemporary philosophers. But it has had major influence. Moreover, compared with the sense-datum theory, it is more economical and in that way simpler. Instead of perceivers, sense-data, and external objects, it posits, as the things figuring in perception and sensory experience, just perceivers and sense-data. Indeed, adverbial phenomenalism does not even posit sense-data, though it does appeal to a special kind of property, that of experiencing in a certain way, for instance blue-bookly.

As a theory of perception, then, phenomenalism has fewer objects to analyze and interrelate than do the other theories we have discussed. In addition, it appears to bridge the most important gap between sensory experience and perception of objects: since the objects are internal and directly experienced, it seems natural to say that they must be as they appear to be – we see all there is of the surface facing us and in principle can see all there is to them as physical objects. On the other hand, for the external objects of common sense, whose reality is independent of perceivers, (non-theistic) phenomenalism must substitute something like permanent possibilities of experience. Thus, the bare-bones appearance of the theory is illusory. Even that metaphor is misleading; for even our bodies are also collections of sense-data; even the flesh itself is not too solid to melt into the sensations of its perceivers.

It is tempting to reject phenomenalism as preposterous. But if we flatly reject it, we learn nothing from it. Let me pose just one objection from which we learn something important about the relation between sense experience and external objects. The theory says that a book, for instance, is – or at least that its presence is (necessarily) equivalent to – one's having or potentially having a suitably stable collection of sense-data, and that seeing it is being visually acquainted with them. If this is a correct analysis of what seeing a book is, then there is a combination of sense-data, sensory items like colors and shapes in one's visual field, such that if, under appropriate conditions, these elements occur in me, then it follows that I see a book. But surely there is no such combination of sense-data. No matter how vividly and stably I (or anyone) may experience the colors and shapes appropriate to a book, it does not follow that anyone sees one. For it is still possible that I am just hallucinating one or seeing something else *as* a book.[24]

This kind of hallucination remains possible even if I have supporting tactual experiences, such as the smooth feel of paper. For even the sense of touch can be stimulated in this way without one's touching a book. Thus, seeing a book is not *just* having appropriate booklike experiences, even if it is *partly* this, and even though, as phenomenalists hold, there is no experienceable difference between a sufficiently stable combination of booklike [illegible]. Still, if seeing a book is

not equivalent to any such collection of sensory experiences, phenomenalism fails to account for the perception of ordinary objects. If there are objects for which it holds, they are not the kind we have in mind in seeking an account of perception.

Perception and the senses

I want to conclude this chapter by indicating some remaining problems about perception. I have already suggested that adverbial theories, sense-datum theories, and the theory of appearing provide plausible accounts of perception, though I consider some version of the first kind prima facie best and I leave open that some theory different from all of them may be better than any of them. I have also suggested that some perceptually grounded beliefs fail to be justified, and that, even when justified and true, they can fail to constitute knowledge. There are two further kinds of problems we should explore. One kind concerns observation, the other the relation of perception to the five senses.

Indirect seeing and delayed perception

Observing something in a mirror can count as seeing it. Indeed, it illustrates the sort of thing ordinarily considered seeing something indirectly, as opposed to seeing it by virtue of seeing sense-data. We can also speak of seeing through telescopes and other instruments of observation, again indirectly. But what if the object is microscopic and colorless, yet appears to us through our lens as gray? Perhaps we see it, but not quite as it is.

If we see a microscopic object at all, however, there must be some respect in which what we see it by is faithful to it or at least represents it by some relation of causal dependence – sometimes called *functional dependence*, since perceptual experience seems to vary as a function of certain changes in the object, as where a bird's moving leftward is reflected in a movement of the image. But what we see a thing *by*, such as color and shape, need not be faithful in all respects. A green field can look black at night; we are nonetheless seeing it. Moreover, we can see something move in the field even if its color *and* shape are distorted.

How much *correspondence* between an object and our sensory impressions representing it to us is required in order for us to see it (or hear it, touch it, and so on)? There may be no answer to this question that is both precise and highly general. The cases vary greatly, and many must be examined in their own terms.

Observation of faraway objects poses further problems. Consider seeing the nearest star in the night sky. It is commonly taken to be about four light years away. Presumably we see it (if at all) only as it *was*. For the sense-datum theory, we have a sense-datum produced by it as it was; on the adverbial view, we are sensing "starly" in the way we would if we received

the relevant visual stimuli at the time the star produces them. If, however, we see it only as it was, do we literally see it, or just its traces?

