is true, and yet you can deduce a false or absurd statement from it, then the original set of statements as a whole must be false. So, in the preceding dialogue, Socrates says in effect, Let's assume that Thrasymachus is right that justice is whatever is in the interest of the powerful, and that people are just if they obey the laws made by the powerful. It is clear, however, that the powerful sometimes make mistakes and demand obedience to laws that are *not* in their best interest. So if Thrasymachus's definition of justice is correct, then it is right for people to do what is in the interest of the powerful, and it is also right to do what is *not* in the interest of the powerful. His idea of justice then leads to a logical contradiction and is therefore false.

Reductio ad absurdum is an argument form in which a set of statements to be proved false is assumed, and absurd or false statements are deduced from the set as a whole, showing that the original statement must be false.

ESSAY/DISCUSSION QUESTIONS Section 1.2

1. Could the execution of someone for saying unpopular things happen in this country? Why or why not? Are there countries in the world where such things happen regularly? Is the execution of someone for his or her offensive speech ever justified? Explain.
2. What do you think Socrates would think about modern consumer societies?
3. Socrates is often regarded as the noblest of the great philosophers. Is this opinion justified? Why or why not?
4. Write an imaginary Socratic dialogue between yourself and a friend. Imagine that your friend declares, "Everyone lies. No one ever tells the truth," and you want to show that those statements are false.
5. Write a Socratic dialogue between two fictional characters. Imagine that the opening statement is, "Courtesy to others is always a cynical attempt to serve your own interests. Respect for people has nothing to do with courtesy."

1.3 THINKING PHILOSOPHICALLY

As we have seen, to think philosophically is to bring your powers of critical reasoning to bear on fundamental questions. When you do this, you are usually clarifying the meaning of concepts, constructing and evaluating philosophical theories, or devising and evaluating logical arguments. This latter task constitutes the principal labor of philosophy. Socrates, Plato, Aristotle, Descartes, and other great thinkers do not deliver their philosophical insights to us without argument, as if we are automatically to accept their views with no questions asked. Philosophers provide *reasons* for thinking their ideas are plausible—that is, they give us arguments. And if we believe what they say, it should be because there are good reasons for doing so. Likewise, if we expect intelligent people to accept *our* philosophical views, we must

argue our case. Since the philosophy we read will most likely contain arguments, our understanding of the text will hang on our ability to identify and understand those arguments.

Reasons and Arguments

An **argument** is a statement coupled with other statements that are meant to support that statement. A **statement (claim)** is an assertion that something is or is not the case and is therefore the kind of utterance that is either true or false. A **conclusion** is the statement being supported. A **premise** is a statement supporting the conclusion.

As you might have guessed, the term *argument* does not refer to heated disagreements or emotional squabbles. An **argument** is a group of statements in which one of them is meant to be supported by the others. A **statement** (or **claim**) is an assertion that something is or is not the case and is therefore the kind of utterance that is either true or false. In an argument, the statement being supported is the **conclusion**, and the statements supporting the conclusion are the **premises**. The premises are meant to provide reasons for believing that the conclusion is true. A good argument gives us good reasons for accepting a conclusion; a bad argument fails to provide good reasons. In philosophy—and in any other kind of rational inquiry—accepting a conclusion (statement) without good reasons is an elementary mistake in reasoning. Believing a statement without good reasons is a recipe for error; believing a statement for good reasons increases your chances of uncovering the truth.

When we do philosophy, then, we are likely at some point to be grappling with arguments—we are trying to either (1) devise an argument to support a statement or (2) evaluate an argument to see if there really are good reasons for accepting its conclusion.

Figure 1.6 Hitler was a master persuader, relying not on good arguments but on emotional rhetoric. How many people today would be persuaded by a contemporary politician with Hitler's rhetorical talents?

Note that *argument* in the sense used here is not synonymous with *persuasion*. An argument provides us with reasons for accepting a claim; it is an attempted "proof" for an assertion. But persuasion does not necessarily involve giving any reasons at all for accepting a claim. To persuade is to influence people's opinions, which can be accomplished by offering a good argument but also by misleading with logical fallacies, exploiting emotions and prejudices, dazzling with rhetorical gimmicks, hiding or distorting the facts, threatening or coercing people—the list is long. Good arguments prove something whether or not they persuade. Persuasive ploys can change minds but do not necessarily prove anything.

Now consider these two simple arguments:

Argument 1
It's wrong to take the life of an innocent person.
Abortion takes the life of an innocent person.
Therefore abortion is wrong.

Argument 2
God does not exist. After all, most college students believe that that is the case.

PHILOSOPHY LAB

Do you live an examined life? The following statements express some fundamental beliefs—beliefs that countless people have but may never have thought much about. Read each statement and select the ones that you sincerely believe. Then try to recall if you have ever seriously questioned these beliefs. (Passing thoughts and idle reverie do not count.) Be honest. This little experiment could be very revealing—and helpful as you think about your life and values.

1. God exists and watches over me.
2. God sometimes answers prayers.
3. There is a heaven.
4. I have both a body and an immortal soul.
5. My emotions are not under my control; they just happen.
6. It is wrong to criticize other cultures.
7. It is wrong to judge other people's actions.
8. The moral principles that I was raised to believe are the right ones.
9. Political conservatives are wrong about most issues.
10. Political liberals are wrong about most issues.
11. I make free choices; all my decisions are up to me.
12. I can come to know some things by faith alone.
13. My emotions are my best guide to what is morally right or wrong.
14. People are basically bad.
15. People are basically good.

In Argument 1, the conclusion is "abortion is wrong," and it is backed by two premises: "It's wrong to take the life of an innocent person" and "Abortion takes the life of an innocent person." In Argument 2, the conclusion is "God does not exist," which is supported by the premise "After all, most college students believe that that is the case." Despite the differences between these two passages (differences in content, the number of premises, and the order of their parts), they are both arguments because they exemplify basic argument structure: a conclusion supported by at least one premise.

Philosophy asks the simple question, what is it all about?
—Alfred North Whitehead

Though the components of an argument seem clear enough, people often fail to distinguish between arguments and strong statements that contain no arguments at all. Suppose we change Argument 1 into this:

> Abortion is wrong. I can't believe how many people think it's morally okay. The world is insane.

Now there is no argument, just an expression of exasperation or anger. There are no statements giving us reasons to believe a conclusion. What we have are some unsupported assertions that may merely *appear* to make a case. If we ignore the

distinction between genuine arguments and nonargumentative material, critical reasoning is undone.

