Knowledge is one of the most central and important subjects of philosophical inquiry. Many people aspire to it, both for the power it brings and for its own sake. Many people claim to have it, but often the knowledge claims of different people turn out to conflict with one another. Moreover, it is widely agreed that individual actions, as well as joint enterprises, based on knowledge rather than mere opinion are more likely to be successful. As a result, we must determine both what knowledge is and how one goes about acquiring it.

The central target of this chapter is what is known as propositional knowledge. Therefore, not only will we have to distinguish knowledge of propositions from other kinds of knowing but we will also need an account of what conditions have to be satisfied in order for someone to know a particular proposition. One question is what knowledge is; another is whether we have any. The epistemological skeptic claims that knowledge is impossible. In this chapter we will assess whether the skeptic has offered any good reason to believe this is true.

CHAPTER CONTENTS:
- a taxonomy of different kinds of knowledge is introduced;
- the traditional account of knowledge is investigated;
- alternative accounts of knowledge are considered;
- the requirements for justified belief are discussed; and
- the problem of philosophical skepticism is addressed.
3.1 A Taxonomy of Knowing

The central concern of this chapter is with propositional knowledge, that is, knowledge of facts or propositions of various kinds. Examples include such things as knowing that water boils at 100°C, knowing that the Montreal Canadiens have the most all-time Stanley Cup victories, and knowing that your mother loves you. There are, however, a number of types of knowledge other than propositional knowledge (see Figure 3.1). One such sense of knowledge, introduced in Chapter 2, is know-how. Know-how consists in having a practical skill, such as knowing how to ride a bicycle or knowing how to speak French. Although knowing how to do certain things may require some propositional knowledge, propositional knowledge by itself does not normally suffice for know-how. Consider, for example, someone with extensive knowledge about the grammar and vocabulary of French but who has never tried to speak the language.

A third sense of knowledge is acquaintance. Rather than a proposition, the object of this kind of knowledge—what one has knowledge of—is a particular person, place, or thing. One might, for example, know Paris or know Bob Dylan’s music (in contrast to knowing Dylan himself) in the sense of being acquainted with them. This minimally requires some kind of direct contact with of the object of knowledge, as opposed to knowing of it only by reputation or the like.

Finally, a fourth sense of knowledge is knowing who someone is. Knowing who is clearly distinct from acquaintance: it is commonplace, for example, for people to know who Bob Dylan is despite not knowing him in the sense of being acquainted with him. The relationship between knowing who and propositional knowledge is, however, somewhat more complicated. In order to know who the murderer is, for example, one presumably has to know some proposition to the effect that the murderer is so-and-so. But knowledge of exactly which proposition is required may depend on the context. Suppose, for example, that the murderer is a person who is both the butler and the king’s illegitimate son. In some contexts, knowing who the murderer is requires knowing the proposition that the murderer is the butler, whereas in other contexts this requires knowing that the murderer is the king’s illegitimate son.

<table>
<thead>
<tr>
<th>PROPOSITIONAL KNOWLEDGE</th>
<th>KNOW-HOW</th>
<th>ACQUAINTANCE</th>
<th>KNOWING WHO</th>
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<tbody>
<tr>
<td>• that snow is white</td>
<td>• how to ride a</td>
<td>• with the city of London,</td>
<td>• who the 44th President of the</td>
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<td></td>
<td>bike</td>
<td>England</td>
<td>United States is</td>
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<tr>
<td>• that I have a doctor’s</td>
<td>• how to speak</td>
<td>• with Bob</td>
<td>• who the Watergate</td>
</tr>
<tr>
<td>appointment at 2 p.m.</td>
<td>French</td>
<td>Dylan’s music</td>
<td>informant Deep Throat is</td>
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FIGURE 3.1 • Types of Knowledge
Propositional knowledge is, in part, a psychological state. In particular, it is a kind of **propositional attitude**—a psychological state in which a subject is related in a certain way to a proposition. And such states are distinguished not only by the proposition to which the subject is related but also by the attitude of the subject toward it, that is, whether she believes or doubts or hopes or fears that it is true. So, for example, not only is believing that most snow is white a distinct propositional attitude from believing that cats are superior pets to dogs, so too is doubting that cats make superior pets to dogs. And just as one can believe or hope or fear, for example, that the temperature of the planet is rising, one can also know this proposition. But unlike belief, desire, and the like, propositional knowledge is not a purely psychological state; rather, it is a mixed state involving psychological and non-psychological elements. In particular, in order to know something, the proposition to which you are psychologically related has to “correspond to the facts.” Although one could believe or fear that the temperature of the planet is rising even if it were not, one can know that the temperature of the planet is rising only if the temperature is in fact rising. Some people are willing to claim knowledge for themselves on the basis of their own certainty, taking the fact that they are personally convinced of the truth of some proposition as sufficient grounds for the judgement that they know it. It is worth emphasizing, however, that certainty is a purely psychological state in the sense at issue: one could, after all, be certain that the temperature of the planet is rising even if it were not. As such, certainty cannot be identified with any mixed state like knowledge.

