"The recipe for perpetual ignorance is: be satisfied with your opinions and content with your knowledge."
—Elbert Hubbard

YOU CAME INTO THIS WORLD WITHOUT OPINIONS OR JUDGMENTS OR VALUES or viewpoints—and now your head is brimming with them. If you tried to write them all down, you would be busy for the rest of your life (and would probably win an award for being the world's biggest bore). They help you make your way through the world. They guide you to both failure and success, ignorance and understanding, good and bad, paralysis and empowerment. Some of your beliefs truly inform you, and some blind you. Some are true; some are not. But the question is, *which ones are which*? This kind of question—a question about the *quality* of your beliefs—is the fundamental concern of **critical thinking**.

Determining the quality or value of your beliefs is a function of thinking, and the kind of thinking that does this job best is critical thinking—a skill that higher education seeks to foster. This means that critical thinking is not about *what* you think, but *how* you think.

Notice also that the question about the quality of beliefs is not about what factors *caused* you to have the beliefs that you do. A sociologist might tell you how society has influenced some of your moral choices. A psychologist might describe how your emotions cause you to cling to certain opinions. Your best friend might allege that you have unconsciously absorbed most of your beliefs directly from your parents. But none of these speculations have much to do with the central task of critical thinking.

Critical thinking focuses not on what *causes* a belief, but on *whether it is worth believing*. A belief is worth believing, or accepting, if we have *good reasons* to accept it. The better the reasons for acceptance, the more likely the belief is to be true. Critical thinking offers us a set of standards embodied in techniques, attitudes, and principles that we can use to assess beliefs and determine if they are supported by good reasons. After all, we want our beliefs to be true, to be good guides for dealing with the world—and critical thinking is the best tool we have for achieving this goal.

Here's one way to wrap up these points in a concise definition:

CRITICAL THINKING: The systematic evaluation or formulation of beliefs, or statements, by rational standards.

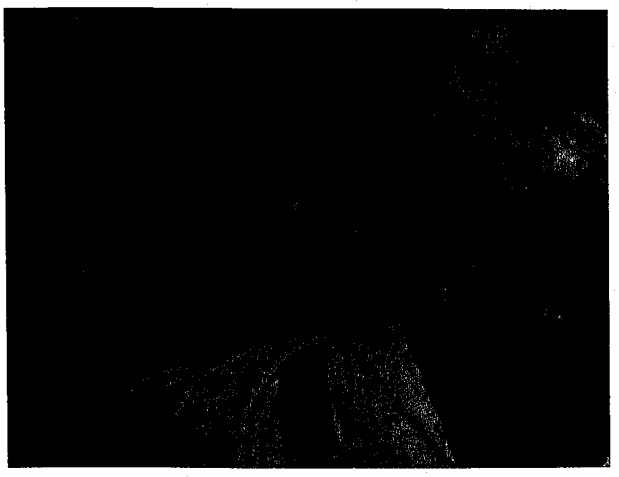
Critical thinking is *systematic* because it involves distinct procedures and methods. It entails *evaluation* and *formulation* because it's used to both assess existing beliefs (yours or someone else's) and devise new ones. And it operates according to *rational standards* in that beliefs are judged by how well they are supported by reasons.

Critical thinking, of course, involves **logic.** Logic is the study of good reasoning, or inference, and the rules that govern it. Critical thinking is broader than logic because it involves not only logic but also the truth or falsity of statements, the evaluation of arguments and evidence, the use of analysis and

investigation, and the application of many other skills that help us decide what to believe or do.

Ultimately, what critical thinking leads you to is knowledge, understanding, and—if you put these to work—empowerment. In addition, as you're guided by your instructor through this text, you will come to appreciate some other benefits that cannot be fully explored now: Critical thinking enables problem-solving, active learning, and intelligent self-improvement.

In Chapters 2 and 3 (the rest of Part 1) you'll get a more thorough grounding in critical thinking and logical argument plus plenty of opportunities to practice your new skills. Consider this chapter an introduction to those important lessons.



In the era of cyberspace and Photoshop, what images can you believe? Whatever the answer, critical thinking must be part of it. Consider this photo of Osama bin Laden, one of several bogus creations that appeared online shortly after his death in May 2011. Some of them also showed up on the front page of major newspapers.

## Why It Matters

In large measure, our lives are defined by our actions and choices, and our actions and choices are guided by our thinking—so our thinking had better be good. Almost every day we are hit by a blizzard of assertions, opinions, arguments, and pronouncements from all directions. They all implore us to believe, to agree, to accept, to follow, to submit. If we care whether our choices are right and our beliefs true, if we want to rise above blind acceptance and arbitrary choices, we must use the tools provided by critical thinking.

We, of course, always have the option of taking the easy way out. We can simply glom onto whatever beliefs or statements come blowing by in the wind, adopting viewpoints because they are favored by others or because they make us feel good. But then we forfeit control over our lives and let the wind take us wherever it will, as if we had no more say in the outcome than a leaf in a storm.