The simplest way to locate an argument is to *find its conclusion first, then its premises*. Zeroing in on conclusions and premises can be a lot easier if you keep an eye out for *indicator words*. Indicator words often tag along with arguments and indicate that a conclusion or premise may be nearby.

Here are a few conclusion indicator words:

consequently	as a result
thus	hence
therefore	so
it follows that	which means that

One's philosophy is not best expressed in words; it is expressed in the choices one makes . . . and the choices we make are ultimately our responsibility.
—Eleanor Roosevelt

Here are some premise indicator words:

in view of the fact	assuming that
because	since
due to the fact that	for
inasmuch as	given that

6 Recall some statements that you have heard or read in which strong assertions were made but no argument was presented. Did the assertions prove anything? What was your reaction at the time? Were you persuaded or impressed by them?

Just remember that indicator words do not *guarantee* the presence of conclusions and premises. They are simply telltale signs.

Assuming we can recognize an argument when we see it, how can we tell if it is a good one? Fortunately, the general criteria for judging the merits of an argument are simple and clear. A good argument—one that gives us good reasons for believing a claim—must have (1) solid logic and (2) true premises. Requirement (1) means that the conclusion should follow logically from the premises, that there must be a proper logical connection between the supporting statements and the statement supported. Requirement (2) says that what the premises assert must in fact be the case. An argument that fails in either respect is a bad argument.

There are two basic kinds of arguments—deductive and inductive—and our two requirements hold for both of them, even though the logical connections in each type are distinct. **Deductive arguments** are intended to give *logically conclusive* support to their conclusions so that if the premises are true, the conclusion absolutely must be true. Argument 1 is a deductive argument and is therefore supposed to be constructed so that if the two premises are true, its conclusion cannot possibly be false. Here it is with its structure laid bare:

A deductive argument is an argument intended to give logically conclusive support to its conclusion.

Argument 1

1. It's wrong to take the life of an innocent person.
2. Abortion takes the life of an innocent person.
3. Therefore, abortion is wrong.

Do you see that, given the form or structure of this argument, if the premises are true, then the conclusion *has to be true*? It would be very strange—illogical, in fact—to agree that the two premises are true but that the conclusion is false.

Now look at this one:

Argument 3

1. All dogs are mammals.
2. Rex is a dog.
3. Therefore, Rex is a mammal.

Again, there is no way for the premises to be true while the conclusion is false. The deductive form of the argument guarantees this.

So a deductive argument is intended to have this sort of airtight structure. If it actually does have this structure, it is said to be *valid.* Argument 1 is deductive because it is intended to provide logically conclusive support to its conclusion. It is valid because, as a matter of fact, it does offer this kind of support. A deductive argument that fails to provide conclusive support to its conclusion is said to be *invalid.* In such an argument, it is possible for the premises to be true and the conclusion false. Argument 3 is intended to have a deductive form, and because it actually does have this form, the argument is also valid.

Philosophy, when superficially studied, excites doubt; when thoroughly explored, it dispels it.
—Francis Bacon

An elementary fact about deductive arguments is that their validity (or lack thereof) is a *separate issue* from the truth of the premises. Validity is a structural matter, depending on how an argument is put together. Truth concerns the nature of the claims made in the premises and conclusion. A deductive argument is supposed to be built so that *if* the premises are true, the conclusion must be true—but in a particular case, the premises might *not* be true. A valid argument can have true or false premises and a true or false conclusion. (By definition, of course, it cannot have true premises and a false conclusion.) In any case, being invalid or having false premises dooms a deductive argument.

Inductive arguments are supposed to give *probable* support to their conclusions. Unlike deductive arguments, they are not designed to support their conclusions decisively. They can establish only that, if their premises are true, their conclusions are probably true (more likely to be true than not). Argument 2 is an inductive argument meant to demonstrate the probable truth that "God does not exist." Like all inductive arguments (and unlike deductive ones), it can have true premises and a false conclusion. So it's possible for the sole premise—"After all, most college students believe that that is the case"—to be true while the conclusion is false.

An **inductive argument** is an argument intended to give probable support to its conclusion.

If inductive arguments succeed in lending probable support to their conclusions, they are said to be *strong.* Strong arguments are such that if their premises are true, their conclusions are probably true. If they fail to provide this probable support, they are termed *weak.* Argument 2 is a weak argument because its premise, even if true, does not show that more likely than not God does not exist. What college students (or any other group) believe about God does not constitute good evidence for or against God's existence.

But consider this inductive argument:

Argument 4

1. Eighty-five percent of the students at this university are Republicans.
2. Sonia is a student at this university.
3. Therefore, Sonia is probably a Republican.

This argument is strong. If its premises are true, its conclusion is likely to be true. If 85 percent of the university's students are Republicans, and Sonia is a university student, she is more likely than not to be a Republican too.

When a valid (deductive) argument has true premises, it is a good argument. A good deductive argument is said to be *sound*. Argument 1 is valid, but we cannot say whether it is sound until we determine the truth of the premises. Argument 3 is valid, and if its premises are true, it is sound. When a strong (inductive) argument has true premises, it is also a good argument. A good inductive argument is said to be *cogent*. Argument 2 is weak, so there is no way it can be cogent. Argument 4 is strong, and if its premises are true, it is cogent.

Checking the validity or strength of an argument is often a plain, commonsense undertaking. Using our natural reasoning ability, we can examine how the premises are linked to the conclusion and can see quickly whether the conclusion follows from the premises. We are most likely to make an easy job of it when the arguments are simple. Many times, however, we need some help, and help is available in the form of methods and guidelines for evaluating arguments.

Having a familiarity with common argument patterns, or forms, is especially useful when assessing the validity of deductive arguments. We are likely to encounter these forms again and again. Here is a prime example:

Argument 5

1. If the surgeon operates, then the patient will be cured.
2. The surgeon is operating.
3. Therefore, the patient will be cured.

Philosophy is like trying to open a safe with a combination lock: each little adjustment of the dials seems to achieve nothing, only when everything is in place does the door open.
—Ludwig Wittgenstein

This argument form contains a *conditional* premise—that is, a premise consisting of a conditional, or if-then, statement (actually a compound statement composed of two constituent statements). Premise 1 is a conditional statement. A conditional statement has two parts: the part beginning with *if* (called the *antecedent*), and the part beginning with *then* (known as the *consequent*). So the antecedent of Premise 1 is "If the surgeon operates," and the consequent is "then the patient will be cured."

