SEVENTH EDITION

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CRITICAL THINKING: A STUDENT'S INTRODUCTION, SEVENTH EDITION



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Let's be honest. Few of your college textbooks will change your life. But this one absolutely can.

This book will make you a better thinker. It will sharpen your mind, discipline your thinking, and help you make smarter decisions.

We will teach you—step by step—how to understand complex texts, analyze issues, think logically, and argue effectively. With effort on your part, this book will hone the thinking skills you need to succeed in college, in your career, and in life.

College is not ultimately about memorizing facts—it's about learning to think. And that's what this book is built to do. It will teach you the skills and attitudes you need to become a skilled thinker, an effective problem solver, and a sound decision-maker.

Together, the authors of this text have been teaching critical thinking for many decades. Teaching critical thinking is our passion. We have seen how it can change lives.

But college is like life: You get out of it what you put into it. Becoming a critical thinker is hard work. At times, this course will feel like boot camp. There's a reason for that: No pain, no gain. Becoming a critical thinker means toning your mental muscles, breaking bad habits of flabby thinking, and developing powerful new habits of disciplined thinking and critical awareness. That requires effort—and practice.

That's why this text has so many exercises. There are tons of them, and all have been carefully selected and class-tested. You need to do the exercises, work through them, and then check the Answers to Selected Exercises at the back of the book. Practice. Make mistakes. Get feedback. And watch yourself become a better, more confident thinker.

Critical thinking is a challenge and an adventure. We hope you enjoy the book and the journey!

*Nothing is more powerful than reason.*
*–Saint Augustine*

The first edition of *Critical Thinking: A Student's Introduction* grew out of our conviction that a critical thinking text that works–that produces real, measurable improvement in students' critical reasoning skills, attitudes, and habits–must have two essential features:

- It must be a text that today's gadget-loving students actually *read.*
- It must provide abundant, class-tested exercises that give students the practice they need to develop as maturing critical thinkers.

In revising *Critical Thinking: A Student's Introduction* for this edition, we've tried to remain faithful to this original vision. Many passages have been rewritten to make the book clearer and (we hope) more engaging and accessible. In addition, several new readings have been added to keep the text timely and culturally relevant.

## Overview of the Text

*Critical Thinking: A Student's Introduction* is designed to provide a versatile and comprehensive introduction to critical thinking. The book is roughly divided into seven major parts:

1. *The Fundamentals:* Chapters 1–3 introduce students to the basics of critical thinking in clear, reader-friendly language.
2. *Language:* Chapter 4 discusses the uses and pitfalls of language, emphasizing the ways in which language can be used to hinder clear, effective thinking.
3. *Fallacies:* Chapters 5 and 6 teach students how to recognize and avoid twenty-two of the most common logical fallacies.

4. *Argument Analysis and Evaluation:* Chapters 7 and 8 offer a clear, step-by-step introduction to the complex but essential skills of argument analysis and evaluation.
5. *Traditional Topics in Informal Logic:* Chapters 9–11 offer a clear, simplified introduction to three traditional topics in informal logic: categorical logic, propositional logic, and inductive reasoning.
6. *Researching and Writing Argumentative Essays:* Chapters 12 and 13 provide students with specific, detailed guidance in producing well-researched, properly documented, and well-written argumentative essays.
7. *Practical Applications:* Chapters 14 and 15 invite students to apply what they have learned by reflecting critically on two areas in which *un*critical thinking is particularly common and harmful: the media (Chapter 14) and science and pseudoscience (Chapter 15).

The text can be taught in various ways. For instructors who stress argument analysis and evaluation, we suggest Chapters 1–8. For instructors who emphasize informal logic, we recommend Chapters 1–6 and 9–11. For instructors who focus on writing, we suggest Chapters 1–6 and 12 and 13. And for instructors who stress practical applications of critical thinking, we recommend Chapters 1–6 and 14 and 15.

## Continuing Strengths of the Text

There are several features that set this book apart from other critical thinking texts:

- A versatile, student-centered approach that covers all the basics of critical thinking—and more—in reader-friendly language.
- An abundance of interesting (and often humorous or thought-provoking) classroom-tested exercises.
- An emphasis on active, collaborative learning.
- A strong focus on writing, with complete chapters on using and evaluating sources (Chapter 12) and writing argumentative essays (Chapter 13).
- An emphasis on real-world applications of critical thinking, with many examples taken from popular culture, and complete chapters on the media and pseudoscientific thinking.
- An extensive treatment of critical thinking standards and impediments.
- A clear and detailed discussion of the distinction between deductive and inductive reasoning.
- An abundance of thought-provoking marginal quotes, as well as "Critical Thinking Lapses"—outrageous examples of poor critical reasoning.

This edition is available online with Connect, McGraw Hill Education's integrated assignment and assessment platform. Connect also offers SmartBook, which is the first adaptive reading experience proven to improve grades and help students study more effectively. All of the title's website and ancillary content is also available through Connect, including an extensive password-protected, user-friendly Instructor's Manual, PowerPoint lecture notes, and a full Test Bank.

## Changing Times, Fresh Material

In preparing this edition, we have benefited greatly from feedback from students, instructors, and a host of anonymous pre-revision reviewers. Our grateful thanks to all! Major changes to this edition include:

- Several new readings have been added and some older readings have been replaced.
- New and updated exercises and examples have been added throughout the book.
- An expanded introduction to the fundamentals of critical thinking (Chapter 1).
- A fuller treatment of the fallacies of composition and division (Chapter 6).
- Updated sections on advertising and the media (Chapter 14).
- In a continuing effort to keep the text as affordable as possible, several chapters have been streamlined and some nonessential (but pricey) materials have been dropped.
- The Instructor's Manual and student online resources have been updated.

## Acknowledgments

Preparing this new edition in the midst of a global pandemic has presented unusual challenges and has truly been a team effort. We're grateful to our pre-revision reviewers and to the many people who have reached out to us by e-mail to offer helpful suggestions. It has been a pleasure working with the skilled and dedicated production staff at McGraw Hill, including Alexander Preiss, Jennifer Apt, Melissa Leick, Sarita Yadav, Gina Oberbroeckling, and Sarah Flynn. As always, our greatest debts are to our families. They have made all the difference.

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This book is about the power of disciplined thinking. It's about learning to think for yourself and being your own person. It's about the personal enrichment that results from learning to use your mind to its fullest potential. In short, it's about critical thinking.

Critical thinking is what a college education is all about. In many high schools, the emphasis tends to be on "lower-order thinking." Students are simply expected to passively absorb information and then repeat it back on tests. In college, by contrast, the emphasis is on fostering "higher-order thinking": the active, intelligent evaluation of ideas and information. This doesn't mean that factual information and rote learning are ignored in college. But it is not the main goal of a college education to teach students *what to think.* The main goal is to teach students *how to think*–that is, how to become independent, self-directed thinkers and learners.

We live in exciting, fast-changing times. With the click of a mouse or the tap of a finger, each of us has instant access to a world of thoughtful, well-reasoned analysis–or to a sewer of bigotry, illogic, and misinformation. Many people today rely heavily on social media, openly partisan news outlets, and other dubious sources for much of their news, information, and social commentary. This has led to a dangerous proliferation of ill-informed, extremist views and a growing number of people who dwell in a toxic "echo chamber" of endlessly repeated and reinforced monolithic views. As Thomas Jefferson stated, "in a republican nation, whose citizens are to be led by reason and persuasion and not by force, the art of reasoning becomes of first importance." Never in human history, perhaps, has it been more important to master this Jeffersonian "art of reasoning."

Often when we use the word *critical* we mean "negative and fault-finding." This is the sense we have in mind, for example, when we complain about a parent or a friend who we think is unfairly critical of what we do or say. But *critical* also

means "involving or exercising skilled judgment or observation." In this sense, critical thinking means thinking clearly and intelligently. More precisely, **critical thinking** is the general term given to a wide range of cognitive skills, attitudes, and intellectual dispositions needed to effectively identify, analyze, and evaluate arguments and truth claims; to discover and overcome biases and false preconceptions; to formulate and present sound reasons in support of conclusions; and to make reasonable, intelligent decisions about what to believe and what to do.

Put somewhat differently, critical thinking is disciplined thinking governed by high intellectual standards. Among the most important of these intellectual standards are **clarity, precision, accuracy, relevance, consistency, logical correctness, completeness,** and **fairness.**[1] Let's begin our introduction to critical thinking by looking briefly at each of these important critical thinking standards.

## Critical Thinking Standards

### Clarity

Before we can effectively evaluate a person's argument or claim, we need to understand clearly what they are saying. Unfortunately, that can be difficult because people often fail to express themselves clearly. Sometimes this lack of clarity is due to laziness, carelessness, or a lack of skill. At other times, it results from a misguided effort to appear clever, learned, or profound. Consider the following passage from philosopher Martin Heidegger's influential but notoriously obscure book *Being and Time:*

> Temporality makes possible the unity of existence, facticity, and falling, and in this way constitutes primordially the totality of the structure of care. The items of care have not been pieced together cumulatively any more than temporality itself has been put together "in the course of time" ["mit der Zeit"] out of the future, the having been, and the Present. Temporality "is" not an *entity* at all. It is not, but it *temporalizes* itself.... Temporality temporalizes, and indeed it temporalizes possible ways of itself. These make possible the multiplicity of Dasein's modes of Being, and especially the basic possibility of authentic or inauthentic existence.[2]

That may be profound, or it may be nonsense, or it may be both. Whatever exactly it is, it is quite needlessly obscure.

As William Strunk Jr. and E. B. White remark in their classic *The Elements of Style,* "[M]uddiness is not merely a disturber of prose, it is also a destroyer of life, of hope: death on the highway caused by a badly worded road sign, heartbreak among lovers caused by a misplaced phrase in a well-intentioned letter...."[3] Only by paying careful attention to language can we avoid such needless miscommunications and disappointments.

Critical thinkers strive not only for clarity of language; they also seek maximum clarity of thought. As self-help books constantly remind us, to achieve our personal goals in life, we need a clear conception of our goals and priorities,

a realistic grasp of our abilities, and a clear understanding of the problems and opportunities we face. Such self-understanding can be achieved only if we value and pursue the clarity of thought.

## Precision

Detective stories contain some of the most interesting examples of critical thinking in fiction. The most famous fictional sleuth is, of course, Sherlock Holmes, the immortal creation of British writer Sir Arthur Conan Doyle. In Doyle's stories, Holmes is often able to solve complex mysteries when the bungling detectives from Scotland Yard haven't so much as a clue. What is the secret of his success? An extraordinary commitment to precision–that is, exact, detailed information and analysis. First, by careful and highly trained observation, Holmes is able to discover clues that others have overlooked. Then, by a process of precise logical inference, he is able to reason from those clues to discover the solution to the mystery.

Everyone recognizes the importance of precision in specialized fields such as medicine, mathematics, architecture, and engineering. Critical thinkers also understand the importance of precise thinking in daily life. They understand that to cut through the confusions and uncertainties that surround many everyday problems and issues, it is often necessary to insist on precise answers to precise questions: What exactly is the problem we're facing? What precisely are the alternatives? What exactly are the advantages and disadvantages of each alternative? Only when we habitually seek such precision are we truly critical thinkers.

## Accuracy

There is a well-known saying about computers: "Garbage in, garbage out." Simply put, this means that if you put bad information into a computer, bad information is exactly what you will get out of it. Much the same is true of human thinking. No matter how brilliant you may be, you're almost guaranteed to make bad decisions if your decisions are based on false information.