"Are you not ashamed of caring so much for the making of money and for fame and prestige, when you neither think nor care about wisdom and truth and the improvement of your soul?"
—Socrates

A consequence then of going with the wind is a loss of personal freedom. If you passively accept beliefs that have been handed to you by your parents, your culture, or your teachers, then those beliefs are *not really yours.* You just happened to be in a certain place and time when they were handed out. If they are not really yours, and you let them guide your choices and actions, then they—not you—are in charge of your life. Your beliefs are yours only if you critically examine them for yourself to see if they are supported by good reasons.

To examine your beliefs in this way is to examine your life, for your beliefs in large measure define your life. To forgo such scrutiny is to abandon your chance of making your life deliberately and authentically meaningful. The

great philosopher Socrates says it best: "The unexamined life is not worth living."

Thus in the most profound sense, critical thinking is not only enlightening, but empowering. This empowerment can take several forms:

**Skills for learning and exploring.** Some species of critical thinking is essential in every intellectual endeavor, every profession, and every college course. Economics, literature, philosophy, ethics, science, medicine, law—these and many other fields require you to understand and use argument, evaluation, analysis, logic, and evidence. Critical thinking is the common language of many worlds, and practicing it will help you make your way in them.

**Defense against error, manipulation, and prejudice.** For lack of good critical thinking, many intelligent people have been taken in by clever marketers, dubious "experts," self-serving politicians, charming demagogues, skillful propagandists, misinformed bloggers, wooly conspiracy theorists, misguided gurus, reckless alarmists, knee-jerk partisans, and smooth-talking xenophobes. For want of a little logic and careful reflection, you can easily choose the wrong career, wrong friends, wrong spouse, wrong investments, wrong religion, and wrong leaders. Without some skill in moral reasoning (critical thinking applied to ethics), you risk making bad decisions about right and wrong, about good and bad. Critical thinking is no guarantee against any of these errors, but it does provide your best possible defense.

**Tools for self-discovery.** A central goal of higher education is to enable students to think critically and carefully for themselves, to confront issues and problems and then devise their own warranted, defensible answers. This means you must be able not only to critically examine the arguments and assertions of others but also to apply these critical powers to your own ideas. To discover what to believe—that is, to find out which claims are worthy of belief—you must weigh them in the balance of critical reasoning. A central question of a mature intellect is, "What should I believe?" This is the fundamental query at the heart of all your conscious life choices. Only you can answer it, and ultimately only critical thinking can guide you to justified answers.

Critical thinking applies not just to some of your individual beliefs, but to all of them together. It applies to your worldview, the vast web of fundamental ideas that help you make sense of the world, what some people call a philosophy of life. We all have a worldview, and most of us want the beliefs that constitute

it to be true and coherent (to fit together without internal contradictions). As you will see in Chapter 11, devising a coherent worldview is the work of a lifetime—and can only be done with the help of critical thinking.

Our choice whether to apply critical thinking skills is not an all-or-nothing decision. Each of us uses critical thinking to some degree in our lives. We often evaluate reasons for (and against) believing that someone has committed a crime, that an earnest celebrity is deluded, that one candidate in an election is better than another, that gun control laws should be strengthened or weakened, that we should buy a car, that the legendary Bigfoot does not exist, that a friend is trustworthy, that one university is superior to another, that the bill being considered in Congress would be bad for the environment, that Elvis is living the good life in a witness-protection program. But the more urgent consideration is not just whether we sometimes use critical thinking, but how well we use it.

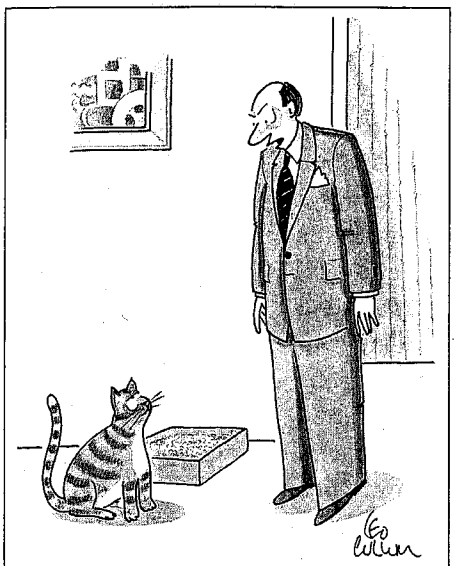
Many people, however, will have none of this—and perhaps you are one of them. They believe that critical thinking—or what they take to be critical thinking—makes one excessively critical or cynical, emotionally cold, and creatively constrained.

For example, there are some who view anything that smacks of logic and rationality as a negative enterprise designed to attack someone else's thinking and score points by putting people in their place. A few of these take the word *critical* here to mean "faultfinding" or "carping."

Now, no doubt some people try to use critical thinking primarily for offensive purposes, but this approach goes against critical thinking principles. The *critical* in critical thinking is used in the sense of "exercising or involving careful judgment or judicious evaluation." Critical thinking is about determining what we are justified in believing, and that involves an openness to other points of view, a tolerance for opposing perspectives, a focus on the issue at hand, and fair assessments of arguments and evidence. To paraphrase a bumper-sticker slogan: Good critical thinking does not make cynics—people make cynics.