The best way to appreciate the structure of such an argument (or any deductive argument, for that matter) is to translate it into traditional argument symbols in which each statement is symbolized by a letter. Here is the symbolization for Argument 5:

1. If p, then q.
2. p.
3. Therefore, q.

We can see that p represents "the surgeon operates," and q represents "the patient will be cured." But notice that we can use this same symbolized argument form to represent countless other arguments—arguments with different statements but having the same basic structure.

It just so happens that the underlying argument form for Argument 5 is extremely common—common enough to have a name, *modus ponens* (or affirming the antecedent). The truly useful fact about *modus ponens* is that any argument having this form is valid. We can plug any statements we want into the formula and the

result will be a valid argument, a circumstance in which if the premises are true, the conclusion must be true.

An equally prevalent argument form is *modus tollens* (or denying the consequent). For example:

Argument 6

1. If the dose is low, then the healing is slow.
2. The healing is not slow.
3. Therefore, the dose is not low.

1. If *p*, then *q*.
2. Not *q*.
3. Therefore, not *p*.

Modus tollens is also a valid form, and any argument using this form must also be valid.

There are also common argument forms that are invalid. Here are two of them:

Argument 7 (Affirming the Consequent)

1. If the mind is an immaterial substance, then ESP is real.
2. ESP is real.
3. Therefore, the mind is an immaterial substance.

1. If *p*, then *q*.
2. *q*.
3. Therefore, *p*.

Argument 8 (Denying the Antecedent)

1. If morality is relative to persons (that is, if moral rightness or wrongness depends on what people believe), then moral disagreement between persons would be nearly impossible.
2. But morality is not relative to persons.
3. Therefore, moral disagreement between persons is not nearly impossible.

1. If *p*, then *q*.
2. Not *p*.
3. Therefore, not *q*.

The advantage of being able to recognize these and other common argument forms is that you can use that skill to readily determine the validity of many deductive arguments. You know, for example, that any argument having the same form as *modus ponens* or *modus tollens* must be valid, and any argument in one of the common invalid forms must be invalid.

Inductive arguments also have distinctive forms, and being familiar with the forms can help you evaluate the arguments. In *enumerative induction*, we arrive at a generalization about an entire group of things after observing just some members of the group. Consider these:

7 Before reading this chapter, would you have found any of the invalid argument forms persuasive? Why or why not?

The essence of philosophy is that a man should so live that his happiness shall depend as little as possible on external things.
—Epictetus

Argument 9

Every formatted disk I have bought from the computer store is defective.

Therefore, all formatted disks sold at the computer store are probably defective.

Argument 10

All the hawks in this wildlife sanctuary that I have observed have had red tails.

Therefore, all the hawks in this sanctuary probably have red tails.

Argument 11

Sixty percent of the Bostonians I have interviewed in various parts of the city are pro-choice.

Therefore, 60 percent of all Bostonians are probably pro-choice.

As you can see, enumerative induction has this form:

X percent of the observed members of group A have property P.

Therefore, X percent of all members of group A probably have property P.

The observed members of the group are simply a sample of the entire group. So based on what we know about this sample, we can generalize to all the members. But how do we know whether such an argument is strong? Everything depends on the sample. If the sample is large enough and representative enough, we can safely assume that our generalization drawn from the sample is probably an accurate reflection of the whole group of members. A sample is representative of an entire group only if each member of the group has an equal chance of being included in the sample. In general, the larger the sample, the greater the probability that it accurately reflects the nature of the group as a whole. Often common sense tells us when a sample is too small.

We do not know how many formatted disks from the computer store are in the sample mentioned in Argument 9. But if the number is several dozen and the disks were bought over a period of weeks or months, the sample is probably sufficiently large and representative. If so, the argument is strong. Likewise, in Argument 10 we don't know the size of the sample or how it was obtained. But if the sample was taken from all the likely spots in the sanctuary where hawks live, and if several hawks were observed in each location, the sample is probably adequate—and the argument is strong. In Argument 11, if the sample consists of a handful of Bostonians interviewed on a few street corners, the sample is definitely inadequate and the argument is weak. But if the sample consists of several hundred people, and if every member of the whole group has an equal chance of being included in the sample, then the sample would be good enough to allow us to accurately generalize about the whole

VALID AND INVALID ARGUMENT FORMS

VALID ARGUMENT FORMS

Affirming the Antecedent (*Modus Ponens*)	Denying the Consequent (*Modus Tollens*)
If *p*, then *q*.	If *p*, then *q*.
p.	Not *q*.
Therefore, *q*.	Therefore, not *p*.
Example:	Example:
If Spot barks, a burglar is in the house.	If Spot barks, a burglar is in the house.
Spot is barking.	A burglar is not in the house.
Therefore, a burglar is in the house.	Therefore, Spot is not barking.

INVALID ARGUMENT FORMS

Affirming the Consequent	Denying the Antecedent
If *p*, then *q*.	If *p*, then *q*.
q.	Not *p*.
Therefore, *p*.	Therefore, not *q*.
Example:	Example:
If the cat is on the mat, she is asleep.	If the cat is on the mat, she is asleep.
She is asleep.	She is not on the mat.
Therefore, she is on the mat.	Therefore, she is not asleep.

population. Typically, selecting such a sample of a large population is done by professional polling organizations.

In the argument form known as *analogical induction* (or argument by analogy), we reason in this fashion: Two or more things are similar in several ways; therefore, they are probably similar in one further way. Consider this argument:

Argument 12

> Humans can walk upright, use simple tools, learn new skills, and devise deductive arguments.
>
> Chimpanzees can walk upright, use simple tools, and learn new skills.
>
> Therefore, chimpanzees can probably devise deductive arguments.

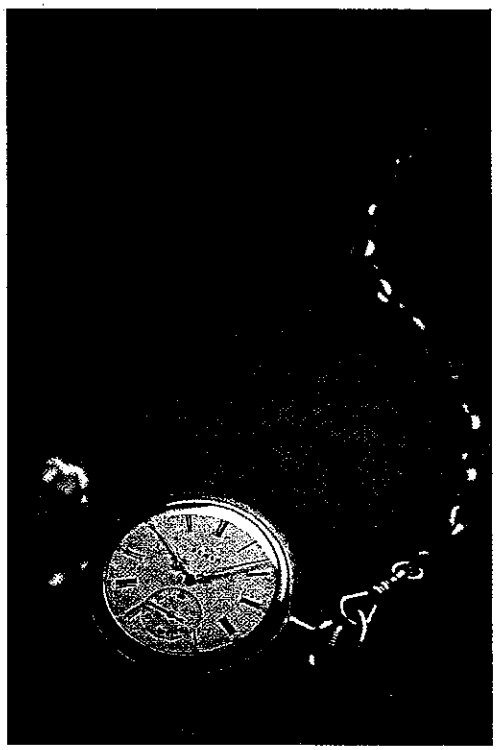

Figure 1.7 How much is a watch like the universe? Everything depends on the relevant similarities and differences.