Suppose that unbeknownst to us the star exploded two years ago. Is it not odd to say we now see it, as opposed to seeing traces of it (as it was)? The latter view is preferable, on the ground that if we unqualifiedly see something now, it exists now. But this point is compatible with the view that even though we may see a thing that exists now only *as* it was, we still literally see it now, just as, if we see a cup as elliptical when it is in fact round, we still do see the cup.

Similar points hold for ordinary seeing, since there is still some temporal gap, and for hearing. But if I can see the field only as it was a fraction of a second ago, can I still know that it is now green? I think so, provided there is no reason to believe its color has suddenly changed (but this is something to be reconsidered in the light of our discussion of skepticism in Chapter 10). The same is not clear for the star: may we know by sight alone that it exists now, when it would take about four years for us to realize that the light that had been emitted is no more? This seems doubtful, but it may depend on how likely it is that a star of the kind in question might have burned out during the period in question. If we knew that such stars last billions of years and that this one is only a few million years old, we might plausibly think we know it still exists. It is plain, however, that understanding perception and perceptual knowledge in these sorts of cases is not easy.

Sight and light

We normally regard seeing as intimately connected with light. But must seeing involve light? Suppose you could step into a pitch-dark room and have the experiences you would have if it were fully lighted. The room would thus *look* to you just as it would if fully lighted, and you could find any unobscured object by looking around for it. Would this not show that you can see in the dark? If so, then the presence of light is not essential to seeing.

However, the case does not establish quite this much. For seeing is a causal relation, and for all I have said you are just vividly hallucinating precisely the right things rather than seeing them. But suppose you are not hallucinating. Indeed, if someone enclosed a coin you see in a drawer or covers your eyes, you no longer have a visual experience of a coin. In this case it could be that somehow the coin affects your eyes through a mechanism other than light transmission, yet requiring an unobstructed path between the object seen and your eyes. *Now* it begins to seem that you are seeing. You are responding visually to stimuli that causally affect your eyes. Yet their doing so does not depend on the presence of light.

Vision and the eyes

In an ominous couplet in Shakespeare's *Othello*, Desdemona's father warns Othello:

> Look to her, Moor, if thou hast eyes to see;
> She has deceived her father and may thee.

It would not have occurred to him to question whether there is any way (literally) to see without eyes (figuratively, Othello cannot see well at all, which is his downfall). But philosophers must sometimes ask whether what seems patently obvious is in fact true. Let us, then, go a step further than treating light as inessential to seeing.

Suppose Emma has lost her eyes in an accident, but a camera is later connected to her brain in the way her eyes were. When she points it in a given direction in good light, she has just the visual sensations, say of color and shape, that she would have had by looking with her eyes. Might this not be seeing? Indeed, do we not think of the camera as *functioning* like the eye? If, under the right causal conditions, she gets the right sorts of sensations through her eyes or a *functional equivalent* of them, she is seeing.

But are even "eyes" (or organs functioning like eyes) necessary for seeing? What if someone who lacks "eyes" could get visual sensations "matching" the objects in the room by strange radiations they emit? Suppose, for instance, that moving the coin away from the person results in the person's visual impression's representing a decrease in its size, and that the impressions of it are eliminated entirely by enclosing the coin in cardboard. This confirms the presence of an appropriate causal connection between the coin and the visual experience of it. If no part of the body (other than the brain) is required for the visual impression of the coin, there is no organ plausibly considered a functional equivalent of eyes, but might we not have seeing?

If what is crucial for seeing an object is its producing visual sensations suitably corresponding to it, presumably the case is one of seeing. If seeing requires the use of an eye or equivalent organ, then it is not – unless the brain itself is a visual organ after all. It is clear enough that the person would have knowledge of what we might call visual properties, above all colors and shapes. One might call that visual knowledge. But visual knowledge of this kind could be held not to be grounded in seeing, nor acquired through use of any sense organs. For these reasons, it may seem somewhat doubtful whether it must be a kind of *perceptual* knowledge. But a case can surely be made for the visual sensation conception of seeing, as against the organ-of-sight conception.

This case, however, may be challenged: can there be "blind sight," seeing in the absence of visual sensations? Something like this is reported in the psychological literature. Imagine an ideal case in which a person with excellent blind sight can navigate among obstacles as if the person saw them, while honestly reporting an absence of visual sensations. Could this be seeing?