Some people fear that if they apply critical thinking to their lives, they will become cold and unemotional—just like a computer abuzz with logic and rote functions. But this is a confused notion. Critical thinking and feelings actually complement one another. Certainly part of thinking critically is ensuring that we don't let our emotions distort our judgments. But critical thinking can also help us clarify our feelings and deal with them more effectively. Our emotions often need the guidance of reason. Likewise, our reasoning needs our emotions. It is our feelings that motivate us to action, and without motivation our reasoning would never get off the ground.

Then there's this dubious assumption: Critical thinking is the enemy of creativity. To some people, critical thinking is a sterile and rigid mode of thought that constrains the imagination, hobbles artistic vision, and prevents "thinking



*"Never, ever, think outside the box."*



outside the box." But critical thinking and creative thinking are not opposed to one another. Good critical thinkers can let their imaginations run free just like anyone else. They can create and enjoy poetry, music, art, literature, and plain old fun in the same way and to the same degree as the rest of the world. Critical thinking can complement creative thinking because it is needed to assess and enhance the creation. Scientists, for example, often dream up some very fanciful theories (which are an important part of doing science). These theories pop into their heads in the same sort of ways that the ideas for a great work of art appear in the mind of its creator. But then scientists use all of their critical thinking skills to evaluate what they have produced (as artists sometimes do)—and this critical examination enables them to select the most promising theories and to weed out those that are unworkable. Critical thinking perfects the creation.

In a very important sense, critical thinking is thinking outside the box. When we passively absorb the ideas we encounter, when we refuse to consider any alternative explanations or theories, when we conform our ideas to the wishes of the group, when we let our thinking be controlled by bias and stereotypes and superstition and wishful thinking—we are deep, deep in the box. But we rise above all that when we have the courage to think critically. When we are willing to let our beliefs be tried in the court of critical reason, we open ourselves to new possibilities, the dormant seeds of creativity.

## REVIEW NOTES

### Why Critical Thinking Matters

- Our thinking guides our actions, so it should be of high quality.
- If you have never critically examined your beliefs, they are not truly yours.
- To examine your beliefs is to examine your life. Socrates: "The unexamined life is not worth living."
- Critical thinking involves determining what we're justified in believing, being open to new perspectives, and fairly assessing the views of others and ourselves.
- Critical thinking provides skills for learning and exploring; defense against error, manipulation, and prejudice; and tools for self-discovery.
- Critical thinking complements both our emotions and our creativity.
- Critical thinking is thinking outside the box.

Critical thinking covers a lot of territory. It's used across the board in all disciplines, all areas of public life, all the sciences, all sectors of business, and all vocations. It has played a major role in all the great endeavors of humankind—scientific discoveries, technological innovations, philosophical insights, social and political movements, literary creation and criticism, judicial and legal reasoning, democratic nation building, and more. The *lack* of critical thinking has also left its mark. The great tragedies of history—the wars, massacres, holocausts, tyrannies, bigotries, epidemics, and witch hunts—grew out of famines of the mind where clear, careful thinking was much too scarce.

# How It Works

As you can see, critical thinking has extremely broad application. Principles and procedures used to evaluate beliefs in one discipline or issue can be used to assess beliefs in many other arenas. Good critical thinking is the same everywhere. Here are the common threads that make it universal.

## Claims and Reasons

Critical thinking is a rational, systematic process that we apply to beliefs of all kinds. As we use the term here, *belief* is just another word for statement, or claim. A **statement** is an assertion that something is or is not the case. The following are statements:

- A triangle has three sides.
- I am cold.
- You are a liar.
- You are not a liar.
- I see blue spots before my eyes.
- $7 + 5 = 12$
- You should never hit your mother with a shovel.
- The best explanation for his behavior is that he was in a trance.
- Rap music is better than punk rock.
- There are black holes in space.

So statements, or claims, are the kinds of things that are either true or false. They assert that some state of affairs is or is not actual. You may know that a specific statement is true, or you may not. There may be no way to find out at the time if the statement is true or false.

**"What some people fail to grasp, Larry, is the difference between 'thinking outside of the box' and just being a weirdo."**

There may be no one who believes the statement. But it would be a statement nonetheless.

Some sentences, though, do *not* express statements:

- Does a triangle have three sides?
- Is God all-powerful?
- Turn that music off.
- Stop telling lies.
- Hey, dude.
- Great balls of fire!

The first two sentences are questions. The second two are commands or requests. The fifth sentence is a greeting. The sixth one is an exclamation. None asserts that something is or is not the case.

When you're engaged in critical thinking, you're mostly either evaluating statements or formulating them. In both cases your primary task is to figure out how strongly to believe them. The strength of your belief should depend on the quality of the reasons in favor of the statements. Statements backed by good reasons are worthy of strong acceptance. Statements that fall short of this standard deserve weaker acceptance.

Sometimes you may not be able to assign any substantial weight at all to the reasons for or against a statement. There simply may not be enough evidence to rationally decide. Generally when that happens, good critical thinkers don't arbitrarily choose to accept or reject a statement. They suspend judgment until there is enough evidence to make an intelligent decision.

