GETTING STARTED:

LOOKING FOR AN ARGUMENT

Our basic unit of reasoning is the ‘argument’. In introducing arguments, the present chapter discusses

- the nature of arguments and their components;
- the contexts, audiences, and opponents that arguments address;
- logical indicators that are signs of argument;
- the difference between arguments and explanations; and
- argument narratives.

In a famous skit in *Monty Python’s Flying Circus*, a man enters a room and asks: ‘Is this the right room for an argument?’

Almost everyone has heard the expression ‘room for argument’. ‘There’s room for argument’ means that some claim is open to debate. But not at Monty Python’s ‘argument clinic’, where the expression ‘room for argument’ denotes a room where arguments take place.

In real life, there are no ‘argument rooms’ designed as places to sell an argument. But there are many rooms in which arguments take place. They include all the rooms in which we carry on our professional and personal lives. In view of this, the ability to argue is a skill that every one of us employs. The present text attempts to teach you how to improve this skill. It contains chapters that explain the difference between strong and weak arguments, and the ways you can assess the reasoning that arguments contain. We begin with an account of arguments, and the differences that distinguish arguments and non-arguments.
1. **Arguments**

The Monty Python skit continues. In answer to the question ‘Is this the right room for an argument?’ the man sitting at the desk responds:

‘I’ve told you once.’
[man looking for an argument:] ‘No you haven’t.’
. . . ‘Yes I did!’
‘Didn’t.’
‘Did.’
‘Didn’t.’
‘I’m telling you I did!’
‘You did not!’

Exasperated, the man looking for an argument finally exclaims: ‘Look, this isn’t an argument, it’s just a contradiction’.

Sometimes we use the word ‘argument’ to mean ‘disagreement’, and especially a vehement disagreement: a harangue, a quarrel, a yelling match characterized by impassioned contradictions. In this sense, the two men in Monty Python’s argument clinic are arguing. Arguments of this sort are a significant and sometimes painful reality we must contend with. But this is not the kind of argument that this book discusses. For philosophers, logicians, and those who study argumentation, an argument is an attempt to go beyond a simple contradiction and provide evidence for some point of view.

Consider the kind of argument attributed to the mythical detective Sherlock Holmes. It begins with a claim, which is usually unexpected and usually amazes his companion Watson. Let’s say the claim is

The crime was committed by someone in the house.

When Watson protests, Holmes does not stop there. He does not raise his voice and simply disagree with Watson. Instead, he backs his claim with reasons that support it. Suppose he provides the following reasons:

1. Although the living room window is open, there are no footprints outside, despite the softness of the ground after yesterday’s rain.
2. The clasp on the box was not broken but opened with a key that had been hidden behind the clock.
3. The dog did not bark.

Holmes has now given us three reasons that support his claim. He has provided us with an argument, based on three observations, that supports the claim that the crime was an ‘inside job’.

Unlike the men in the Monty Python skit, Holmes has given an ‘argument’ in the sense in which the term is used in logic. For this is a context in which an argument is a set of reasons offered in support of a claim. Arguments of this sort are the essence of reasoning, which is a rational attempt to decide what should be believed. Arguments
may be presented orally, in a written text, or by means of photographs, pictures, symbols, and other visual images (visual arguments are discussed in detail in Chapter 3). The claim an argument supports is called its conclusion. The reasons offered in support of a conclusion are called its premises.

The simplest arguments have one premise. In the Monty Python skit that we began with, an argument in our sense emerges when the man looking for an argument, exasperated, denies that an argument can be the same as a contradiction, retorting, 'No it can't. An argument is a connected series of statements intended to establish a definite proposition.'

This is a one-premise argument that can be summarized as follows:

PREMISE: An argument is a connected series of statements intended to establish a definite proposition.

CONCLUSION: It can't be the same as a contradiction.

In the Holmes example, the conclusion is supported by three premises. In other arguments, conclusions may be supported by more or fewer premises. Most of the arguments that we use in our day-to-day lives are complex combinations of premises and conclusions that contain a main argument and a number of sub-arguments that support the premises the main argument depends on.

Arguments are motivated by the intentions of arguers. First and foremost, an arguer's intention is to convince an audience—someone or some group of people—that a given claim is acceptable, or that a proposed course of action is or is not justified. A strong argument convinces an audience because its premises are acceptable rather than unacceptable, and because they justify the conclusion. We shall have much to say about the difference between strong and weak (and good and bad) arguments in later chapters of this book. In the present chapter, we focus on the nature of arguments and their components, as this is the best way to prepare for that discussion.

2. An Example

We will take our first example of real argument from the lead article in the Plaistow, New Hampshire, Rockingham News on 30 August 2002. Entitled 'Dog-fight leader gets prison', it recounts the case of a man who was tried for cruelty to animals after he trained 43 pit bull terriers to fight in matches he staged. Like other cases tried before the courts, this is a paradigm example of a context in which arguments occur.

In the case in question, Judge Gillian Abrahamson presented an argument when she said that the actions of the man who trained the dogs and staged the fights, Christopher DeVito, were disturbing because he had 'inflicted such pain and torture on helpless animals for fun and profit.' She presented another argument when she remarked that the severity of the 37 counts of 'Exhibition of Fighting Animals' justified a sentence in a state prison rather than a county jail.

The attorney for the defendant, Michael Natola, argued when he asserted that the sentence handed down by Judge Abrahamson did not fit the crime because it was
‘unprecedented in its length’. A coordinator for the Humane Society of the United States New England Regional Office, Hillary Twining, argued for a contrary conclusion when she supported the prison sentence, claiming that ‘the minor penalties associated with misdemeanour convictions are not a sufficient deterrent.’ They were not sufficient, she claimed, because ‘dog fighting yields such large profits for participants [that dog fighters] merely absorb these fines as part of the cost of doing business.’

Like other legal and social issues, this is one that is characterized by many conflicting arguments. Both the prosecuting attorney and the lawyer defending Mr DeVito presented arguments to the court. The judge responded with a decision backed by argument. The lawyers and the judge argued in a broader context that included arguments that were presented in newspapers, in letters to the editor, in public meetings, and in many public and private conversations. All of these arguments took place in an even broader context characterized by debate about the rights of animals and cruelty to animals.

Arguments in real life usually occur in complex contexts of this sort. In most cases, contrary arguments are possible, and a variety of issues may be discussed and debated. In part because of this, argumentation is a complex, open-ended process that may develop and evolve in a variety of ways.

**Exercise 1A***

1. The discussion of the report in the *Rockingham News* notes a number of arguments that emerged in the trial of Christopher DeVito. Identify three of these arguments by specifying the premise(s) and conclusion of each.

2.* The discussion of the dog-trainer’s case might easily evolve in a way that considers many related issues. Given that it is wrong to be cruel to animals, one might ask, why is it permissible to kill them and eat them, for isn’t killing animals a form of cruelty? Identify the premise and conclusion in this argument and construct your own argument for the conclusion that it is (or is not) wrong to kill animals to eat them (use no more than three premises in your argument). Identify the premises and the conclusion of your argument.

3. Someone defending those who stage dog fights might argue that we permit boxing, so we should permit dog fighting. Should these two sports be treated similarly? Why or why not? Construct an argument (with no more than three premises) for a conclusion one way or the other.

4. Do you think that animals should be used in scientific experiments? Write a short argument (one paragraph) that supports your view.

5. Explain how someone with an opposing point of view might argue against the argument you prepared in answer to question 4.

*In this and other exercise sets, answers to starred questions are provided in the ‘Selected Answers’ section at the back of this book.*
3. Arguers, Audiences, and Opponents

Traditional logic analyzes arguments in terms of premises and conclusions. This is an important perspective, but there are other ways to look at arguments. Because argumentation is a communicative act, what is sometimes called a 'speech act', arguments should also be analyzed in terms of three parties who play a central role in argument.

The first party to an argument is the arguer—the party who forwards the argument. Usually this party is an individual, but it may also be a group of people or a corporate body of some sort—a company, a branch of government, or some other organization. When we ourselves construct arguments we are, of course, arguers. Arguers construct arguments in contexts that are characterized by disagreement and debate or in which these have the potential to arise. It is in such contexts that an arguer may want to reinforce a point of view with reasons that support it. In judging arguments, we often judge the arguer as well as the argument they provide, because their credibility is essential to their trustworthiness (an indication of their character, or what argumentation theorists call their ethos). An arguer's credibility will probably determine our willingness to accept many aspects of the claims they make. The importance of an arguer's character in the assessment of argument gives rise to a whole family of arguments—called ethotic arguments—which we discuss in Chapter 14.

A second party to an argument is the audience to whom the argument is addressed. We use arguments when we want to convince an audience—someone or some group of people—that a given claim is true or false or acceptable, or that some course of action is or is not justified. In some circumstances we act as our own audience. Sherlock Holmes probably reasons through to his conclusion privately before he presents an argument to Watson. He may begin with a hypothesis, then look to see if there is evidence to support it. On another occasion, he may be struck by one or more pieces of evidence, and reason from these to his conclusion, reinforcing his argument with other premises that present additional evidence. Holmes acts as his own audience as he develops the argument in his mind.

After Holmes is satisfied with his conclusion, he sets about convincing another audience that it is correct—in this case, Watson. Poor reasoners often fail to distinguish between audiences, assuming that whatever convinces them of some conclusion will and should convince other audiences. In cases where two people (say, Holmes and Watson) share very similar points of view, this is a reasonable assumption. But it is an erroneous assumption in broader contexts, and especially in contexts in which we must interact and argue with audiences who do not share our point of view. In such contexts, it is egocentric to believe that the things that we care about are characteristic of our audience, which may have a very different set of beliefs and values. This is often the case given that arguments are the principal means we use to try to convince those who have different points of view that they should accept our own conclusions.

The role that audiences play in arguments is often evident in historical examples. These examples can be instructive because they were designed to appeal to audiences
who had different attitudes, beliefs, and concerns than we do. When we read these arguments, such differences may jump out at us, making the arguments seem peculiar. Consider the following 1940s advertisement for Philip Morris cigarettes:

Medical authorities know this one is superior—
Philip Morris
Scientifically proved less irritating to the nose and throat.
When smokers changed to Philip Morris, substantially every case of irritation of nose and throat—due to smoking—cleared up completely, or definitely improved!
That is the findings of distinguished doctors, in clinical tests of men and women smokers—reported in an authoritative medical journal.
Solid proof that this finer-tasting cigarette is less irritating to the nose and throat!
Call for Philip Morris
America’s finest cigarette

Today, it seems peculiar to cite ‘distinguished doctors’ and ‘medical authorities’ in an advertisement for cigarettes, for we live at a time when it has been clearly demonstrated that smoking is injurious to one’s health. We all know that medical authorities would recommend not that one smoke a particular brand of cigarette, but that one should not smoke. The only medical studies likely to be cited in such a context are studies that demonstrate that smoking contributes to particular kinds of ailment. Because of this, the Philip Morris argument has little impact on contemporary audiences.

Another feature of the Philip Morris advertisement that is worth noting in this context is a slogan—‘Buy more war bonds’—that appears with it. This tag is characteristic of North American advertisements during the Second World War, when advertisers felt a pressing need to assert their patriotism, something that was necessary if their advertisements were to appeal to a population that was wholly preoccupied with the war effort. It is for this reason that a full-page advertisement for Camel cigarettes on the back of Life (27 July 1942) features photos of a woman labourer working in a cockpit and a pilot flying a B-24 Bomber, with the caption:

When Bombers are your Business
— ON THE ASSEMBLY LINE — ON THE FRONT LINE
YOU WANT STEADY NERVES
IMPORTANT TO STEADY SMOKERS:
The smoke of
slow-burning
CAMELS
contains
LESS NICOTINE

Like the Philip Morris ad, this Camel advertisement tries to strike a responsive chord in the audience of the day—in this case, by producing an ad that associates the alleged mildness of Camel cigarettes with the ongoing war effort. This is an association that is
underscored by other aspects of the ad, which features quotes from women who are working on the manufacture of the B-24 and a note that, ‘With men in the Army, Navy, Marines, Coast Guard, the favourite cigarette is Camel. (Based on actual sales records in Post Exchanges and Canteens.)’

Similar attempts to engage an audience preoccupied with war characterize other advertisements of the same era. In an advertisement in Life (11 October 1943) Nestle’s chocolate bars are advertised under the title of a column written by the famous war correspondent Ernie Pyle. Underneath the title (‘U.S. Troops Fight On Chocolate Diet’) one reads that:

This is the way famed war correspondent Ernie Pyle started one of his columns that are appearing daily in the Scripps-Howard newspapers . . . Yes, chocolate is a fighting food, it supplies the greatest amount of nourishment in the smallest possible bulk. So wherever America fights, the Army uses chocolate in the form of emergency rations, selected because it contains so much quick energy . . .

The preoccupation with World War II that is reflected in arguments and advertisements of this period is accompanied by other assumptions and values that characterize the audience of the day. The Campbell Soup advertisement we have adapted below (p. 8)—‘Put A Feather in Mrs. Canada’s Cap’—is addressed to women readers of the Canadian magazine Star Weekly. It suggests that they should buy Campbell’s cream of mushroom soup because it is ‘unusual and especially good’ and, much more importantly, because it will make a good impression on their families, an achievement for these women to take pride in—a ‘feather in their cap’. Underlying the advertisement is the assumption that women are homemakers and that they should aspire to perform their housework in ways that will earn them the approval of their families.

