

Sixth Edition

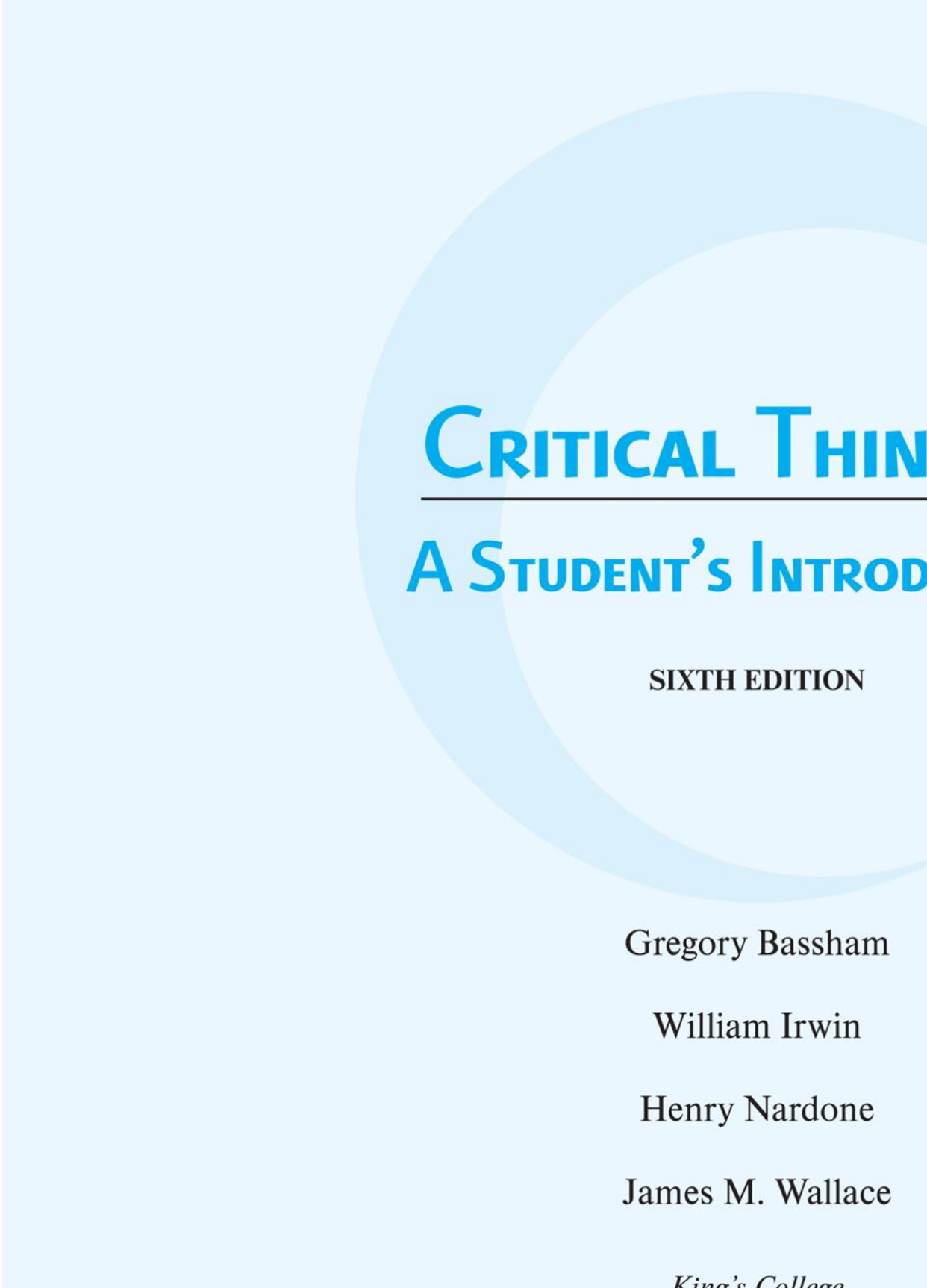
# CRITICAL THINKING

A Student's Introduction



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Hill**  
Education

Gregory Bassham ■ William Irwin  
Henry Nardone ■ James M. Wallace



**CRITICAL THIN**  

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**A STUDENT'S INTRODUCTION**

**SIXTH EDITION**

Gregory Bassham

William Irwin

Henry Nardone

James M. Wallace

*King's College*





## CRITICAL THINKING: A STUDENT'S INTRODUCTION, SIXTH EDITION

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## A PERSONAL WORD TO STUDENTS

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 over seventy years. Teaching critical thinking is what we do. It's our passion. We have seen how critical thinking changes 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!

# PREFACE

*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—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, many new readings have been added to keep the text timely and fresh.

## 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.

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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 *uncritical* thinking is particularly common and harmful: the media (Chapter 14) and pseudoscience and the paranormal (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.

## **STRENGTHS AND DISTINCTIVE FEATURES OF THE TEXT**



There are a number of 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, hindrances, and dispositions.
- 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 errors in reasoning and thinking.