## Reasons and Arguments

Reasons provide support for a statement. That is, they provide us with grounds for believing that a statement is true. Reasons are themselves expressed as statements. So a statement expressing a reason or reasons is used to show that another statement is true or likely to be true. This combination of statements—a statement (or statements) supposedly providing reasons for accepting another statement—is known as an **argument.** Arguments are the main focus of critical thinking. They are the most important tool we have for evaluating the truth of statements (our own and those of others) and for formulating statements that are worthy of acceptance. Arguments are therefore essential for the advancement of knowledge in all fields.

Often people use the word *argument* to indicate a quarrel or heated exchange. In critical thinking, however, *argument* refers to the assertion of reasons in support of a statement.

The statements (reasons) given in support of another statement are called the **premises.** The statement that the premises are intended to support is called the **conclusion.** We can define an argument, then, like this:

ARGUMENT: A group of statements in which some of them (the premises) are intended to support another of them (the conclusion).

The following are some simple arguments:

1. Because banning assault rifles violates a constitutional right, the U.S. government should not ban assault rifles.
2. The *Wall Street Journal* says that people should invest heavily in stocks. Therefore, investing in stocks is a smart move.
3. When Judy drives her car, she's always late. Since she's driving her car now, she will be late.
4. Listen, any movie with clowns in it cannot be a good movie. Last night's movie had at least a dozen clowns in it. Consequently it was awful.
5. The war on terrorism must include a massive military strike on nation X because without this intervention, terrorists cannot be defeated. They will always be able to find safe haven and support in the X regime. Even if terrorists are scattered around the world, support from nation X will increase their chances of surviving and launching new attacks.
6. No one should buy a beer brewed in Canada. Old Guzzler beer is brewed in Canada, so no one should buy it.

Here are the same arguments where the parts are easily identified:

1. [Premise] Because banning assault rifles violates a constitutional right, [Conclusion] the U.S. government should not ban assault rifles.
2. [Premise] The *Wall Street Journal* says that people should invest heavily in stocks. [Conclusion] Therefore, investing in stocks is a smart move.
3. [Premise] When Judy drives her car, she's always late. [Premise] Since she's driving her car now, [Conclusion] she will be late.
4. [Premise] Any movie with clowns in it cannot be a good movie. [Premise] Last night's movie had at least a dozen clowns in it. [Conclusion] Consequently it was awful.
5. [Premise] Without a military intervention in nation X, terrorists cannot be defeated. [Premise] They will always be able to find safe haven and support in the X regime. [Premise] Even if terrorists are scattered around the world, support from nation X will increase their chances of surviving and launching new attacks. [Conclusion] The war on terrorism must include a massive military strike on nation X.
6. [Premise] No one should buy a beer brewed in Canada. [Premise] Old Guzzler beer is brewed in Canada. [Conclusion] So no one should buy it.

What all of these arguments have in common is that reasons (the premises) are offered to support or prove a claim (the conclusion). This logical link between premises and conclusion is what distinguishes arguments from all other kinds of discourse. This process of reasoning from a premise or premises to a conclusion based on those premises is called **inference.** Being able to identify

"What danger can ever come from ingenious reasoning and inquiry? The worst speculative skeptic ever I knew was a much better man than the best superstitious devotee and bigot."
—David Hume

arguments, to pick them out of a block of nonargumentative prose if need be, is an important skill on which many other critical thinking skills are based.

Now consider this passage:

> The cost of the new XJ fighter plane is $650 million. The cost of three AR21 fighter bombers is $1.2 billion. The administration intends to fund such projects.

Is there an argument here? No. This passage consists of several claims, but no reasons are presented to support any particular claim (conclusion), including the last sentence. This passage can be turned into an argument, though, with some minor editing:

> The GAO says that any weapon that costs more than $50 million apiece will actually impair our military readiness. The cost of the new XJ fighter plane is $650 million dollars. The cost of three AR21 fighter bombers is $1.2 billion. We should never impair our readiness. Therefore, the administration should cancel both these projects.

Now we have an argument because reasons are given for accepting a conclusion.

Here's another passage:

> Allisha went to the bank to get a more recent bank statement of her checking account. The teller told her that the balance was $1725. Allisha was stunned that it was so low. She called her brother to see if he had been playing one of his twisted pranks. He wasn't. Finally, she concluded that she had been a victim of bank fraud.

Where is the conclusion? Where are the reasons? There are none. This is a little narrative hung on some descriptive claims. But it's not an argument. It could be turned into an argument if, say, some of the claims were restated as reasons for the conclusion that bank fraud had been committed.

Being able to distinguish between passages that do and do not contain arguments is a very basic skill—and an extremely important one. Many people think that if they have clearly stated their beliefs on a subject, they have presented an argument. But a mere declaration of beliefs is not an argument. Often such assertions of opinion are just a jumble of unsupported claims. Search high and low and you will not find an argument anywhere. A writer or speaker of these claims gives the readers or listeners no grounds for believing the claims. In writing courses, the absence of supporting premises is sometimes called "a lack of development."

