

CRITICAL REASONING THIRD EDITION

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AND
DAVID W. PAULSEN



THIRD EDITION

Critical Reasoning

*Understanding and Criticizing
Arguments and Theories*

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Preface to the Third Edition

This text has evolved through succeeding editions alongside an educational movement. When the first edition was written, it was one of the very few texts designed to help students improve their ability to evaluate critically what they heard and read in a variety of everyday contexts. Most of the books in the field of logic did not address this need directly. But in the succeeding years the importance of developing and applying analytical and critical skills in everyday contexts became widely recognized. By the time the second edition was published, courses in informal logic and critical thinking had become common in colleges and universities across the United States and had been installed as a graduation requirement at some. As we began to prepare this third edition, it became apparent that the interest in critical reasoning is more than a short-term trend. Not only have course offerings and enrollments continued to increase in this area, but there is also a broadly based movement to infuse critical thinking instruction across the curriculum. Conferences related to critical thinking continue to draw large audiences, and publication of scholarly literature in this area has shown strong development.

In this context, teachers and students are well served by the availability of a variety of texts displaying different approaches to many topics. In this edition, we have sought to maintain features that have appealed to a broad range of users of previous editions: readability, diversity of examples and exercises, and clear presentation of step-by-step procedures for reconstruction and criticism. In addition, ours remains one of the few texts that

provide techniques for understanding and criticizing theories as well as arguments. In response to a variety of helpful suggestions, we have added new features to the third edition.

New Features in the Third Edition

- A new introductory chapter—"Deciding What to Believe"—that thoroughly describes what critical reasoning is and that develops the case in favor of the practice of critical reasoning.
- Expanded informal characterization of the validity of arguments in Chapter 4, using physical models to convey the notion of logical necessity.
- A more detailed formal treatment of validity in the appendix. This allows instructors more flexibility in choosing whether and how deeply to pursue formal logic in connection with critical reasoning.
- Concise definitions of each fallacy we discuss in Chapter 6.
- A useful glossary of important concepts at the end of the text.
- An expanded selection of answers to exercises, including exercises requiring longer answers.

Suggestions for Using the Text

The main body of the text is divided into two parts. Chapters 2 through 8 concentrate on deductive arguments; Chapters 9 and 10 concentrate on induction and empirical theories. Within the section on arguments, Chapters 2 and 3 concentrate on analysis and reconstruction of simple passages, Chapters 4 and 5 introduce techniques of criticism, Chapter 6 discusses fallacies, and Chapters 7 and 8 apply techniques to more complicated passages. Even though the early chapters may seem relatively easy, it is important for the reader to master this material, because the more complex exercises in Chapter 7 and especially Chapter 8 are very difficult unless the step-by-step procedures of identifying premises and conclusions, adding missing premises and conclusions, determining validity, criticizing premises, assessing underlying conceptual theories, and paraphrasing passages have been carefully studied. Even if the steps of analysis and criticism have been learned individually, this learning will be wasted unless it can be brought together in a more systematic manner to understand and criticize real-life arguments, such as those in Exercise 8.

A main concern in selecting a text and planning a course in critical thinking is how much attention to devote to more formal aspects of logic. In this edition, we have sought to give users a maximum of flexibility in

this regard. Chapter 4 contains an introduction to the concept of validity by means of analogy with physical necessity as well as some informal techniques involving counterexamples and parity of reasoning that can be used to demonstrate invalidity. The appendix provides an introduction to symbolism, definition of truth functional connectives, and the use of truth tables and Venn diagrams, as well as comments about natural deduction. The appendix can be omitted, used in part (for example, as an introduction to symbolic notation), taught as a free-standing chapter (with assigned exercises), or treated as an introduction and supplement to a more elaborate discussion of symbolic logic.

Instructors might consider varying passages to be analyzed and criticized by asking students to select articles from newspapers or magazines. We have found it useful to have students keep a journal of such articles, as well as a transcription of interesting arguments or theories they have heard in conversation, encountered in lectures, or seen on television. As a final exercise, students can then be asked to apply the techniques discussed in the text to some of the items in their journals. These and other ways of extending the text are considered in greater detail in the *Critical Reasoning Instructor's Manual*.