These advertisements—and other arguments of the past—strike us as odd because we are not the audience they address. The audience of the past had a different set of attitudes, beliefs, and concerns that made these arguments seem natural and appropriate. Some would argue that the appeal to a war effort against fascism has now been replaced by an appeal to comfort, sex, and an ever higher standard of living. Whether this is so or not, it is likely that future audiences who look at our advertisements and arguments will find many of them peculiar, for they will assume a different point of reference that is characterized by a different set of beliefs and values. With hindsight, it is often easy to point to naive or misguided beliefs and convictions in the arguments of the past. Though other naive and misguided beliefs and convictions probably characterize our own arguments, it is much more difficult to identify them because we take them for granted. Logic can help us develop a critical attitude to arguments that will enable us to identify questionable assumptions more easily.

Sophisticated arguers recognize that arguments need to be attuned to audiences and respond to the views and the perspective of whatever audience they address. If we want to convince you that you should vote for a particular politician, and we know that you are concerned about budget overspending, we may appeal to her record of fiscal responsibility. If we are arguing with someone who thinks that poverty is the most
THOUSANDS OF CLEVER WOMEN ARE WINNING THEIR FAMILIES' PRAISE FOR DISCOVERING THIS DELIGHTFUL SOUP!

Steaming platefuls of Campbell's Cream of Mushroom on your table will mean a sure, bright feather in your cap - the heartfelt acclaim of your family, the eager tribute of your friends and always, for you, the satisfaction you enjoy when you serve something unusual and especially good.

Have you served your family this welcome new find - Campbell's Cream of Mushroom?

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important social issue, we may argue on the basis of her record of commitment to the poor. It would be dishonest to say in the first case that she will decrease social spending and in the second that she will increase it. But it would be equally wrongheaded to assume that the same argument is appropriate for different audiences whose views differ radically. Each audience has its own issues, values, and concerns, and a good reasoner is obligated to recognize and respond to these.

Sometimes arguers take advantage of audiences, playing on their biases and taking advantage of their lack of knowledge. In part, this is possible because many audiences are made up of people who do not reason well, and who can be persuaded by arguments that do not satisfy the criteria for good reasoning. This is especially true in the case of audiences that have not developed a good sense of reasonableness. By promoting the study of reasoning, we aim to neutralize the power of bad arguments both by developing the logical acumen of audiences (for we are all audiences) and by teaching the ability to persuade with good reasoning. Our goal is ‘reasonable persuasion’ rather than mere ‘persuasion’.

One way to ensure that we argue in a reasonable way that does not take advantage of an audience is by respecting obligations that we have to a third party to an argument. This party is made up of those who oppose our conclusion and our point of view—individuals we might loosely call the argument’s opponents. Even when they are not included in our immediate audience, these opponents are important, for arguments develop in controversial contexts that are characterized by a process of argument and counter-argument (what argumentation theorists call ‘dialectical’ contexts). If we are arguing for a public medicare system, this means that we should take seriously (and, ideally, anticipate) the objections to our arguments that are likely to be forwarded by those who are opposed to publicly supported healthcare. If we are arguing against the use of animals in medical experiments, we will need to respond to the views of those who think that such use is justified because it is necessary for the development of medicine.

A commitment to pay attention to the arguments of opponents forces us to take objections to our views seriously. In Judaism, a Rabbi who meets with someone who wishes to convert is obligated to make three genuine attempts to convince them that this is not a good idea. This is a version of the principle that one should take objections to one’s conclusions seriously. In this case, the idea is that one is not ready for such a momentous decision unless one is certain enough not to be persuaded by objections to it. More generally, a commitment to reason well requires that we take objections to our views seriously whenever we make important decisions or argue for particular points of view.

4. Simple and Extended Arguments

A simple argument is an argument that has one conclusion that is supported by one or more premises. Simple arguments represent the basic unit of reasoning. An extended argument is an argument that has a main conclusion supported by premises, and
some premises that are supported by other arguments. The following example illustrates how simple arguments can evolve into extended arguments.

In a book expounding the Christian notion of grace, *What's So Amazing About Grace?* (Zondervan/Harper Collins, 1997, p. 247), Philip Yancey writes that, 'For all its flaws the church at times has, fitfully and imperfectly to be sure, dispensed Jesus’ message of grace to the world. It was Christianity, and only Christianity, that brought an end to slavery, and Christianity that inspired the first hospitals and hospices to treat the sick. The same energy drove the early labour movement, women’s suffrage, prohibition, human rights campaigns, and civil rights.' This passage is naturally interpreted as a simple argument, for it presents a claim (that the Christian church has, despite its flaws, made Jesus’ message of grace manifest in the world) and backs it with reasons for thinking that this is so (it was only Christianity that brought an end to slavery; it was Christianity that inspired the first hospitals and hospices; and so on and so forth).

Yancey’s argument appears in a book that is written for Christian readers. His argument may, when it is taken in conjunction with his other claims and arguments, convince this audience that there is something valuable and worthwhile in the Christian church. But it is easy to see how his simple argument may quickly evolve into an extended argument. For one’s willingness to accept the argument will depend on one’s willingness to accept the premises, and those skeptical of his Christian point of view are not likely to accept them without debate. Skeptics are, for example, likely to reject the claim that it was only Christianity that brought an end to slavery, or that Christianity made women’s suffrage possible.

Defending Yancey’s argument to a broader audience that includes those skeptical of religion requires that one build arguments for his premises. In the process, one turns his initial argument into an extended argument. In the course of real debate about the Christian church, it is likely that all of Yancey’s premises will have to be defended. Some of the premises used to support his premises may have to be backed by further argument. It is in this way that a simple argument naturally evolves into a complex extended argument made up of a principal argument and sub-arguments that back its premises.

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### DEFINITIONS

> **Argument** is a set of reasons designed to support a claim. The reasons are called **premises**. The claim they support is called the **conclusion**. The sentence, 'She’s a better chess player than he is, so he’ll never date her,' expresses an argument. Its conclusion is the claim that he’ll never date her. It has one premise, which is the statement that she's a better chess player than he is.

> **Audience** is an individual or group to whom an argument is directed. Arguments are a way to convince particular audiences of some point of view. The audience for any arguments we make in this text is you, the reader.
The opponents are those individuals who hold an opposing point of view. In preparing arguments, we are obligated to try to answer the objections that the opponents might propose.

A simple argument is an argument that has one conclusion supported by one or more premises. An extended argument is an argument that has a main conclusion supported by premises, some of which are conclusions of subsidiary arguments.

EXERCISE 1B

1. Describe two different audiences to whom you might present an argument for or against the use of animals in scientific experiments (each audience may be an individual or a collective). What are the issues that are likely to matter to each audience?

2. What is the argument in the following ad from Family (May/June 1996), which features a large photo of a baby, accompanied by text? Who is the intended audience? How can you tell?

   YOU’RE THE ONE WHO HAS PROMISED TO PROTECT HER. PROTECT HER SCALP FROM IRRITATION WITH NEW IMPROVED JOHNSON’S BABY SHAMPOO, THE ONLY ONE CLINICALLY PROVEN HYPОАLLEРGENIC.

3. You are in the process of buying a new house. You must decide between three different options: (A) You buy a deluxe condominium on Lakeshore Boulevard; (B) You buy a modest bungalow on Northfield Road; (C) You decide to give up on the house and move into a downtown apartment. Option A will let you live the lifestyle you will most enjoy; option B will save you a significant amount of money; option C will place you within walking distance of a good grade school for your children. Pick an option and write an argument for it that is addressed to (a) your spouse, (b) your children, (c) your parents.

4. In recent years, dentists, medical researchers, and health activists have debated the risks of ‘silver’ amalgam fillings. The principal ingredient in these fillings is mercury, which is toxic to human beings. Those opposed to amalgam fillings argue that the mercury in the fillings does not remain inert and enters the body, where it can cause serious illness and multiple side effects. Those committed to amalgam fillings (including professional dentistry associations) have argued that there is no convincing evidence to back these claims. In order to explore the argumentation in this debate,

   a) go to the World Wide Web, find a site that discusses amalgam fillings, and identify the premises and conclusion in one argument it contains;
b) identify and analyze the argument forwarded in the following excerpt from the website of the American Dental Association <http://www.ada.org/public/faq/fillings.html#safe> (18 Dec. 2002), explaining how one would turn it into an extended argument.

**Are dental amalgams safe?**

Yes. Dental amalgam has been used in tooth restorations worldwide for more than 100 years. Studies have failed to find any link between amalgam restorations and any medical disorder. Amalgam continues to be a safe restorative material for dental patients.

5. The following illustration is a copy of a 1997 recruitment poster used by the British Army (see *The Guardian Weekly*, 19 Oct. 1997, p. 9). It is a revised version of a famous World War I recruitment poster that depicted Lord Kitchener in the same pose, his gloved hand pointing at the viewer while he declares ‘Your country needs you’. During the war and afterwards, the poster was widely recognized as a patriotic symbol. In the 1997 version, the face of a black officer is superimposed over the face of Lord Kitchener. There is an argument being conveyed in the poster. What is it? Identify the premises and conclusion and discuss it from the point of view of audience.
5. Distinguishing Arguments from Non-Arguments

We have defined an argument as a conclusion and a set of supporting statements (‘premises’). The first step in argument analysis is recognizing arguments and their components. It is important to distinguish the identification of an argument from an assessment of it. When we say here that something is an argument, we are not saying that it is a good argument. It may be strong or weak, plausible or implausible, convincing or unconvincing, but we leave the determination of this for later chapters. As part of your approach to good reasoning, you should separate the attempt to identify and summarize an argument from the attempt to decide whether it is a good one. In the early chapters of this book, our concern is the former rather than the latter.

Sometimes enthusiastic students (or pugnacious individuals) are inclined to interpret almost anything as an argument. This is a mistake, for many claims and remarks are not properly developed as attempts to provide evidence for some conclusion. We use language for many purposes other than arguing—to report facts, to convey our feelings, to ask questions, to propose hypotheses, to express our opinions, etc. The first step in learning how to analyze arguments is, therefore, learning how to distinguish between arguments and non-arguments.

Logical Indicators

In deciding whether or not a set of sentences is an argument, it is important to remember that verbal arguments are expressed in a variety of ways. Sometimes the conclusion comes first and is followed by premises. Sometimes the premises come first and are followed by the conclusion. At other times, some of the evidence is given first, followed by the conclusion, followed by further evidence.

‘Logical indicators’ are signposts that tell us that particular statements are premises or conclusions. The expressions ‘consequently’, ‘thus’, ‘so’, ‘hence’, ‘it follows that’, ‘therefore’, and ‘we conclude that’ are conclusion indicators. When you come across these and other words and phrases that function in a similar way, it usually means that the statement that follows them is the conclusion of an argument. Consider the following examples:

All the senior managers here are members of the owner’s family. So I’ll have to move if I want to get promoted.

A human being is constituted of both a mind and a body, and the body does not survive death; therefore we cannot properly talk about personal immortality.

In cases as simple as these, we can easily identify the premises, for they are the statements that remain after we identify the argument’s conclusion. Remember, here we are simply identifying arguments without making any judgment about the quality of the reasoning.

In other cases arguments are designated by premise indicators. Common premise indicators include the expressions ‘since’, ‘because’, ‘for’, and ‘the reason is’. The
argument in our last example can be expressed with a premise rather than a conclusion indicator by wording it as follows:

Since a human being is constituted of both a mind and a body, and the body does not survive death, we cannot properly talk about personal immortality.

Here are two more arguments that use premise indicators:

Nothing can be the cause of itself; for in that case it would have to exist prior to itself, which is impossible.

Sheila must be a member of the cycling club, because she was at last week’s meeting and only members were admitted.

In these and cases like them, premise indicators clearly identify the reasons offered for some conclusion. The conclusion of the argument is the statement they support. In the last case, the conclusion is the claim, ‘Sheila must be a member of the cycling club.’

Arguments may contain both premise and conclusion indicators, but this is unusual, for once we know the premises or conclusion of an argument, its other components are usually obvious. An argument with a premise or a conclusion is usually a clear argument. In constructing your own arguments, the important point is that you should use logical indicators so that other people can clearly recognize that they are arguments and note what evidence you are offering for what conclusion.

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**Arguments without Indicator Words**

Logical indicators are signposts that help us identify arguments and differentiate their premises and conclusions. But arguers often do not use logical indicators in their arguments. Very few advertisements contain logical indicators, for example, but most of them invite us to reason to the conclusion that we should buy this or that. To deal with cases such as these, we need to be able to determine when arguments occur without premise or conclusion indicators.
In trying to decide whether a group of sentences without a logical indicator is an argument, we need to consider whether the context in which the sentence group appears is a context in which something is in dispute or controversial: is the situation one in which someone should justify some claim by offering reasons in support of it? Argumentative contexts can be illustrated with Stephen Brunt’s book *Facing Ali: The Opposition Weighs In* (Alfred Knopf, 2002), which is made up of interviews with the opponents who boxed against Muhammad Ali. On the back of the jacket cover, there are three quotes under the heading *Praise for Facing Ali*. The following quote is assigned to Bert Sugar, who is identified as the ‘co-author of *Sting Like a Bee* and former editor and publisher of *Ring Magazine*’:

Just when you think that everything about Muhammad Ali and his career has been written, re-written and over written, along comes Stephen Brunt to give us a valuable new perspective to the Ali story in this extraordinary look at the parties of the second part: his opponents. *Facing Ali* has ‘winner’ written all over it. And through it.