We automatically tend to understand such behavior in terms of seeing, and there is thus an inclination to say that this is seeing. The inclination is even stronger if light's reaching the eyes is necessary for the person to avoid the obstacles. But if the subject has no visual sensation – as opposed to lacking ordinary awareness of it – it is not clear that we must say this, and I doubt that it would be so. The most we must say is that the person seems to *know* where the obstacles are. Knowing through some causal process by which objects produce true beliefs about them is not necessarily perception, and certainly need not be seeing.[25]

It may seem that blind sight is genuine seeing because it produces knowledge of visual propositions – propositions ascribing visual properties. But knowledge of visual propositions is possible without vision, for instance by something like sonar. Moreover, even dependence on light does not establish that the process in question is visual: the light might somehow stimulate non-visual mechanisms that convey information about the objects emitting it. Similar questions arise for the importance of sensations to perception in the other sensory modes, for instance of auditory sensations in hearing. There, too, we find hard questions for which competing answers are plausible.

It is difficult, then, to provide an overall philosophical account of just what seeing, or perception in general, is; and while all the theories we have discussed can help in answering the questions just posed, none does so in such a simple and decisive way as to leave all its competitors without some plausibility. Still, in exploring those theories we have seen many important points about perception. It is a kind of causal relation. Even its least complex and apparently most basic mode, simple perceiving, requires, in addition to the perceiver, both an object of perception and a sensory experience that in some way corresponds to that object and records, if only imagistically, an indefinite and possibly quite extensive amount of information about the object. Partly on the basis of this information, perception tends to produce beliefs about the perceived object. It implies that the perceiver at least normally has justification for certain beliefs about the object, and it normally produces both justified beliefs about that object and knowledge of it.

Perception may be illusory, as where something appears to have a property it does not have, such as ellipticality where it is really circular. Perception – or sensory experience that seems to the subject just like it – may also be hallucinatory, as in the case of Macbeth's dagger. When it is, the question arises whether there must be interior objects, sense-data, with which the subject is directly acquainted. But both illusions and hallucinations can apparently be accounted for without positing sense-data, and thus without adding a further kind of element to the four that seem central in perception – the perceiver, the object perceived, the sensory experience, and the causal relation between the object and perceiver in virtue of which that

experience is produced – or reducing perceptual objects to sense-data. Illusion and hallucination can also be accounted for without denying that perceptual experience – the evidence of the senses – normally yields justified belief and knowledge about the world outside the perceiver. Many questions remain, but so far we have seen no reason to doubt that perception is a rich and basic source of both knowledge and justification.

Notes

1 Perceiving *of*, perceiving *to be*, and perceiving *that* may also be called perception of, perception to be, and perception that, respectively; but the second expression is not common, and in that case, at least, the -ing forms usually better express what is intended.

2 A related way to see the difference between objectual and propositional beliefs is this. If I believe something to have a property, say a British Airways plane to be a Boeing 777, then this same belief can be ascribed to me using any correct description of that plane, say, as the most traveled plane in the British Airways fleet: to say I believe BA's most traveled plane to be a 777 is to ascribe the same belief to me. This holds even if I do not believe it meets that description – and it can hold even where I cannot understand the description, as a child who believes a tachistoscope to be making noise cannot understand 'tachistoscope'. By contrast, if I have a propositional belief, say that the United Airlines plane on the runway is the most traveled in its fleet, this ascription cannot be truly made using just any correct description of that plane, say the plane on which a baby was delivered on Christmas Day, 2001. I may have no inkling of that fact – or think it holds for a BA plane. A rough way to put part of the point here is to say that propositional beliefs about things are about them *under a description or name*, and objectual beliefs about things are not (even if the believer could describe them in terms of a property they are believed to have, such as being noisy). It is in part because we need not conceptualize things – as by thinking of them under a description – in order to have objectual beliefs about them that those beliefs are apparently more basic than propositional ones.

3 In terminology common in epistemology, objectual belief is *de re* – of the thing – whereas propositional belief is *de dicto* – of the proposition – and I am making a similar distinction between objectual and propositional perception. The objectual cases, unlike the propositional ones, require no particular concept of the thing in question. To be sure, those who do have the concept of a field and know that I believe it to be rectangular may say, 'He believes the field is rectangular,' meaning that I believe it *to be* rectangular. English idiom is often permissive in this way, and in everyday life nothing need turn on the difference. Moreover, some philosophers have held that a thing, such as a field, can be a constituent in a proposition, and this might provide a basis for saying that the two belief ascriptions may be properly interchangeable. I am here ignoring that controversial and uncommon conception of a proposition. For detailed discussion of the extent to which perception is conceptual and of how it yields perceptual beliefs, see Michael Pendelbury, 'Sensibility and Understanding in Perceptual Judgments,' *South African Journal of Philosophy* 18, 4 (1999).