Here are three more examples of verbiage sans argument:

> Attributing alcohol abuse by children too young to buy a drink to lack of parental discipline, intense pressure to succeed, and affluence incorrectly draws attention to proximate causes while ignoring the ultimate cause: a culture that tolerates overt and covert marketing of alcohol, tobacco and sex to these eas-

FROM THE WEB

## Critical Thinking and Fake Blogs

Fake blogs offering parodies of celebrities or other famous people can be fun: Remember the parody blog called Fake Steve Jobs? But another kind of fake blog—the phony business blog—is less amusing. As one report says,


BBC NEWS

Will fake business blogs crash and burn?

By Robert Plummer
Business reporter, BBC News

Have you come across any sock puppets or astroturfers on the internet lately?

If you're a casual user of the web, you may not have a clue what that means.

But if you're a blogger who specialises in online comment about business, whether as a consumer or a campaigner, the question will probably have you scratching with frustration.

Not so long ago, it was fashionable to celebrate how the internet had empowered the customers of big companies, with dissatisfied consumers taking their grievances to a mass audience through blogs.

Optimists have spoken of the way in which the "one-way street" of corporate communication has been replaced by a "conversation" between businesses and ordinary people.

But at the same time, some firms have been trying to con the consumer by pushing their own propaganda on websites while pretending to be the voice of the people.

Companies caught out posting these bogus blogs - or "flogs" - include Sony, L'Oreal and Wal-Mart, while a whole vocabulary has gradually emerged to describe their actions.

WAYS TO MISLEAD ON THE WEB

- Astroturfing: Attempting to use websites to create a false impression of grass-roots support for something.
- Sock puppetry: Posting entries under several different names to make something look more popular than it is.

Now, however, this kind of tactic has been ruled an unfair commercial practice by Brussels.

From 26 May, any UK firm breaking the rules may face prosecution, stiff fines and possibly even jail terms for its staff.

"This brings in a new concept of fairness, a brave new world for businesses dealing with consumers and advertising," says lawyer Philip Cannell of CMS Cameron McKenna.

"If misleading companies are going to try and be sneaky, that will now be a strictly [illegible]."

SEE ALSO
- How to masterminds a fake blog
- Companies urged: Let your staff blog
- Call for blogging code of conduct
- Australian athletes blogs banned
- Blogosphere sees healthy growth
- Business tales the blogging bullet

TOP BUSINESS STORIES
- G20 leaders close to global deal
- ECB reduces rates to record low
- Airbus admits to saying on staff

MOST POPULAR STORIES NOW
SHARED READ WATCHED/LISTENED
1 G20 leaders close to global deal
2 FBI called in over Wikileaks leak
3 Privacy law cuts internet traffic
4 Clothing verboten at German hotel

> [S]ome firms have been trying to con the consumer by pushing their own propaganda on websites while pretending to be the voice of the people.
>
> Companies caught out posting these bogus blogs—or "flogs"—include Sony, L'Oreal and Wal-Mart. . . .[1]

Have you been a victim of flogging? Probably. Will you get flogged again? Perhaps. The good news is that critical thinking skills provide excellent anti-flog protection. How? Try answering that question for yourself after studying this chapter.

> "He who knows only his own side of the case, knows little of that. His reasons may be good, and no one may have been able to refute them. But if he is equally unable to refute the reasons on the opposite side; if he does not so much as know what they are, he has no ground for preferring either opinion."
>
> —John Stuart Mill

ily manipulated, voracious consumers. [Letter to the editor, *New York Times*]

[A recent column in this newspaper] deals with the living quarters of Bishop William Murphy of the Diocese of Rockville Centre. I am so disgusted with the higher-ups in the church that at times I am embarrassed to say I am Catholic. To know that my parents' hard-earned money went to lawyers and payoffs made me sick. Now I see it has also paid for a high-end kitchen. I am enraged. I will never make a donation again. [Letter to the editor, *Newsday*]

I don't understand what is happening to this country. The citizens of this country are trying to destroy the beliefs of our forefathers with

their liberal views. This country was founded on Christian beliefs. This has been and I believe still is the greatest country in the world. But the issue that we cannot have prayer in public places and on public property because there has to be separation of church and state is a farce. [Letter to the editor, *Douglas County Sentinel*]

The passage on alcohol abuse in children is not an argument but an unsupported assertion about the causes of the problem. The passage from the disappointed Catholic is an expression of outrage (which may or may not be justified), but no conclusion is put forth, and no reasons supporting a conclusion are offered. Note the contentious tone in the third passage. This passage smells like an argument. But, alas, there is no argument. Each sentence is a claim presented without support.

Sometimes people also confuse **explanations** with arguments. An argument gives us reasons for believing *that something is the case*—that a claim is true or probably true. An explanation, though, tells us *why or how something is the case.* Arguments have something to prove; explanations do not. Ponder this pair of statements:

1. Adam obviously stole the money, for three people saw him do it.
2. Adam stole the money because he needed it to buy food.