A good example of this is provided by the 2020 U.S. presidential election. Following his decisive defeat at the polls, President Trump falsely declared that the election was "rigged" and that he had actually "won by a lot." Despite clear evidence to the contrary, many Trump loyalists accepted this "Big Lie." What resulted was an unprecedented assault on American democracy, culminating in the violent insurrectionist attack on the U.S. capitol on January 6, 2021, and a wave of voter-suppression laws in states with Republican legislatures. None of this would have occurred had Trump supporters honestly examined how baseless were claims of election rigging and widespread illegal voting.

Critical thinkers don't merely value the truth; they have a *passion* for accurate, timely information. As consumers, citizens, workers, and parents, they strive to make decisions that are as informed as possible. In the spirit of Socrates' famous statement that the unexamined life is not worth living, they never stop learning, growing, and inquiring.

## Relevance

Anyone who has ever sat through a meandering, unproductive meeting or watched a mud-slinging political debate can appreciate the importance of staying focused on relevant, on-topic ideas and information. A favorite debater's trick is to try to distract an audience's attention by raising an irrelevant issue. Even Abraham Lincoln wasn't above such tricks, as the following story told by his law partner illustrates:

> In a case where Judge [Stephen T.] Logan—always earnest and grave—opposed him, Lincoln created no little merriment by his reference to Logan's style of dress. He carried the surprise in store for the latter, till he reached his turn before the jury. Addressing them, he said: "Gentlemen, you must be careful and not permit yourselves to be overcome by the eloquence of counsel for the defense. Judge Logan, I know, is an effective lawyer. I have met him too often to doubt that; but shrewd and careful though he be, still he is sometimes wrong. Since this trial has begun I have discovered that, with all his caution and fastidiousness, he hasn't knowledge enough to put his shirt on right." Logan turned red as crimson, but sure enough, Lincoln was correct, for the former had donned a new shirt, and by mistake had drawn it over his head with the pleated bosom behind. The general laugh which followed destroyed the effect of Logan's eloquence over the jury—the very point at which Lincoln aimed.[4]

Lincoln's ploy was entertaining and succeeded in distracting the jury. Had the jurors been thinking critically, however, they would have realized that carelessness about one's clothing has no logical relevance to the strength of one's arguments. Critical thinkers stay on topic, on track.

## Consistency

It is easy to see why consistency is essential to critical thinking. Logic tells us that if a person holds inconsistent beliefs, at least one of those beliefs must be false. Critical thinkers prize truth and so are constantly on the lookout for inconsistencies, both in their own thinking and in the arguments and assertions of others.

"Consistency" means "doing the same." Thus, someone acts consistently when their thoughts, words, or deeds agree with either their past thoughts, words, or deeds (so-called diachronic consistency) or with their present ones (synchronic consistency). Critical thinkers have integrity–a kind of integral wholeness–both in what they believe and in what they say and do. There are thus two kinds of inconsistencies they are careful to avoid. One is *logical inconsistency,* which involves saying or believing inconsistent things (i.e., things that cannot both or all be true) about a particular matter. The other is *practical inconsistency,* which involves saying one thing and doing another.

Sometimes people are fully aware that their words conflict with their deeds. The politician who cynically breaks her campaign promises once she takes office, the TV evangelist caught in an extramarital affair, the drug counselor arrested for peddling drugs–such people are hypocrites pure and simple. From a critical

## Speaking of Inconsistency . . .

Philosophy professor Kenneth R. Merrill (1932–2018) offers the following tongue-in-cheek advice for writers. What kind of inconsistency does Merrill commit?

1. Watch your spelling. Writters who mispele a lott of words are propperly reguarded as iliterate.
2. Don't forget the apostrophe where its needed, but don't stick it in where theres no need for it. A writers reputation hangs on such trif le's.
3. Don't exaggerate. Overstatement always causes infinite harm.
4. Beware of the dangling participle. Forgetting this admonition, infelicitous phrases creep into our writing.
5. Clichés should be avoided like the plague. However, hackneyed language is not likely to be a problem for the writer who, since he was knee-high to a grasshopper, has built a better mousetrap and has kept his shoulder to the wheel.
6. Keep your language simple. Eschew sesquipedalian locutions and fustian rhetoric. Stay clear of the crepuscular—nay, tenebrific and fuliginous—regions of orotund sonorities.
7. Avoid vogue words. Hopefully, the writer will remember that her words basically impact the reader at the dynamic interface of creative thought and action. To be viable, the writer's parameters must enable her to engage the knowledgeable reader in a meaningful dialogue—especially at this point in time, when people tend to prioritize their priorities optimally.
8. Avoid profane or abusive language. It is a damned outrage how many knuckle-dragging slobs vilify people they disagree with.[5]

thinking point of view, such examples are not especially interesting. As a rule, they involve failures of character more than they do failures of critical reasoning.

More interesting from a critical thinking standpoint are cases in which people are not fully aware that their words conflict with their deeds. Such cases highlight an important lesson of critical thinking: that human beings often display a remarkable capacity for self-deception. Author Harold Kushner cites an all-too-typical example:

> Ask the average person which is more important to him, making money or being devoted to his family, and virtually everyone will answer *family* without hesitation. But watch how the average person actually lives out his life. See where he really invests his time and energy, and he will give away the fact that he really does not live by what he says he believes. He has let himself be persuaded that if he leaves for work earlier in the morning and comes home more tired at night, he is proving how devoted he is to his family by expending himself to provide them with all the things they have seen advertised.[6]

Critical thinking helps us become aware of such unconscious practical inconsistencies, allowing us to deal with them on a conscious and rational basis.

It is also common, of course, for people to unknowingly hold inconsistent beliefs about a particular subject. In fact, as Socrates pointed out long ago, such unconscious logical inconsistency is far more common than most people

### Critical Thinking Lapse

The human race are masters of the ridiculous. There was actually a story in our newspaper of a man who was bitten on the tongue while kissing a rattlesnake. He decided to try a nonscientific remedy he heard about to counteract a snakebite. So he wired his mouth to a pickup truck battery and tried to jump-start his tongue. It knocked him out and he ended up in the hospital, where he lost part of his tongue and one lip.[7]

suspect. As we shall see, for example, many today claim that "morality is relative," while holding a variety of views that imply that it is not relative. Critical thinking helps us recognize such logical inconsistencies or, still better, avoid them altogether.

## Logical Correctness

To think logically is to reason correctly—that is, to draw well-founded conclusions from the beliefs we hold. To think critically we need accurate and well-supported beliefs. But, just as important, we need to be able to reason from those beliefs to conclusions ("inferences") that logically follow from them. Unfortunately, illogical thinking is all too common in human affairs. Bertrand Russell, in his classic essay "An Outline of Intellectual Rubbish," provides an amusing example:

> I am sometimes shocked by the blasphemies of those who think themselves pious—for instance, the nuns who never take a bath without wearing a bathrobe all the time. When asked why, since no man can see them, they reply: "Oh, but you forget the good God." Apparently they conceive of the deity as a Peeping Tom, whose omnipotence enables Him to see through bathroom walls, but who is foiled by bathrobes. This view strikes me as curious.[8]

As Russell observes, from the proposition

> God sees everything.

the pious nuns correctly drew the conclusion

> God sees through bathroom walls.

However, they failed to draw the equally obvious conclusion that

> God sees through bathrobes.

Such illogic is, indeed, curious—but not, alas, uncommon.

## Completeness

In most contexts, we rightly prefer deep, through, and complete thinking to thinking that is shallow and superficial. Thus, we justly condemn slipshod criminal investigations, hasty jury deliberations, superficial news stories, sketchy

driving directions, and snap medical diagnoses. Of course, there are times when it is impossible or inappropriate to discuss an issue in depth; no one would expect, for example, a thorough and wide-ranging discussion of the ethics of human genetic research in a short newspaper editorial. Generally speaking, however, thinking is better when it is deep rather than shallow, and thorough rather than spotty and superficial.

## Fairness

Finally, critical thinking demands that our thinking be fair—that is, open-minded, impartial, and free of distorting biases and preconceptions. That can be very difficult to achieve, particularly in today's polarized environment. Even the most superficial acquaintance with history and the social sciences tells us that people are often strongly disposed to resist unfamiliar ideas, to prejudge issues, to stereotype outsiders, and to identify truth with their own self-interest or the interests of their nation or group. It is probably unrealistic to suppose that our thinking could ever be completely free of biases and preconceptions; to some extent, we all perceive reality in ways that are powerfully shaped by our individual life experiences and cultural backgrounds. But as difficult as it may be to achieve, basic fair-mindedness is clearly an essential attribute of a critical thinker. We act and think unjustly when we fail to treat opposing views with the respect they deserve, allow bias to close our minds and hearts, or refuse to "treat like cases alike" by holding ourselves to different intellectual standards than we hold others.

## Exercise 1.1

I. Break into groups of four or five. Choose one member of your group to take notes and be the group reporter. Discuss your education up to this point. To what extent has your education prepared you to think clearly, precisely, accurately, logically, and so forth? Have you ever known a person (e.g., a teacher or a parent) who strongly modeled the critical thinking standards discussed in this section? If so, how?

II. Have you ever been guilty of either practical inconsistency (saying one thing and doing another) or logical inconsistency (believing inconsistent things about a particular issue)? In small groups think of examples either from your own experience or from that of someone you know. Be prepared to share your examples with the class as a whole.

III. Are clarity, precision, accuracy, relevance, consistency, logicalness, completeness, and fairness universal intellectual standards? That is, are they valid at all times and in all contexts? Are there any situations in which some or all of these norms should not be applied? Explain and defend your answer.

IV. How high are intellectual standards in contemporary politics? In the mass media? On social media? Can you think of any ways of improving the quality of thought and discussion in these areas?

## The Benefits of Critical Thinking

Having examined some of the key intellectual standards that lie at the heart of critical thinking and reasoning, (clarity, precision, and so forth), let's now consider more specifically what you can expect to gain from a course in critical thinking.

### Critical Thinking in the Classroom

As we noted, college is a lot different from high school. In college, the focus is less on memorization and more on higher-order thinking: the active, intelligent evaluation of ideas and information. For this reason, critical thinking plays a vital role throughout the college curriculum.

In a critical thinking course, students learn a variety of skills that can greatly improve their classroom performance. These skills include:

- understanding the arguments and beliefs of others,
- critically evaluating those arguments and beliefs, and
- developing and defending one's own thoughtful, well-supported arguments and beliefs.

Let's look briefly at each of these three skills.

To do well in college, you must, of course, be able to *understand* the material you are studying. A course in critical thinking cannot make inherently difficult material easy, but it will teach a variety of skills that, with practice, can significantly improve your ability to understand the arguments and issues discussed in your college textbooks and classes.

In addition, critical thinking can help you *critically evaluate* what you are learning in class. During your college career, your instructors will often ask you to discuss "critically" some argument or idea introduced in class. Critical thinking teaches a wide range of strategies and skills that can greatly improve your ability to do so.

You will also frequently be asked to *develop your own arguments* on particular topics or issues. In an American Government class, for example, you might be asked to write a paper addressing the issue of whether the Electoral College in U.S. presidential elections should be abolished. To write such a paper successfully, you must do more than simply find and assess relevant arguments and information. You must also be able to marshal arguments and evidence in a way that convincingly supports your view. The systematic training provided in a course in critical thinking can greatly improve that skill as well.