4 It may be best to leave open here that Susie could, at least for a moment, believe (in an admittedly weak sense of the term), of a tachistoscope, that it is making noise, yet not believe any proposition about it: she *attributes* noise-making to it, yet does not conceptualize it in the way required for having a propositional belief about it, the kind of belief expressed in a complete declarative sentence such as 'The thing on the table is making noise'. She would then have no propositional belief about the instrument, the kind of belief that should unqualifiedly be called true (or false), such as that the tachistoscope is making noise. On this approach, what I am calling objectual belief is better called *property attribution*. It is an attribution *to* the thing in question because of the kind of causal role that thing plays in grounding the attribution; and if it is not strictly speaking a

belief, it does imply a disposition to form one, such as that the thing on the table is making noise.

5 Specifically, these are *doxastic* attitudes (from the Greek *doxa*, for 'belief'). A fear can be propositional and thereby cognitive, but it need not entail believing the proposition one fears is so, e.g. that the man approaching one will attack. Some might consider objectual awareness, say awareness of perfect symmetry, cognitive, at least when the person has the concept of relevant property. By contrast, desires, the paradigm *conative* attitudes, should not, I think, be taken to have propositional objects (e.g. 'to swim' in 'my desire to swim' does not express a truth or falsehood).

6 Perceptions that embody beliefs in the ways illustrated are also called *epistemic*, since the embedded belief is commonly considered to constitute knowledge. Their connection with knowledge is pursued in this chapter and others.

7 The distinction between simple and propositional perceiving and other distinctions drawn in this chapter are not always observed. At one point W.V. Quine says,

> think of "*x* perceives *y*" rather in the image of "*x* perceives that *p*". We say "Tom perceives the bowl" because in emphasizing Tom's situation we fancy ourselves volunteering the observation sentence "Bowl" rather than "Surface of a bowl," "Front half of a bowl," "Bowl and background," and so on. When we ask "What did he perceive?" we are content with an answer of the form "He perceived that *p*".
>
> *Pursuit of Truth*, revised edn (Cambridge, Mass.: Harvard University Press, 1992), p. 65

Notice that since seeing that (say) there is a bowl in front of one obviously entails seeing a bowl, it is no surprise that we are content with a report of the propositional perception even if we wanted to know only what object was seen. It does not follow that simple seeing *is* or even entails propositional seeing. It is also worth noting that Quine is apparently thinking only of seeing here; for the other four senses, there is less plausibility in maintaining what he does.

8 The adage could not be taken to refer to simple seeing, for what we simply see, say a glass or leaf or field, is not the sort of thing that can be believed (to be true or false). To be sure, seeing something, especially something as striking as golfball-size hail, produces a *disposition to believe* certain propositions, say that this is a dangerous storm. But, by what seems an economy of nature, there are many things we are disposed to believe but do not. I have defended these points in detail in 'Dispositional Beliefs and Dispositions to Believe,' *Nous* 28 (1994), 419–34.

9 This applies even to full-scale philosophical dictionaries written by teams of experts, though such a work can provide concise statements of much valuable information. See, for example, the entries on blind sight and perception in Robert Audi (ed.) *The Cambridge Dictionary of Philosophy* (Cambridge and New York: Cambridge University Press, 1995, 1999).

10 In the light of what has been said in this chapter so far we can accommodate much of what is plausible in the common view that, as D.M. Armstrong puts it,

> [perception] is an acquiring of knowledge or belief about our physical environment (including our own body). It is a flow of information. In some cases it may be something less than the acquiring of knowledge or belief, as in the cases where perceptions are entirely discounted or where their content has been confidently anticipated.
>
> *Belief, Truth and Knowledge* (Cambridge: Cambridge University Press, 1973), p. 22

First, I can agree that perception entails acquisition of *information*; the point is that *not all our information is possessed as the content of a belief*. Second, Armstrong himself notes an important way in which perception might fail to produce belief: it is "discounted," as, for

example, where one is sure one is hallucinating and so resolutely refuses to accept any of the relevant propositions.

11 This is the kind of view developed in detail by Fred Dretske. See esp. *Knowledge and the Flow of Information* (Cambridge, Mass.: MIT Press, 1981).

12 The notion of normality here is not statistical; it implies that what is not normal calls for explanation. In the world as we know it, exceptions to the normality generalizations I propose seem at least rare; but the point is not that statistical one, but to bring out that the very concepts in question, such as those of seeing and knowing, have a connection in virtue of which explanation is called for if what is normally the case does not occur.

13 In speaking of justification that prevails and of overall justification, I have in mind the kind appropriate to a rational person's believing the proposition in question, construed as roughly the kind such that, when we believe a true proposition with that kind of justification then (apart from the kinds of case discussed in Chapter 8 that show how justified true beliefs *need not* constitute knowledge), we know it.