The object of studying philosophy is to know one's own mind, not other people's.
—Dean Inge

This argument says that because chimpanzees are similar to humans in several respects, they probably are similar to humans in one further respect.

Here's an argument by analogy that has become a classic in philosophy:

Argument 13

A watch is a complex mechanism with many parts that seem arranged to achieve a specific purpose—a purpose chosen by the watch's designer.

In similar fashion, the universe is a complex mechanism with many parts that seem arranged to achieve a specific purpose.

Therefore, the universe must also have a designer.

We can represent the form of an argument by analogy in this way:

X has properties P_1, P_2, P_3, plus the property P_4.

Y has properties P_1, P_2, and P_3.

Therefore, Y probably has property P_4.

The strength of an analogical induction depends on the relevant similarities between the two things compared. The more relevant similarities there are, the greater the probability that the conclusion is true. In Argument 12, several similarities are noted. But there are some unmentioned dissimilarities. The brain of a chimpanzee is smaller and more primitive than that of a human, a difference that probably inhibits higher intellectual functions such as logical argument. Argument 12, then, is weak. A common response to Argument 13 is that the argument is weak because although the universe resembles a watch in some ways, in other ways it does not resemble a watch. Specifically, the universe also resembles a living thing.

The third type of inductive argument is known as *inference to the best explanation* (or abduction), a kind of reasoning that we all use daily and that is at the heart of scientific investigations. Recall that an argument gives us reasons for believing *that* something is the case. An *explanation*, on the other hand, states *how* or *why* something is the case. It attempts to clarify or elucidate, not offer proof. For example:

1. Megan definitely understood the material, for she could answer every question on the test.
2. Megan understood the material because she has a good memory.

Sentence 1 is an argument. The conclusion is "Megan definitely understood the material," and the reason (premise) given for believing that the conclusion is true is "for she could answer every question on the test." Sentence 2, though, is an explanation. It does not try to present reasons for believing something; it has nothing to

prove. Instead, it tries to show why something is the way it is (why Megan understood the material). Sentence 2 assumes that Megan understood the material then tries to explain why. Such explanations play a crucial role in inference to the best explanation.

In inference to the best explanation, we begin with premises about a phenomenon or state of affairs to be explained. Then we reason from those premises to an explanation for that state of affairs. We try to produce not just any old explanation, but the best explanation among several possibilities. The best explanation is the one most likely to be true. The conclusion of the argument is that the preferred explanation is indeed probably true. For example:

Argument 14

Tariq flunked his philosophy course.

The best explanation for his failure is that he didn't read the material.

Therefore, he probably didn't read the material.

Argument 15

Ladies and gentlemen of the jury, the defendant was found with the murder weapon in his hand, blood on his clothes, and the victim's wallet in his pocket. We have an eyewitness putting the defendant at the scene of the crime. The best explanation for all these facts is that the defendant committed the murder. There can be very little doubt—he's guilty.

Here's the form of inference to the best explanation:

Phenomenon *Q*.

E provides the best explanation for *Q*.

Therefore, it is probable that *E* is true.

The true function of philosophy is to educate us in the principles of reasoning and not to put an end to further reasoning by the introduction of fixed conclusions.
—George Henry Lewes

In any argument of this pattern, if the explanation given is really the best, then the argument is inductively strong. If the explanation is not the best, the argument is inductively weak. If the premises of the strong argument are true, then the argument is cogent. If the argument is cogent, then we have good reason to believe that the conclusion is true.

The biggest challenge in using inference to the best explanation is determining which explanation is the best. Sometimes this feat is easy. If our car has a flat tire, we may quickly uncover the best explanation for such a state of affairs. If we see a nail sticking out of the flat and there is no obvious evidence of tampering or of any other extraordinary cause (that is, there are no good alternative explanations), we may safely conclude that the best explanation is that a nail punctured the tire.

In more complicated situations, we may need to do what scientists do to evaluate explanations, or theories—use special criteria to sort through the possibilities. Scientists call these standards the *criteria of adequacy*. Despite this fancy name, these criteria are basically just common sense, standards that you have probably used yourself.

One of these criteria is called *conservatism*. This criterion says that, all things being equal, the best explanation or theory is the one that fits best with what is already known or established. For example, if a friend of yours says—in all seriousness—that she can fly to the moon without using any kind of rocket or spaceship, you probably wouldn't believe her (and might even think that she needed psychiatric help). Your reasons for doubting her would probably rest on the criterion of conservatism—that what she says conflicts with everything science knows about spaceflight, human anatomy, aerodynamics, laws of nature, and much more. It is logically possible that she really can fly to the moon, but her claim's lack of conservatism (the fact that it conflicts with so much of what we already know about the world) casts serious doubt on it.

Here is another useful criterion for judging the worth of explanations: *simplicity*. Other things being equal, the best explanation is the one that is the simplest—that is, the one that rests on the fewest assumptions. The theory making the fewest assumptions is less likely to be false because there are fewer ways for it to go wrong. In the example about the flat tire, one possible (but strange) explanation is that space aliens punctured the tire. You probably wouldn't put much credence in this explanation because you would have to assume too many unknown entities and processes—namely, space aliens who have come from who-knows-where using who-knows-what methods to move about and puncture your tires. The nail-in-the-tire theory is much simpler (it assumes no unknown entities or processes) and is therefore much more likely to be true.

When you are carefully reading an argument (whether in an essay or some other context), you will be just as interested in whether the premises are true as in whether the conclusion follows from the premises. If the writer is conscientious, he or she will try to ensure that each premise is either well supported or in no need of support (because the premise is obvious or agreed to by all parties). The needed support will come from the citing of examples, statistics, research, expert opinion, and other kinds of evidence or reasons. This arrangement means that each premise of the primary argument may be a conclusion supported in turn by premises citing evidence or reasons. In any case, you as the reader will have to evaluate carefully the truth of all premises and the support behind them.