Statement 1 is an argument. Statement 2 is an explanation. Statement 1 tries to show that something is the case—that Adam stole the money. And the reason offered in support of this statement is that three people saw him do it. Statement 2 does not try to prove that something is the case (that Adam stole the money). Instead, it attempts to explain why something is the case (why Adam stole the money). Statement 2 takes for granted that Adam stole the money and then tries to explain why he did it. (Note: Explanations can be used as integral *parts* of arguments. As such they are powerful intellectual and scientific tools that help us understand the world, which is why this text has several chapters [Part 4] devoted to explanations used in this way.)

"Why should you mind being wrong if someone can show you that you are?"
—A. J. Ayer

It's not always easy to recognize an argument, to locate both premises and conclusion, but there are a few tricks that can make the job more manageable. For one, there are **indicator words** that frequently accompany arguments and signal that a premise or conclusion is present. For example, in argument 1, cited earlier in this chapter, the indicator word *because* tips us off to the presence of the premise "Because banning assault rifles violates a Constitutional right." In argument 2, *therefore* points to the conclusion "Therefore, investing in stocks is a smart move."

Here are some common premise indicators:

| | | |
|---|---|---|
| because | due to the fact that | inasmuch as |
| in view of the fact | being that | as indicated by |
| given that | since | for |
| seeing that | assuming that | the reason being |
| as | for the reason that | |

And here are some common conclusion indicators:

| | | |
|---|---|---|
| therefore | it follows that | it must be that |
| thus | we can conclude that | as a result |
| which implies that | so | which means that |
| consequently | hence | ergo |

Using indicator words to spot premises and conclusions, however, is not foolproof. They're just good clues. You will find that some of the words just listed are used when no argument is present. For example,

- I am here *because* you asked me to come.
- I haven't seen you *since* Woodstock.
- He was *so* sleepy he fell off his chair.

Note also that arguments can be put forth without the use of *any* indicator words:

> We must take steps to protect ourselves from criminals. We can't rely on the government—law enforcement is already stretched thin. The police can't be everywhere at once, and they usually get involved only after a crime has been committed.

As you may have noticed from these examples, the basic structure of arguments can have several simple variations. For one thing, arguments can have any

**"NEWSMAKERS"**

### Political Straw

Political discourse bristles with bad arguments, logical fallacies, rhetorical manipulations, and flat-out lies—the very things that critical thinking can help us defend against. Consider these examples of one of the politician's favorite ploys—the fallacy of the straw man, the distorting, weakening, or oversimplifying of someone's position so it can be more easily attacked or refuted (discussed in detail in Chapter 5).

BARACK OBAMA

"Secularists are wrong when they ask believers to leave their religion at the door before entering into the public square."

"Don't tell me that Democrats won't defend this country!"

LYNNE CHENEY (from her Keep America Safe mission statement)

"Amidst the great challenges to America's security and prosperity, the current [Obama] administration too often seems uncertain, wishful, irresolute, and unwilling to stand up for America, our allies and our interests."

MICHELE BACHMANN

"I also believe that we must repeal and defund Obamacare as part of any solution to our current debt crisis. Why? Because Obamacare is the largest spending and entitlement program ever passed in our nation's history."

SARAH PALIN

"[Obama's Medicare advisory board] also implicitly endorses the use of 'death panel'-like rationing by way of the new Independent Payments Advisory Board—making bureaucrats, not medical professionals, the ultimate arbiters of what types of treatment will (and especially will not) be reimbursed under Medicare.

MITT ROMNEY

"The president went about this all wrong. He went around the world and apologized for America. He—he addressed the United Nations in his inaugural address and chastised our friend, Israel, for building settlements and said nothing about Hamas launching thousands of rockets into Israel."

Can you tell how each position is being distorted? How common is the straw-man fallacy? Do you think it is effective as a tool of persuasion? Would you fall for this tactic? ■

number of premises. Arguments 1 and 2 have one premise. Arguments 3, 4, and 6, two premises; argument 5, three premises. In extended arguments that often appear in essays, editorials, reports, and other works, there can be many more premises. Also, the conclusion of an argument may not always appear after the premises. As in argument 5, the conclusion may be presented first.

Occasionally the conclusion of an argument can be disguised as a question—even though we would usually expect a question not to be a claim at all. (For purposes of examining such arguments, we may need to paraphrase the conclusion; in

some arguments, we may also need to paraphrase premises.) Most of the time readers have no difficulty discerning what the implicit conclusion is. See for yourself:

> Do you think for one minute that liberal Democrats in Congress will support a bill that makes gun control legislation impossible? They have never voted that way. They have already declared that they will not allow such a bill. And their leadership has given them their marching orders: Don't support this bill.

Probably the best advice for anyone trying to uncover or dissect arguments is this: *Find the conclusion first.* Once you know what claim someone is trying to prove, isolating the premises becomes much easier. Ask yourself, "What claim is this writer or speaker trying to persuade me to believe?" If the writer or speaker is not trying to convince you of anything, there is no argument to examine.

