

Richard L. Epstein

Critical Thinking

ILLUSTRATED BY ALEX RAFFI



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Richard L. Epstein

Cartoons by Alex Raffi



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Preface to the Student

You can read this book on your own. There are plenty of examples. The exercises illustrate the ideas you're supposed to master. With some effort you can get a lot out of this text.

But if you only read this book by yourself, you'll miss the discussion, the exchanges in class that make the ideas come alive. Many of the exercises are designed for discussion. That's where your understanding will crystallize, and you'll find that you can begin to use the ideas and methods of critical thinking.

You'll get the most out of discussions if you've worked through the material first. You need to know how to read this (or any) textbook.

Read the chapter through once, with a pencil in hand. Get an overview. Mark the passages that are unclear. You need to understand what is said—not all the deep implications of the ideas, not all the subtleties, but the basic definitions. You should have a dictionary on your desk.

Once the words make sense and you see the general picture, you need to go back through the chapter paragraph by paragraph, either clarifying each part or marking it so you can ask questions in class. Then you're ready to try the exercises.

You should try all the exercises. Many of them will be easy applications of the material you've read. Others will require more thought. And some you won't make sense of until you talk about them with your classmates and instructor. When you get stuck, look up the answer in the back.

By the time you get to class, you should be on the verge of mastering the material. Some discussion, some more examples, a few exercises explained, and you've got it.

That pencil in your hand is crucial. Reading shouldn't be a passive activity.

You need to master this material. It's essential if you want to write well. It's essential in making good decisions in your life. If you can think critically you can advance in your work. No matter where you start in your career—flipping hamburgers or behind a desk—when you show your employer that you are not only responsible but can think well, can foresee consequences of what you and others do and say, you will go far. As much as the knowledge of this or that discipline, the ability to reason and communicate will speed you on your way. Those skills are what we hope to teach you here.

Preface to the Instructor

This textbook is designed to be the basis of classroom discussions. I've tried to write it so that lectures won't be necessary. I've minimized the jargon while retaining the ideas. The material is more challenging than in other texts, while, I hope, more accessible.

The exercises are meant to lead to discussion, encouraging the students to compare ideas. Class time can be used to discuss homework. Instead of spending masses of time grading all the exercises, there are Quickie Exams in the Instructor's Manual that you can assign.

The chapters build on one another to the end. Rely on your students to read the material—quiz them orally in class, call on them for answers to the exercises, clear up their confusions. You can do the whole book in one semester that way.

I've chosen the material that I think is essential for a one-semester course, the fundamentals of reasoning well. I comment below on how you might rearrange the order a bit and why I've left out some subjects that are occasionally covered in a critical thinking course.

This course should be easy and fun to teach. If you enjoy it, your students will, too.

The order of the material

The Fundamentals (Chapters 1–5) is all one piece. I suggest you go through it in a direct line. It's the heart of the course. Here and throughout there is a lot of emphasis on learning the definitions.

The Structure of Arguments (Chapters 6–8) is important. Chapter 6 on compound claims—an informal version of propositional logic—is probably the hardest for most students. There's a temptation to skip it and leave that material for a formal logic course. Yet some skills in reasoning with conditionals is essential, for if you skip this chapter you'll end up having to explain the valid and invalid forms piecemeal when you deal with longer arguments. It's the same for Chapter 8 on general claims—an informal introduction to quantifiers in reasoning—except that the material seems easier. The second half of Chapter 7 can be skipped.

Avoiding Bad Arguments (Chapters 9–11) is a lot of fun. Slanters and fallacies give the students motive to look around and find examples from their own lives and from what they read and hear. It engages them. Because of that, many instructors like to put this material earlier. But then you end up teaching a hodge-

podge of fallacies that won't connect and won't be retained. I've introduced the fallacies along with the good arguments they mock (e.g., slippery slope with reasoning in a chain with conditionals, *ad hominem* with a discussion of when it's appropriate to accept an unsupported claim), so that Chapter 11 is a summary and overview. You can push Chapters 9 and 10 forward to right after Chapter 5, but that leaves Chapter 11 hanging alone later. Covering this material here helps students unify the earlier material and gives them some breathing room. With the exercises in Arguments for Analysis, you can conclude a one-quarter course.