This passage contains no premise or conclusion indicators—no ‘therefore’, ‘since’, or ‘because’. But it is plausibly taken as an argument. For the quotes on the back of the book jacket are not there simply to inform us; they are there to convince prospective readers that Stephen Brunt’s book is a book worth reading and, more fundamentally, that it is a book that they should buy. This is the function of the information that is typically included on the cover of a book. In the case of Brunt’s book, the quote from Bert Sugar is plausibly interpreted as the argument that the book is worth reading—that it has “winner” written all over it—because it unexpectedly provides a ‘valuable new perspective to the Ali story’ and ‘an extraordinary look’ at his opponents. This simple argument can in turn be plausibly construed as an argument for a further conclusion that is unstated, i.e. that one should buy this book.

It is important to recognize contexts that are argumentative contexts, for they are contexts in which we need to adopt a critical attitude that asks whether the reasons given for some claim are convincing. We need to recognize that we are dealing with an attempt to convince us to purchase Mary Gordon’s *Joan of Arc* (Weidenfeld & Nicholson/Penguin, 2000) when, on the inside cover of the book, we read, ‘In this book Mary Gordon, with the passion and grace that mark her bestselling novels about women and faith, penetrates this cultural icon . . .’ along with quotes of praise for her other books. In this context, we need to ask how strongly quotes from two newspaper reviews (two reviews out of possibly thousands, in a context where reviewers may disagree radically) support the conclusion that we should buy the book.

When arguments are presented without premise or conclusion indicators—as though they were simple statements of fact—it is easy to forget that they need to be queried and evaluated. In many cases, it is possible that indicators are not used precisely because the author of an argument wants to present it as a matter of fact that is not open to dispute. If we fail to raise questions in such cases, we fail to adopt the critical stance that a healthy attitude to argument requires.
Context is one important factor that can help us decide whether a set of sentences with no logical indicators should be classified as an argument. In making this decision, we should also pay attention to other clues that may be found in the wording of the sentences themselves. Suppose, for example, we find the following paragraph in a letter on the history of South America:

The artistic motifs that characterize the ruins of ancient Aztec pyramids are very similar to those found in Egypt. And the animals and vegetation found on the eastern coasts of South America bear a striking resemblance to those of West Africa. From all appearances, there was once a large land mass connecting these continents.

This passage does not contain standard indicator words. Yet its first two sentences report observational data that appear to justify a speculative third statement—a statement that is the kind of statement that needs to be supported. This appears to be confirmed by the expression ‘from all appearances’, which acts as a bridge between the first two sentences and the third. In this way, the internal clues in the passage convince us that this is a case in which the author offers his first two statements as premises for his last.

**Borderline Cases**
The ability to detect arguments on the basis of context and internal clues is a skill that everyone has to some degree, but it is a skill that improves with practice. The more time you spend looking for, detecting, and analyzing arguments, the better you will be at distinguishing arguments from non-arguments, though no amount of skill will resolve all of the issues raised by difficult cases. The kinds of questions that arise in the latter situations are illustrated in the following example, adapted from a letter to the *Hamilton Spectator*, written on the occasion of a strike by steel workers in the city:

Haven’t we had enough letters to the editorial page of the *Spectator* every day and from cry-baby steel workers talking about how the Stelco strike is killing them? I am sure there are hundreds of pro-union letters going into the *Spectator* office, but only the anti-union ones are printed. I would not be a bit surprised if Stelco and the *Spectator* were working together to lower the morale of the steel workers who chose to strike for higher wages.

It is difficult to say whether or not this passage contains an argument. Certainly an opinion is expressed. But does the author offer reasons to support it?

If we want to distill an argument from the letter, it might look something like this:

**PREMISE:** We have had enough letters to the editorial page from cry-baby steel workers talking about how the Stelco strike is killing them.

**PREMISE:** I am sure there are hundreds of pro-union letters going into the *Spectator* office, but only the anti-union ones are printed.

**CONCLUSION:** There is reason to believe that Stelco and the *Spectator* are working together to lower the morale of steel workers.

This interpretation of the letter contains some linguistic adjustments. The final sentence in the published letter reads like a privately held suspicion. We have reworded
it so that it carries the impact of a conclusion (but in a way that is in keeping with the tentative tone of the author’s comments). Given that the writer has decided to express such a controversial claim publicly, it is plausible to suppose that she wants to convince readers that it is true, on the basis of the considerations she has raised in the earlier sentences of her letter. For this reason we have interpreted ‘I would not be a bit surprised if . . .’ as the claim, ‘There is reason to believe that . . .’

In creating our first premise we have put into statement form what appeared in the letter as a question, changing ‘Haven’t we had enough letters . . .?’ to ‘We have had enough letters . . .’ This is not an arbitrary change, for it highlights a common stylistic feature shared by many ordinary-language arguments. Genuine questions are not statements but requests for information, so they cannot function as a premise or conclusion in an argument. But not all questions are requests. Some are implicit statements or assertions that are expressed as questions for ‘rhetorical’ effect. They are used because they involve the person who hears or reads the argument in the argument, forcing them to answer the question in the way intended. We call such questions rhetorical questions. In the case at hand, the writer is not genuinely asking whether there have or have not been enough letters to the editorial page. Rather, her question is a way of asserting that there have been enough letters. Our revised wording clarifies this meaning.

We could have constructed a more complex representation of the chain of reasoning that seems to be contained in this letter about steel workers. We could have identified as an intermediary conclusion, or ‘sub-conclusion’, the statement, ‘the Spectator presents a biased view of the Stelco strike,’ which is implied in the second premise. This sub-conclusion could itself be construed as a premise for the main conclusion, that Stelco and the Spectator are working together to lower the morale of the steel workers. In this and many other cases, alternative interpretations and representations of the same argument are possible. In the present case, the proposed premises and conclusion are sufficient for our purposes.

The question remains: does the writer argue? Does she assert a claim and provide evidence for it? Do our proposed premises and conclusion capture reasoning in the letter? Is this a context in which reasons have been given for some conclusion? Perhaps so, perhaps not. It is always difficult to discern someone else’s intentions if they do not use explicit or even oblique indicator words. While this is a context in which an argument would be appropriate—the letter is, after all, published in the context of a debate about the steel workers’ strike—you may think that there is not enough internal evidence to show that the author of the letter should be attributed the argument we have suggested.

We have chosen this example precisely because it is difficult to say whether the letter in question should be treated as an argument. In dealing with borderline cases of this sort, you will do well to recognize that there is no certain way to establish whether the author of the letter intended it as an argument. The only evidence we have is the letter itself, and it might be interpreted as an argument or not. Rather than attempt to do the impossible and decide between these two alternatives, you will do
better to acknowledge this uncertainty and then deal with the issues that it raises. This can be done in a way that recognizes that the intentions of the author are somewhat unclear. We can, for example, respond to the *Spectator* letter by remarking that

The author of this letter suggests that the *Spectator* is acting in collusion with Stelco. She appears to believe that this is so on the grounds that . . . If this is her reasoning, then she has failed to adequately back her claims. . . .

Here the expressions ‘She appears to believe’ and ‘If this is her reasoning’ clearly recognize that it is possible that the author of the letter intends it in a different way. But our remarks also allow us to deal with the argumentative issues that are raised by her letter in view of the argument it may contain. And dealing with these issues in this way is the proper way to further the discussion and debate.

In cases where we wish to analyze a possible argument, we can recognize the ambiguity of the arguer’s intention by introducing our discussion with a statement like the following:

It is not clear whether the author intends to argue for the claim that . . . He appears to think that this claim can be justified on the grounds that . . . If this is what he intends, then it must be said that . . .

We can then go on to outline the tentative argument we wish to discuss, and to analyze it as we would analyze other arguments. The caveat that we add to such analyses allows us to deal with possible arguments that are worth discussing even if their author intended them in another way. The simple fact that someone might interpret their claims in this way warrants this discussion.

When we do attempt to identify and assess arguments it is important to remember the risk that we may misinterpret someone’s claims. When we construct our own arguments we want to construct them in a way that prevents misinterpretation. In dealing with other people’s claims, we must be particularly careful not to interpret their claims as bad arguments they may not have intended (the principle that we should adopt a charitable interpretation is called the ‘Principle of Charity’). As someone involved in argumentative discussion, which is characterized by controversy and debate, you need to remember that the attempt to avoid misinterpretation does not mean that you should avoid issues that are raised by someone’s remarks. If it is unclear what they intend, you should say so, but this should not stop you from discussing whatever issues are raised by their remarks (intentionally or unintentionally). It is by pursuing such discussion that you will best contribute to the clearer understanding that is the ultimate goal of argument.

**Exercise 1C**

1. The following passage is a variant of the second proof of God’s existence found in St Thomas Aquinas’s *Summa Theologica* (the argument is sometimes called the ‘argu-
ment from first cause’). Identify all the premise and conclusion indicators used in the passage, and identify the structure of the argument, i.e. what premises lead to what conclusions.

The second proof of God’s existence is from the nature of cause and effect. In the world we find that there is an order of causes and effects. There is nothing which is the cause of itself; for then it would have to be prior to itself, which is impossible. Therefore things must be caused by prior causes. So there must be a first cause, for if there be no first cause among the prior causes, there will be no ultimate, nor any intermediate cause, for to take away the cause is to take away the effect. If there were an infinite series of causes, there would be no first cause, and neither would there be an ultimate effect, nor any intermediate causes; all of which is plainly false. Therefore it is necessary to admit a first cause, to which everyone gives the name of God.

2. Insert premise or conclusion indicators, and/or revise the following sentences, in a way that clarifies the argument.

a)* [from a travel brochure] You’ll like the sun. You’ll like the beach. You’ll like the people. You’ll like Jamaica.

b) [from a letter to New Woman (July 1995)] I am disgusted that New Woman printed the letter from B.A. Showalter . . . Showalter said, ‘You don’t see straight people pushing their lifestyle on everyone else.’ But straight people and straight society do just that. From day one, children are assumed to be heterosexual. They are exposed to tales of heterosexual romance, pushed to enjoy the company of the opposite sex, and given little opportunity to explore the alternative.

c)* [adapted from a letter in defence of the decision by the Serbian military to take UN peacekeepers hostage, in Time (3 July 1995)] The Serbs have responded in accordance with appropriate military procedure. Proper military procedure makes soldiers Prisoners of War, not hostages. Those individuals taken are soldiers in combat. They have the right to fire and bomb.

d) [adapted from Aristotle, in Metaphysics, 1084a, pp. 1–4] Number must be either infinite or finite. But it cannot be infinite. An infinite number is neither odd nor even, but numbers are always odd or even.

3. Are the following passages arguments? Borderline cases? What would you say about the passage if you were responding to it?

a) [Martha Beck, in ‘Looking for Dr Listen-Good’, The Oprah Magazine (Jan. 2003), p. 42] You can steer clear of all these nightmare councillors by remembering Goethe’s phrase ‘Just trust yourself, then you will know how to live.’ Rely on this truth at every stage of the therapeutic process. Trust yourself when your aching heart tells you it needs a compassionate witness. Trust yourself when your instincts warn you that the therapist your mother or a minister recommended isn’t giving you the right advice. Trust yourself when, sitting in a relative stranger’s office, you suddenly feel a frightening, exhilarating urge to tell truths you’ve never known until that very moment.
b) She’s the best boss I’ve ever had. She buys everyone a present on their birthday.

c) [from a letter to *National Geographic* (Nov. 1998)] The laboratory where I am a consultant obtained a hair sample of an alleged 1,200-year-old Peruvian mummy. Our analysis revealed levels of lead, cadmium, and aluminum 5 to 13 times higher than would be acceptable in the typical patient of today . . . consensus was that he received the contaminants from improperly glazed clay pottery.

d) [from *Life Extension* (Dec. 2002), p. 32] . . . the fact is that millions of women all over the world don’t need Premarin because they don’t get the [menopause] symptoms Western women get. By now most people have heard that the Japanese have no word for ‘hot flash’. But did you know that the Mayan and Navajo indigenous peoples don’t either? The women in these cultures don’t get ‘hot flashes’. In fact, they get virtually no menopausal symptoms at all. And it’s not because they have strange rituals or odd lifestyles. They simply eat differently. Sounds boring, but these women incorporate things in their diet that keep menopausal symptoms away.

e) [from *PC Gamer* (Dec. 2002)] No other action game has so brilliantly mixed ground combat with aerial support in a multiplayer setting. In *Battlefield 1942*, airpower is a strong weapon, . . . but it comes with high dangers. Ground-based anti-aircraft guns can chop you to pieces with flak, and enemy fighters are a constant dogfighting threat. But when you land your payloads, it’s a devastating blow to the enemy.

f) [from the same article] American, British, Russian, German, and Japanese forces are all modelled. Each map pits two forces against one another in a recreation of a historic battle.