Reading Philosophy

Unfortunately, arguments in philosophical essays rarely come neatly labeled so you can find and evaluate them. You have to do that work yourself, a task that requires careful reading and thinking. The process can be challenging because in the real world, arguments can be simple or complex, clearly stated or perplexing, and apparent or hidden. This is true for philosophical essays as well as for any other kind of writing that contains arguments. In some philosophical prose, the relationship between the conclusion (or conclusions) and the premises can be complicated, and even good arguments can be surrounded by material irrelevant to the arguments at hand. The remedy for these difficulties is instructive examples and plenty of practice, some of which you can get in this chapter.

Let's begin by identifying and analyzing the argument in the following passage. The issue is whether humans have free will or are compelled by forces beyond their

control to act as they do (a topic we take up in Chapter 5). The statements are numbered for ease of reference.

> (1) The famous trial lawyer Clarence Darrow (1857–1938) made a name for himself by using the "determinism defense" to get his clients acquitted of serious crimes. (2) The crux of this approach is the idea that humans are not really responsible for anything they do because they cannot choose freely—they are "determined," predestined, if you will, by nature (or God) to be the way they are. (3) So in a sense, Darrow says, humans are like wind-up toys with no control over any action or decision. (4) They have no free will. (5) Remember that Darrow was a renowned agnostic who was skeptical of all religious claims. (6) But Darrow is wrong about human free will for two reasons. (7) First, in our everyday moral life, our own commonsense experience suggests that sometimes people are free to make moral decisions. (8) We should not abandon what our commonsense experience tells us without good reason—and (9) Darrow has given us no good reason. (10) Second, Darrow's determinism is not confirmed by science, as he claims—but actually conflicts with science. (11) Modern science says that there are many things (at the subatomic level of matter) that are not determined at all: (12) they just happen.

Indicator words are scarce in this argument, unless you count the words "first" and "second" as signifying premises. But the conclusion is not hard to find; it's Statement 6: "Darrow is wrong about human free will for two reasons." Locating the conclusion enables us to see that some statements (Statements 1 through 4) are neither conclusion nor premises; they are just background information on Darrow's views. Most argumentative essays contain some supplemental information like this. Statement 5 is irrelevant to the argument; Darrow's agnosticism has no logical connection to the premises or conclusion. Statement 12 is just a rewording of Statement 11. After this elimination process, only the following premises and conclusion (Statement 6) remain:

> (6) But Darrow is wrong about human free will for two reasons.
>
> (7) First, in our everyday moral life, our own commonsense experience suggests that sometimes people are free to make moral decisions.
>
> (8) We should not abandon what our commonsense experience tells us without good reason.
>
> (9) Darrow has given us no good reason.
>
> (10) Darrow's determinism is not confirmed by science, as he claims—but actually conflicts with science.
>
> (11) Modern science says that there are many things (at the subatomic level) that are not determined at all.

Figure 1.8 Clarence Darrow (1857–1938).

Philosophy is a kind of journey, ever learning yet never arriving at the ideal perfection of truth.
—Albert Pike

Statements 7 through 11 are the premises. They are all meant to provide support to Statement 6, but their support is of unequal weight. Statement 10 gives independent support to the conclusion without the help of any other premises, so it is an *independent* premise. We can say the same thing about Statement 11; it too is an independent premise. But notice that Statements 7, 8, and 9 are *dependent* premises supporting the conclusion. That is, taken separately, they are weak, but together they constitute a plausible reason for accepting Statement 6. Statement 10 directly supports the conclusion, and in turn is supported by Premise 11.

Now take a look at this passage:

> (1) As the Islamic clerics cling to power in Iran, students there are agitating for greater freedom and less suppression of views that the clerics dislike. (2) Even though ultimate power in Iran rests with the mullahs, it is not at all certain where the nation is headed. Here's a radical suggestion: (3) the Islamic republic in Iran will fall within the

PHILOSOPHERS AT WORK

Hypatia

Figure 1.9 Hypatia (c. 370–415).

Hypatia (c. 370–415) was the greatest philosopher of her day. She lived in the Greek city of Alexandria, which in the fourth century was the intellectual epicenter of the world, excelling in scientific and philosophical learning. It also was the home of the famed Library, which contained thousands of scholarly manuscripts drawn from the best thinkers of ancient times, including the works of Plato and Aristotle. In this rich environment, Hypatia achieved fame as a Neoplatonist philosophy teacher, an astronomer, and a mathematician. At around age twenty-five or thirty she became the director of the school of the renowned philosopher Plotinus—a very high honor, since women were traditionally not appointed to such offices. Another indication of her sterling reputation was that she was appointed by a Christian government even though she was known to be a pagan.

She taught the works of the "pagan" philosophers such as Plato and Aristotle, and students came from far-flung places for the privilege of being her students. She also is thought to have written three commentaries on noted mathematical treatises.

In 415, Cyril, the Bishop of Alexandria, arranged for Hypatia's brutal murder at the hands of a Christian mob. She was pulled from her chariot, hauled to a church, stripped naked, and skinned alive with oyster shells. Cyril, on the other hand, was later canonized.

> next five years. Why do I say this? (4) Because the majority of Iranians are in favor of democratic reforms, (5) and no regime can stand for very long when citizens are demanding access to the political process. (6) Also, Iran today is a mirror image of the Soviet Union before it broke apart—there's widespread dissatisfaction and dissent at a time when the regime seems to be trying to hold the people's loyalty. (7) Every nation that has taken such a path has imploded within five years. (8) Finally, the old Iranian trick of gaining support for the government by fomenting hatred of America will not work anymore (9) because Iran is now trying to be friends with the United States.

The conclusion is Statement 3, and the premises are Statements 4 through 9. The first two statements are extraneous. Statements 4 and 5 are dependent premises and so are Statements 6 and 7. Statements 8 and 9 constitute an argument that gives support to the passage's main conclusion (Statement 3). Statement 8 is the conclusion; Statement 9, the premise. Notice also that the sentence "Why do I say this?" is not a statement.

So remember: When you read a philosophical essay, you are not simply trying to glean some facts from it as you might if you were reading a science text or technical report. Neither are you following a storyline as if you were reading a mystery novel (though philosophy papers sometimes contain their share of mysteries). In most cases, you are tracing the steps in an argument, trying to see what conclusion the writer wants to prove and whether she succeeds in proving it. Along the way, you may encounter several premises with their accompanying analyses, clarifications, explanations, and examples. You may even run into a whole chain of arguments. In the end, if you have read well and the writer has written well, you are left not with a new set of data or a story ending, but a realization—maybe even a revelation—that a conclusion is, or is not, worthy of belief.

8 Suppose you are presented with written material containing statements and arguments that strike you as irreverent or unorthodox. Would you be able to read such a text with an open mind? Can you recall a case in which did just that?