The last part, *Reasoning About Our Experience* (Chapters 12–15), covers specific kinds of arguments. Chapter 13 on numerical claims could follow directly after Chapter 5. I don't include chapters on moral reasoning, legal reasoning (there are examples of legal reasoning in the chapters and in the Instructor's Manual), or explanations. These are important subjects, and I deal with them in a second course on critical thinking. But students need to know about analogies, generalizing, and cause and effect before they tackle them. And they require introducing a lot of background: philosophical distinctions for moral reasoning, law for legal reasoning, science for explanations.

It is possible to teach students how to write good arguments. I've included two types of writing exercises. The first requires the student to write an argument for or against a given issue, where the issue and the method of argument are tied to the material that has just been presented. About midway through the book you can have your students read *Composing Good Arguments*, which summarizes the lessons they should learn. The writing exercises take some time to grade, but, as I discuss in the Instructor's Manual, there are shortcuts.

The second type of writing lesson presents a situation or a series of actions in a cartoon, and requires the student to write the best argument possible for a claim based on that. These lessons seem to do more to teach students reasoning than any other exercise I've used. Students have to distinguish between observation and deduction; they have to judge whether a good argument is possible; they have to judge whether the claim is objective or subjective; they have to judge whether a strong argument or a valid argument is called for. These deserve class time for discussion.

What is new or unusual about this text

- The big difference is that I have tried to tie all the material into a single whole, a one-semester course covering the basics. The text is meant to be read and studied from one end to the other. The ideas fit together and make sense as one piece.

An example of this unity is how the principle of charity is revised into the Principle of Rational Discussion and the Guide to Repairing Arguments (Chapter 4). These play a central role in any argument analysis. They are explained and justified. They are used continuously to give shape to the analyses. They serve to organize the fallacies (Chapter 11), so that fallacies are not just a confusing list.

- There is an enormous variety and number of examples and exercises. The exercises relate to the material, and start from simply stating a definition, to relating the various ideas, to applying the concepts. There is repetition of exercises to promote mastery of the most important ideas. There are worked examples, both in the text and in the exercises, which help the students see how to proceed in their own work.

The exercises and examples are about topics students worry about all the time (their studies and grades, their love lives, their digestion, the superiority of dogs to cats, . . .). The examples from newspapers and media are focused on the material and on what will interest students. Philosophical issues are raised, but in the context of dialogues that students can imagine hearing their friends say. The text relates theory to the needs of the students to reason in their own lives.

- There is a Workbook which lays out exercises in a format that forces students to do the basic steps in argument analysis for every argument they encounter. It also makes grading a lot easier. There are many cartoon exercises in the Workbook not found in the text, including a dozen cartoon writing lessons at the end.
- Cartoons for this book have been drawn specifically to reinforce the ideas, to show relationships of ideas, and, with the writing exercises, to get students to convert nonverbal experience into arguments. The cartoons, especially the cartoon writing lessons, help students grasp the ideas much faster.
- The book has an Instructor's Manual that is extraordinarily complete. Not only have I included answers and lots of sample exams, but also a running commentary on teaching methods and why the material is presented as it is. There is also an Instructor's Disk that contains all the sample exams ready to modify and print, as well as other handouts and answers to the exams.
- Definitions and key ideas are boxed. It's easy to find the important material.
- The text is fun to read, yet challenges the very best student.

I've tried to steer between the Scylla of saying nonsense and the Charybdis of teaching only trivialities. I hope you find the journey memorable. The water is deep.

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I am grateful to them all. Much of what is good in this text comes from them. What is bad is mine, all mine.