### Critical Thinking in the Workplace

Surveys indicate that fewer than half of today's college graduates can expect to be working in their major field of study within five years of graduation. This statistic speaks volumes about changing workplace realities. Increasingly, employers are looking not for employees with highly specialized career skills, since such skills can usually best be learned on the job, but for team-oriented workers with good

thinking and communication skills—quick learners who can solve problems, think creatively, gather and analyze information, draw appropriate conclusions from data, and communicate their ideas clearly and effectively. These are exactly the kinds of generalized thinking and problem-solving skills that a course in critical thinking can improve.

## Critical Thinking in Life

Critical thinking is hugely important in many contexts outside the classroom and the workplace. Let's look briefly at three important respects in which this is the case.

First, critical thinking can help us avoid making foolish personal decisions. All of us have at one time or another made decisions about consumer purchases, relationships, personal behavior, and the like that we later realized were seriously misguided or irrational. Critical thinking can help us avoid such mistakes by teaching us to think about important life decisions more carefully, clearly, and logically.

Second, critical thinking plays an essential role in promoting democratic processes. Despite what cynics might say, in a democracy it really is "we the people" who have the final say over who governs and to what ends. It is vitally important, therefore, that citizens' decisions be as informed and as thoughtful as possible. Many of today's most serious social problems—climate change, unresponsive government, failing schools, a broken healthcare system, rampant gun violence, lack of affordable childcare, a shrinking middle-class, and an economy that works mostly for the wealthy, to mention just a few—have largely been caused by poor critical thinking. Without an active and informed citizenry, such problems will only grow worse.

Third, critical thinking is worth studying for its own sake, simply for the personal enrichment and empowerment it can bring to our lives. One of the most basic truths of the human condition is that most people, most of the time, believe what they are told. Throughout most of recorded history, people accepted without question that the earth was the center of the universe, that demons cause disease, that slavery was just, and that women are inferior to men. Critical thinking, honestly and courageously pursued, can help free us from the unexamined assumptions and biases of our upbringing and our society. It lets us step back from the prevailing customs, values, and beliefs of our culture and ask, "This is what I've been taught, but is it true? Does it make sense?" In short, critical thinking allows us to lead self-directed, autonomous "examined" lives. Such personal liberation is, as the word itself implies, the ultimate goal of a *liberal* arts education. Whatever other benefits it brings, a liberal education can have no greater reward.

## Common Barriers to Critical Thinking

The preceding section raises an obvious question: If critical thinking is so obviously important why is it that *un*critical thinking is so common? Why is it that so many people—including many highly educated and intelligent people—find critical thinking so difficult?

The reasons, as you might expect, are quite complex. Following is a list of some of the most common impediments to critical thinking:

- lack of education and relevant background information
- bias
- prejudice
- superstition
- credulity (gullibility)
- egocentrism (self-centered thinking)
- sociocentrism (group-centered thinking)
- peer pressure
- conformism
- tribalism
- provincialism (narrow, unsophisticated thinking)
- narrow-mindedness
- close-mindedness
- misology (distrust in reason and rational argument)
- distrust in science
- distrust in credible media sources
- misplaced trust in lying politicians or other unreliable sources
- relativistic thinking
- stereotyping
- unwarranted assumptions
- scapegoating (blaming the innocent)
- rationalization (inventing excuses to avoid facing our real motives)
- wishful thinking
- short-term thinking
- conspiratorial thinking
- selective perception
- tunnel vision (missing the bigger picture due to an excessively narrow focus)
- overpowering appetities or emotions
- self-deception
- intellectual sloth (lack of curiosity and disinterest in things of the mind)
- confirmation bias (favoring evidence that supports one's current views)
- other common cognitive biases (see box titled "The Hazards of Mental Shortcuts" on the next page)

## The Hazards of Mental Shortcuts

Aristotle called humans the rational animal. We humans certainly take pride in our ability as critical thinkers, but we aren't always as rational as Aristotle might have believed. Some of our cognitive tools evolved under evolutionary pressure that required us to make quick decisions. As a result, the cognitive tools that may serve us well when we have to make a quick decision, like whether that's a saber-toothed tiger approaching, serve us less well when we use them to make decisions that require more careful consideration, like whether to buy a particular car. These tools are called heuristics.

A heuristic is a rule of thumb for problem solving and decision making. Because heuristics allow us to make judgments and decisions quickly, they are valuable time-saving tools. Problems result, though, when we use the wrong tool at the wrong time. In their landmark article "Judgment under Uncertainty: Heuristics and Biases," psychologists Amos Tversky and Daniel Kahneman identified three heuristics that lead us to make mistakes when they are misapplied. Kahneman's best-selling book *Thinking, Fast and Slow* (2011) points to the fundamental problem: We are apt to make mistakes when we quickly apply heuristics to situations that require slower, more deliberate consideration.

In 2002 Kahneman was awarded the Nobel Prize in Economics, a fact that testifies to the fruitfulness of his work. Tversky and Kahneman's studies on heuristics have had a major impact not just in their home discipline of psychology but also in economics, public policy, military planning, medical training, and many more areas.

The first heuristic is the **representativeness heuristic,** according to which we judge probability based on resemblance. For quick decisions, this heuristic is valuable though not infallible. If a mangy stray dog with foam coming out of its mouth is approaching me, then I will have to decide quickly what to do. I may be tempted to try to help the dog, but the representativeness heuristic will tell me that there is a significant chance that the dog has rabies—the dog resembles other dogs that have rabies. So I will avoid the dog and call the animal control office in my town. Even if it turns out that the dog is healthy and friendly, I will be glad that I erred on the side of caution.

Consider another example. You are a basketball scout for an NBA team, and you come across a high school player who is the same height and weight as LeBron James. He also has the same scoring average that James did in high school. Should you recommend that your team draft this player out of high school? It would certainly be tempting, and your automatic thinking might scream that yes you should. But unlike the case of the stray dog, this is not a case where a quick decision needs to be made. Signing an NBA player is a major investment, and most players turn out to be bad investments. You should pause and be skeptical. Ask yourself: What are the chances of finding another LeBron James? There are some striking similarities, but in what ways does your prospect differ from James?

The second heuristic is the **availability heuristic,** according to which we judge frequency by the ease with which we can bring examples to mind. For example, when asked to judge whether cancer is a common cause of death among Americans over sixty years old, I will automatically search my memory for

people I know who died of cancer when they were over sixty years old, and I will answer yes.

Consider this question: Is the average American more likely to die in a terrorist attack or in a swimming pool? If you think about it quickly and apply the availability heuristic, you may be tempted to answer that death in a terrorist attack is more likely. After all, you may have just seen the news on your social media feed of yet another terrorist attack. But in fact, more Americans die in swimming pools each year than in terrorist attacks. We just don't hear nearly as much about swimming pool deaths because they don't make exciting news stories. So if you are afraid of terrorist attacks or if you are deciding whether or not to buy a pool, you might want to think more slowly and deliberately about matters.

The **anchoring and adjustment heuristic** describes the common tendency to make an estimate based on an initial starting point (the "anchor") and then fail to adjust sufficiently from that starting point. If I am visiting New York City and I see a Statue of Liberty souvenir for sale by a street merchant, I will have a price in mind that I am willing to pay, for example, ten dollars. When I ask the price, I may be willing to pay a little more if the merchant tells me it's handmade or that it's the last one he has. But ten dollars will be the standard by which I judge the price. For a quick and minor decision such as this, my anchor price will probably serve me well.

If the first computer I ever bought was a used IBM PC that cost 1000 dollars in 1995, then that price may serve as my anchor. A new PC in 2022 that costs 800 dollars will automatically seem very inexpensive to me. But in fact, it may be overpriced. The same model may be available for only 600 dollars at a different store. I need to think slowly and deliberately to free myself from my anchor in this case.

The lesson of recent research on heuristics and other cognitive biases is clear: Rational thinking is more difficult than has long been assumed.

Let's look in detail at five of these impediments—egocentrism, sociocentrism, unwarranted assumptions, relativistic thinking, and wishful thinking—that play an especially powerful role in hindering critical thinking.

## Egocentrism

**Egocentrism** is the tendency to see reality as centered on oneself. Egocentrics are selfish, self-absorbed people who see their rights and needs as more important to everyone else's. All of us are affected to some degree by egocentric biases.

Egocentrism can reveal itself in a host of ways. Two common forms are self-interested thinking and the superiority bias.

**Self-interested thinking** is the tendency to accept and defend beliefs that harmonize with one's self-interest. Almost no one is immune to self-interested thinking. Most rich people favor low taxes on the wealthy; most poor people do not. Most state university professors strongly support tenure, paid sabbaticals, low teaching loads, and a strong faculty voice in university governance; many state

taxpayers and university administrators do not. Most American voters favor campaign finance reform; most elected politicians do not. Of course, some of these beliefs may be supported by good reasons. From a psychological standpoint, however, it is likely that self-interest plays at least some role in shaping the respective attitudes and beliefs.

Self-interested thinking, however understandable it may seem, is a major obstacle to critical thinking. Everyone finds it tempting at times to reason that "this benefits me, so it must be good"; but from a critical thinking standpoint, such "reasoning" is a sham. Implicit in such thinking is the assumption that "What is most important is what *I* want and need." But why should I, or anyone else, accept such an arbitrary and obviously self-serving assumption? What makes *your* wants and needs more important than everyone else's? Critical thinking condemns such special pleading. It demands that we weigh evidence and arguments objectively and impartially. Ultimately, it demands that we revere truth—even when it hurts.

**Superiority bias** (also known as illusory superiority or the better-than-average effect) is the tendency to overrate oneself—to see oneself as better in some respect than one actually is. We have all known braggarts or know-it-alls who claim to be more smarter, luckier, more talented, or more knowledgeable than they really are. If you are like most people, you probably think of yourself as being an unusually self-aware person who is largely immune from any such self-deception. If so, then you too are probably suffering from superiority bias.

Studies show that superiority bias is an extremely common trait. In one survey, one million high school seniors were asked to rate themselves on their "ability to get along with others." Only 15 percent put themselves below the median.[9] Other surveys have shown that 90 percent of business managers and more than 90 percent of college professors rate their performance as better than average. Student surveys indicate that most college students think they are far less likely to get divorced, develop a drinking problem, fail at business, or die of cancer than their peers. It is easy, of course, to understand why people tend to overrate themselves. We all like to feel good about ourselves. Nobody likes to think of himself or herself as being "below average" in some important respect. At the same time, however, it is important to be able to look honestly at our personal strengths and weaknesses. We want to set high personal goals, but not goals that are wildly unrealistic. Self-confidence grounded in genuine accomplishment is an important element of success. Overconfidence is an obstacle to genuine personal and intellectual growth.

## Sociocentrism

**Sociocentrism** is group-centered thinking. Just as egocentrism can hinder rational thinking by focusing excessively on the self, so can sociocentrism short-circuit rational thought by focusing excessively on the group.

Sociocentrism can distort critical thinking in many ways. Three of the most important are group bias, tribalism, and conformism.

**Group bias** is the tendency to see one's own group (nation, tribe, sect, peer group, and the like) as being inherently better than others. Social scientists tell us that such thinking is extremely common throughout human history and across cultures. Just as we seem naturally inclined to hold inflated views of ourselves, so we find it easy to hold inflated views of our family, our community, or our nation. Conversely, we find it easy to look with suspicion or disfavor on those we regard as "outsiders."