6. **Arguments and Explanations**

Attempting to distinguish arguments from non-arguments can sometimes be confusing because the indicator words used to indicate premises and a conclusion are sometimes used in other ways. In the sentence ‘Since you arrived on the scene my life has been nothing but trouble,’ the word ‘since’ does not act as a premise indicator but signals the passage of time. In the sentence ‘I work for IBM,’ the word ‘for’ is not a premise indicator, and ‘thus’ does not indicate a conclusion in ‘You insert the CD in the CD-ROM drive thus.’

In cases like the ones just noted, it is obvious that indicator words do not function as a way to signal premises and conclusions. In other cases, this may not be obvious, especially in cases where indicators like ‘so’, ‘since’, ‘therefore’, and ‘because’ are used in giving explanations. To understand why these words are used in explanations—and to appreciate the difference between arguments and explanations—you need to understand two different meanings that characterize our ordinary talk of ‘reasons’.

When we talk of ‘reasons’ in logic we mean ‘reasons for believing something’. It is in this sense that premises are reasons for believing some conclusion. In other circumstances, the word ‘reasons’ means ‘causes’ rather than ‘premises’. In this
kind of context, the *reason* something happened is the *cause* that brought it about. Consider Hugh Rawson’s opening remarks in a book on folk etymology (*Devious Derivations*, Castle Books, 2002, p. 1): ‘One of the most basic of all human traits is the urge to find reasons for why things are as they are. Ancient peoples heard thunder and created gods of thunder. They witnessed the change of seasons, and devised stories to explain the coming of winter and the miraculous rebirth of spring. The tendency is universal, appearing in every aspect of human thought and endeavor.’

In this context, the reasons alluded to are those things that bring about—i.e. cause—thunder, the seasons, and everything else that humans aspire to explain. Among the contemporary issues we want to explain are global warming, why some people manage to live so long, and why Mad Cow disease became a human problem. In explaining such phenomena we often use indicator words. We say that global warming has intensified since we burn too much fossil fuel; that Aunt Sally lived so long because she didn’t drink or smoke and avoided arguments; or that the protein molecules that cause Mad Cow disease are not contained in milk, so one cannot contract the disease by drinking milk.

In deciding whether indicator words are being used to indicate an argument or an explanation, you need to consider the status of the claim that is backed by reasons. Consider the claim ‘X, therefore Y’. If this is an argument, it is Y (the conclusion) that is in dispute. If it is an explanation, it is X (the reasons given for Y) that is in dispute. In an explanation, we know what happened and are trying to determine the reasons for it. In an argument (at least if it is a good argument), we know the reasons we cite and are using them to establish some further conclusion that is in doubt.

The claim ‘The house burnt down because they were smoking in bed’ is an explanation. If we put it into the form ‘X, therefore Y’, then X would be equivalent to ‘They were smoking in bed’, and Y would equal ‘The house burnt down’. In such a case, Y is not in doubt. The issue is what reasons explain why Y occurred. It would, therefore, be a mistake to interpret the claim as the following argument:

PREMISE: They were smoking in bed.  
CONCLUSION: Their house burnt down.

In dealing with such cases, you should ask yourself whether the ‘concluding’ statement or state of affairs that is indicated by an indicator word is an issue of disagreement or debate. If the controversy surrounds the reasons (the ‘premise’ material) provided to account for the event, you are dealing with an explanation. If, on the other hand, the conclusion is controversial, and the reasons are assumed to be acceptable, then we have an argument.

Consider another example. Imagine a courtroom in which an expert witness makes the following remarks in explaining what happened in an accident:

The minivan was carrying a load in excess of the maximum recommended and was hauling a trailer that had been improperly attached to the vehicle. Consequently, when the driver veered suddenly to the left—trying to avoid a stalled truck—he lost control of the vehicle and crashed into the oncoming vehicle.
These remarks give the reasons why (according to the expert) the accident occurred. The remarks make it clear that no one doubts that the crash occurred. What is in question is the cause of the crash, and it is this that the expert explains. Of course, the explanation offered for the crash might be debated. It probably will be debated if it is expert testimony in a trial that accuses the driver of breaking the law. In such a context, an explanation may generate an argument. But it is not itself an argument, and it would be a mistake to interpret it as one because it uses a word (‘consequently’) that is often used as a conclusion indicator.

You can usually distinguish arguments and explanations by putting them into the general scheme ‘X, therefore Y’ (or ‘Y because X’) and asking whether they are an attempt to explain the cause of Y or an attempt to argue the claim that Y is true. Alternatively, you can ask whether X or Y is in dispute. If Y (the conclusion) is in dispute, the sentences are an argument. If X (the set of reasons) is in dispute, they form an explanation.

**Arguments within Explanations**

Complex cases arise in situations in which explanations contain arguments. These situations occur because arguments can also be causes. We have already said that good reasoners are convinced by good arguments. In this way, good arguments cause them to hold certain beliefs. To explain the beliefs that people hold, and the behaviours that follow from them, we often need to explain the arguments that led people to such beliefs. In such cases, an explanation will contain an argument (the one ascribed to the person or persons whose belief is in question), and we will, in the process of identifying and assessing arguments, want to recognize and analyze it.

Consider an example. Imagine that it is January. You live in Detroit. Your daughter, Clara, gets up in the morning, looks out the window, and sees a blizzard raging. Instead of getting dressed and setting off to school she smiles and goes back to bed. Let's suppose she reasoned as follows: ‘The schools close down whenever there is a blizzard, so there will be no school today.’ It is clear that this is an argument. It is an argument that convinces Clara that she does not need to go to school.

When you bang on Clara’s bedroom door and ask her why she isn’t ready for school, she explains: ‘Because there’s a blizzard outside and they close the schools whenever there’s a blizzard.’ Clara is now offering an explanation. She is explaining why she isn’t ready for school. If we put her explanation into the standard ‘X, therefore Y’ format, then X = There’s a blizzard outside and they close the schools whenever there’s a blizzard, and Y = I’m still not ready for school. This is clearly an explanation—it explains a cause, and it is the reasons (X) that led to it that are in question (Clara is not disputing that she is still in bed). But this is an explanation with a difference, for it is an explanation that explains the reasoning behind Clara’s decision to stay in bed. In this way, her explanation outlines an argument, which might be summarized as follows:

**PREMISE 1:** There’s a blizzard outside.

**PREMISE 2:** They close the schools whenever there’s a blizzard.

**CONCLUSION:** There’s no need to get ready for school.
In the process of recognizing this argument, we recognize that this is a case in which an explanation contains an argument, and a case in which the word ‘because’ indicates both a causal explanation and, less directly, a set of premises in an argument.

Once we recognize Clara’s argument, it can be assessed and analyzed in the ways that we analyze other arguments. Given that her explanation is, in part, an attempt to convince you that she does not need to get ready for school, you are likely to respond by evaluating her inference. You might look out the window and accept her premise, and accept the conclusion she has inferred. But you might disagree. You might challenge the suggestion that the snowfall outside qualifies as a ‘blizzard’, or you might remind Clara of times when Detroit schools (or her school) remained open, even in the middle of a blizzard. In all these situations, you intuitively recognize that her explanation contains an argument.

Another example can illustrate the difference between explanations that do and do not contain an argument. Suppose someone tells you that ‘Germany lost the war because Hitler turned his attention to Russia when he had England at his mercy.’ This is the kind of statement that is likely to elicit discussion in a conversation about World War II. Many would say it is a simplistic explanation of Germany’s fall from strength. But it is not an argument. This is a case where ‘because’ indicates an explanation rather than an argument. For the statement that Germany lost the war is not a matter of dispute. In attempting to provide a causal explanation for why this happened, the speaker offers a controversial opinion, but they have not as yet attempted to provide evidence to support it.

Imagine that someone challenges the proposed explanation of Hitler’s defeat. Suppose the speaker answers the challenge as follows:

Sun Tzu’s famous book The Art of War says that a successful military campaign must move swiftly. No army can sustain a war for a protracted period of time. Hitler ignored this wisdom. His decision to attack Russia committed him to a long and protracted war. Therefore, he failed.

In this remark our imaginary interlocutor explains the reasons that led to Hitler’s fall. In view of this, the word ‘therefore’ functions as an explanation indicator. But this is a case in which the explanation contains an argument. For it indicates a chain of reasoning that might cause one to believe that Hitler was bound to lose the war when he decided to turn his attention to Russia instead of finishing the war against England. This chain of reasoning can be summarized as follows:

**PREMISE 1:** Sun Tzu’s famous book The Art of War tells us that a successful military campaign must move swiftly—in no army can sustain a military operation for a protracted period of time.

**PREMISE 2:** Hitler’s decision to attack Russia ignored this wisdom, committing him to a protracted war.

**CONCLUSION:** Once Hitler decided to attack Russia, he was bound to fail.
Once we recognize that the explanation contains this argument, we may ask a variety of questions that pertain to it. Does Sun Tzu say what our interlocutor claims? Is the proposed principle of military success debatable? Are there counter-examples that cast doubt upon it? Did the decision to attack Russia inevitably mean a long war? Were there other factors that extended it? Putting aside the answers to these questions, the important point is that this is another case where an explanation contains an argument that may be assessed.

These examples show that arguments and explanations are not in every case distinct. In logic, we have an argument whenever we have reasons forwarded as premises for a conclusion. Some explanations contain reasoning and can be said to contain an argument. In classifying sets of sentences as arguments and non-arguments we need, therefore, to distinguish between explanations that do and do not contain arguments.

7. ARGUMENT NARRATIVES

The most obvious examples of arguments are ‘first-hand’ arguments. They are arguments that are conveyed to us by the words of the arguer. Most of the examples in this book are first-hand arguments. In the cases that are unclear, the lack of clarity is inherent in the words of the author of the argument in question.

We have already seen that the situation is more complex when one deals with arguments that are contained in explanations. In such cases, the argument leads to the conclusion that one should accept the belief or behaviour that is explained. On other occasions, both in this book and in day-to-day reasoning, we will want to analyze second- (or third-) hand arguments that are similar in the sense that they are not expressed in the words of the actual arguer.

Consider an example from a novel. In the novel Redwork, Michael Bedard describes a liaison between one of his main characters, Alison, and a philosophy Ph.D. student she nicknames ‘Hegel’. When her liaison with Hegel leads to pregnancy, ‘His solution to the problem was as clear, clean and clinical as a logical equation—get rid of it. Instead, she had got rid of him. She hadn’t had much use for philosophy since’ (p. 24). In this passage, the narrator provides a second-hand account of reasoning, or ‘argument narrative’, which he attributes to Alison. We do not have the reasoning expressed in her own words, but it is clear that it was Alison’s negative experience with her boyfriend that convinced her that she had no use for philosophy.

We might summarize her argument as ‘Hegel is a philosopher who deals with human situations in ways typical of a philosopher (in ways as clean and clinical as a logical equation), so philosophy is of no use to me.’

Like borderline cases, such argument narratives have to be treated with care, for it is always possible that the person who narrates the argument is not presenting it accurately. The kinds of problems this poses are highlighted in historical discussions of ancient thinkers whose written works have not survived. An extreme example is the ancient philosopher Pyrrho, who is famous for a radical skepticism that
has exerted a great deal of influence on the history of philosophy. The closest we come to his views is an account of them provided by Eusebius, the fourth-century bishop of Caesarea, who quotes a passage in Aristocles’ *On Philosophy*, which is an account of Pyrrho’s philosophy given by his follower, Timon of Phlius. This long chain of reporting makes Eusebius’s account a fourth-hand account of Pyrrho’s views, written more than 500 years after Pyrrho died. In as extreme a case as this, the issues of accuracy that arise in the analysis of narrated arguments make it very difficult to establish, with any certainty, the argument the original arguer espoused.

The limited access we have to an arguer’s own words when we deal with second-hand arguments calls for caution in such contexts, but we can still usefully analyze argument narratives in the way in which we analyze other arguments. In doing so we must be sure to recognize that we are, in such a case, analyzing the argument *someone else* has attributed to the arguer. Provided we have reasonable faith in the person who is attributing the argument, it may be worth analyzing for the same reason that other arguments are worth analyzing—because it can shed light on significant issues we want to explore and understand.

**Exercise 1D**

1. For each of the following passages, discuss whether it contains an explanation and/or argument. Identify any argument (or explanation) indicators in the text and discuss what needs to be said in responding to each passage. In the case of arguments, identify their premises and conclusion.
   a) The company lost a lot of money last year, so we are not getting a wage increase this year.
   b) I believe that drugs should be legal because the attempt to ban them creates more problems than it solves.
   c) [adapted from a letter to the TLS (17 Jan. 2003)] Galileo was faced with the choice of whether to recant the Copernican theory or face almost certain death by torture at the hands of the Inquisition. He chose the disgrace of recanting, rather than an honourable death as a martyr to science, because his work was not complete. He was subsequently able to develop, among other things, a physics involving concepts of constant velocity and acceleration that were crucial to Newton’s development of the laws of motion.
   d) [Emily Carr, in ‘Klee Wyck’, *The Emily Carr Collection* (2002), p. 23] Everything looked safe, but Jimmie knew how treacherous the bottom of Skedans Bay was; that’s why he lay across the bow of his boat, anxiously peering into the water and motioning to Louisa his wife, who was at the wheel.
   e) [from an ad in *Oprah's Magazine* (Jan. 2003)] Over 34 million people are affected by nail fungus, a recurring infection that can spread and lead to serious consequences. So it’s important to begin treatment at the first sign of symptoms.
f) [David Lodge, in *Small World* (1984), p. 231] Half the passengers on transatlantic flights these days are university teachers. Their luggage is heavier than average, . . . and bulkier, because their wardrobes must embrace both formal wear and leisure wear, clothes for attending lectures in, and clothes for going to the beach in, or the Museum, or the Schloss, or the Duomo, or the Folk Village. For that's the attraction of the conference circuit: it's a way of converting work into play . . .

g)* [from Peter King’s website <http://users.ox.ac.uk/~wore0337/note.html> (accessed 19 Dec. 2002)] The smug and offensive (and ignorant) tone of this [comment from another website] gets up my nose, and is a sure-fire way of ensuring that I don't include a link to the site in question.