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CHAPTER ONE

Deciding What to Believe

When you read a book or a newspaper or listen to someone speak, or even when you are thinking by yourself, you face a decision about what to believe. Should you accept a newspaper columnist's argument in favor of undermining drug cartels by legalizing drugs? Should you be persuaded by your professor's reasoning that plea bargaining in the criminal courts should be eliminated? Should you be led by your own considerations to the conclusion that women should not be entirely free to choose whether to have an abortion? Critical reasoning—the subject of this book—is a collection of procedures that will help you make decisions concerning what to believe. More specifically, exercise of critical reasoning can help you understand what is at issue and guide you in judging whether the reasons supporting a point of view are strong enough that you should accept it.

This is not to say that critical reasoning *alone* can tell you what to believe. Critical reasoning is not a magical technique guaranteed to tell you whether to accept a particular belief in isolation. It does not operate in a vacuum. In order to decide whether drugs should be legalized, for example, you would need supporting information. You would probably want to know the extent of drug use under present laws, the nature of illegal drug trafficking and the harm it produces, the probable effects of different plans for legalization (Would drug use increase? By whom? How much?), and so on. But in evaluating what appears to be “information” on these subjects and in judging whether this information justifies taking a particular position on the issue, critical reasoning should play a crucial role.

The techniques of critical reasoning that we describe in this book assume that you already have many beliefs and that you use these beliefs to decide whether to accept new arguments presented to you. For example, suppose someone claims that drug use wouldn't increase significantly if drugs were legalized. You will be inclined to accept or reject this, depending on your beliefs about people—how tempted they are to use drugs, whether it is the threat of punishment that now keeps them from using drugs, and whether they would become more inclined to use drugs if the threat of legal punishment were lifted. If you believe that the threat of legal punishment has very little to do with whether people use drugs, this would support the claim that legalization wouldn't result in higher drug use.

Of course, you can always pursue the question further, asking whether a supporting belief is itself well supported. Why do you believe that threat of punishment isn't what keeps people from using drugs? You could try to find out whether there is support for this belief, perhaps by looking at research done on why some people use drugs while others don't. Moreover, it is crucial for critical reasoners to be willing to give up some previously held beliefs if they appear to be inconsistent with claims that have better support.

The techniques of critical reasoning that we present here are not techniques for generating beliefs or cleverly presenting arguments. They are not techniques that tell you how to move from premises you now accept to conclusions you haven't yet considered. They are techniques for *evaluating* some beliefs in the light of others. By contrast, the detective in fiction is often depicted as "deducing" unexpected conclusions from a set of clues. Critical reasoning does not operate in this way. It is a procedure for judging beliefs, not for generating them.

We can describe our approach to critical reasoning more clearly by contrasting it with two other kinds of activity: (1) passive reading or listening (as in the case of students who expect a lecturer to fill them with information) and (2) mere disagreement (as in the case of a combative person who is not willing to listen to reason).

Critical Reasoning Versus Passive Reading or Listening

Sometimes, when we listen to a lecture or read a book or an essay, we take each statement as information to be remembered. Suppose you are listening to a professor lecturing on the criminal courts. If your main purpose is

to prepare yourself for a multiple choice test, you might simply try to remember as many of her statements as you can: "Most criminal cases don't go to trial. About 90 percent of defendants plead guilty. Most legal scholars account for this high rate of guilty pleas as being the result of plea bargaining. If this is so, then eliminating plea bargaining would swamp the courts with cases." If you are taking notes, your mind will be active to the extent that you select some statements as worth writing down, and you probably group statements together under topical headings. But you are passive in the sense that you don't evaluate which of the professor's statements to accept and which to doubt or reject.

By contrast, critical reasoning demands a more fully active approach. First, in order to evaluate what you hear, you listen for structure: Are some statements presented as conclusions (e.g., that eliminating plea bargaining would swamp the courts) and others as supporting reasons (e.g., that plea bargaining results in guilty pleas)? Are some presented as explanations? What are they intended to explain? (Is the availability of plea bargaining intended to explain the high rate of guilty pleas?) Next, you evaluate: Has this conclusion been adequately supported? Do you have reason to doubt the supporting statements? Does the conclusion follow from them? Is this explanation an adequate one? These are some of the questions this book will address.