Most people absorb group bias unconsciously, usually from early childhood. It is common, for example, for people to grow up thinking that their society's beliefs, institutions, and values are better than those of other societies. Consider this exchange between eight-year-old Maurice D. and the well-known Swiss scientist and philosopher Jean Piaget:

> **Maurice D.** (8 years, 3 months old): If you didn't have any nationality and you were given a free choice of nationality, which would you choose? *Swiss nationality.* Why? *Because I was born in Switzerland.* Now look, do you think the French and the Swiss are equally nice, or the one nicer or less nice than the other? *The Swiss are nicer.* Why? *The French are always nasty.* Who is more intelligent, the Swiss or the French, or do you think they're just the same? *The Swiss are more intelligent.* Why? *Because they learn French quickly.* If I asked a French boy to choose any nationality he liked, what country do you think he'd choose? *He'd choose France.* Why? *Because he was born in France.* And what would he say about who's nicer? Would he think the Swiss and the French equally nice or one better than the other? *He'd say the French are nicer.* Why? *Because he was born in France.* And who would he think more intelligent? *The French.* Why? *He'd say that the French want to learn quicker than the Swiss.* Now you and the French boy don't really give the same answer. Who do you think answered best? *I did.* Why? *Because Switzerland is always better.*[10]

Although most people outgrow such childish nationalistic biases to some extent, few of us manage to outgrow them completely. Clearly, this kind of "mine-is-better" thinking lies at the root of a great deal of human conflict, intolerance, and oppression.

Another common form of sociocentrism is **tribalism**—strong feelings of loyalty to, and identification with, one's tribe, clan, or perceived in-group. Particularly during periods of stress or perceived threat, tribalist commitments to "oneness and sameness" can grow strong—sometimes to the point that they overwhelm reason and what Lincoln called "the better angels of our nature." Outsized tribalist loyalties are often difficult to recognize, since they are rooted in evolution and frequently operate below the level of conscious awareness. Like other forms of sociocentrism, however, tribalism can ride roughshod over reason, logic, and common decency. For those reasons, we must all be alert to its powerful subconscious allure and be sensitive to situations in which loyalties to our "tribe" or social group is causing harmful exclusion, unjust partiality, or loss of some large good.

A third common form of sociocentric thinking is conformism (sometimes called the herd instinct). **Conformism** refers to our tendency to follow the crowd—that is, to conform (often unthinkingly) to authority or to group standards of conduct and belief. The desire to belong, to be part of the in-group, can be among the most powerful of human motivations. As two classic experiments demonstrate, this desire to conform can seriously cripple our powers of critical reasoning.

In the first experiment, conducted in the 1950s by Solomon Asch, groups of eight college students were asked to match a standard line like the following

_____

with three comparison lines such as these:

A _____

B _____

C _____

In each group, only one of the eight participants was unaware of the true nature of the experiment; the other seven were confederates working in league with the experimenter. In each case, the single true subject was seated at the end of the table and asked to answer last. In some trials, the seven confederates unanimously gave the correct answer (B); in others, they unanimously gave an incorrect answer. The results: When no pressure to conform was present, subjects gave the correct answer more than 99 percent of the time. When faced with the united opposition of their peers, however, almost one-third (32 percent) of the subjects refused to believe their own eyes and gave answers that were obviously incorrect!

Another famous experiment was conducted by Stanley Milgram in the 1960s.[11] In Milgram's experiment, subjects were asked to administer a series of increasingly severe electrical shocks to people whom the subjects could hear but couldn't see. (In fact, no actual shocks were given; the shock "victims" were actually confederates who merely pretended to be in pain.) Subjects were told that they were participating in a study of the effects of punishment on learning. Their task was to act as "teachers" who inflicted progressively more painful shocks on "learners" whenever the latter failed to answer a question correctly. The severity of the shocks was controlled by a series of thirty switches, which ranged in 15-volt intervals from 15 volts ("Slight Shock") to 450 volts ("XX Danger: Severe Shock"). The purpose of the study was to determine how far ordinary people would go in inflicting pain on total strangers, simply because they were asked to do so by someone perceived to be "an authority."

The results were, well, shocking. More than 85 percent of the subjects continued to administer shocks beyond the 300-volt mark, long after the point at which they could hear the victims crying out or pounding on the walls in pain. After the 330-volt mark, the screaming stopped, and for all the subjects knew, the victims were either unconscious or dead. Despite that, nearly

two-thirds (65 percent) of the subjects continued to administer shocks, as they were instructed, until they had administered the maximum 450 volts.

The lesson of these studies is clear: "Authority moves us. We are impressed, influenced, and intimidated by authority, so much so that, under the right conditions, we abandon our own values, beliefs, and judgments, even doubt our own immediate sensory experience."[12] As critical thinkers, we need to be aware of the seductive power of conformism and develop habits of independent thinking to combat it.

## Unwarranted Assumptions and Stereotypes

An **assumption** is something we take for granted, something we believe to be true without any proof or conclusive evidence. Almost everything we think and do is based on assumptions. If the weather report calls for rain, we take a rain jacket because we assume that the meteorologist is not lying, that the report is based on a scientific analysis of weather patterns, that the instruments are accurate, and so forth. There may be no proof that any of this is true, but we realize that it is wiser to take the jacket than to insist that the weather bureau provide exhaustive evidence to justify its prediction.

Although we often hear the injunction "Don't assume," it would be impossible to get through a day without making assumptions; in fact, many of our daily actions are based on assumptions we have drawn from the patterns in our experience. You go to class at the scheduled time because you assume that class is being held at its normal hour and in its same place. You don't call the professor each day to ask if class is being held; you just assume that it is. Such assumptions are *warranted,* which means that we have good reason to hold them. When you see a driver coming toward you with the turn signal on, you have good reason to believe that the driver intends to turn. You may be incorrect, and it might be safer to withhold action until you are certain, but your assumption is not unreasonable.

Unwarranted assumptions, however, are unreasonable. An *unwarranted* assumption is something taken for granted without good reason. Such assumptions often prevent our seeing things clearly. For example, our attraction for someone might cause us to assume that they feel the same way and thus to interpret that person's actions incorrectly.

One of the most common types of unwarranted assumptions is a **stereotype.** The word *stereotype* comes from the printing press era, when plates, or stereotypes, were used to produce identical copies of one page. Similarly, when we stereotype, as the word is now used, we assume that individual people have all been stamped from one plate, so all politicians are alike, or Muslims, or African Americans, professors, women, and so forth. When we form an opinion of someone that is based not on their individual qualities but, rather, on their membership in a particular group, we are assuming that all or virtually all members of that group are alike. Because people are not identical, no matter what race or other similarities they share, stereotypical conceptions will often be false or misleading.

Typically, stereotypes are arrived at through a process known as *hasty generalization,* in which one draws a conclusion about a large class of things (in this case, people) from a small sample. If we meet one South Bergian who is rude, we might jump to the conclusion that all or most South Bergians are rude. Or we might generalize from what we have heard from a few friends or read in a single news story. Often the media—advertisements, the news, movies, and so forth—encourage stereotyping by the way they portray groups of people.

The assumptions we need to become most conscious of are not the ones that lead to our routine behaviors, such as carrying a rain jacket or going to class, but the ones on which we base our more important attitudes, actions, and decisions. If we are conscious of our tendency to stereotype, we can take measures to end it.

## Exercise 1.2

I. Read this story and answer the questions that follow.

When it happened, a disturbing mix of feelings bubbled inside you. It sickened you to watch the boat slip beneath the waves and disappear forever; so much work had gone into maintaining it and keeping it afloat, but at least everyone was safe in the tiny lifeboat you'd had just enough time to launch. You secretly congratulated yourself for having had the foresight to stock the lifeboat with a few emergency items, such as a small amount of food and water, but you knew that a boat built to hold three, maybe four people wasn't going to survive too long with such an overload of passengers.

You looked around at your companions: the brilliant Dr. Brown, whose cleverness and quick wit had impressed you on many occasions; Marie Brown, pregnant and clearly exhausted from the climb into the lifeboat; Lieutenant Ashley Morganstern, a twenty-year veteran who'd seen the most brutal sorts of combat; the lieutenant's secretary and traveling companion, whose shirt you noticed for the first time bore the monogram *LB,* but whom everyone called, simply, "Letty"; and Eagle-Eye Sam, the trusted friend who'd been at your side for many years as you sailed the oceans in your precious, now-vanished boat and whose nickname came from his ability to spot the smallest objects seemingly miles away at sea.

Seeing the fear on your passengers' faces, you tried to comfort them: "Don't worry; we'll be fine. They'll be looking for us right away. I'm sure of it." But you weren't so sure. In fact, you knew it wasn't true. It might be days before you were found, since you'd had no time to radio for help. Rescuers probably wouldn't be dispatched until Friday, five days from now, when your failure to show up in port would finally arouse concern.

On the third day, your passengers showed increasing signs of frustration, anger, and fear. "Where are they?" Marie cried. "We can't go on like this!"

You knew she was right. *We can't,* you thought, *not all of us anyway.*

On the fourth day, the food was completely gone, and just enough water remained to keep perhaps three people alive for another day, maybe two. Suddenly, things got worse. "Is that water?!" Marie screamed, pointing a shaking finger at the bottom of the lifeboat. Horrified, you looked down to see a slight trickle of water seeping in at the very center of the boat. Dr. Brown

grabbed a T-shirt that was lying in the bottom of the boat and used it like a sponge to absorb the water, wringing it out over the side and plunging it into the invading water again and again. But it was no use; the water began to seep in faster than Brown could work.

"We're too heavy," the lieutenant insisted without emotion. "We've got to lighten the load. Someone has to get out and swim."

"Swim?!" Marie gasped in disbelief. "Are you insane?! There are sharks in these waters!"

"Who's it going to be, Captain?" the lieutenant asked almost coldly, staring you square in the eye. "Which one of us swims?"

"Me. I'll go," you say, swinging your leg out over the side of the boat.

"No," Letty insisted. "You're the only one who knows how to navigate. If you go, we'll all die. You must choose one of us to sacrifice."

And so you did.

A. Answer the following questions individually.
   1. Which one did you choose? Why? Why didn't you choose the others?
   2. As you read, you probably imagined what the characters looked like. From the image you had of them, describe the following characters in a few sentences:
      The Captain
      Dr. Brown
      Marie Brown
      Lieutenant Ashley Morganstern
      Letty
      Eagle-Eye Sam
   3. Do you think Dr. Brown is related to Marie Brown? If so, how?

B. Now form groups of three and complete the following tasks:
   1. Compare your responses to question 1 in part A. Discuss the reasons for your decisions. Is there any consensus in the group?
   2. Do you all agree on the relationship between Dr. Brown and Marie Brown?
   3. What evidence is there in the story to support your answer for question 3 in part A? Is it possible that they are related in another way or not at all?
   4. Look at your portraits of Dr. Brown. How many assumptions did you and your group members make about the doctor's gender, age, appearance, and profession? What evidence in the story supports your image of the doctor? If your images are similar, what do you think accounts for that similarity? Are your mental images similar to ones we normally see in the media, for example?
   5. Look at your portraits of the other characters. First, what similarities do you find among your group's members? Second, what evidence is there in the story to support your assumptions? Are other assumptions possible? Finally, where do you think your mental images came from?

II. In groups of three or four, name and explain a stereotypical conception people may have had about you over the years. Note how that stereotypical conception keeps others from coming to know you more accurately. Turn your page over and exchange papers with other members of your group. See if the other members can determine which stereotype description goes with what member of your group.

## Relativistic Thinking

Nearly every college professor has had at least one conversation like the following:

> *Pat:* Professor X, I don't understand why you gave me a D on this paper.
>
> *Prof. X:* Well, as I noted in my written comments, you state your opinions, but you don't offer any reasons to back them up.
>
> *Pat:* Do you mean you gave me a low grade because you disagree with my opinions?
>
> *Prof. X:* No, not at all, Pat. You received a low grade because you didn't give any arguments or evidence to support your opinions.
>
> *Pat:* But isn't everyone entitled to their own opinion? And can anyone ever really prove that their opinion is right and everyone else's is wrong? Why, then, do I have to give reasons for my opinions when I'm entitled to hold them and no one can prove that they're wrong?