2. Provide two examples of each of the following:
   a)* argument
   b) logical indicator
   c) premise indicator
   d)* rhetorical question
   e) audience
   f) conclusion
   g) conclusion indicator
   h)* opponent
   i) second-hand argument

3. Each of the following passages is taken from the discussion in this chapter, though the wording has sometimes been adapted for the purposes of this exercise. Each contains a simple argument. In each case, identify any logical indicators as well as the premises and conclusion.
   a)* We have defined an argument as a unit of discourse that contains a conclusion and supporting statements or premises. Since many groups of sentences do not satisfy this definition, and cannot be classified as arguments, we must begin learning about arguments in this sense by learning to differentiate between arguments and non-arguments.

   b) In other cases, indicator words are used, but not to indicate premises and a conclusion. When you come across indicator words that have more than one use, you must therefore be sure that the word or phrase is functioning as a logical indicator.

   c)* In logic, we have an argument whenever we have reasons suggested as premises for a conclusion. Explanations can contain reasoning in this sense and can, therefore, be classified as arguments.

   d) [Clara explaining why she isn't ready to go to school] 'Because there's a blizzard outside and they close Detroit schools whenever there's a blizzard.'

   e) Sun Tzu's famous book *The Art of War* tells us that a successful military force must act swiftly and cannot sustain a military operation for a protracted period of time. But Hitler's decision to attack Russia inevitably committed him to a
long war. Because of this, he was bound to fail once he decided to attack Russia.

f) It is important that you be alert to variations from the usual indicator words, for the richness of our language makes many variations possible.

g) We have already seen that an argument is a unit of discourse consisting of a group of statements. But genuine questions are not statements, but requests for information. As such, a genuine question cannot serve as a premise or conclusion.

h) Misinterpreting someone else’s thinking is a serious mistake and we should therefore proceed with caution when we are trying to decide whether a particular discourse is or is not an argument.

4. Explain why you are reading this book. As this explanation will have to explain your reasoning, it will contain an implicit argument. Identify the premises and conclusion in this argument.

**Major Exercise 1M**

For each of the following, decide whether an argument and/or explanation is present and explain the reasons for your decision. Be sure to qualify your remarks appropriately when dealing with borderline cases. In the case of arguments, provide the premises and conclusion.

a) Religion is nothing but superstition. Historians of religion agree that it had its beginnings in magic and witchcraft. Today’s religious belief is just an extension of this.

b) [a comment by an observer who visited the seal hunt on the east coast of Newfoundland] The first time I went out onto the ice and saw the seal hunt it sickened me. I could not believe that a Canadian industry could involve such cruelty to animals and callous brutalization of men for profit.

c) The island of Antigua, located in the Caribbean, boasts secluded caves and dazzling beaches. The harbour at St John’s is filled with the memories of the great British navy that once called there.

d) [from an ad for Ceasefire, the Children’s Defense Fund and Friends (1995)] Each year, hundreds of children accidentally shoot themselves or someone else. So if you get a gun to protect your child, what’s going to protect your child from the gun?

e) [from a passage in John Grisham’s *The Chamber* (1994), where his protagonist, Adam, and the Governor discuss whether his client will name an accomplice and be granted clemency] It won’t happen, Governor. I’ve tried. I’ve asked so often, and he’s denied so much, that it’s not even discussed any more.

f) [Donald Wildmon, quoted in *Time* (2 June 2003)] Could somebody have a husband and a woman partner at the same time and be a Christian? . . . I doubt that seriously.
g) [Richard Stengel, in *You’re Too Kind* A Brief History of Flattery (Simon & Schuster, 2000), p. 11c] People who do not suffer fools gladly, gladly suffer flatterers. (Ergo, flatterers are no fools.)

h)* [Stengel, p. 14] In many ways, flattery works like a heat seeking missile, only what the missile homes in on is our vanity. And vanity, as the sages tell us, is the most universal human trait. . . . Flattery almost always hits its target because the target—you, me, everybody—rises up to meet it. We have no natural defense system against it.

i)* [from *Time* (2 June 2003), p. 4] As a single father who, when married, held down a demanding job and fully participated in child rearing and household chores, I was offended by Pearson’s fatuous attempt to mine the worn-out vein of humour about useless males. She defines a husband as ‘a well-meaning individual often found reading a newspaper’. None of the fathers and husbands I know come anywhere close to this stereotype. I was dismayed that *Time* would publish such tired pap and think it’s funny or relevant.

j) [overheard at a train station] These trains are *never* on time. The last time I took one it was two hours late.

k) [from an ad in *University Affairs* (Mar. 2003), p. 51] UBC hires on the basis of merit and is committed to employment equity. We encourage all qualified people to apply. There is no restriction with regard to nationality or residence, and the position is open to all candidates. Offers will be made in keeping with immigration requirements associated with the Canada Research Chairs program.

l) [Orlo Miller, in *The Donnellys Must Die* (Macmillan, 1962), p. 231] The body of criminal law is more designed for the punishment of the individual offence than for the execution of judgment against a corporate criminal conspiracy. In witness of this we need only consider the American experience in dealing with organized crime. Even in international law a charge of genocide is difficult to sustain against an individual member of a state conspiracy.

m) [Hugh Rawson, in *Devious Derivations* (Castle Books, 2002), p. 2] False conclusions about the origins of words also arise . . . as a result of the conversion of Anglo-Saxon and other older English terms into modern parlance. Thus a *crayfish* is not a fish but a crustacean (from the Middle English *crevis*, crab). A *helpmate* may be both a help and a mate, but the word is a corruption of *help meet*, meaning suitable helper . . . *Hopscotch* has nothing to do intrinsically with kids in kilts; *scotch* here is a moderately antique word for a cut, incision, or scratch, perhaps deriving from the Anglo-French *escocher*, to notch or nick.

By the same token, people who eat *humble pie* may have been humbled, but only figuratively. The name of the dish comes from *umbles*, meaning the liver, heart, and other edible animal innards.

n) [from a local church pamphlet] None of us on the Leadership Team, here at Brant Community Church, would claim to have received an infallible picture of the future, but we do believe that forecasting and planning is part of the job that God has called us to do.
o) [a quote from ‘Midwifery on Trial’, Quarterly Journal of Speech (Feb. 2003), p. 70] The difficulty I find with the judge’s decision [to dismiss a charge against a midwife] . . . is that these people are completely unlicensed. They are just a group of people, some with no qualifications, whose only experience in some cases is having watched five or six people give birth. They have no comprehension of the complications that can arise in childbirth . . . we are about to embrace totally unqualified people . . . I think the judge is out of his mind.

p) [from the Disability Discrimination Act of the United Kingdom, available online at <http://www.parliament.the-stationery-office.co.uk/pa/lid200102/ldbills/040/2002040.htm> (accessed 8 Jan. 2003)] Where (a) any arrangements made by or on behalf of an employer, or (b) any physical feature of premises occupied by the employer, place the disabled person concerned at a substantial disadvantage in comparison with persons who are not disabled, it is the duty of the employer to take such steps as it is reasonable, in all the circumstances of the case, for him to have to take in order to prevent the arrangements or feature having that effect.

q) [from a letter to Sport’s Illustrated (14 Feb. 1984)] True. Wayne Gretzky’s scoring streak is amazing. But to compare Gretzky’s streak with Joe DiMaggio’s 56-game gem is ludicrous—it’s no contest. Gretzky kept his streak alive by scoring into an empty net in the closing seconds of a game against Chicago. Tell me, how many times did Joe D. come to bat in the bottom of the ninth with no one playing in the outfield? Case closed!

r)* [from a letter in National Geographic (May 1998), which is a comment on an article on the aviator Amelia Earhart, who disappeared on a flight over the Pacific in July 1937] I was sorry to see Elinor Smith quoted, impugning Amelia’s flying skills, in the otherwise excellent piece by Virginia Morell. Smith has been slinging mud at Earhart and her husband, George Putnam, for years, and I lay it down to jealousy. Amelia got her pilot’s license in 1923 (not 1929 as Smith once wrote) and in 1929 was the third American woman to win a commercial license.

s) [John Beifuss, in ‘Timing’s right for Kissinger portrait’, a review of the film Trials, at gomemphisgo.com Movie Reviews, <http://www.gomemphis.com/mca/movie_reviews/article/0,1426,MCA_569_1592636,00.html> (accessed 24 Dec. 2002)] At the very least, Trials serves as an overdue corrective to the still active cult of Kissinger. Even viewers who aren’t convinced that the former national security adviser, Secretary of State and Nobel Peace Prize winner fits the definition of ‘war criminal’ likely will emerge shocked that presidents still call for advice from the man who may have been responsible for such clandestine and illegal foreign policy initiatives as the 1969 US carpet bombing of Cambodia, the 1970 overthrow and murder of democratically elected Chilean president Salvador Allende and the 1972 ‘Christmas Bombing’ of North Vietnam, which Hitchens, in an onscreen interview, describes as ‘a public relations mass murder from the sky’. As journalist Seymour Hersh comments: ‘The dark side of Henry Kissinger is very, very dark.’
t) [an exchange attributed to a reporter interviewing a former Miss Alabama:] 

**Question**: If you could live forever, would you and why? **Answer**: I would not live forever because we should not live forever because if we were supposed to live forever then we would live forever but we cannot live forever which is why I would not live forever.

u) [Nicholas Lezard, in *Guardian Weekly* (12 Oct. 1997), commenting on Edward de Bono’s *Textbook of Wisdom*] This book contains some of the most mindless rubbish I’ve ever been privileged to hear from an adult. . . . I won’t quote any because cleaning vomit from computer keyboards is nasty, time-consuming work. Just trust me when I say that you will become wiser if you gently smear your nose against any section of this newspaper—adverts included. No correspondence, please.

v) [from a letter to *New Woman* (July 1995) in support of a commitment to cover New Age issues] When I was going through a recent bout with depression, I discovered the ‘goddess spirituality’ movement. I chose Artemis as the goddess I would seek comfort in. . . . I built an altar to her in my room, burned incense, and meditated, and I found comfort in these ritualistic practices. I think this type of paganism can be an important tool for women to discover their inner strengths.

w) [Jonelle P. Weaver, in ‘Salad Days’, *New Woman* (July 1996)] Today, there is a tendency to reduce oil [in vinaigrette salad dressing] and make up the volume in acidic liquid. That is a gross error, because the tongue-puckering results annihilate the gentle flavors of other ingredients.

x) [from a letter to the *Kitchener-Waterloo Record*, entitled ‘We’re Different’ (28 Sept. 1993)] The Sept. 20 article, Waterloo Restaurant Charged, outlined the various charges laid against the Golden Griddle Restaurant on Weber Street, Waterloo. This restaurant was charged by the Waterloo Region health unit for various violations under the Provincial Offences Act, including unsanitary conditions and mishandling of food.

As an employee of a neighbouring Golden Griddle in Kitchener, I feel that it is important to point out that the practices of one restaurant are not indicative of the quality of food, service or cleanliness of other Golden Griddle Restaurants, especially the Kitchener location.

The Kitchener Golden Griddle on Highland Road is the highest-ranked restaurant in the chain having been awarded the number one position among the 64 Golden Griddle restaurants across Canada. Each month a ‘mystery guest’ hired by the head office rates each chain restaurant on 57 dimensions that fall under three categories: service, quality of food and cleanliness.

The owners/managers and staff have worked hard over the last nine months to achieve and to maintain this number one standing. It would be unfortunate and unfair for the Kitchener Golden Griddle’s reputation to be tarnished by another restaurant’s transgressions.

The quality, service and cleanliness in any restaurant is a direct reflection of the staff and the management who dedicate their time and effort to their jobs.
y) [The following is adapted from a Wilson Sports advertisement from 1943. Identify two arguments it contains. How do they compare to arguments in advertisements today?]

SPRINTS EQUIPMENT IS FIGHTING EQUIPMENT
   take care of what you have

Every piece of sports equipment you own has a part to play in our total war effort. America's sports must be kept up to keep America strong.

The Player's Pledge

Whereas - American sports play a vital part in the physical fitness and morale of civilian America, and,

Whereas - There is just so much of various types of sports equipment available for the duration,

Therefore - I pledge myself to follow the Wilson "Share the Game" Plan - to help preserve sports for the good of all - to make my present equipment last by using it carefully, and - if I buy NEW equipment, to see that my old equipment is made available to some other American who needs exercise, too.