The best way to learn how to read philosophy well is to read philosophy often. You will probably get plenty of chances to do that in your current philosophy course. Having a few rules to guide you in your reading, however, may help shorten the learning curve. As you read, keep the following in mind.

1. Approach the text with an open mind. If you are studying philosophy for the first time, you are likely—at least at first—to find a good bit of the material difficult, strange, or exasperating, sometimes all three at once. That's normal. Philosophy is an exploration of the rugged frontiers of our knowledge of fundamental things, so much of this new territory is likely to seem daunting or unfamiliar. There's also an excellent chance that your first visits to this terrain will be vexing, perhaps even infuriating, because you may sometimes disagree with what you read.

There is no shame in experiencing any of these reactions. They come with the territory. But if you are to make any headway in philosophy, you need to try your best to counteract these attitudes and feelings. Remember, philosophy at its best is a fair-minded, fearless search for truth. Anything that interferes with this noble quest must be overcome and cast aside.

Avoid making a judgment about an essay's ideas or arguments until you fully understand them and have fairly considered them. Make sure you are not reading with

Small amounts of philosophy lead to atheism, but larger amounts bring us back to God.
—Francis Bacon

the intent to prove the conclusions false (or true). Be open to the possibility that the essay could give you good reasons to change your mind about something.

Try to maintain a neutral attitude toward the writer, presuming neither that she is right nor wrong, neither sinner nor saint. Don't assume that everything a renowned philosopher says must be true, and don't presuppose that everything a philosopher you dislike says must be false. Give the writer the same attention and respect that you would give a friend who is discussing a serious issue with you.

If you are reading the work of a famous philosopher and you find yourself thinking that his or her ideas are obviously silly or ridiculous, think again. The odds are good that you are misunderstanding what you read. It is wiser to assume that the text offers something of value (even if you disagree with it) and that you need to read more carefully.

2. Read actively and critically. Philosophical reading is intense. It cannot be rushed. It cannot be crammed. It cannot be done while your mind is on automatic pilot.

Philosophical reading is *active* reading. Instead of reading just to get through a piece of writing, you must take your time and ask yourself what key terms and passages mean, how the argument is structured, what the central thesis is, where the premises are, how certain key ideas are related, whether the main conclusion conflicts with propositions you know are true, even how the material compares with other philosophical writing on the same subject.

Philosophical reading is also *critical* reading. In critical reading, you ask not just what something means but whether a statement is true and if the reasoning is solid. You ask if the conclusion really follows from the premises, whether the premises are true, if the analysis of a term really makes sense, if an argument has been overlooked, if an analogy is weak, whether there are counterexamples to key claims, and whether the claims agree with other things you have good reason to believe.

3. Identify the conclusion first, then the premises. When you first begin reading philosophical texts, they may seem to you like dark thickets of propositions into which you may not enter without losing your way. But your situation is really not that bad. In argumentative writing (the kind you are most likely to encounter in philosophy), you can depend on there being, well, an argument, a conclusion backed by premises. There could, of course, be several arguments that support the main argument, and the arguments could be complex, but these sets of conclusion-plus-premises will all serve as recognizable guideposts. If you want to penetrate the thicket, then, you must first identify the argument (or arguments). And the key to doing that is to find the conclusion first, then look for the premises.

When you find the main conclusion, you thereby identify the main point of the essay, and you then have the number-one clue to the function of all the rest of the text. Once you uncover the point that the writer is trying to prove, finding the supporting premises becomes much easier. And when you isolate the premises, locating the text that explains and amplifies the premises gets easier too. Therefore, the first—and most important—question you can ask about a philosophical essay is, "What claim is the writer trying to prove?"

4. Outline, paraphrase, or summarize the argument. Understanding an essay's argument is so important that testing whether you really "get it" is crucial. You can test your grasp of the argument by outlining, paraphrasing, or summarizing it. If you can lay out an argument's premises and conclusion in an outline, or if you can accurately paraphrase or summarize the argument, you probably have a pretty good understanding of it. Very often students who think they comprehend an argument are surprised to see that they cannot devise an adequate outline or summary of it. Such failures suggest that, although outlining, paraphrasing, or summarizing may seem to some to be unnecessary, they are not—at least not to those who are new to philosophy.

5. Evaluate the argument and formulate a tentative judgment. When you read philosophy, understanding it is just the first step. You also must do something that many beginners find both difficult and alien: you must make an informed judgment about what you read. Simply reiterating what the writer has said will not do. Your judgment is what matters here. Mainly, this judgment is your evaluation of the argument presented by the writer—an assessment of (1) whether the conclusion follows from the premises and (2) whether the premises are true. Only when the answer to both of these questions is yes can you say that the conclusion of the argument is worthy of acceptance. This kind of evaluation is precisely what your instructor expects when she asks you to critique an argumentative essay in philosophy.

Fallacious Reasoning

You can become more proficient in reading and writing philosophy if you know how to identify fallacies when you see them. **Fallacies** are common but bad arguments. They are defective arguments that appear so often in writing and speech that philosophers have given them names and offered instructions on how to recognize and avoid them.

A **fallacy** is a common but bad argument.

Many fallacies are not just failed arguments—they are also deceptively plausible appeals. They can easily appear sound or cogent, misleading the reader. Their potential for slipperiness is another good reason to study fallacies. The best way to avoid being taken in by them is to study them until you can consistently pick them out of any random selection of prose. Here are some of the more prevalent ones.

> This is patently absurd; but whoever wishes to become a philosopher must learn not to be frightened by absurdities.
> —Bertrand Russell

Straw Man

The **straw man** fallacy is the misrepresentation of a person's views so they can be more easily attacked or dismissed. Let's say you argue that the war in Afghanistan is too costly in lives and money, and your opponent replies this way:

The **straw man** is the fallacy of misrepresenting a person's views so they can be more easily attacked or dismissed.

> My adversary argues that the war in Afghanistan is much too difficult for the United States, and that we ought to, in effect, cut and run while we can. But why must we take the coward's way out?

Thus, your point has been distorted, made to look more extreme or radical than it really is; it is now an easy target. The notion that we ought to "cut and run"

PHILOSOPHY NOW

Philosophy in the News

Very often, behind the headlines we see every day there lurks a deeper philosophical issue. And when people reflect on the stories, they frequently find themselves pondering fundamental questions and beliefs. Philosophy is hard to avoid. Here is a sampling of possible headlines paired with the philosophical questions they raise.