Pat, here, has fallen into the trap of *relativistic thinking.* It is crucial to understand why this is a trap, because once one has fallen into it, it is very difficult to see any point in studying critical thinking at all.

**Relativism** is the view that there is no objective or factual truth, but that truth varies from individual to individual, or from culture to culture. There are two popular forms of relativism: subjectivism and cultural relativism. **Subjectivism** is the view that truth is a matter of individual opinion. This is the view Pat apparently holds. According to subjectivism, whatever an individual believes is true, *is* true for that person, and there is no such thing as "objective" or "absolute" truth, that is, truth that exists independent of what anyone believes. For example, suppose Bobby thinks action films are better than romantic comedies, and Alice believes the opposite. According to subjectivism, action films are better than romantic comedies for Bobby but not for Alice. Both beliefs are true—*for them.* And truth *for* one individual or another is the only kind of truth there is.

The other common form of relativism is **cultural relativism.** This is the view that truth is a matter of social or cultural opinion. In other words, cultural relativism is the view that what is true for person A is what A's culture or society believes is true. Eating with your fingers, for example, might be considered rude in South Bergia but not in North Bergia. According to cultural relativism, therefore, eating with your fingers *is* rude in South Bergia but not North Bergia. Thus, for the cultural relativist, just as for the subjectivist, there is no objective or absolute standard of truth. What is true is whatever most people in a society or culture believe to be true.

Relatively few people endorse subjectivism or cultural relativism in the pure, unqualified forms in which we have stated them. Almost everybody would admit, for example, that $1 + 1 = 2$ is true, no matter who might be ignorant or deluded enough to deny it. What relativists usually claim, therefore, is not that all truth is relative, but that truth is relative in some important domain(s). By far the most common form of relativism is *moral relativism*. Like relativism

generally, moral relativism comes in two major forms: moral subjectivism and cultural moral relativism. **Moral subjectivism** is the view that what is morally right and good for an individual, A, is whatever A believes is morally right and good. Thus, if Andy believes that premarital sex is always wrong, and Jennifer believes that it is not always wrong, according to moral subjectivism premarital sex is always wrong for Andy and is not always wrong for Jennifer.

The other major form of moral relativism is **cultural moral relativism,** the view that what is morally right and good for an individual, A, is whatever A's society or culture believes is morally right and good. Thus, according to cultural moral relativism, if culture A believes that polygamy is wrong, and culture B believes that polygamy is right, then polygamy is wrong for culture A and right for culture B.

Cultural moral relativism is a very popular view today, especially among the young. There are two major reasons people seem to find it so attractive. One has to do with the nature of moral disagreement, and the other concerns the value of tolerance.

Moral disagreements are a matter of ethics, and ethics obviously, is very different from math or science. In math and science, there are arguments and disagreements, but not nearly to the extent there are in ethics. For example, all mathematicians agree that $2 + 3 = 5$, and all scientists agree that the earth is larger than the moon. In ethics, there is widespread disagreement, the disagreements often go very deep, and there seems to be no rational way to resolve many of them. For instance, people in the United States disagree strongly about the morality of abortion or same-sex marriage. What such deep disagreements show, some people conclude, is that there is no objective truth in ethics; morality is just a matter of individual belief or social convention.

Another reason people find cultural moral relativism attractive is that it seems to support the value of tolerance. Throughout history, terrible wars, persecutions, and acts of religious and cultural imperialism have been committed by people who firmly believed in the absolute righteousness of their culture's beliefs and values. Cultural moral relativism seems to imply that we must be tolerant of other cultures' moral beliefs and values. If culture A believes that polygamy is wrong, and culture B believes that it is right, then culture A must agree that polygamy is right for culture B, no matter how offensive the practice may be to culture A.

Despite these apparent attractions, however, there are deep problems with cultural moral relativism, as the following exercise (adapted from a set of role-playing scenarios developed by Dr. Grant H. Cornwell)[13] will illustrate.

## Exercise 1.3

In groups of four or five, choose a group reporter to take notes and be the group spokesperson. Read and discuss one of the following case studies as assigned by your instructor.

### Case 1

**Definition:** A cultural moral relativist is one who maintains the following thesis: *Whatever members of a culture believe is morally right and good is morally right and good for them.*

You are a member of culture C studying cultures A and B. You are a committed cultural moral relativist, that is, you maintain wholeheartedly the relativist thesis.
Culture A is a pacifist culture and believes that it is always morally wrong to commit a violent act against another human being for any reason.
Culture B is a militaristic and slaveholding culture. Its members believe that it is morally good and right to invade, subjugate, and enslave other cultures.
While you are observing them, culture B invades culture A.

#### Discussion Questions

1. What can you consistently believe with regard to the morality of culture A? The morality of culture B? Specifically, as a consistent moral relativist, can you criticize or condemn the morality of culture A? Of culture B?

2. What can you consistently do with regard to culture B's invasion and attempted subjugation of culture A?

### Case 2

**Definition:** A cultural moral relativist is one who maintains the following thesis: *Whatever members of a culture believe is morally right and good is morally right and good for them.*

You are a member of culture B and a committed cultural moral relativist, that is, you maintain wholeheartedly the relativist thesis.
Culture B is a militaristic and slaveholding culture. A majority of its members believe that it is morally right and good to invade, subjugate, and enslave other cultures.
Culture A is a pacifist culture. A majority of its members believe that it is always wrong to commit any act of violence against another human being for any reason.
Culture B believes that it is morally wrong for culture A to practice pacifism.
Culture B invades culture A. Its aim is to subjugate and enslave members of culture A and force some of them to participate in gladiatorial bouts for the amusement of members of culture B.

#### Discussion Questions

1. Is there any logical inconsistency in being a cultural moral relativist and also belonging to culture B? (*Hint:* Consider not only what culture B believes is right and good for its own members to do but also what it believes is right and good for other cultures to do.) If so, which beliefs, precisely, are inconsistent?

2. What can you consistently believe with regard to the morality of culture A? The morality of culture B? Specifically, as a consistent moral relativist, can you criticize or condemn the morality of culture A? Of culture B?

3. What can you consistently do with regard to culture B's invasion and attempted conquest of culture A?

### Case 3

**Definition:** A cultural moral relativist is one who maintains the following thesis:
*Whatever members of a culture believe is morally right and good is morally right and good for them.*

Culture B consists of two subcultures: the Alphas and the Betas. The Alphas are a ruling majority group. They believe that it is morally right to randomly select a young child for sacrifice at the beginning of each year. The Betas are an oppressed minority group with its own distinctive cultural, moral, and religious practices. Betas believe strongly that child sacrifice is morally wrong.

You are a member of culture B and a Beta. You are also a committed cultural moral relativist, that is, you maintain wholeheartedly the relativist thesis.
Culture A is a pacifist culture. Members of this culture believe that it is always wrong to commit any act of violence against another human being for any reason.
The Alphas believe that it is morally right to impose their beliefs and values on culture A. They believe that it is a moral atrocity that culture A does not sacrifice children, and they believe that they have a moral duty to use whatever means are necessary to change the beliefs of culture A and have its members comply with this practice.
Culture B invades culture A and begins its program of subjugation and indoctrination.

#### Discussion Questions

1. Is it possible for an individual to belong to more than one culture at the same time? If so, does this pose any logical difficulty for the cultural moral relativist?

2. Is there any logical difficulty in being a moral relativist and belonging to culture B? (*Hint:* Consider not only what culture B believes is right and good for its own members to do but also what it believes is right and good for other cultures to do.)

3. What can you consistently believe with regard to the morality of culture A? The morality of culture B? Specifically, as a consistent moral relativist, can you criticize or condemn the morality of culture A? Of culture B?

4. What can you consistently do with regard to culture B's invasion and attempted subjugation of culture A?

5. Suppose that sometime in the future the Betas become the majority subculture in culture B, and a majority of culture B comes to believe that child sacrifice is wrong. Can this be described as "moral progress" from the standpoint of cultural moral relativism? Why or why not?

These cases highlight several serious problems with cultural moral relativism.

1. *Relativism makes it impossible for us to criticize or condemn other cultures' values, even those that seem horribly and clearly wrong.* We can no longer say, for example, that a particular culture is wrong to practice slavery or child sacrifice, as long as that culture believes that those practices are morally right.
2. *Relativism makes it impossible for us to criticize or condemn our own societies' prevailing values.* Suppose you personally oppose racial segregation, but a majority of your society supports it. According to relativism, you must change your mind and agree that racial segregation is right in your society. In fact, if relativism is true, anyone who criticizes majority values is *always wrong.* Total conformity to majority opinion is required.
3. *Relativism rules out the idea of moral progress.* Moral values can change, but if relativism is true, they can never become better or worse, for relativism implies that what is right for a society is what that culture believes is right *at that time.* Thus, a relativist cannot say, for example, that the abolition of slavery or laws outlawing gender discrimination represented moral progress in the United States.
4. *Relativism can lead to conflicting moral duties.* There are several ways in which a relativist might find himself stuck with conflicting moral beliefs and duties. Cases 2 and 3 highlight two ways in which this can occur:[14]
   a. *When a relativist is a member of a society that holds beliefs that conflict with moral relativism* (cases 2 and 3). If your society believes, for example, that child sacrifice is absolutely and objectively right, then you too, as a moral relativist, must believe that child sacrifice is absolutely and objectively right, for whatever moral beliefs your society holds, you must hold as well.
   b. *When a relativist belongs to two or more cultures and those cultures hold mutually inconsistent moral beliefs* (case 3). Can a person belong to two different cultures at the same time? It is hard to see why not. An Amish farmer living in Ohio, for instance, would seem to be a member of both an Amish culture and a larger American one. If such dual membership is possible, however, conflicts can clearly occur between the two cultures' moral codes. And given relativism's claim that what is right for a person is whatever their culture believes is right, this could lead to conflicting moral duties.

Thus, cultural moral relativism has consequences that make it very difficult to accept. In addition, however, it can be shown that the two main reasons people are attracted to cultural moral relativism—ethical disagreement and the value of tolerance—are not good reasons at all.

First, does the fact that there is deep and persistent disagreement in ethics show that there is no objective moral truth—that ethics is just a matter of opinion? Hardly. Think about another area in which there is deep, pervasive, and seemingly irresolvable disagreement: religion. People disagree vehemently over whether God exists, whether there is an afterlife, and so forth; yet we don't conclude from this that there is no objective truth about these matters. It may be difficult to *know* whether God exists. But *whether* he exists is not simply a matter of opinion. Thus, deep disagreement about an issue does not show that there is no objective truth about that issue.

Second, as the cases in Exercise 1.3 make clear, cultural moral relativism does not necessarily support the value of tolerance. Relativism tells us that we should accept the customs and values of our society. Thus, if you live in an *intolerant* society, relativism implies that you too should be intolerant.

Does this mean that cultural moral relativism has nothing at all to teach us? No. The fact that people disagree so much about ethics does not show that moral truth is simply a matter of opinion, but it should make us cautious and open-minded regarding our own ethical beliefs. If millions of obviously decent, intelligent people disagree with you, how can you be sure that your values are the correct ones? In this way, relativism can teach us an important lesson about the value of intellectual humility. But we don't need relativism—which is a false and confused theory—to teach us this lesson. We can learn it just by opening our hearts and minds and reflecting honestly about the challenges of living an ethical life.