BUY "WILSON" QUALITY

If you need new equipment, specify Wilson quality. It not only insures better play but longer play. Once you get new equipment, take good care of it. Never has sports equipment been as precious as now. See your Professional or dealer.
z) [What is the argument propounded in the following advertisement?]

IT'S A SMALL WORLD

When you look at it from the right vantage point.

We can get you there.

For twenty years, in over forty countries and sixteen different languages, we're building the Global Networks for the businesses of today.

Simons Global Networking
Visit us at www.simons.com

IT'S A BEAUTIFUL WORLD
Having identified arguments, we need to set them out in diagrams that show the relations between the components. The present chapter discusses

- argument diagrams;
- linked and convergent premises within arguments;
- supplemented diagrams; and
- diagramming your own arguments.

1. Argument Diagrams

Once we recognize an argument, we need to delineate its structure as a first step in deciding how we should assess it. This is not always easy, for arguments in their natural state are frequently confusing. A conclusion may be stated first or last, or may be sandwiched by the premises. Premise and conclusion indicators may or may not be used, and the same ideas may be repeated in a number of different ways. Extraneous comments, digressions, and diversions (insinuations, jokes, insults, complements, etc.) may be interspersed with that content that really matters to the argument.

We call remarks and comments that accompany but are not integral to an argument ‘noise’. In analyzing arguments, you will need to begin by eliminating noise. Sometimes it exists in the form of introductory information that sets the stage or background for an argument that follows. Sometimes it consists of statements that are intended only as asides—statements that have no direct bearing on the argument but may add a flourish or a dash of humour. In discarding noise, you must be careful to
ensure that you do not, at the same time, discard something that is integral to the argument.

We can discard the noise that accompanies an argument by drawing an argument ‘diagram’ that maps and clarifies its structure. Diagramming is an especially important tool when you are first learning how to understand an argument (your own or someone else’s), for it teaches you how to isolate an argument’s essential components and plot their relationship to each other. Even when you have developed your logic skills, diagramming will be an invaluable aid when you must deal with complex arguments, or with arguments that are presented in confusing ways, something that is common in ordinary discourse.

We begin to diagram an argument by extracting its components. It is easiest to begin with the conclusion, because it is the point of the whole argument. After we determine the conclusion, we can identify the premises by asking what evidence is given to support the conclusion. When we are creating a diagram, we create a ‘legend’ that designates the argument’s premises as P1, P2, etc., and the conclusion as C. In an extended argument, we list the intermediary secondary conclusions as C1, C2, etc., and designate the main conclusion as MC. Once we have constructed a legend for a diagram, we use the legend symbols (P1, P2, MC, C1, etc.) to represent the argument’s premises and conclusion, and connect them with arrows that indicate what follows from what.

When we wish to diagram the argument ‘Thinking clearly and logically is an important skill, so all students should study the rudiments of logic,’ we create a legend as follows:

\[
P1 = \text{Thinking clearly and logically is an important skill.} \\
C = \text{All students should study the rudiments of logic.}
\]

Once we have this legend, we can diagram the argument as:

```
  P1
   ↓
    C
```

This diagram portrays the essential structure of our argument. It shows that our argument consists of one premise that leads to one conclusion. Together with our legend, the diagram shows the argument’s components and their relationship. The only thing that might seem missing is the conclusion indicator ‘so’, but this is represented by the arrow in the argument, which tells us the direction of the inference.

In our first example, our diagram is so simple it may seem redundant. But we have purposely begun with a simple argument that requires no interpretation. Should someone using this argument draw a further conclusion from C, such as ‘Courses on critical thinking should be mandatory’ then the corresponding diagram would be a ‘serial’ diagram:
When diagramming most arguments, especially extended ones, we must make many linguistic adjustments. We have already seen that we delete indicator words, since the arrows and symbols in our diagram will perform the task of indicating premises and conclusions and the ways in which they are connected. A more difficult task is eliminating sentences that repeat ideas, as well as remarks, words, and phrases that are, for some other reason, properly classified as noise. In many cases, changes in the wording (but not the meaning) of an argument’s premises and conclusion will make the diagram read more smoothly. We may also need to change verb tenses and re-formulate exclamations, rhetorical questions, and sentence fragments so that they will be recognized as implicit statements that function as a premise or conclusion.

The following excerpt will help to illustrate the kinds of linguistic changes that may be necessary in order to diagram an argument. It is taken from an article entitled ‘$40,000-plus for eggs of clever, pretty women’, by Kate Cox, posted on the Sydney Morning Herald website <http://www.smh.com.au/articles/2002/12/14/1039656259779.html> (15 Dec. 2002):

Karen Synesiou, a director of Egg Donation, Inc., said women [in Australia who are willing to donate their eggs to American couples] could earn up to $US25,000 ($44,000), although the average payment was between $US5,000 and $US10,000. . . . American fertility specialist and former model Shelley Smith, who runs the Egg Donor Program in the US, said it was unethical for US agents to tout for business overseas. ‘I vehemently oppose what they do,’ she said.

‘We work frequently with Australian couples, more and more over the years because they just can’t find donors there. But we don’t import Australian donors.

‘It’s just terrible that they purposely take a woman from there and bring them here when there are dozens of couples desperately needing donors in their own country. It’s a roundabout way . . . and it really exploits everybody, the girls and the couples. Everybody gets hurt.’

Ms Smith said recipient couples would most likely receive less information about their donor and Australian egg donors would be offered less than US citizens get paid for their eggs, not have adequate access to counselling services, and possibly regret it later.

Once we recognize that this passage contains an argument, we can proceed to diagram it. It should immediately be clear that the first sentence in the excerpt is noise.
that provides background information rather than the content of an argument: it explains the context of Smith’s argument, but it is not a part of it. Hence, while the first sentence is important, it contains nothing that needs to be included in our diagram.

In this and other cases, you should always begin your analysis of an argument by trying to identify the principal point the arguer is trying to establish. In the process, you will cut through the noise the argument contains. In this case, this way of proceeding means that we should begin to diagram Smith’s argument by trying to determine her main conclusion. We find this early in the excerpt, when she is attributed the claim that it is unethical for US agents to tout for business overseas. This claim is emphatically reinforced in her statements: ‘I vehemently oppose what they do,’ and ‘it really exploits everybody, the girls and the couples. Everybody gets hurt.’ As the discussion is clearly a discussion of the use of Australian women donors, we will identify the main conclusion as:

\[ MC = \text{It is unethical for American companies to solicit human egg donations from Australia.} \]

Having established the main conclusion in the argument, we need to ask what evidence Smith gives in support of it. We detect a number of premises. The first piece of evidence that demands some comment is included in Smith’s suggestion that ‘Australian egg donors would not have adequate access to counselling services and possibly regret it later.’ This is plausibly interpreted as a sub-argument, for it suggests that Australian women may possibly regret their decision later because they will not have adequate access to counselling services. In order to capture this aspect of the reasoning we need to include the following premise and conclusion in our legend:

\[ P1 = \text{Australian egg donors will not have adequate access to counselling services.} \]
\[ C1 = \text{Australian egg donors who donate to American couples may regret their decision later.} \]

We detect three other premises in the argument, which we identify as follows:

\[ P2 = \text{It’s just terrible that they purposely take a woman from Australia and bring them here when there are dozens of Australian couples desperately needing donors.} \]
\[ P3 = \text{American couples involved in such transactions will most likely receive less information about their donor.} \]
\[ P4 = \text{Australian egg donors will likely be offered less money than US citizens get paid for their eggs.} \]

This completes our legend, allowing us to diagram the argument attributed to Smith:
This example is more complex than our first and better illustrates the process by which we ‘translate’ ordinary-language arguments into diagrams. It is especially important to observe the way we created a clear diagram by eliminating the background information, digressions, and significant repetition of the original. The diagram gives us important information that will be invaluable in an evaluation of the reasoning: it shows us how many lines of support there are for the main conclusion, and how many of those lines are also supported. As diagramming is a skill that improves with practice, it is by repeating exercises such as this that you will learn how to recognize language that needs to be adjusted to suit a diagram, and how to make the linguistic adjustments that are appropriate in different cases.

**DIAGRAMMING: A SHORTCUT METHOD**

In most cases in this book we will present a diagram by defining our legend in the way we have already outlined. But in dealing with arguments on a more casual basis, we often use a quicker method. Instead of writing out each premise and conclusion, we circle the relevant statements in a passage and number them consecutively. We can then sketch a diagram that shows the relationships between the numbered statements. Those sentences or words that can be considered ‘noise’ can be crossed out or left unnumbered.

1. **Thinking clearly and logically is an important skill**, so
2. **all students should study the rudiments of logic**

In diagramming with this shortcut method, our first example might be diagrammed as follows:

```
1

2
```

This shortcut method of diagramming can help you complete practice exercises much more quickly than the long method, which requires you to write out an argument’s premises and conclusion in full. Use the shortcut when it is convenient, as
we will on occasion, but be aware that there are cases in which this method is unsuitable. In these cases, the premises and/or conclusion of the argument need to be identified by making revisions to the actual statements that the arguer uses (in order to eliminate ‘noise’, to clarify the arguer’s meaning, to recognize the argument’s implicit components, or for some other reason).

2. **Linked and Convergent Premises**

In order to make diagrams a more effective way to represent the structure of an argument, we draw them in a way that distinguishes between premises that are ‘linked’ and those that are ‘convergent’. **Linked premises** work as a unit—they support a conclusion only when they are conjoined. **Convergent premises** are separate and distinct, and offer independent evidence for a conclusion.

Some simple examples can illustrate the difference between linked and convergent premises, and the ways in which they can be represented in a diagram. Consider, as a first example, the Sherlock Holmes argument we discussed in Chapter 1 (see p. 2). It can be diagrammed as follows:

\[
\begin{align*}
P_1 &= \text{Although the living room window is open, there are no footprints outside despite the softness of the ground after yesterday’s rain.} \\
P_2 &= \text{The clasp on the box was not broken but opened with a key that had been hidden behind the clock.} \\
P_3 &= \text{The dog did not bark.} \\
C &= \text{The crime was committed by someone in the house.}
\end{align*}
\]

The premises in this argument are convergent: each premise has a separate arrow leading to the conclusion indicating that it provides an independent reason for that conclusion. You can see this by imagining that the only premise in the argument is either P1 or P2 or P3. In each case, our reasoning would be weaker, but the single premise would still provide some evidence for C. The premises do not require each other to provide support for the conclusion.

The situation would be very different if Sherlock Holmes used the following reasoning to conclude that the crime could not have been committed by the butler, George:

\[
\begin{align*}
\text{It is clear that the crime was committed by someone who is very strong. But George is singularly weak. So he cannot be the culprit.}
\end{align*}
\]

In this new argument, the premises are linked: they provide support for the conclusion only if they are considered as a unit. The first premise—the claim that the crime
was committed by someone very strong—provides no support for the conclusion that George ‘cannot be the culprit’ unless we combine it with the second premise—that George is singularly weak. Similarly, the second premise provides no support for the conclusion unless it is combined with the first.

In an argument diagram, we will recognize the linked nature of these two premises by placing a plus sign (+) between them, drawing an underline beneath them, and using a single arrow to join the two of them to the conclusion. Our finished diagram looks like this:

\[
\begin{align*}
P1 &= \text{The crime was committed by someone very strong.} \\
P2 &= \text{George is singularly weak.} \\
C &= \text{George cannot be the culprit.}
\end{align*}
\]

We can easily imagine Sherlock Holmes combining this argument with further reasoning. If he has already decided that ‘Either George or Janice is guilty of the crime,’ he may now conclude that Janice is the culprit, for the argument above has eliminated the only other possibility. In this case, Holmes’ entire chain of reasoning may be diagrammed by extending our initial diagram:

\[
\begin{align*}
P1 &= \text{The crime was committed by someone very strong.} \\
P2 &= \text{George is singularly weak.} \\
C1 &= \text{George cannot be the culprit.} \\
P3 &= \text{Either George or Janice is guilty of the crime} \\
MC &= \text{Janice is guilty of the crime.}
\end{align*}
\]

In this new diagram, C1 and P3 are linked premises for the main conclusion, for they support it only when they are combined.

In drawing diagrams, it is important to make sure that you distinguish between linked and convergent premises, for this distinction will determine how you assess particular premises. If you have difficulty deciding whether some premise P is linked to other premises, ask yourself whether P provides any support for the conclusion when it is considered independently of the other premise(s). If the answer is yes, then draw an arrow from P to the conclusion. If the answer is no, then ask yourself which of the
other premises must be combined with P to make it support the conclusion. After you have answered this question, join P to these other premises with a + sign, underline them, and draw one arrow from this set of premises to the conclusion.

Some Examples
To better acquaint you with argument diagrams we have designed the following three diagrams to illustrate the application of our diagramming method to particular arguments.

Example 1

Argument
The ruins of ancient Aztec pyramids are very similar to those found in Egypt. Also, animals and vegetation found on the eastern coasts of South America bear a striking resemblance to those of West Africa. From all appearances, there was once a large land mass connecting these continents. Which implies that the true ancestors of the indigenous peoples of South America are African.

Diagram
P1 = The ruins of ancient Aztec pyramids are very similar to those found in Egypt.
P2 = Animals and vegetation found on the eastern coasts of South America bear a striking resemblance to those of West Africa.
C1 = There was once a large land mass connecting these continents.
MC = The true ancestors of the indigenous peoples of South America are African.