Critical Reasoning Versus Mere Disagreement

In contrast to passive reading and listening, mere disagreement is critical as well as active, but it nevertheless lacks some essential features of critical reasoning. As we conceive mere disagreement, the listener/reader is poised to reject that with which she disagrees. She approaches what she hears or reads with her own established beliefs well in mind. She considers each statement presented to her and accepts, rejects, or holds it as uncertain, depending on how it squares with her prior set of beliefs. So as she reads from the editorial on legalizing drugs, "Many of the deaths associated with drug trafficking are the result of disputes between rival drug gangs," she thinks, OK, I agree with that. She reads further that, if drugs were legalized, the commerce of drugs could be regulated by law. She thinks, Well, I guess so. She proceeds through the editorial to the conclusion of the article, which suggests the limited legalization of drugs, and she makes the judgment, No, that's too radical, I've always been against drugs.

This process is active in that, as each statement is considered, a judgment is made. And the process is critical insofar as the judgments are evaluative (some statements are accepted, some are rejected). But critical reasoning differs from mere disagreement in certain crucial ways.

Mere disagreement is applied to separate, individual statements, and they are judged solely against the background of the reader's own beliefs. Critical reasoning, by contrast, requires reading the whole editorial for argumentative structure, looking at some statements as justifications for believing others. Rather than judging the main thesis of the article in isolation and evaluating it on the basis of her prior beliefs alone, critical reasoning requires that the reader be open to having her mind changed. Even if she would have disagreed with the editor's thesis initially, she might be persuaded by the content of the editorial to believe it.

Critical reasoning, then, involves looking at reasons on which a point of view is based and judging whether these reasons are strong enough to justify accepting this point of view.

The Attitude of the Critical Reasoner

This activity of critical reasoning typically carries with it an attitude quite different from that of the person engaged in mere disagreement. When we engage in mere disagreement, we seek to maintain the same beliefs we held prior to considering a new position. When we engage in critical reasoning, we cultivate an attitude of relative detachment. Of course, we can't give up our whole set of beliefs at once because we use these beliefs to judge whether to accept the argument being presented to us. But if an arguer points out that reasons we ourselves would accept really support his conclusion and would compel us to give up some conflicting view we used to hold, then we see this as a gain, not a loss.

If we have been against abortion and someone points to beliefs we ourselves hold that would rationally compel us to the view that the fetus should not be considered a person, then as critical reasoners we would embrace this view even though it threatens our antiabortion position. And the same can be said if we are in favor of allowing abortion and we are given good reasons for taking the fetus to be a person. The object is not to "save face" by attempting to justify past beliefs, but to embrace whatever is most reasonable now. We are committed to being consistent and to following reason wherever it leads.

An issue like abortion typically reduces potential reasoners to mere disagreeers. Because the issue is heartfelt and because those on both sides tend to see their opponents as villains, it is difficult to accept a point that might give support to the opposing view, even if you have good reason to accept it. The object becomes the “winning” of the argument—by making the opposition look and sound bad—rather than the winning of new understanding by careful consideration of points made.

Self-Identity: Two Options

These two attitudes—the mere disagreeer’s attitude of wanting to sustain past beliefs and the critical reasoner’s attitude of wanting to judge what *should* be believed—correspond to two ways of viewing ourselves. I might associate what I truly am with my present set of beliefs. Then, if I find that I was mistaken about something, I must admit that until now my self has been defective—a difficult thing to do. In this situation, it is important for me to *already* be right—not to have to change my beliefs or learn from someone else. Maintaining this attitude will hold me at the level of mere disagreement.

On the other hand, I might identify myself more closely with the belief-forming process itself. Rather than characterizing myself in static terms, by the set of beliefs that I try to maintain, I can think of myself dynamically as actively engaged in replacing less adequate beliefs with more adequate ones. I can characterize myself as the kind of person who takes pride in carrying out this activity well. Critical reasoners are like athletes engaged in the activity of their sport. Mere disagreeers are more like bodybuilders, taking pride in the static features of their bodies, not in how their bodies perform.

Benefits of Critical Reasoning

What is to be gained from approaching disputes as opportunities to improve your set of beliefs rather than as contests? Many people enjoy winning arguments, and they would be disappointed to learn that studying