## Wishful Thinking

Once, as a Little Leaguer, one of the authors was thrown out at the plate in a foolish attempt to stretch a triple into a home run, possibly costing the team the game. Angry and disappointed, he refused to believe that he had really been thrown out. "I was safe by a mile," he said plaintively to his disbelieving coaches and teammates. It was only years later, when he was an adult, that he could admit to himself that he really had been out—out, in fact, by a mile.

Have you ever been guilty of wishful thinking—believing something not because you had good evidence for it but simply because you wished it were true? If so, you're not alone. Throughout history, human intelligence has done battle with wishful thinking and has usually come out the loser.

People fear the unknown and invent comforting myths to render the universe less hostile and more predictable. They fear death and listen eagerly to stories of healing crystals, quack cures, tales of past lives, and communication with the dead. They fantasize about possessing extraordinary personal powers and accept uncritically accounts of psychic prediction, levitation, miracle cures, and ESP. They delight in tales of the marvelous and the uncanny, and they buy mass-market tabloids that feature headlines such as "Spiritual Sex Channeler: Medium Helps Grieving Widows Make Love to their Dead Husbands."[15] They kid themselves into thinking, "It can't happen to me," and

then find themselves dealing with the consequences of unwanted pregnancies, drunk-driving convictions, drug addiction, homelessness, or COVID-19.

### Exercise 1.4

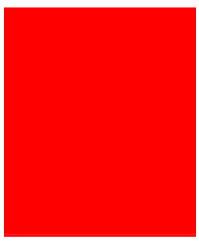
I. Have you ever been guilty of self-interested thinking, superiority bias, group bias, tribalism, conformism, or wishful thinking? Without embarrassing yourself too much, discuss these critical thinking lapses in groups of three or four; then share with the class whatever examples you'd like to discuss.

II. This textbook gives a number of examples of self-interested thinking, superiority bias, group bias, conformism, and wishful thinking. Jot down at least two additional examples of each of these five critical thinking hindrances. Divide into groups of three or four, discuss your examples with the group, and share what you think are the best examples with the class as a whole.

## Qualities of a Critical Thinker

We hope that, over the course of this chapter, a picture has begun to emerge of the key qualities of a critical thinker. Some of these qualities involve intellectual *skills*, such as a well-honed ability to analyze arguments, weigh evidence, reason to well-supported conclusions, formulate sound arguments, and detect shoddy reasoning. Other characteristics involve *attitudes*, such as a recognition of the importance of high intellectual standards, evidence-based reasoning, open-mindedness, sensitivity to common impediments to sound thinking, and the love of truth. Still other attributes involve *dispositions*—firmly ingrained habits of mind and character—such as a fair-mindedness, intellectual courage, inquisitiveness, intellectual diligence, carefulness, thoroughness, attentiveness, and intellectual humility. Pulling these all together, we are now in a position to offer a general profile of a critical thinker. The following list contrasts some of the key intellectual traits of critical thinkers with the relevant traits of uncritical thinkers.[16]

| *Critical Thinkers …* | *Uncritical Thinkers …* |
|---|---|
| Have a passionate drive for clarity precision, accuracy, and other critical thinking standards. | Often think in ways that are unclear, imprecise, and inaccurate. |
| Are sensitive to ways in which critical thinking can be skewed by egocentrism, sociocentrism, wishful thinking, and other impediments. | Often fall prey to egocentrism, sociocentrism, relativistic thinking, unwarranted assumptions, and wishful thinking. |
| Are skilled at understanding, analyzing, and evaluating arguments and viewpoints. | Often misunderstand or evaluate unfairly arguments and viewpoints. |



| | |
|---|---|
| Reason logically and draw appropriate conclusions from evidence and data. | Think illogically and draw unsupported conclusions from evidence and data. |
| Are intellectually honest with themselves, acknowledging what they don't know and recognizing their limitations. | Pretend they know more than they do and ignore their limitations. |
| Listen open-mindedly to opposing points of view and welcome criticisms of beliefs and assumptions. | Are close-minded and resist criticisms of beliefs and assumptions. |
| Base their beliefs on facts and evidence rather than on personal preference or self-interest. | Often base beliefs on mere personal preference or self-interest. |
| Are aware of the biases and preconceptions that shape the way they perceive the world. | Lack awareness of their own biases and preconceptions. |
| Think independently and are not afraid to disagree with group opinion. | Tend to engage in "groupthink," uncritically following the beliefs and values of the crowd. |
| Are able to get to the heart of an issue or a problem, without being distracted by details. | Are easily distracted and lack the ability to zero in on the essence of an issue or a problem. |
| Have the intellectual courage to face and assess fairly ideas that challenge even their most basic beliefs. | Fear and resist ideas that challenge their basic beliefs. |
| Pursue truth and are curious about a wide range of issues. | Are often relatively indifferent to truth and lack curiosity. |
| Have the intellectual perseverance to pursue insights or truths despite obstacles or difficulties. | Tend not to persevere when they encounter intellectual obstacles or difficulties. |

A course in critical thinking is like most other things in life: You get out of it what you put into it. If you approach critical thinking as a chore—a pointless general education requirement you need to get out of the way before you can turn to more "relevant" courses in your major—a chore it will be. On the other hand, if you approach critical thinking as an opportunity to develop your mind and learn habits of disciplined thinking that are vital to success in school, in your career, and in your life as a liberally educated person, it can be a rewarding and even transformative experience.

## Exercise 1.5

I. Review the list of critical thinking traits on pages 25–26, then write a 250-word essay in which you address the following questions: Which of the qualities listed is your strongest critical thinking trait? Why? Which is your weakest? Why? What could you do to improve in this latter regard? Be specific and realistic.

II. In groups of three or four, define the following critical thinking traits: intellectual honesty, open-mindedness, fair-mindedness, intellectual courage, and intellectual perseverance. (See the list of critical thinking traits on pages 25–26 for some broad hints.) Give an example of each.

III. In groups of three or four, think of examples, either from your experience or from your knowledge of current events or history, of individuals who possess, or did possess, the quality of intellectual courage to an unusual degree. What about them leads you to think of them as being especially intellectually courageous? Do the same for the qualities of open-mindedness, intellectual honesty, and intellectual perseverance. Be prepared to share your group's best examples with the class.

IV. Critical thinkers possess intellectual habits (or "virtues") such as open-mindedness, curiosity, and intellectual courage. They also have high intellectual standards for how they use their minds and form beliefs. Such standards are called critical thinking (or "epistemic") norms, and include common-sense principles such as "Don't believe on insufficient evidence," "Proportion your beliefs to the strength of the evidence," and "Be willing to revise your beliefs in the light of new evidence." In small groups, see if you can come up with five other norms that good thinkers commonly use to form rational, well-supported beliefs.

V. Political scientists tell us that many voters are poorly informed about issues, and are often influenced by emotion or other non rational factors. In small groups, discuss the traits that an "ideal" or "intellectually virtuous" voter would possess. Share your group's ideas with the class.

VI. What critical thinking challenges, if any, did you experience as a result of the recent COVID-19 pandemic? In general, do you believe that government officials, schools, and ordinary citizens responded to the pandemic appropriately?

## Summary

1. *Critical thinking* is the general term given to a wide range of cognitive skills and intellectual dispositions needed to effectively identify, analyze, and evaluate arguments and truth claims; to discover and overcome personal preconceptions and biases; to formulate and present convincing reasons in support of conclusions; and to make reasonable, intelligent decisions about what to believe and what to do. It is disciplined thinking governed by clear intellectual standards that have proven their value over the course of

human history. Among the most important of these intellectual standards are clarity, precision, accuracy, relevance, consistency, logical correctness, completeness, and fairness.

2. Critical thinking has many benefits. It can help students do better in school by improving their ability to understand, construct, and criticize arguments. It can help people succeed in their careers by improving their ability to solve problems, think creatively, and communicate their ideas clearly and effectively. It can also reduce the likelihood of making serious mistakes in important personal decisions, promote democratic processes by improving the quality of public decision making, and liberate and empower individuals by freeing them from the unexamined assumptions, dogmas, and prejudices of their upbringing, their society, and their age.

3. Major barriers to critical thinking include egocentrism, sociocentrism, unwarranted assumptions, relativistic thinking, and wishful thinking.

   *Egocentrism* is the tendency to see reality as centered on oneself. Two common forms of egocentrism are self-interested thinking (the tendency to accept and defend beliefs that accord with one's own self-interest) and superiority bias (the tendency to overrate oneself ).

   *Sociocentrism* is group-centered thinking. Three common varieties of sociocentrism are group bias (the tendency to see one's culture or group as being better than others), tribalism (powerful feelings of loyalty to the tribe or group), and conformism (the tendency to conform, often unthinkingly, to authority or to group standards of conduct and belief).

   *Unwarranted assumptions* are things we take for granted without good reason. Often, unwarranted assumptions take the form of stereotypes. *Stereotypes* are generalizations about a group of people in which identical characteristics are assigned to all or virtually all members of the group, often without regard to whether such attributions are accurate.

   *Relativistic thinking* is thinking that is based on the idea that there is no "objective" or "factual" truth–that truth varies from individual to individual, or from culture to culture. The most popular form of relativism is *moral relativism,* which holds that what is morally right and good varies from individual to individual (*moral subjectivism*) or from culture to culture (*cultural moral relativism*).

   *Wishful thinking* is believing something because it makes one feel good, not because there is good reason for thinking that it is true.

4. Critical thinkers possess many qualities that distinguish them from uncritical thinkers. Among the most important of these traits are a passionate drive for clarity, precision, accuracy, and other intellectual standards that characterize careful, disciplined thinking; a sensitivity to the ways in which critical thinking can be skewed by egocentrism, wishful thinking, and other psychological obstacles to rational belief; honesty and intellectual humility; open-mindedness; intellectual courage; love of truth; and intellectual perseverance.