## Arguments in the Rough

As you've probably guessed by now, in the real world, arguments almost never appear neatly labeled as they are here. As suggested earlier, they usually come imbedded in a thicket of other sentences that serve many other functions besides articulating an argument. They may be long and hard to follow. And sometimes a passage that sounds like an argument is not. Your main challenge is to identify the conclusion and premises without getting lost in all the "background noise."

Ponder this passage:

> [1] A. L. Jones used flawed reasoning in his letter yesterday praising this newspaper's decision to publish announcements of same-sex unions. [2] Mr. Jones asserts that same-sex unions are a fact of life and therefore should be acknowledged by the news media as a legitimate variation on social partnerships. [3] But the news media are not in the business of endorsing or validating lifestyles. [4] They're supposed to report on lifestyles, not bless them. [5]

"Ignorance is an evil weed, which dictators may cultivate among their dupes, but which no democracy can afford among its citizens."
—William Henry Beveridge

REVIEW NOTES

### Claims, Reasons, and Arguments

- **Statement (claim):** An assertion that something is or is not the case
- **Premise:** A statement given in support of another statement
- **Conclusion:** A statement that premises are used to support
- **Argument:** A group of statements in which some of them (the premises) are intended to support another of them (the conclusion)
- **Explanation:** A statement or statements asserting why or how something is the case
- **Indicator words:** Words that frequently accompany arguments and signal that a premise or conclusion is present

"I respect faith, but doubt is what gets you an education."
—Wilson Mizner

In addition, by validating same-sex unions or any other lifestyle, the media abandon their objectivity and become political partisans—which would destroy whatever respect people have for news outlets. [6] All of this shows that the news media—including this newspaper—should never (explicitly or implicitly) endorse lifestyles by announcing those lifestyles to the world.

There's an argument here, but it's surrounded by extraneous material. The conclusion is sentence 6—"All of this shows that the news media—including this newspaper—should never (explicitly or implicitly) endorse lifestyles by announcing those lifestyles to the world." Since we know what the conclusion is, we can identify the premises and separate them from other information. Sentences 1 and 2 are not premises; they're background information about the nature of the dispute. Sentence 3 presents the first premise, and sentence 4 is essentially a restatement of that premise. Sentence 5 is the second premise.

Stripped clean of nonargumentative material, the argument looks like this:

## FURTHER THOUGHT

### Go Ahead, Make My Day

Occasionally you will come across an argument that makes its case by way of irony. Both the premises and conclusion may be clearly implied but nowhere stated directly. Here's an excerpt from a full-page ad in the *New York Times* featuring a big picture of Osama bin Laden, the man thought to be responsible for the terrorist attacks of September 11. Osama is addressing America:

> I want you to invade Iraq. Go ahead. Send me a new generation of recruits. Your bombs will fuel their hatred of America and their desire for revenge. Americans won't be safe anywhere. Please attack Iraq. Distract yourself from fighting Al Qaeda. Divide the international community. Go ahead. Destabilize the region. Maybe Pakistan will fall—we want its nuclear weapons. Give Saddam a reason to strike first. He might draw Israel into a fight. Perfect! So please—invade Iraq. Make my day.

Here, an advocacy group is arguing for the opposite of what "Osama" is saying: Don't invade Iraq. This message is the implied conclusion. The basic idea is that invading Iraq is exactly what terrorists want—so don't do it.

[Premise] But the news media are not in the business of endorsing or validating lifestyles. [Premise] In addition, by validating same-sex unions or any other lifestyle, the media abandon their objectivity and become political partisans—which would destroy whatever respect people have for news outlets. [Conclusion] All of this shows that the news media—including this newspaper—should never (explicitly or implicitly) endorse lifestyles by announcing those lifestyles to the world.

Now see if you can spot the conclusion and premises in this one:

[1] You have already said that you love me and that you can't imagine spending the rest of your life without me. [2] Once, you even tried to propose to me.

## FURTHER THOUGHT

### Dumb and Dumber

Many times when we don't know something, that's bad. But when we don't know that we don't know something, that's worse. At least, that's the view of researchers who studied the effects of this kind of double-edged ignorance (*Journal of Personality and Social Psychology*, Dec. 1999). In several studies, the researchers assessed the ability of study participants in areas that demanded "knowledge, wisdom, or savvy"—logical reasoning, English grammar, and humor.

Harry and Lloyd (Jim Carrey and Jeff Daniels) from the movie *Dumb & Dumber* (1994).

The results: People whose abilities were very weak tended to greatly overestimate them. Those who got the lowest test scores thought that they achieved much higher scores. The data suggested that the overestimations arose because the subjects couldn't distinguish accuracy from error. They didn't know what they didn't know. Ironically, when the researchers helped the participants improve their abilities and increase their knowledge, the participants could recognize their limitations.

Hmm. Increase your knowledge and recognize your limitations—isn't that what critical thinking helps you do?

[3] And now you claim that you need time to think about whether we should be married. [4] Well, everything that you've told me regarding our relationship has been a lie. [5] In some of your letters to a friend you admitted that you were misleading me. [6] You've been telling everyone that we are just friends, not lovers. [7] And worst of all, you've been secretly dating someone else. [8] Why are you doing this? [9] It's all been a farce, and I'm outta here.