Example 2

Argument
[In a famous incident in Homer’s Odyssey, Odysseus and his men land on an island inhabited by one-eyed giants called ‘Cyclopes’. When Odysseus speaks to a Cyclops inside a cave he reminds him that Zeus requires the Cyclopes to treat guests well. The Cyclops responds with the following argument.] ‘Stranger, you must be a fool, or must have come from very far afield. For you warn me to take care of my responsibilities to Zeus and we Cyclopes care nothing about Zeus and the rest of the gods...’
Diagram

P1  = You warn me to take care of my responsibilities to Zeus.
P2  = We Cyclopes care nothing about Zeus and the rest of the gods.
C  = You must be a fool or have come from very far afield.

Example 3

Argument
[adapted from a letter to the Globe and Mail (9 Oct. 1998)] Re. Lord Elgin’s Greek Marbles: Robert Fulford advocates that the sculptures should be kept at the British museum. He’s wrong. I can think of three reasons why the marbles should be returned to Greece. They are part of the cultural heritage of Greece, not Britain. They were taken from Greece with the consent of the Ottoman empire, which had no cultural claim on the antiquities. And there is no evidence that the marbles were in danger of ‘destruction or dispersal’, as he puts it, when Lord Elgin shipped them off to Britain.

Mr Fulford should think again.

Diagram

P1  = The Elgin Marbles are part of the cultural heritage of Greece, not Britain.
P2  = The Elgin Marbles were taken from Greece with the consent of the Ottoman empire, which had no cultural claim on the antiquities.
P3  = There is no evidence that the marbles were in danger of ‘destruction or dispersal’ (as Fulford puts it) when Lord Elgin shipped them off to Britain.
C1  = The Marbles should be returned to Greece.
MC  = Robert Fulford is wrong when he advocates that Lord Elgin’s Greek Marbles should be kept at the British Museum.
DIAGRAMMING AN ARGUMENT

1. Determine the main conclusion of the argument: the major point the arguer is trying to establish.
2. Mark the text into blocks that have a unified logical purpose, such as stating a premise or drawing a conclusion.
3. Cross out digressions and noise.
4. Express the content of each block in statement form. In doing so, try to capture the author's intended meaning.
5. Create a legend listing the premises as P1, P2, etc., the subsidiary conclusions as C1, C2, C3, etc. and the main conclusion as MC.
6. Join each independent premise to the conclusion it supports with an arrow.
7. Conjoin linked premises with a plus sign (+) and an underline, and connect them to the appropriate conclusion with an arrow.

3. SUPPLEMENTED DIAGRAMS

A diagram is an efficient way to summarize the content of an argument. Its legend presents the premises and conclusion(s). The diagram itself provides a visual representation of the relationships that exist between them. When we want to assess an argument, constructing a diagram is a good way to begin our assessment of the reasoning it contains.

It is important to remember that, as useful as they may be, diagrams do not, in themselves, provide all the information we need to assess any argument. We have already noted that there is more to an argument than premises and conclusions. Arguments are situated in a context of communication that includes arguers, audiences, and opponents. A careful analysis of an argument must frequently discuss these parties. In order to prepare the way for this discussion, we may, in drawing the diagram for an argument, decide to identify one or more of them. In discussing the strength of the argument, this information may provide the basis for a discussion of the arguer (which may address their credibility or our past experience in dealing with their arguments, etc.), the audience for whom the argument is constructed (which may explain aspects of the argument that might otherwise make little sense), or the opponents (for we may need to assess the extent to which the arguer has adequately dealt with objections to their view).

A supplemented diagram is a diagram of an argument to which has been added information about the arguer, the audience to which the argument is directed, or those who oppose this point of view. A fully supplemented argument contains information on all three. An example that can be used to illustrate the construction of a fully supplemented diagram is the following advertisement for Scotiabank, which appeared in a variety of university newspapers in an effort to promote the bank among students:
Being a student has its advantages.

Being a student can be tough, but it does have its advantages, like the no-fee Scotia Banking Advantage Plan. It gives you a daily interest chequing account, a ScotiaCard banking card and a Classic VISA card. We also offer low-interest Scotia Student Loans. Sign up for the Scotia Banking Advantage Plan before November 10th, you’ll automatically get a chance to win an IBM ThinkPad PS/Note 425 notebook computer. Just drop into any Scotia branch for full details or call 1-800-9-SCOTIA.

Scotiabank

To construct a fully supplemented diagram for this argument, we proceed by preparing a standard diagram, combining it with an account of the arguer, the audience, and the opponents. When we do so, the resulting account of the argument might look like this:

The arguer is Scotiabank.
The audience is students, for this particular advertisement speaks only to students, not to other potential customers.
The opponents include competing banks, who are likely to argue that their banks are as student-friendly as Scotiabank, as well as those who might oppose banking in a more fundamental way. The latter may believe that there are moral reasons that show that we should not use banks and should support credit unions in their place.

P1 = The no-fee Scotia Banking Advantage Plan gives you a daily interest chequing account, a ScotiaCard banking card, and a Classic VISA card.
P2 = We also offer low-interest Scotia Student Loans.
P3 = If you sign up for the Scotia Banking Advantage Plan before November 10th, you’ll automatically get a chance to win an IBM ThinkPad PS/Note 425 notebook computer.
C = You should drop into a Scotiabank branch or call 1-800-9-SCOTIA for details.

This fully supplemented diagram provides a very complete background for argument analysis. On the one hand, it clearly delineates the premises and conclusion of the
argument, and the pattern of support within the reasoning. At the same time, it provides us with the information on the arguer, the audience, and the opponents that may play an important role in our attempt to determine whether this is a good argument. For example, the recognition that the arguer is Scotiabank is not inconsequential, for this is a case where the arguer has an obvious vested interest, where there are financial benefits that accrue to Scotiabank if the intended audience accepts its conclusion. This is something we may need to consider in deciding whether the argument is biased in a way that reflects this vested interest.

In dealing with most arguments we will not provide fully supplemented diagrams. Why? Because this is a time-consuming task, especially if we are analyzing a whole series of arguments. Instead of providing fully supplemented diagrams, we will normally provide diagrams that are supplemented only with whatever information about the arguer, the audience, or the opponents we believe is relevant to a critical assessment of the argument. We suggest you do the same, while keeping in mind that someone who fully understands an argument should be able to provide a fully supplemented diagram that discusses the features of argument we have outlined in this and the previous chapter. Even when you don’t provide a fully supplemented argument, you should, in principle, be able to do so.

**Exercise 2A**

1. Illustrate each of the following concepts with two examples of your own.
   a) diagram legend
   b) linked premises
   c) convergent premises
   d) supplemented diagrams

2. Say whether each of the following passages is an argument. If it is an argument, provide a supplemented diagram that illustrates its structure.
   a) [Richard Stengel, in *You’re Too Kind* A Brief History of Flattery (Simon & Schuster, 2000), p. 234] Compliments, favours, and self-enhancement aren’t good bets when ingratiating upward because they seem manipulative and even impertinent.
   b) [from a letter to the *Globe and Mail* (4 June 2003), p. A16] If the committee that ranked Brian Mulroney second among recent Canadian prime ministers applied the same criteria to prime ministers of the United Kingdom, they would place Neville Chamberlain above Winston Churchill. . . . Something is wrong here.
   c) [from a university debate over the proposed North American ‘missile shield’, which would protect North America from incoming missiles] The proposed missile defence system would be the first step toward weapons in space. So far, space has been preserved as a military free zone. It is important—for the safety of us all—that we keep it that way. So we should reject the proposed missile shield.
   d) [Hilary Clinton, quoted by David Heinzmann in the *Chicago Tribune* (28 Oct. 1999)] ‘[I]n many ways, the story of Chicago blues is the story of the African-
American experience,’ she said. ‘The blues found its beat with the polyrhythms of Africa; gained words and form and pain and emotion on the plantations of the South; travelled up the Mississippi; collaborated with white musicians and discovered electricity, volume and fame right here in the Windy City.’

Urge Hillary Clinton to Save Maxwell Street, An American Treasure
Hilary Clinton has an appreciation for and understanding of the blues and played an instrumental role in ensuring that the Chess Studios have been saved and rehabbed. If preserving the Chess Studios is essential to the legacy of the Blues, certainly Maxwell Street must be preserved also. Blues is, at root, a folk idiom. Its creation comes from the folk at the grassroots street level. The music got recorded at Chess, VJ, and other labels but it got created on Maxwell Street.

University College Bahrain
University College Bahrain is a new private university in the Kingdom of Bahrain. The college seeks qualified candidates in a range of disciplines. It’s an opportunity you should explore. We provide competitive salaries and a renewable 3-year contract, although visiting positions for one year are also available. The benefits package includes (1) Suitable furnished housing, (2) Medical Insurance, (3) Annual round-trip excursion air tickets from Bahrain to place of residence for the employee, spouse, and up to 2 dependent children under the age of 18, (4) Educational allowance for the teaching of children up to BD4,000 for both children from KG2 through Grade 12 level, (5) Annual paid leave of 60 days, (6) Moving allowance and (7) One month’s salary as gratuity for each year of service completed at the University paid annually.

[Robert Sullivan, in ‘Adventure: An Attempt at a Definition’, Life: The Greatest Adventures of All Time (Life Books, Time Inc., 2000), pp. 8–9] We will not deny that when the Norwegian Viking Leif Eriksson sailed to Vinland in the year 1000, . . . he had quite an adventure. We will not deny that when Marco Polo traveled the Silk Road at the end of the 13th century, he had many adventures. We will not deny the adventurousness of Christopher Columbus . . . But adventurers first? We would argue not. Most were explorers, principally, while others were variously conquistadors, missionaries and mercenaries. Among their reasons for venturing, adventure was low on the list. . . . Yes, on paper an explorer may look quite the same as an adventurer. They share several traits—boldness, stoicism, strength. But the reason for the enterprise is fundamentally different, and an adventurer is, therefore, a very different beast.

[from Time (2 June 2003), p. 23] Swing voters have always been elusive creatures, changing shape from election to election. . . . This axiom is proving true again with that most-talked-about slice of American political demography: the Soccer Mom. Since 9/11, polls suggest she has morphed into Security Mom . . . The sea change in these women has already reshaped voting patterns. Their
new attitude helps explain why the gender gap that had worked to the Democrats’ advantage since Ronald Reagan was in office narrowed sharply in last year’s congressional elections.

i) [Hugh Rawson, in Devious Derivations (Castle Books, 2002), pp. 131–2] loo. The standard British euphemism for the toilet . . . is of comparatively recent vintage but of unknown provenance. This has not prevented — on the contrary, it has encouraged — a wealth of speculation about its origin. Among the more frequently encountered theories . . .

1. Loo is a mangled translation of the French lieu, place, as in lieux d’aisance, places of comfort, i.e. comfort stations. This theory accords with the tendency of English speakers to lapse into French when touching on delicate topics. . . . On the other hand, the evidence for lieux as the source of loo is only circumstantial, and it is odd that the conversion into English was not made much earlier than seems to have been the case.

2. Loo is a clipping of Waterloo, a word that is never far removed from the patriotic Briton’s consciousness, possibly with an allusion to yet another euphemism — W.C. or water closet. The association was in the mind of James Joyce . . . But Joyce was always making connections of this sort, and the fact he made this one is not a proof of the Waterloo origin . . .

The various ‘explanations’ for loo are passed along with confident but sadly misplaced assurance.

j) [Hugh Rawson, from the same book, p. 123] kick the bucket. The ‘obvious’ explanation — that the reference is to standing on a pail and kicking it away in order to hang oneself from a rafter may not be correct. Bucket also is an antique word, perhaps from the Old French buquet, balance, for a beam or yoke from which anything may be carried or hung. Thus, the reference might also be to the beam from which slaughtered pigs are suspended by their heels . . .

The earliest known example of kick the bucket in print is from Captain Francis Grose’s A Classical Dictionary of the Vulgar Tongue (1785), where the phrase is defined simply as ‘to die’. The use of the expression at this date to refer to death in general rather than suicide in particular argues in favor of the bucket-as-beam theory, as does the existence of such similar phrases as kick up [one’s] heels and kick [one’s] clogs, also meaning simply ‘to die’.

4. Diagramming Your Own Arguments

Our examples have already demonstrated that diagramming is a useful tool when we need to plot the structure of someone else’s argument. We will end our discussion by noting that diagramming can also be used to analyze and construct arguments of our own. How extensively you use diagrams will depend on your own inclinations. Some people find a diagrammatic representation of an argument an invaluable tool in argument construction. Others who are not inclined to visual representations may not make extensive use of them. Though you will need to decide what works for you,
there are two ways in which a supplemented diagram can help you construct an argument, especially if you feel some trepidation as you approach the task before you.

First, a diagram will provide you with a precisely defined set of premises and conclusions, and illustrate the way in which the premises support particular conclusions. Because the structure in a diagram is clear, using a diagram will encourage you to plot straightforward patterns of argument with clear lines of reasoning. Second, diagramming will help you see for yourself whether the premises you provide work independently to support a conclusion or rely upon each other to provide support.