14 There are complexities I cannot go into, such as how one's competence figures. I am imagining here someone competent to tell whether a note is flat (hence someone not tone deaf): in general, if one is not competent to tell whether a kind of thing has a property or not, an experience in which it seems to have it may not justify one in believing it does. There is also the question of *what* the belief is about when the "object" is hallucinatory, a problem discussed shortly. Still other problems raised by this justification principle are discussed in Chapter 8 in connection with the controversy between internalism and externalism.

15 If, as is arguable, seeing that it is blue entails knowing that it is, then he does *not* see that it is, though he sees its blue color. But this entailment claim is far from self-evident. Suppose he clearly sees a blue bird and believes it is blue, but does not know that it is because of his frequent hallucinations. A moment before he hallucinated such a bird; a moment later he will again; and he realized his senses have been playing such tricks on him. Still, he cannot help believing this bird is blue and believes that *on the basis of* clearly seeing it and its color in normal light. Might we say that he sees that the bird is blue, but does not know this? We cannot say that he "can't believe his own eyes," because he does; but if, in the normal way, they show him the truth and he thereby believes it, might he not see it through them?

16 The theory of appearing has not been widely defended, but a detailed sympathetic treatment is given in William P. Alston's 'Back to the Theory of Appearing,' forthcoming.

17 For a recent study and defense of a sense-datum theory see Howard Robinson, *Perception* (London and New York: Routledge, 1994). Cf. Laurence BonJour's, *Epistemology: Classical Problems and Contemporary Responses* (Lanham, MD: Rowman and Littlefield, 2002), esp. Chapters 6 and 7.

18 The view that ordinary perceptual belief is non-inferential is controversial and – for various senses of inferences – has been widely discussed by both philosophers and psychologists. Not *all* sense-datum views, moreover, take perceptual belief to be non-inferential. For a discussion of perception that brings to bear both psychological and philosophical literature see John Heil, *Perception and Cognition* (Berkeley and Los Angeles, CA: University of California Press, 1983), esp. Chapter 2. Cf. Armstrong, op. cit.

19 Granted, the mouth of the cup does not appear to us *to be* elliptical if we realize its shape cannot be judged from how it visually appears at an angle, but that is a different point. It concerns what shape we *take* it to have, not what shape visually appears in our consciousness antecedently to our taking it to be of any particular kind.

20 For a detailed and influential discussion of the adverbial theory, with criticism of the sense-datum view, see R.M. Chisholm, *Perceiving* (Ithaca, NY: Cornell University Press, 1957).

21 This is a very important point. One major materialist theory of the mind–body relation – the identity theory – says that mental phenomena are identical with brain states or processes. But this theory fails if sense-data exist as mental entities and have properties,

such as being green and rectangular, that no brain process has. Identity theorists thus generally oppose the sense-datum theory. See, for example, J.J.C. Smart's much-discussed 'Sensations and Brain Processes,' *Philosophical Review* 68 (1959), 141–56.

22 These and other problems are brought against the sense-datum theory by Winston H.F. Barnes in 'The Myth of Sense-Data,' *Proceedings of the Aristotelian Society* 45 (1944–5). Cf. R.M. Chisholm's discussion of the problem of the speckled hen: is there, for instance, any answer to the question how many spots there are in an image of such a hen? And how can we distinguish counting the number there are from the number's changing? See his *Theory of Knowledge*, 3rd edn (Englewood Cliffs, NJ: Prentice-Hall), 1989, p. 25.

23 For a detailed twentieth-century defense of phenomenalism, see Book II of C.I. Lewis's *An Analysis of Knowledge and Valuation* (La Salle, IL: Open Court, 1946). Cf. R.M. Chisholm's widely known criticism of this defense in 'The Problem of Empiricism,' *Journal of Philosophy* 45 (1948).

24 Berkeley might hold that if *God* has booklike sense-data, it does follow that there really is a book. A case can be made for this, but one might also argue that as an all-powerful being God could bring it about that there is a distinction between his creating a physical object and having the corresponding sense-data.

25 A subject who really *does* have visual impressions could also misreport. The possibility of such misreporting about one's own consciousness is discussed in Chapter 3.

2 Memory

- **Memory and the past**
- **The causal basis of memory beliefs**
- **Theories of memory**

  Three modes of memory
  The direct realist view
  The representative theory of memory
  Memory images
  Remembering
  The phenomenalist conception of memory
  The adverbial conception of memory

- **Remembering, recalling, and imaging**
- **Remembering, imaging, and recognition**
- **The epistemological centrality of memory**

  Remembering, knowing, and being justified
  Memorial justification and memorial knowledge
  Memory as a preservative and generative source