And you thought that romantic love had nothing to do with critical thinking! In this passionate paragraph, an argument is alive and well. The conclusion is in sentence 4: "Well, everything that you've told me . . . has been a lie." Sentence 9, the concluding remark, is essentially a repetition of the conclusion. Sentences 1, 2, and 3 are background information on the current conflict. Sentences 5, 6, and 7 are the premises, the reasons that support the conclusion. And sentence 8 is an exasperated query that's not part of the argument.

You will discover that in most extended argumentative passages, premises and conclusions make up only a small portion of the total wordage. A good part of the text is background information and restatements of the premises or conclusion. Most of the rest consists of explanations, digressions, examples or illustrations, and descriptive passages.

Of all these nonargumentative elements, explanations are probably most easily confused with arguments. As we've seen, arguments try to prove or demonstrate that a statement is true. They try to show *that* something is the case. Explanations, however, do not try to prove that a statement is true. They try to show *why* or *how* something is the way it is. Consider these two statements:

- People have a respect for life because they adhere to certain ethical standards.
- People should have a respect for life because their own ethical standards endorse it.

The first statement is an explanation. It's not trying to prove anything, and no statement is in dispute. It's trying to clarify why or how people have respect for life. The second statement, though, is an argument. It's trying to prove, or provide support for, the idea that people should have a respect for life.

We discuss the basics of explanations in Chapter 9, and we deal with the other nonargumentative elements in Chapters 4 and 5. In the meantime, you should be able to locate the conclusion and premises of an argument—even when there is a lot of nonargumentative material nearby.

Finally, as you can see, learning the principles of critical thinking or logic requires at least some prior knowledge and ability. But, you may wonder (especially if this is your first course in critical or logical reasoning), Where does this prior knowledge and ability come from—and do you have these prerequisites? Fortunately, the answer is yes. Since you are, as Aristotle says, a rational animal, you already have the necessary equipment, namely, a logical sense that helps you reason in everyday life and enables you to begin honing your critical reasoning.

## KEY WORDS

**argument**
**conclusion**
**critical thinking**
**explanation**
**indicator words**
**inference**
**logic**
**premise**
**statement**

# Summary

- Critical thinking is the systematic evaluation or formulation of beliefs, or statements, by rational standards. Critical thinking is *systematic* because it involves distinct procedures and methods. It entails *evaluation* and *formulation* because it's used to both assess existing beliefs (yours or someone else's) and devise new ones. And it operates according to *reasonable standards* in that beliefs are judged according to the reasons and reasoning that support them.

## Why It Matters

- Critical thinking matters because our lives are defined by our actions and choices, and our actions and choices are guided by our thinking. Critical thinking helps guide us toward beliefs that are worthy of acceptance, that can us help be successful in life, however we define success.
- A consequence of not thinking critically is a loss of personal freedom. If you passively accept beliefs that have been handed to you by your family and your culture, then those beliefs are not really yours. If they are not really yours, and you let them guide your choices and actions, then they—not you—are in charge of your life. Your beliefs are yours only if you critically examine them for yourself to see if they are supported by good reasons.
- Critical thinking does not necessarily lead to cynicism. It can complement our feelings by helping us sort them out. And it doesn't limit creativity—it helps perfect it.

## How It Works

- Critical thinking is a rational, systematic process that we apply to beliefs of all kinds. *Belief* is another word for statement, or claim. A *statement* is an assertion that something is or is not the case. When you're engaged in critical thinking, you are mostly either evaluating a statement or trying to formulate one. In both cases your primary task is to figure out how strongly to believe

the statement (based on how likely it is to be true). The strength of your belief will depend on the strength of the reasons in favor of the statement.

- In critical thinking an argument is not a feud but a set of statements—statements supposedly providing reasons for accepting another statement. The statements given in support of another statement are called the *premises*. The statement that the premises are used to support is called the *conclusion*. An argument then is a group of statements in which some of them (the premises) are intended to support another of them (the conclusion).
- Being able to identify arguments is an important skill on which many other critical thinking skills are based. The task is made easier by indicator words that frequently accompany arguments and signal that a premise or conclusion is present. Premise indicators include *for, since,* and *because*. Conclusion indicators include *so, therefore,* and *thus*.
- Arguments almost never appear neatly labeled for identification. They usually come imbedded in a lot of statements that are not part of the arguments. Arguments can be complex and lengthy. Your main challenge is to identify the conclusion and premises without getting lost in all the other verbiage.

## EXERCISES

Exercises marked with * have answers in "Answers to Exercises" (Appendix B). Integrative exercises and writing assignments are not supplied with answers.

### Exercise 1.1

REVIEW QUESTIONS

* 1. What is critical thinking?
2. Is critical thinking primarily concerned with *what* you think or *how* you think?
3. Why is critical thinking systematic?
* 4. According to the text, what does it mean to say that critical thinking is done according to rational standards?
5. According to the text, how does a lack of critical thinking cause a loss of personal freedom?
* 6. What does the term *critical* refer to in critical thinking?
7. In what way can feelings and critical thinking complement each other?
* 8. What is a statement?