## Notes

1. Our discussion of critical thinking standards is indebted to Richard Paul, *Critical Thinking: What Every Person Needs to Survive in a Rapidly Changing World* (Rohnert Park, CA: Center for Critical Thinking and Moral Critique, 1990), pp. 51–52; and Richard Paul and Linda Elder, *Critical Thinking: Tools for Taking Charge of Your Learning and Your Life* (Upper Saddle River, NJ: Prentice Hall, 2001), pp. 83–131.
2. Martin Heidegger, *Being and Time,* trans. John Macquarrie and Edward Robinson (San Francisco: HarperSanFrancisco, 1962), pp. 376–77. Originally published in 1927.
3. William Strunk Jr. and E. B. White, *The Elements of Style,* 3rd ed. (New York: Macmillan, 1979), p. 79.
4. William H. Herndon, quoted in David Hackett Fischer, *Historians' Fallacies: Toward a Logic of Historical Thought* (New York: Harper & Row, 1970), p. 291.
5. Used by permission of Kenneth R. Merrill.
6. Harold Kushner, *When All You've Ever Wanted Isn't Enough: The Search for a Life That Matters* (New York: Pocket Books, 1986), p. 15.
7. Erma Bombeck, *All I Know about Animal Behavior I Learned in Loehmann's Dressing Room* (New York: Harper Paperbacks, 1995), p. 66.
8. Bertrand Russell, "An Outline of Intellectual Rubbish," in *Unpopular Essays* (New York: Simon & Schuster, 1950), pp. 86–87.
9. Cited in Thomas Gilovich, *How We Know What Isn't So: The Fallibility of Human Reason in Everyday Life* (New York: Free Press, 1991), p. 77. The same survey found that only 2 percent of respondents rated themselves below average in their leadership ability. Another survey found that 86 percent of Australians rate their job performance as above average. David G. Myers, *The Pursuit of Happiness* (New York: Avon, 1993), p. 111.
10. Quoted in Richard Paul, *Critical Thinking*, pp. 91–92.
11. See Stanley Milgram, *Obedience to Authority: An Experimental View* (New York: Harper & Row, 1974).
12. Joel Rudinow and Vincent E. Barry, *Invitation to Critical Thinking,* 4th ed. (Ft. Worth, TX: Harcourt College Publishers, 1999), p. 20.
13. Grant H. Cornwell, "From Pluralism to Relativism and Back Again: Philosophy's Role in an Inclusive Curriculum," *Teaching Philosophy* 14 (June 1991), pp. 143–53. Used with permission.
14. There is a third way that moral relativism can lead to conflicting moral duties, namely, when a relativist belongs to a culture that holds conflicting moral beliefs. As a little Socratic questioning quickly makes clear, most people unwittingly hold conflicting moral beliefs. To take a simple example, a child might believe both that "I should always do what my teacher tells me" and that "I should always do what my parents tell me" without

realizing that these two rules can conflict. A whole society, of course, can also hold inconsistent moral beliefs and, indeed, is even more likely to do so than an individual, since a society has no single, unifying mind to iron out conflicts. At one time, for instance, a majority of Americans believed both that "unjustified discrimination is wrong" and that "women should not be permitted to vote," which we recognize to be inconsistent, though few people at the time did. Because a relativist must share the moral beliefs of his society (or at least those beliefs he is aware of), he may find himself committed to inconsistent beliefs.

15. *Weekly World News,* March 11, 2000.
16. This list of critical thinking dispositions is drawn largely from three sources: Vincent Ryan Ruggiero, *Beyond Feelings: A Guide to Critical Thinking,* 9th ed. (New York: McGraw Hill, 2012), pp. 20–26; John Chaffee, *The Thinker's Way* (Boston, MA: Little, Brown, 1998), pp. 34–37; and Paul, *Critical Thinking,* p. 54. For a lengthier but similar list, see Paul and Elder, *Critical Thinking*, pp. 105–12.

As we saw in Chapter 1, critical thinking is centrally concerned with *reasons:* identifying reasons, evaluating reasons, and giving reasons. In critical thinking, passages that present reasons for a claim are called *arguments.* In this chapter, we explore the concept of an argument and explain how to distinguish arguments from nonarguments.

When people hear the word *argument,* they often think of some kind of shouting match or heated quarrel. In critical thinking, however, an argument is simply a claim defended with reasons.

Arguments are composed of one or more premises and a conclusion. **Premises** are statements in an argument offered as evidence or reasons why we should accept another statement, the conclusion. The **conclusion** is the statement in an argument that the premises are intended to prove or support. An **argument,** accordingly, is a piece of reasoning in which one or more statements (the premises) are offered to prove or support some other statement (the conclusion).

A **statement** is a sentence that can be viewed as either true or false.[1] Here are some examples of statements:

Red is a color.

Canada is in South America.

God does not exist.

Abortion is morally wrong.

One of these statements is clearly true, one is clearly false, and the other two are debatable. Each of them is a statement, however, because each can be prefaced with the phrase "It is true that" or "It is false that."

Four things should be noted about statements. First, a sentence may be used to express more than one statement. For example, the grammatical sentence,

Roses are red and violets are blue.

expresses two distinct statements ("roses are red" and "violets are blue"). Each of these is a statement because each is capable of standing alone as a declarative sentence.

Second, a statement can sometimes be expressed as a phrase or an incomplete clause, rather than as a complete declarative sentence. Consider the following sentence:

> With mortgage interest rates at thirty-year lows, you owe it to yourself to consider refinancing your home. (radio ad)

Grammatically, this is a single declarative sentence. The speaker's intent, however, is clearly to defend one assertion ("You owe it to yourself to consider refinancing your home") on the basis of another ("Mortgage interest rates are at thirty-year lows"). The fact that we have to rephrase the sentence slightly to make this explicit should not obscure the fact that two statements are being offered rather than one.

Third, not all sentences are statements, that is, sentences that either assert or deny that something is the case. Here are some examples of sentences that are not statements:

> What time is it? (question)
>
> Hi, Dad! (greeting)
>
> Close the window! (command)
>
> Please send me your address. (request)
>
> Let's go to Paris for our anniversary. (proposal)
>
> Insert tab A into slot B. (instruction)
>
> Oh, my goodness! (exclamation)

None of these is a statement because none of them asserts or denies that anything is the case. None says, in effect, "This is a fact. Accept this; it is true." Consequently, sentences like these are not parts of arguments.

Finally, statements can be about subjective matters of personal experience as well as objectively verifiable matters of fact. If I say, for example,

> I have a headache

this is a statement because it is either true or false (I might be lying, after all), even though other people may have no way of verifying whether I am telling the truth.

Not all sentences, however, are as they appear. Some sentences that look like nonstatements are actually statements and can be used in arguments. Here are two examples:

> Alyssa, you should quit smoking. Don't you realize how bad that is for your health?
>
> Be kind, for everyone you meet is fighting a great battle. (Philo of Alexandria)

The first example contains a rhetorical question. A **rhetorical question** is a sentence that has the grammatical form of a question but is meant to be

### Critical Thinking Lapse

A nineteen-year-old man was hospitalized in Salt Lake City after undertaking a personal investigation into the eternal question of whether it is possible to fire a 0.22-caliber bullet by placing it inside a straw and striking it with a hammer. Answer: Sometimes (including this time); it went off and hit him in the stomach.[2]

understood as a statement. In our example, the person asking the question isn't really looking for information. She's making an assertion: that smoking is very bad for one's health. This assertion is offered as a reason (premise) to support the conclusion that Alyssa should quit smoking.

The second example includes an **ought imperative,** that is, a sentence that has the form of an imperative or command but is intended to assert a value or ought judgment about what is good or bad, or right or wrong. Grammatically, "Be kind" looks like a command or suggestion. In this context, however, the speaker is clearly making an assertion: that you *should,* or *ought to,* be kind. His statement that everyone you meet is fighting a great battle is offered as a reason to support that value judgment.

How can we tell when a sentence that looks like a command or suggestion is really an ought imperative? The key question to ask is this: Can we accurately rephrase the sentence so that it refers to what someone should or ought to do? If we can, the sentence should be regarded as a statement.

Consider two further examples. Suppose a drill sergeant says to a new recruit,

> Close that window, soldier! It's freezing in here!

In this context, it is clear that the sergeant is issuing an order rather than expressing an ought judgment ("You *ought to* close that window, soldier!"). On the other hand, if one roommate were to say to another,

> Don't blow-dry your hair in the tub, Bert! You could electrocute yourself!

it is likely that the roommate is expressing an ought judgment ("You *shouldn't* blow-dry your hair in the tub!") rather than issuing an order or making a mere suggestion.

As these examples make clear, it is always important to consider the context in which an expression is used. A sentence such as "Eat your vegetables" might be a command (nonstatement) in one context and an ought imperative (statement) in another.

To recap: Imperative sentences are not statements if they are intended as orders, suggestions, proposals, or exhortations. They are statements if they are intended as pieces of advice or value judgments about what someone ought or ought not to do.

## Poor Richard's Ought Imperatives

Proverbs are a rich source of ought imperatives. A proverb is a short, commonly repeated saying that expresses (or is believed to express) an important general truth or valuable life lesson. Common sayings like "Many hands make light work," "Look before you leap," "The squeaky wheel gets the grease," and "Don't count your chickens before they're hatched" are examples of proverbs that will be familiar to most readers of this text.

Frequently, proverbs are accompanied by an accompanying reason (i.e., a premise) that is intended to provide evidence for the proverb itself. In American culture, the acknowledged master of the pithy, memorable aphorism was the scientist and statesman Benjamin Franklin (1706–1790). In his classic *Poor Richard's Almanack* (1733–1758), we find the following much-quoted maxims:

Wink at small faults; remember thou hast great ones.

Love your enemies, for they will tell you your faults.

Since thou art not sure of a minute, throw not away an hour.

Up, sluggard, and waste not life; in the grave will be sleeping enough.

Note that each of these passages contains an ought imperative—in these instances, pieces of advice are phrased as directives but intended to make a claim about what it would be wise, or good, or morally obligatory, or advisable, to do. Other good sources of proverbial ought imperatives include the Bible (e.g., the Book of Proverbs), folk verse, collections of famous quotations, and the writings of Shakespeare. Check them out some time; you'll find a lot of wisdom there!

## Exercise 2.1

I. Determine whether, in typical contexts, the following sentences are or are not statements. Exercises marked with the icon (◯) are answered in the back of the book.

◯ 1. Capital punishment is wrong.
2. Can vegetarians eat animal crackers? (George Carlin)
3. Ted Williams is the greatest hitter in baseball history.
◯ 4. What do you say we stop at the next rest stop?
5. Abraham Lincoln was the first president of the United States.
6. Let's party!
◯ 7. Great!
8. Keep off the grass. (sign)
9. If Sally calls, tell her I'm at the library.
◯ 10. I hope Peter likes his new job.
11. Can't you see that pornography demeans women?
12. Holy cow!
◯ 13. Please print your name legibly.
14. What will it profit a man, if he gains the whole world and forfeits his life? (Matt. 16:26)
15. You want mayo on that, right?

16. What a crock!
17. Give me a call if you have trouble downloading the file.
18. Blondes are more attractive than brunettes.
19. I'll have a veggie burger and fries, please. (said to a fast-food restaurant employee)
20. Give us this day our daily bread. (said in prayer)
21. Smoke 'em if you've got 'em.
22. Mi casa es su casa.
23. Don't you realize how silly you look?
24. What a man has not, can anyone take that from him? (Marcus Aurelius)
25. Yikes!

II. Determine whether the following passages do or do not contain ought imperatives. Remember that an argument contains an ought imperative if it features an imperative sentence that functions not as a command or order but as a piece of advice or value judgment about what it would be good or smart or proper to do.