### 3.2 The Traditional Account of Knowledge

Although there are many accounts of propositional knowledge, the most prominent and widely held view is the so-called traditional account of knowledge. According to this view, knowledge is equivalent to justified true belief. More precisely, a subject S knows a proposition p if and only if S believes p, p is true, and S’s belief that p is justified. So, for example, in order for me to know that most snow is white, I must believe that most snow is white, most snow must in fact be white, and I must have adequate evidence for my belief. The first condition is what renders knowledge a kind of propositional attitude. Since belief is a propositional attitude—that of taking the proposition toward which it is directed to be true or to accurately characterize the world—any state that includes belief will itself be a propositional attitude. The second condition renders knowledge a mixed state rather than a pure psychological state. In order to know something, a subject not only has to believe it but what she believes also has to be true or accurate. One’s belief that the temperature of the planet is rising cannot count as knowledge unless what one believes is true, that is, unless the temperature of the planet is in fact rising. Finally, the third condition requires that in order to have knowledge we need to have an adequate basis for our beliefs. Suppose, for example, that someone based his or her opinions about climate change on the outcome of a coin toss. If the coin toss came out right, one might end up with a true belief about climate change. Nevertheless, one could
Knowledge vs. True Belief

One might wonder what the advantage is of knowledge over mere true belief, or, equivalently (at least according to the traditional account) of justified true belief over unjustified true belief. After all, in either case, acting on your beliefs is likely to enable you to achieve your goals. Suppose, for example, that while both Fred and Mary correctly believe that there is a six-pack of Molson Canadian hidden at the bottom of the boot box in the mudroom of their home, Mary has evidence for her belief—the direct (and surreptitious) observation of someone hiding it there, perhaps—but Fred does not. Fred’s belief is instead the product of a hunch, or a lucky guess, or the like, rather than evidence. But despite his lack of evidence, Fred is just as likely as Mary to be able to successfully procure a bottle of Molson Canadian should he desire one. After all, like Mary, his belief about the location of the beer in question is correct. Nevertheless, knowledge does seem to have at least two advantages over true belief. First, knowledge is more stable. A competitor for the beer in question might be able to persuade Fred that it is located elsewhere, thereby lowering his odds of acquiring it. But given that Mary has evidence for the location of the beer, she is less likely to be susceptible to such persuasion. And second, evidence systematically leads to true beliefs, whereas hunches and lucky guesses do not. As a result, even though Fred might do as well as Mary in the specific case at hand, insofar as Mary systematically bases her beliefs about the locations of the things she wants on evidence and Fred systematically bases his beliefs on hunches and lucky guesses, Mary will likely do much better than Fred at getting what she wants in the long term.

not acquire knowledge about climate change on this basis. After all, the accuracy of one’s belief would just be a matter of luck. What is required in addition is that the subject have evidence that justifies her belief and thus makes it reasonable for her to confidently hold it.

There are, however, a number of reasons to object to the traditional account of propositional knowledge. First, one might worry whether knowledge of a proposition really requires that the subject believe it. An unconfident student, for example, might arguably know the right answer to a test question despite not believing his answer to be correct. Second, one might argue that knowledge does not require truth. What is characteristic of knowledge, on this view, is certainty or a commitment to the truth of the proposition in question on the part of the person who claims to know something. If I claim to know that the temperature of the planet is rising, then this entails that I am certain that the temperature of the planet is rising or am committed to the truth of this proposition. But I can be certain or so committed even if as a matter of fact the temperature of the planet is not rising. And third, the notion of justification raises many challenging questions: What kinds of evidence are required for knowledge? What degree of justification is required? Does a given subject have to have the evidence for her beliefs herself or can she rely upon the justification of others?

But in addition to the question of whether each of the conditions invoked in the traditional account is individually necessary for knowledge, one might also wonder whether all three of them are jointly sufficient or good enough for knowledge. Consider, for example, a business owner, Jane, who has two employees: Fred and Mary. Suppose that Jane notices that Fred is regularly disoriented at work
and, upon further investigation discovers baggies in his waste basket with cocaine residue in them and Fred’s fingerprints on them. And suppose that on this basis Jane comes to believe both that Fred is using cocaine and, hence, that one of her employees is using cocaine. Given the evidence she has, both of these beliefs appear to be justified. But suppose that unbeknownst to Jane it is in fact Mary who is using cocaine. To hide her tracks, Mary has been storing her cocaine in Fred’s discarded lunch bags, which she places back in Fred’s wastebasket when she is finished with them. And the reason Fred has been disoriented at work is that he has taken on a second job in order to pay off his gambling debts. Now Jane’s belief that Fred is using cocaine is false and so does not count as knowledge on the traditional account. But her belief that one of her employees is using cocaine is true—after all, Mary is—and so does count as knowledge on this view. But given that this belief is based on her false belief in Fred’s cocaine use, Jane arguably does not know that one of her employees is using cocaine despite having a justified true belief to this effect.