Once you sketch a diagram, turning it into a written or a spoken argument is a simple task. It requires only that you substitute premise or conclusion indicators for the arrows in the argument, and make any minor adjustments the sense of the argument requires. If there are sub-arguments, you will want to include them as separate paragraphs (or separate sections) in a written argument. The argument that results will have a clear structure because it has been built upon a structure that was clearly delineated in your diagram.

A supplemented diagram is an especially useful tool when preparing an argument, because it will force you to think about the audience and opponents of your argument and their own beliefs and attitudes. This can help you develop an argument that takes them into account. A long extended argument should appeal to the beliefs, convictions, and concerns of the audience, and should address counter-arguments that opponents to your position are likely to raise. The ability to prepare supplemented diagrams will be important to your development as a reasoner.

The arguments you present should be arguments that can easily be diagrammed. Because your argument should be expressed precisely, it should not be difficult for someone who wishes to diagram it to specify your premises and conclusions in a legend. Premise and conclusion indicators should make clear which premises are tied to which conclusions, allowing an observer to easily determine how arrows should connect the different components of the argument, and whether premises should be linked in the diagram or left to converge on the conclusion.

**Exercise 2B**

1. Go back to Exercise 1M (see p. 27). Pick four arguments in the exercise. In each case, dispute the argument's conclusion by providing a supplemented diagram (specifying an audience and an opponent) for a simple argument for the opposite conclusion. Present the argument in a paragraph.

2. Construct and diagram simple arguments supporting or disputing five of the following ten claims. In each case, let the audience be the general public, and define some group of likely opponents. Present the argument you have diagrammed in a paragraph.
   a)* A college education is a privilege rather than a right.
   b)* Genetic experiments should be banned.
c) Capital punishment is wrong.
d) The threat of terrorism justifies greater security measures in airports.
e) History has vindicated capitalism.
f) The drinking age should be a uniform 21 across the nation.
g) Newspapers should not exploit their position by supporting causes.
h) Violent pornography should be censored.
i) The right to bear arms does not extend to assault weapons designed for killing humans.
j) University education should be free for all who qualify.

A Cautionary Note
Having extolled the virtues of diagramming, we offer you a few words of caution and some practical suggestions. In diagramming—and in constructing arguments—aim for simplicity. Plot the structure of your argument so that it is relatively simple and stands out as clearly as possible. Do not defeat your purpose by creating a small-scale version of a Greek labyrinth. Do not push the possibilities for diagramming to extremes. All you need is a diagram that shows clearly the role that each premise plays in the total scheme of your argumentation. Too much elaboration tends to be confusing.

<table>
<thead>
<tr>
<th>PREPARING ARGUMENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Diagram an argument for your conclusion.</td>
</tr>
<tr>
<td>2. Diagram an argument against likely objections.</td>
</tr>
<tr>
<td>3. Keep your diagrams as simple as possible.</td>
</tr>
<tr>
<td>4. Base your finished argument on your diagrams.</td>
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</tbody>
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Major Exercise 2M
Decide whether each of the following contains an argument, and explain the reasons for your decision. Diagram any arguments you find. In at least four cases, provide a fully supplemented diagram of the argument.

a) The room was sealed from the inside. Hence, no one could have left it. Therefore, the murderer was never in the room.
b) Few monographs are successful in introducing readers to the manifold benefits of a new theory or idea while at the same time making clear its weaknesses and limitations. The author is to be commended for what she has accomplished here.
c) Literacy skills are essential for the development of productive citizens. This program has been teaching people basic literacy skills for over two decades. Providing continued funding for the program is clearly justified.
d) Active euthanasia, or assisting someone to die, is a practice that will come to be accepted in the future. For when people become old or debilitated by illness, they may lack the strength to end their own lives. Such individuals may try many times, unsuccessfully, to end their own lives, causing themselves and others great suffering. Therefore, the need to have assistance in ending terminal pain is becoming more evident.

e) [Josef Joffe, discussing America’s role in the world, in Time (7 Mar. 1995)] Why not be a ‘cheap hawk’, letting the others take care of the world’s business? The answer is easy. The Japanese won’t take care of free trade . . . The Russians, if left alone, will happily sell nuclear-weapons technology to Iran, and the French would be similarly obliging about lifting the embargo on Iraq. And who will contain China, the next superpower?

f) [from one of the first printed reviews of the Rolling Stones, included in Tony Sanchez, Up and Down with the Rolling Stones (Blake, 1991)] The Stones are destined to be the biggest group in the R & B scene—if that scene continues to flourish. Three months ago only fifty people turned up to see the group. Now Gomelski has to close the doors at an early hour—with over 400 fans crowding the hall. . . . Fact is that, unlike all other R & B groups worthy of the name, the Rolling Stones have a definite visual appeal. . . . They are genuine R & B fanatics themselves . . . They can also get the sound that Bo Diddley gets—no mean achievement . . . They know their R & B numbers inside out and have a repertoire of about 80 songs, most of them ones that the real R & B fans know and love.

g) [from the website of the US Food and Drug Administration Center for Devices and Radiological Health, <http://www.fda.gov/cdrh/consumer/amalgams.html> (accessed 5 Jan. 2003)] FDA and other organizations of the US Public Health Service (USPHS) continue to investigate the safety of amalgams used in dental restorations (fillings). However, no valid scientific evidence has ever shown that amalgams cause harm to patients with dental restorations, except in the rare case of allergy.

The safety of dental amalgams has been reviewed extensively over the past ten years, both nationally and internationally. In 1994, an international conference of health officials concluded there is no scientific evidence that dental amalgam presents a significant health hazard to the general population, although a small number of patients had mild, temporary allergic reactions. The World Health Organization (WHO), in March 1997, reached a similar conclusion. They wrote: ‘Dental amalgam restorations are considered safe, but components of amalgam and other dental restorative materials may, in rare instances, cause local side effects or allergic reactions. The small amount of mercury released from amalgam restorations, especially during placement and removal, has not been shown to cause any other adverse health effects.’ Similar conclusions were reached by the USPHS, the European Commission, the National Board of Health and Welfare in Sweden, the New Zealand Ministry of Health, Health Canada and the province of Quebec.
h) [from ‘Toxic Teeth’, a report of an Oakland, California, press conference, <http://www.toxicteeth.net/8-3-01.html> (accessed 5 Jan. 2003)] ‘The State of California Dental Board, acting as an arm of the American Dental Association, continues to cover up the dangers of Mercury in dental fillings, in defiance of the law and the increasing scientific evidence,’ said Charles G. Brown, the lead attorney in the national legal battle against Mercury in dentistry and a former West Virginia state Attorney General. ‘It is long past time for the Dental Board to “open wide” and start using the “M” word. By refusing to adopt an accurate, full disclosure Fact Sheet, they continue to deceive consumers into thinking amalgam fillings are made of silver, when in fact the major component—about 50 per cent—is Mercury and only about 25 per cent of a Mercury amalgam filling is composed of silver.

‘Mercury is universally recognized as an extremely dangerous toxin,’ Brown continued. ‘One filling contains 750 milligrams of Mercury, enough to contaminate a small lake. The Dental Board and the ADA [American Dental Association] are out of the medical mainstream in claiming that Mercury is safe for use in human beings. . . .’

‘The Dental Board, like the ADA and the CDA, is out of step not only with the rest of the medical community, but with California law,’ said attorney Shawn Khorrami, who has sued the Dental Board, the ADA and CDA in California Superior Court. ‘The State of California identifies Mercury as a toxic substance, and under Prop. 65, therefore, dentists are required to warn their patients about it. Our complaint is not with individual dentists, many of whom share our concern about the use of Mercury, but with the Dental Board, too many of whose members seem to have a vested interest in the continued use of Mercury.’

‘We believe that the dental industry has not taken responsibility for the toxic Mercury that they release into our waters every day,’ said Lena Brook of Clean Water Action, speaking for her organization as well as Health Care Without Harm and the California Public Interest Research Group. ‘Waste from dental offices and from people with Mercury fillings gets into our sewer systems and eventually into the waters that we fish. Eating fish contaminated with Mercury, a potent neurotoxin, has been proven to affect brain development in children. In fact, according to recent estimates by the Centers for Disease Control, one in ten women of childbearing age are now at risk of having children with neurological defects due to Mercury exposure.’
Communication is a complex process. It frequently depends on an ability to understand what isn’t said, or what is said obliquely. To help understand and diagram arguments of this sort, this chapter presents

- three basic principles of communication;
- abbreviated arguments;
- hidden premises and hidden conclusions; and
- verbal, non-verbal, and visual arguments.

The examples of argument we have examined so far are relatively straightforward. They were chosen because they are, in most cases, explicit combinations of premises and conclusions that are easily interpreted. Arguments can be more difficult to diagram and assess in cases that require more interpretation. This is especially true of arguments that depend on claims or assumptions that are not explicit but are left unstated or are said obliquely. The problems of interpretation that arise in such cases might be compared to the problems we have already noted in our discussion of arguments that lack explicit premise or conclusion indicators.

When diagramming and assessing arguments that depend on components that are not explicit, you must ‘fill in the blanks’ by identifying what an argument assumes or implicitly asserts. To help you deal with the issues this raises, this chapter presents principles of communication that can be applied to cases of this sort. By developing your ability to apply and abide by these principles, you will hone the skills you need to
interpret and diagram other people's arguments, and to create clear and meaningful arguments of your own.

1. **Speech Acts and the Principles of Communication**

Because speech is the paradigm way in which we communicate, attempts to communicate are commonly called 'speech acts'. As their name suggests, speech acts are actions commonly performed by uttering certain kinds of statements. We will follow this convention, noting that we engage in speech acts whenever we communicate, even when we do so without using spoken words. A comment made to a friend is a speech act, but so is a paragraph in a term paper, a wave to a friend, a 'thumbs up' gesture, or a map that someone draws to show you where they live.

The three basic principles of communication we will emphasize can be expressed in terms of speech acts. They are broad principles that inform all kinds of communication. We will emphasize their application to argumentative exchange, but will state them in a general way, as directions you should follow whenever you attempt to interpret a speech act, and especially a speech act that has a meaning that is not fully explicit:

**Principle 1.** Assume that a speech act is intelligible.

**Principle 2.** Interpret a speech act in a way that fits the context in which it occurs.

**Principle 3.** Interpret a speech act in a way that is in keeping with the meaning of its explicit elements (the words, gestures, music, etc., it explicitly contains).

The first of these three principles tells us that we should assume that a speech act is meaningful and strive to understand it. The second and third principles tell us how to understand a speech act, i.e. by considering its immediate and broader context (the other speech acts it is connected to, but also the broader social context in which it occurs), and by interpreting it in a way that is in keeping with the meaning of its explicit elements.

We all use these three principles when we interpret many non-argumentative remarks and gestures. We also use them when we interpret instances of poetry and art, which count as speech acts because they are attempts to engage in communication. We invite you to think about the application of the principles of communication in the latter contexts. In this book we will, however, restrict our attention to their use in the attempt to interpret, diagram, and assess argumentative exchange. Our aim is a discussion that will teach you how to use these principles to unearth and identify implicit components that need to be recognized and identified in such contexts.

It may be helpful to begin by saying that we have implicitly appealed to our three principles of communication in the earlier chapters of this book. The role our principles play in ordinary diagramming and analysis can be illustrated with an example. The following excerpt is taken from a letter to *Atlantic Monthly* (December 2002). It
is a response to an article in which Philip Jenkins predicted the rise of ‘The Next Christianity’, first in the southern hemisphere and then globally.

Philip Jenkins accurately points out the profound demographic shift of Christianity toward the Third World, particularly in Africa. However, the competition between Christianity and Islam, particularly in Africa, may be the real story. . . . AIDS could have profound consequences for the relative performances of Christianity and Islam, particularly in the sub-Saharan Africa. Muslim North and West Africa has been largely spared the devastation that has torn through Christian East and South Africa. Not only are Muslims less likely to engage in social practices that lead to viral transmission (an imperfect defense at best), but circumcised males in Africa become infected and pass on infection at substantially lower rates with a similar level of viral exposure. Unless Christian Africa can find a way to halt the HIV epidemic, the demographic ascent of Christianity may be significantly blunted.

This letter is plausibly read as an extended argument that supports a conclusion expressed in its last sentence. The argument can be diagrammed as follows:

\[
\begin{align*}
P1 &= \text{Muslim North and West Africa have been largely spared the devastation that has torn through Christian East and South Africa.} \\
P2 &= \text{Not only are Muslims less likely to engage in social practices that lead to viral transmission (an imperfect defense at best), but circumcised males in Africa become infected and pass on infection at substantially lower rates with a similar level of viral exposure.} \\
C1 &= \text{The spread of AIDS may have a more negative impact on Christianity than on Islam, especially in Africa.} \\
MC &= \text{Unless Christian Africa can find a way to halt the HIV epidemic, the demographic ascent of Christianity may be significantly blunted.}
\end{align*}
\]

This is a relatively straightforward diagram. You should have no difficulty recognizing that this diagram represents the author's reasoning, even though some features of the argument are not explicit in the letter, which contains no premise and conclusion indicators, and does not explicitly assert C1.

The author comes closest to C1 when he says that ‘AIDS could have profound consequences for the relative performances of Christianity and Islam, particularly in the sub-Saharan Africa.’ Taken in isolation, this is a weaker claim than C1, for it does not