Tea Party Rejects Entitlement and Welfare Programs	Is libertarianism a viable political theory?
Man Claims Out-of-Body Experience	Can the mind (soul) exist independently of the body?
Residents Demand Death Penalty for Child Killer	Is capital punishment ever morally permissible?
Christopher Hitchens Book Says "God Is Not Great"	Does God exist? Does religion do more harm than good?
Japan Tsunami Kills Thousands	Does natural evil show that there is no God?
Scientists Say "Big Bang" Uncaused	Is Aquinas's first-cause argument doomed?
Attorneys Say Hormones Caused Woman to Kill	Do we have free will? Are all our actions caused by factors beyond our control?
Stem Cell Research Banned	Is the fetus a person with full moral rights from the moment of conception?
China Says It Must Be Judged by Chinese Morality	Is morality relative to cultures? Does "human rights" apply only to the West?

Are most perennial debates in politics really about fundamental philosophical issues that are never discussed? Could these issues be resolved if people, in good faith, applied the Socratic method?

or "take the coward's way out" *does not follow* from the statement that the war in Afghanistan is too costly.

The straw man kind of distortion, of course, proves nothing, though many people fall for it every day. This fallacy is probably the most common type of fallacious reasoning used in politics. It is also popular in many other kinds of argumentation—including student philosophy papers.

Figure 1.10 Politics is rife with fallacies—especially straw man, appeal to the person, and slippery slope. What fallacies in politics have you heard or read lately?

Appeal to the Person

Closely related to the straw man fallacy is **appeal to the person** (also known as the *ad hominem* fallacy). Appeal to the person is the rejecting of a statement on the grounds that it comes from a particular person, not because the statement, or claim, itself is false or dubious. For example:

Appeal to the person is the fallacy of rejecting a statement on the grounds that it comes from a particular person, not because the statement, or claim, itself is false or dubious.

> You can safely discard anything that Susan has to say about government. She's a dyed-in-the-wool socialist.
>
> Johnson argues that our current welfare system is defective. But don't listen to him—he's a conservative.

Ad hominem arguments often creep into student philosophy papers. Part of the reason is that some appeals to the person are not so obvious. For example:

> Swinburne's cosmological argument is a serious attempt to show that God is the best explanation for the existence of the universe. However, he is a well-known theist, and this fact raises some doubts about the strength of his case.
>
> Dennett argues from the materialist standpoint, so he begins with a bias that we need to take into account.
>
> Some of the strongest arguments against the death penalty come from a few people who are actually on death row. They obviously have a vested interest in showing that capital punishment is morally wrong. We therefore are forced to take their arguments—however convincing—with a grain of salt.

Each of these arguments is defective because it asks us to reject or resist a claim solely because of a person's character, background, or circumstances—things that are generally irrelevant to the truth of claims. A statement must stand or fall *on its own merits*. The personal characteristics of the person espousing the view do not necessarily have a bearing on its truth. Only if we can show that someone's dubious traits somehow make the claim dubious are we justified in rejecting the claim because of a person's personal characteristics. Such a circumstance is rare.

Appeal to Popularity

Appeal to popularity is the fallacy of arguing that a claim must be true not because it is backed by good reasons, but simply because many people believe it.

The **appeal to popularity** (or appeal to the masses) is another extremely common fallacy. It is arguing that a claim must be true not because it is backed by good reasons, but simply because many people believe it. The idea is that, somehow, there is truth in numbers. For example:

> Of course there's a God. Everyone believes that.

> Seventy percent of Americans believe that the president's tax cuts are good for the economy. So don't try to tell me the tax cuts aren't good for the economy.

> Most people believe that Jones is guilty, so he's guilty.

In each of these arguments, the conclusion is thought to be true merely because it is believed by an impressive number of people. The number of people who believe a claim, however, is irrelevant to the claim's truth. What really matters is how much support the claim has from good reasons. Large groups of people have been—and are—wrong about many things. Many people once believed that Earth is flat, mermaids are real, and human sacrifices help crops grow. They were wrong.

Remember, however, that the number of people who accept a claim *can* be relevant to its truth if the people happen to be experts. Twenty professional astronomers who predict an eclipse are more reliable than one hundred nonexperts who swear that no such eclipse will occur.

Genetic Fallacy

Genetic fallacy is the fallacy of arguing that a statement can be judged true or false based on its source.

A ploy like the appeal to the person is the **genetic fallacy**—arguing that a statement can be judged true or false based on its source. In an appeal to the person, someone's character or circumstance is thought to tell the tale. In the genetic fallacy, the truth of a statement is supposed to depend on origins other than an individual—organizations, political platforms, groups, schools of thought, even exceptional states of mind (like dreams and intuitions). Look:

> That new military reform idea has gotta be bunk. It comes from a liberal think tank.

> At the city council meeting Hernando said that he had a plan to curb the number of car crashes on Highway 19. But you can bet that whatever it is, it's half-baked—he said the plan came to him when he was stoned on marijuana.

The U.S. Senate is considering a proposal to reform affirmative action, but you know their ideas must be ridiculous. What do they know about the rights of the disadvantaged? They're a bunch of rich, white guys.

There are more things in heaven and earth, Horatio, than are dreamt of in your philosophy.
—William Shakespeare

Equivocation

The fallacy of **equivocation** is assigning two different meanings to the same significant word in an argument. The word is used in one sense in a premise and in a different sense in another place in the argument. The switch in meaning can deceive the reader and disrupt the argument, rendering it invalid or weaker than it would be otherwise. Here's a classic example:

Equivocation is the fallacy of assigning two different meanings to the same significant word in an argument.

Only man is rational.

No woman is a man.

Therefore, no woman is rational.

And one other:

You are a bad writer.

If you are a bad writer, then you are a bad boy.

Therefore, you are a bad boy.

The first argument equivocates on the word *man*. In the first premise, *man* means humankind; in the second, male. Thus, the argument seems to prove that women are not rational. You can see the trick better if you assign the same meaning to both instances of *man*. Like this:

Only humans are rational.

No woman is a human.

Therefore, no woman is rational.

In the second argument, the equivocal term is *bad*. In the first premise, *bad* means incompetent; in the second, immoral.

Appeal to Ignorance

As its name implies, this fallacy tries to prove something by appealing to what we *don't* know. The **appeal to ignorance** is arguing that either (1) a claim is true because it hasn't been proven false or (2) a claim is false because it hasn't been proven true. For example:

Appeal to ignorance is the fallacy of arguing that either (1) a claim is true because it hasn't been proven false or (2) a claim is false because it hasn't been proven true.