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Critical Thinking

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Preface to the Student

Preface to the Instructor

Acknowledgments

THE FUNDAMENTALS

1 Are You Convinced?

A. Are You Convinced?	1
B. Claims	2
C. Arguments	5
• Exercises for Chapter 1	8

Writing Lesson 1	13
----------------------------	----

2 What Are We Arguing About?

A. Vague Sentences	
1. Too vague?	15
2. Drawing the line (<i>Bad arguments</i>)	16
3. Vagueness and standards	17
4. Moral claims	18
5. Confusing objective and subjective (<i>Bad arguments</i>)	21
• Exercises for Section A	22
B. Ambiguous Sentences	
1. Which do you mean?	25
2. Pronouns and quotation marks	25
• Exercises for Section B	27
C. Definitions	28
• Exercises for Section C	32

Writing Lesson 2	37
----------------------------	----

3 What is a Good Argument?

A. What is a Good Argument?	39
B. The Connection Between the Premises and Conclusion	41
C. The Tests for an Argument to Be Good	44
• Exercises for Sections A–C	48
D. Strong vs. Valid Arguments	51
• Exercises for Chapter 3	52

	Writing Lesson 3	57
	Writing Lesson 4 [Cartoons]	59
4	Repairing Arguments	
	A. The Need to Repair Arguments	61
	B. The Principle of Rational Discussion	62
	C. The Guide to Repairing Arguments	64
	D. Relevance (<i>Bad arguments</i>)	70
	• Exercises for Sections A–D	71
	E. Inferring and Implying	77
	• Exercises for Section E	78
	Writing Lesson 5	81
	Writing Lesson 6 [Cartoons]	83
5	Is That True?	
	A. Evaluating Premises	86
	B. Criteria for Accepting or Rejecting Claims	
	1. <i>Reject</i> : The claim contradicts our personal experience	86
	• Exercises for Sections A and B.1	88
	2. <i>Reject</i> : The claim contradicts other claims we know are true	90
	3. <i>Don't accept</i> : The claim contradicts one of the other premises	90
	4. <i>Accept</i> : The claim is given as personal experience by someone we know and trust, and the person is an authority on that kind of claim	91
	5. <i>Accept</i> : The claim is offered by a reputable authority whom we can trust as an expert about this kind of claim and who has no motive to mislead us	91
	• Exercises for Sections B.2–B.5	92
	6. <i>Accept</i> : The claim is put forward in a reputable journal or reference source	93
	7. <i>Accept</i> : The claim is in a media source that's usually reliable and has no obvious motive to mislead	93
	8. <i>Suspend judgment</i> : Plausibility isn't truth	94
	9. Advertising?	95
	10. Arguing backwards: Don't believe the premises just because the conclusion is true	95
	Summarizing: When to accept and when to reject	96
	• Exercises for Section B	96
	C. It's Not Who Said It (<i>Bad arguments</i>)	
	1. Mistaking the person for the argument	102
	2. Mistaking the person for the claim	102
	3. Phony refutation	103
	• Exercises for Section C	104

Writing Lesson 7	109
Review Chapters 1–5	113

THE STRUCTURE OF ARGUMENTS

6	Compound Claims	
	A. It’s Just One Claim	
	1. Compound claims	119
	2. The contradictory of a claim	121
	• Exercises for Section A	123
	B. Consider the Alternatives	
	1. Reasoning with “or” claims	125
	2. False dilemmas (<i>Bad arguments</i>)	128
	• Exercises for Section B	129
	C. Conditionals	
	1. Valid and invalid forms of arguments using conditionals	130
	• Exercises for Section C.1	134
	2. “Only if”	136
	3. Necessary and sufficient conditions	136
	• Exercises for Sections C.2 and C.3	137
	4. Reasoning in a chain and the slippery slope	139
	• Exercises for Chapter 6	141
	Writing Lesson 8	145
	Writing Lesson 9 [Cartoons]	151
7	Complex Arguments	
	A. Raising Objections	153
	B. Refuting an Argument	
	1. Refuting directly	155
	2. Refuting indirectly	156
	3. Attempts to refute that are <i>bad arguments</i>	157
	• Exercises for Sections A and B	159
	C. Arguments within Arguments	161
	D. Dependent and Independent Premises	163
	• Exercises for Sections C and D	164
	E. Analyzing Complex Arguments	166
	• Exercises for Section E	171
	Writing Lesson 10	173
8	General Claims	
	A. “All” and “Some”	177
	B. Contradictories	179