### 3.3 Alternative Accounts of Knowledge

Numerous alternatives to the traditional account of knowledge have been developed in response to such counterexamples to it. We will consider two here: causal theories and reliability theories. Nearly all versions of these theories retain the first two conditions of the traditional account of knowledge—the requirements that a knowing subject believes the known proposition and that this proposition be true—and offer an additional condition that they take to be required for knowledge. Where they differ is over whether this additional condition is a requirement over and above the third condition of the traditional account—that the subject’s belief is justified—or a replacement for it. That is, these alternatives can be understood to take knowledge to require justified true belief plus some further condition, or they can be understood to require merely true belief plus this further condition. For simplicity here, we will just assume the latter.
According to causal theories, what is required for propositional knowledge in addition to true belief is that the subject's belief be caused by the facts that make her belief true. Many of our beliefs, at least, are learned or acquired rather than being innate, that is, psychological states that we are in some sense born with. Such beliefs can be the product of experience, or testimony, or reasoning, or some combination of these processes. Now in some cases, the beliefs one acquires are just false. So, for example, I might come to falsely believe that the Toronto Maple Leafs have won the Stanley Cup more times than the Montreal Canadiens on the basis of the testimony of my father, a lifelong Leafs fan. But in other cases, the acquired beliefs are true: had my father's testimony been different, I would have correctly believed that the Habs had more Stanley Cup victories than the Leafs. According to the causal theory, however, in addition to having a true belief, what is required for knowledge is that the fact that makes one's belief true be what caused one to acquire it. So, for example, in order for someone to know that there is a fallen tree in the road one would have to believe that there is a fallen tree in the road, there would in fact have to be a fallen tree in the road, and one's belief that there is a fallen tree in the road would have to be caused by the fact that there is. Hence, if one's belief in the presence of the fallen tree were the product of observations of the tree, then one would know that there is a fallen tree in the road. But if one's beliefs were caused instead by a dream or hallucination, then one would lack this knowledge despite having true beliefs. Moreover, the causal theory avoids the counterexample to the traditional account of knowledge considered above because it does not entail that Jane knows that one of her employees is using cocaine. And the reason it does not entail this is because the fact that makes it true that one of her employees is using cocaine true—Mary’s cocaine use—is not what causes Jane to believe this proposition.

There are, however, a couple of reasons to worry about the causal theory. First, according to the causal theory, in order to know something, the fact that is known has to cause your belief about it. But, the objection goes, certain sorts of facts are simply incapable of causing beliefs about themselves. For example, I can have beliefs now about what is going to happen in the future. But since the facts that might make those beliefs true will not come into existence until the future (if they ever occur at all), they cannot cause my current beliefs. As a result, the causal theory seems to rule out the possibility of knowledge about the future. But at least some modest knowledge of the future does seem possible: for example, I might know that most of the students in my class will be turning in an essay assignment tomorrow, because, let us suppose, I gave them an assignment due tomorrow and most of them turned in their previous assignments on time. Second, there are lots of different ways in which facts can cause a subject to believe something, some of which do not result in knowledge. Suppose, for example, a live video feed of a tree in front of me is used to create a holographic image of a tree in the very same location in front of me (perhaps the actual tree is obscured by the presence of a screen onto which the holographic image is projected). And suppose this causes me to believe that there is a real tree in front of me. According to the causal theory, because (i) I believe there is a tree in front of me, (ii) it is true that there is a tree in front of me, and (iii) my belief that there is a tree in front of me is caused by the fact that there
is a tree in front of me, it follows that I know there is a tree in front of me. But as a matter of fact, because experiences of holographic images—however generated—are poor guides to the presence of what they are images of, I lack knowledge of the presence of a tree in such circumstances.

An alternative to causal theories of knowledge are reliability theories. According to reliability theories, what is required for propositional knowledge over and above true belief is that the subject’s belief be formed by a reliable process, that is, a process that yields true beliefs most of the time. So in order to know that there is a tree in front of me I would have to believe there is a tree in front of me, it would have to be true that there is a tree in front of me, and that belief would have to be generated by a reliable process, rather than merely being caused by the fact. Suppose, for example, that someone forms the belief that the temperature of the planet is rising because she discovers that there is a wide consensus among the experts—climate scientists—that this is true. Since basing one’s beliefs on the consensus of the relevant experts yields true beliefs most of the time, the subject would, according to the reliability theory, know that the temperature of the planet is rising. But if she formed her belief instead on the basis of an astrological forecast or a reading of tea leaves, then, because such processes are not very reliable, she would not know this proposition.

Although much of the critical discussion of reliability theories is too complex for our purposes, one worry is worth mentioning here. In particular, the worry is that reliability theories entail that people with propositional knowledge will often be unaware of the basis of this knowledge, or even whether they know at all. On the traditional account discussed above, subjects are aware of the reasons and evidence that justify their beliefs. As a result, they are well placed to be aware of—and perhaps even know—whether they have knowledge. But according to reliability theories, the basis of knowledge is not the evidence one has for one’s beliefs but rather the processes by which they are formed. And not only are knowers often unaware of how their beliefs were formed but they are also regularly unaware of exactly how reliable these processes are.

### 3.4 Justification

Whether or not justified true belief is by itself sufficient for knowledge, as the traditional account would have it, the question of what is required for a belief to be justified is an interesting one in its own right. As a first pass, we might say that