Try as they may, scientists have never been able to disprove the existence of an afterlife. The conclusion to be drawn from this is that there is in fact an afterlife.

Super Green Algae can cure cancer. No scientific study has ever shown that it does not work.

No one has ever shown that ESP (extrasensory perception) is real. Therefore, it does not exist.

> There is no evidence that people on welfare are hardworking and responsible. Therefore, they are not hardworking and responsible.

The first two arguments try to prove a claim by pointing out that it hasn't been proven false. The second two try to prove that a claim is false because it hasn't been proven true. Both kinds of arguments are bogus because they assume that a lack of evidence proves something. A lack of evidence, however, can prove nothing. Being ignorant of the facts does not enlighten us.

Notice that if a lack of evidence could prove something, then you could prove just about anything you wanted. You could reason, for instance, that since no one can prove that horses *can't* fly, horses must be able to fly. Since no one can disprove that you possess supernatural powers, you must possess supernatural powers.

False Dilemma

False dilemma is the fallacy of arguing erroneously that since there are only two alternatives to choose from and one of them is unacceptable, the other one must be true.

In a dilemma, you are forced to choose between two unattractive possibilities. The fallacy of **false dilemma** is arguing erroneously that since there are only two alternatives to choose from and one of them is unacceptable, the other one must be true. Consider these:

> You have to listen to reason. Either you must sell your car to pay your rent, or your landlord will throw you out on the street. You obviously aren't going to sell your car, so you will be evicted.

> You have to face the hard facts about the war on drugs. Either we must spend billions of dollars to increase military and law enforcement operations against drug cartels, or we must legalize all drugs. We obviously are not going to legalize all drugs, so we have to spend billions on anti-cartel operations.

Philosophy is at once the most sublime and the most trivial of human pursuits. —William James

The first argument says that there are only two choices to consider: either sell your car or get evicted, and since you will not sell your car, you will get evicted. This argument is fallacious because (presumably) the first premise is false—there seem to be more than just two alternatives here. You could get a job, borrow money from a friend, or sell your DVD player and TV. If the argument seems convincing, it is because other possibilities are excluded.

The second argument asserts that there are only two ways to go: spend billions to attack drug cartels or legalize all drugs. Since we won't legalize all drugs, we must therefore spend billions to assault the cartels. The first (either/or) premise, however, is false; there are at least three other options. The billions could be spent to reduce and prevent drug use, drug producers could be given monetary incentives to switch to non-drug businesses, or only some drugs could be legalized.

Begging the Question

Begging the question is the fallacy of trying to prove a conclusion by using that very same conclusion as support.

The fallacy of **begging the question** is trying to prove a conclusion by using that very same conclusion as support. It is arguing in a circle. This way of trying to prove something says, in effect, "X is true because X is true." Few people would fall for this

fallacy in such a simple form, but more subtle kinds can be beguiling. For example, here's the classic instance of begging the question:

> The Bible says that God exists.
>
> The Bible is true because God wrote it.
>
> Therefore, God exists.

The conclusion here ("God exists") is supported by premises that assume that very conclusion.

Here's another one:

> All citizens have the right to a fair trial because those whom the state is obliged to protect and give consideration are automatically due judicial criminal proceedings that are equitable by any reasonable standard.

This passage may at first seem like a good argument, but it isn't. It reduces to this unimpressive assertion: "All citizens have the right to a fair trial because all citizens have the right to a fair trial." The conclusion is "All citizens have the right to a fair trial," but that's more or less what the premise says. The premise—"those whom the state is obliged to protect and give consideration are automatically due judicial criminal proceedings that are equitable by any reasonable standard"—is equivalent to "All citizens have the right to a fair trial."

When circular reasoning is subtle, it can ensnare even its own creators. The fallacy can easily sneak into an argument if the premise and conclusion say the same thing but say it in different, complicated ways.

Slippery Slope

The metaphor behind this fallacy suggests the danger of stepping on a dicey incline, losing your footing, and sliding to disaster. The fallacy of **slippery slope**, then, is arguing erroneously that a particular action should not be taken because it will lead inevitably to other actions resulting in some dire outcome. The key word here is *erroneously.* A slippery slope scenario becomes fallacious when there is no reason to believe that the chain of events predicted will ever happen. For example:

Slippery slope is the fallacy of arguing erroneously that a particular action should not be taken because it will lead inevitably to other actions resulting in some dire outcome.

> This trend toward gay marriage must be stopped. If gay marriage is permitted, then traditional marriage between a man and a woman will be debased and devalued, which will lead to an increase in divorces. And higher divorce rates can only harm our children.

This argument is fallacious because there are no reasons for believing that gay marriage will ultimately result in the chain of events described. If good reasons could be given, the argument might be salvaged.

Composition

Sometimes what is true about the parts of a thing is also true of the whole—and sometimes not. The fallacy of **composition** is arguing erroneously that what can be said of the parts can also be said of the whole. Consider:

Composition is the fallacy of arguing erroneously that what can be said of the parts can also be said of the whole.

Philosophy should quicken life, not deaden it.
—Susan Glaspell

Each piece of wood that makes up this house is lightweight. Therefore, the whole house is lightweight.

Each soldier in the platoon is proficient. Therefore, the platoon as a whole is proficient.

The monthly payments on this car are low. Hence, the cost of the car is low.

Just remember, sometimes the whole does have the same properties as the parts. If each part of the rocket is made of steel, the whole rocket is made of steel.

Division

Division is the fallacy of arguing erroneously that what can be said of the whole can be said of the parts.

If you turn the fallacy of composition upside down, you get the fallacy of **division**—arguing erroneously that what can be said of the whole can be said of the parts:

The house is heavy. Therefore, every part of the house is heavy.

The platoon is very effective. Therefore, every member of the platoon is effective.

That herd of elephants eats an enormous amount of food each day. Therefore, each elephant in the herd eats an enormous amount of food each day.

ESSAY/DISCUSSION QUESTIONS Section 1.3

1. What is the difference between an argument and an explanation? What is the difference between an argument and a set of accusations? or expressions of outrage?
2. How is reading philosophy different from, say, reading a physics text? or reading a novel?
3. Think about the political commentators you've read or listened to. What fallacies have they been guilty of using?
4. The straw man fallacy is rampant in political debates. Give an example of such a tactic being used by commentators or politicians, or make up an example of your own.
5. Devise an argument in favor of the proposition that people should (or should not) be punished as Socrates was for speaking their minds.