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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.

## WHAT’S NEW TO THE SIXTH EDITION

In preparing this edition, we have benefited enormously from suggestions from users and reviewers of previous editions. Our grateful thanks to all! This is the most extensive revision of the text since the second edition. The major changes in this edition are the following:

- Many new readings have been added and some older readings have been replaced.
- The media section of Chapter 14 has been completely rewritten in light of rapid, tectonic changes to the whole media environment and current politics.
- Chapter 1 contains a fuller discussion of cognitive biases and sociocentrism.
- Two new fallacies (composition and division) have been added to Chapter 6.
- The discussion of logical relevance in Chapter 5 has been clarified and expanded.
- New and updated exercises and examples have been added throughout the book.
- In a continuing effort to keep the text as affordable as possible, several chapters have been streamlined.
- The Instructor's Manual and student online resources have been updated and expanded.

## ACKNOWLEDGMENTS

A book like this takes a village. Our heartfelt thanks to the team of anonymous pre-revision reviewers who offered valuable feedback on ways to strengthen the text; to the many reviewers of previous editions; to Andy Petonak, Rebecca Thompson, and David Doty, who provided great assistance on the media chapter; to the courteous and skilled professionals at McGraw-Hill who guided us through the revision process, especially Jamie Laferrera, Alexander

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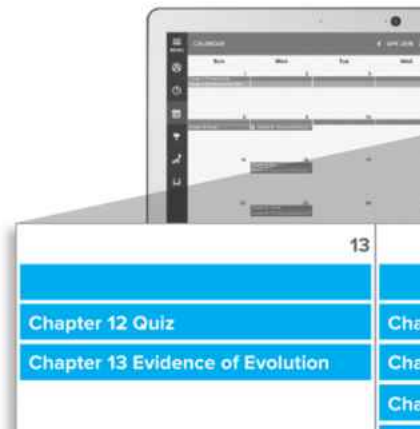
- Jordan Cunningham,  
Eastern Washington University

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## CHAPTER 1

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# INTRODUCTION TO CRITICAL THINKING

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 empowerment and enrichment that result 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.

*Criticism lies at the very heart of education.*

—Robert Paul Wolff

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 and illogic. In terms of critical-thinking opportunities and challenges, we live in “the best of times” and “the worst of times.” Never before has it been so important, therefore, to study critical thinking and master its vital lessons.

*The purpose which runs through all other educational purposes—the common thread of education—is the development of the ability to think.*

—Educational Policies Commission

## WHAT IS CRITICAL THINKING?

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 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.

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Put somewhat differently, critical thinking is disciplined thinking governed by clear intellectual standards. Among the most important of these intellectual standards are **clarity, precision, accuracy, relevance, consistency, logical correctness, completeness, and fairness.**<sup>1</sup> 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 he or she is 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*:

*Everything that can be said can be said clearly.*



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.<sup>2</sup>

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....”<sup>3</sup> Only by paying careful attention to language can we avoid such needless miscommunications and disappointments.

Critical thinkers not only strive for clarity of language but 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*. 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.

*A constant exercise of the discipline of precise thought makes for more lucid and exact thinking.*

—John Hick

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 exactly 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.

*No one can navigate well through life without an accurate map by which to steer. Knowledge is the possession of such a map, and truth is what the map gives us, linking us to reality.*

—Tom Morris

A good example of this is provided by America's long and costly involvement in Vietnam. The policymakers who embroiled us in that conflict were not stupid. On the contrary, they were, in journalist David Halberstam's oft-quoted phrase, "the best and the brightest" of their generation. Of course, the reasons for their repeated failures of judgment are complex and controversial; but much of the blame, historians agree, must be placed on false and inadequate information: ignorance of Vietnamese history and culture, an exaggerated estimate of the strategic importance of Vietnam and Southeast Asia, false assumptions about the degree of popular support in South Vietnam, unduly optimistic assessments of the "progress" of the war, and so forth. Had American policymakers taken greater pains to learn the truth about such matters, it is likely they would not have made the poor decisions they did.

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 boring school assembly or watched a mud-slinging political debate can appreciate the importance of staying focused on relevant ideas and information. A favorite debaters' trick is to try to distract an

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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.<sup>4</sup>

*No tedious and irrelevant discussion can be allowed; what is said should be pertinent.*

—Plato

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.

## 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.

*The guiding principle of rational behavior is consistency.*

—Deborah J. Bennett

There are two kinds of inconsistency that we should 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 thinking point of view, such examples are not especially interesting. As a rule, they involve failures of character to a greater degree 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

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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.<sup>6</sup>

*There is a difference between knowing the path and walking the path.*

—Morpheus, in *The Matrix*

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 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.

*Intelligence means a person who can see implications and arrive at conclusions.*

—Talmud





## Speaking of Inconsistency ...

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

1. Watch your spelling. Writers who mispele a lott of words are properly regarded 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 slob vilify people they disagree with.<sup>5</sup>

## Logical Correctness