1. Be nice to your kids. They'll choose your nursing home. (bumper sticker)
2. Toby, never throw a pen at your sister! You could put an eye out! (said by Toby's mother)
3. Never raise your hands to your kids. It leaves your groin unprotected. (George Carlin)
4. If you consume three or more alcoholic drinks every day, ask your doctor whether you should take ibuprofen or other pain relievers/fever reducers. Ibuprofen may cause stomach bleeding. (label)
5. Why don't we eat at El Grande Burrito tonight. I feel like Mexican.
6. If you do not get your first meal service choice, please do not be distressed, as all our entrées taste very much the same. (flight attendant)
7. Turn off your engine when waiting to pick up the kids. Idling longer than ten seconds in park uses more gas than restarting the car. (Al Gore)
8. In batting practice you must make a point of leaving the bad pitches alone. You don't want your reflexes to get into bad habits. (Mickey Mantle)
9. Don't bother buying premium gas if your car specifies regular. It won't make your car go faster or operate more efficiently–and it's about 14 percent more expensive. (*Consumer Reports* advertising brochure)
10. If at all possible don't work more than eighteen hours a week when you are in college. Studies show that working more than eighteen hours weekly adds to graduation time. (Michael MacDowell)
11. I never use a whistle in practice. I want the players to get used to reacting to my voice–just like in a real game. (basketball coach Mike Krzyzewski)
12. Associate not with evil men, lest you increase their number. (George Herbert)
13. If you play [poker] enough, accept that from time to time you are going to go bust, because from time to time, everyone, even the best of the best, does. (Doc Holliday)
14. Speak, Lord; for thy servant heareth. (I Sam. 3:9)
15. Borrow money from pessimists–they don't expect it back. (Steven Wright)
16. *God to Moses:* Put off your shoes from your feet, for the place on which you are standing is holy ground. (Exodus 3:5)
17. We have to be prepared to accept pain, or else we will never dare to hope or to love. (Harold Kushner)

18. Always go to other people's funerals; otherwise they won't go to yours. (Yogi Berra)
19. Have faith in your abilities! Without a humble but reasonable confidence in your own powers you cannot be successful or happy. (Norman Vincent Peale)
20. We should realize that what has happened to us in the past and what is happening to us at this very moment are beyond our control, so it is foolish to get upset about these things. (William B. Irvine)

## Identifying Premises and Conclusions

In identifying premises and conclusions, we are often helped by indicator words. **Indicator words** are words or phrases that provide clues that premises or conclusions are being put forward. **Premise indicators** indicate that premises are being offered, and **conclusion indicators** indicate that conclusions are being offered. Here are some common premise indicators:

| | |
|---|---|
| since | because |
| for | given that |
| seeing that | considering that |
| inasmuch as | as |
| in view of the fact that | as indicated by |
| judging from | on account of |

The following examples illustrate the use of premise indicators:

> Having fun can be the spice of life but not its main course, *because* when it is over, nothing of lasting value remains. (Harold Kushner)

> *Since* effective reasoning requires reliable information, it's important to be able to distinguish good sources and trustworthy experts from less useful ones. (Drew E. Hinderer)

> He that would seriously set upon the search of truth ought in the first place to prepare his mind with a love of it. *For* he that loves it not will not take much pains to get it, nor be much concerned when he misses it. (John Locke)

And here are some common conclusion indicators:

| | |
|---|---|
| therefore | thus |
| hence | consequently |
| so | accordingly |
| it follows that | for this reason |
| that is why | which shows that |
| wherefore | this implies that |
| as a result | in light of this |
| this being so | we may infer that |

These examples illustrate the use of conclusion indicators:

> There's probably no God, *so* stop worrying and enjoy your life. (ad on London bus)
>
> Rapid economic improvements represent a life-or-death imperative throughout the Third World. Its people will not be denied that hope, no matter the environmental costs. *As a result,* that choice must not be forced upon them. (Al Gore)
>
> Your life is what your thoughts make it. *That is why* it is important for all of us to guard our minds from unhealthy habits of thinking, habits that hold us back from what we could be accomplishing. (Tom Morris)
>
> Your mind is the basis of everything you experience and of every contribution you make to the lives of others. *Given this fact*, it makes sense to train it. (Sam Harris)

Understanding arguments would be easier if the expressions just listed were used only to signal premises or conclusions. That is not the case, however, as the following examples illustrate:

> I haven't seen you *since* high school.
>
> You've had that jacket *for* as long as I've known you.
>
> *Thus* far everything has been great.
>
> It was *so* cold that even the ski resorts shut down.
>
> There is water on the floor *because* the sink overflowed.

In none of these examples does the italicized term function as an indicator word. This shows once again why it's so important to consider the context when determining the meaning of an expression.

Many arguments contain no indicator words at all. Here are two examples:

> Cats are smarter than dogs. You can't get eight cats to pull a sled through snow. (Jeff Valdez)
>
> Do something wonderful, people may imitate it. (Albert Schweitzer)

In these passages, there are no indicator words to help us identify the premises and conclusions. Reading carefully, however, we can see that the point of the first passage is to support the claim, "Cats are smarter than dogs," and the point of the second passage is to support the claim, "Do something wonderful."

How can we find the conclusion of an argument when the argument contains no indicator words? The following list provides some helpful hints.

***Tips on Finding the Conclusion of an Argument***

- Find the main issue and ask yourself what position the writer or speaker is taking on that issue.
- Look at the beginning or end of the passage; the conclusion is often (but not always) found in one of those places.

- Try putting the word *therefore* before one of the statements. If it fits, that statement is probably the conclusion.
- Try the "because" trick. That is, try to find the most appropriate way to fill in the blanks in the following statement: The writer or speaker believes _____ (conclusion) because _____ (premise). The conclusion will naturally come before the word *because.*[3]

## Exercise 2.2

I. The following exercises will give you practice in identifying premises and conclusions. If the passage contains more than one premise, identify them as P1, P2, and so on.

1. Since light takes time to reach our eyes, all that we see really existed in the past. (Louis Pojman, *The Theory of Knowledge*)
2. Life changes when you least expect it to. The future is uncertain. So seize this day, seize this moment, and make the most of it. (Jim Valvano, quoted in Mike Krzyzewski, *Leading with the Heart*)
3. Take care of a good name: for this shall continue with thee, more than a thousand treasures precious and great. (*Ecclesiasticus* 41:12)
4. I think faith is a vice, because faith means believing a proposition when there is no good reason for believing it. (Bertrand Russell, "The Existence and Nature of God")
5. You want to be very careful about lying; otherwise you are nearly sure to get caught. (Mark Twain, "Advice to Youth")
6. There is no definitive way to prove any one set of religious beliefs to the exclusion of all others. For that reason religious freedom is a human right. (Richard Paul and Linda Elder, *The Miniature Guide to Understanding the Foundations of Ethical Reasoning*)
7. Science is based on experiment, on a willingness to challenge old dogma, on an openness to see the universe as it really is. Accordingly, science sometimes requires courage—at the very least the courage to question the conventional wisdom. (Carl Sagan, *Broca's Brain: Reflections on the Romance of Science*)
8. Do not play your sound system loudly as you may not be able to hear warning sirens from emergency vehicles. In addition, hearing damage from loud noise is almost undetectable until it's too late. (car owner's manual)
9. Our attitudes toward creatures that are conscious and capable of experiencing sensations like pain and pleasure are importantly different from our attitudes toward things lacking such capacities, mere chunks of matter or insentient plants, as witness the controversies about vegetarianism and scientific experiments involving live animals. (Jaegwon Kim, *Philosophy of Mind,* 3rd ed.)
10. You know how I know animals have souls? Because on average, the lowest animal is a lot nicer and kinder than most of the human beings that inhabit this Earth. (newspaper call-in column)

11. Forbear to judge, for we are sinners all. (Shakespeare, *Henry VI,* part 2)
12. We sleep every night and almost every night we dream: is it any wonder that dreams sometimes come true? (Anthony Kenny, *A New History of Western Philosophy*)
13. There is no prospect of world government, which is just as well, since it would probably be a horrible government in many ways. (Thomas Nagel, *What Does It All Mean?*)
14. You should always honor your fiercest opponent; the better your opponent, the better you have to be. (Lance Armstrong, *Every Second Counts*)
15. The evil of drunkenness consists partly in the physical deterioration it gradually induces, but far more in the unseating of reason from its ruling position, making the man a temporary beast, and in the disastrous social consequences involved in becoming unfit for any responsible work, such as holding a job or supporting a family. (Austin Fagothey, *Right and Reason,* 6th ed.)
16. It's part of human nature to be angry at God when bad things happen, but what's the point? If we encourage each other to blame God for injustices, then aren't we giving the evil or dark side a victory by keeping God's precious children—that's all of us—away from His loving arms? (letter to the editor)
17. In great contests each party claims to act in accordance with the will of God. Both may be, and one must be, wrong. God cannot be for and against the same thing at the same time. (Abraham Lincoln, "Meditation on the Divine Will")
18. There seems to be a tacit assumption that if grizzlies survive in Canada and Alaska, that is good enough. It is not good enough for me. The Alaska bears are a distinct species. Relegating grizzlies to Alaska is about like relegating happiness to heaven; one may never get there. (Aldo Leopold, *A Sand County Almanac*)
19. Has it ever occurred to you how lucky you are to be alive? More than 99 percent of all creatures that have ever lived have died without progeny, but not a single one of your ancestors falls into this group! (Daniel C. Dennett, *Darwin's Dangerous Idea*)
20. Men love the suit so much, we've actually styled our pajamas to look like a tiny suit. Our pajamas have little lapels, little cuffs, simulated breast pockets. Do you need a breast pocket on your pajamas? You put a pen in there, you roll over in the middle of the night, you kill yourself. (Jerry Seinfeld, *SeinLanguage*)

II. Identify the premises and conclusions in the following arguments.

1. When the universe has crushed him man will still be nobler than that which kills him, because he knows that he is dying, and of its victory the universe knows nothing. (Blaise Pascal, *Pensées*)
2. Rights are either God-given or evolve out of the democratic process. Most rights are based on the ability of people to agree on a social contract, the ability to make and keep agreements. Animals cannot possibly reach such an agreement with other creatures. They cannot respect anyone else's rights. Therefore they cannot be said to have rights. (Rush Limbaugh, *The Way Things Ought to Be*)

3. Truth and falsehood are properties of beliefs and statements: hence a world of mere matter, since it would contain no beliefs or statements, would also contain no truth or falsehood. (Bertrand Russell, *The Problems of Philosophy*)
4. Since moral responsibility presupposes free-will, since this freedom is not compatible with universal causal determinism, and since universal causal determinism appears to be the case, it seems evident that—contrary to what most people believe—human beings are not morally responsible. (stated but not endorsed in William H. Halverson, *A Concise Introduction to Philosophy,* 4th ed. [adapted])
5. Our faith comes in moments; our vice is habitual. Yet there is a depth in those brief moments which constrains us to ascribe more reality to them than to all other experiences. For this reason the argument which is always forthcoming to silence those who conceive extraordinary hopes of man, namely the appeal to experience, is forever invalid and vain. (Ralph Waldo Emerson, "The Over-Soul")
6. The travel rule I will stress here is: Never trust anything you read in travel articles. Travel articles appear in publications that sell large, expensive advertisements to tourism-related industries, and these industries do not wish to see articles with headlines like: "URUGUAY: DON'T BOTHER". So no matter what kind of leech-infested, plumbing-free destination travel writers are writing about, they always stress the positive. (Dave Barry, *Dave Barry's Greatest Hits*; emphasis omitted)
7. How can anyone in his right mind criticize the state police for the speed traps? If you're not speeding, you don't have to worry about them. It could save your life if some other speeder is stopped. (newspaper call-in column)
8. Philosophy is dangerous whenever it is taken seriously. But so is life. Safety is not an option. Our choices, then, are not between risk and security, but between a life lived consciously, fully, humanly in the most complete sense and a life that just happens. (Douglas J. Soccio, *Archetypes of Wisdom,* 3rd ed.)
9. Our nation protests, encourages, and even intervenes in the affairs of other nations on the basis of its relations to corporations. But if this is the case, how can we dissociate ourselves from the plight of people in these countries? (Louis P. Pojman, *Global Environmental Ethics*)
10. If a man say, "I love God," and hateth his brother, he is a liar: for he that loveth not his brother whom he hath seen, how can he love God whom he hath not seen? (I John 4:20)
11. Each of us has an intellectual dimension to his experience. We need ideas as much as we need food, air, or water. Ideas nourish the mind as the latter provide for the body. In light of this, it's clear that we need good ideas as much as we need good food, good air, and good water. (Tom Morris, *If Aristotle Ran General Motors*)
12. What is right in one place may be wrong in another, because the only criterion for distinguishing right from wrong—and so the only ethical standard for judging an action—is the moral system of the society in which the act occurs. (stated but not endorsed in William H. Shaw, *Business Ethics,* 4th ed.)