C. “Only”	180
• Exercises for Sections A–C	180
D. Some Valid and Invalid Forms	182
• Exercises for Section D	186
E. Between One and All	
1. Precise generalities	189
2. Vague generalities	189
• Exercises for Section E	191
Writing Lesson 11	193

Review Chapters 6–8	195
--------------------------------------	------------

AVOIDING BAD ARGUMENTS

9 Concealed Claims

A. Where’s the Argument?	201
B. Loaded Questions	202
C. What Did He Say?	
1. Making it sound nasty or nice	202
2. Downplayers and up-players	203
3. Where’s the proof?	204
D. Innuendos	206
E. Slanters and Good Arguments	206
• Exercises for Chapter 9	207

10 Too Much Emotion

A. Appeal to Pity	213
B. Appeal to Fear	214
C. Appeal to Spite	215
D. Feeling Good	216
E. Is This a Bad Argument?	217
• Exercises for Chapter 10	218

11 Fallacies (*A summary of bad arguments*)

A. Fallacies	221
B. Structural Fallacies	222
C. Content Fallacies	223
D. Violating the Rules of Rational Discussion	224
E. Is This Really a Fallacy?	225
F. So It’s Bad, So What?	226
• Exercises for Chapter 11	227

Writing Lesson 12	229
-----------------------------	-----

Arguments for Analysis	231
Writing Lesson 13 [Cartoons]	251

REASONING ABOUT OUR EXPERIENCE

12	Reasoning by Analogy	
	A. What is Reasoning by Analogy?	255
	B. An Example	256
	C. Judging Analogies	258
	D. Analogies in the Law	260
	• Exercises for Chapter 12	262
	Writing Lesson 14	269
13	Numbers?	
	A. Misleading Claims with Numbers	
	1. Apples and oranges	272
	2. Compared to what?	272
	3. Phony precision	273
	4. How could they know that number?	273
	B. Averages	274
	• Exercises for Chapter 13	276
14	Generalizing From Experience	
	A. Generalizing	279
	• Exercises for Section A	282
	B. When is a Generalization Good?	
	1. How you can go wrong	283
	2. Representative samples	284
	• Exercises for Sections B.1 and B.2	287
	3. Sample size	288
	4. Is the sample studied well?	289
	5. Three premises needed for a good generalization	290
	6. The margin of error and confidence level	290
	7. Variation in the population	291
	8. Risk	292
	9. Analogies and generalizations	292
	• Exercises for Section B	293
15	Cause and Effect	
	A. What is the Cause?	
	1. Causes and effects	302
	2. The normal conditions	303
	3. Particular causes, generalizations, and general causes	303

• Exercises for Sections A.1–A.3	304
4. The cause precedes the effect	305
5. The cause makes a difference	305
6. The cause and effect are close in space and time (tracing the cause backwards)	306
7. Criteria for cause and effect	307
B. Examples	307
• Exercises for Sections A and B	311
C. Common Mistakes in Reasoning about Causes	
1. Reversing cause and effect	313
2. Overlooking other a common cause	314
3. Looking too hard for a cause	314
4. How to look for the cause	316
• Exercises for Section C	317
D. Cause and Effect in Populations	318
1. Controlled experiment: cause-to-effect	319
2. Uncontrolled experiment: cause-to-effect	319
3. Uncontrolled experiment: effect-to-cause	320
• Exercises for Section D	321
Writing Lesson 15	333
Writing Lesson 16 [Cartoons]	335
Review Chapters 12–15	337
Composing Good Arguments	339
Writing Lesson 17	341
Making Decisions	343

APPENDICES

Using Examples in Reasoning

A. Examples for Definitions and Methods	347
B. Showing a Universal Statement is False	348
C. Showing an Argument is Not Valid	348
• Exercises on Examples	349

Diagramming Arguments

A. Diagrams	351
• Exercises for Section A	354
B. Counterarguments	354
• Exercises for Section B	356

Truth-Tables

A. Symbols and Truth-Tables	357
B. The Truth-Value of a Compound Claim	360
• Exercises for Sections A and B	362
C. Representing Claims	363
• Exercises for Section C	365
D. Checking for Validity	366
• Exercises for Section D	369
Glossary	371
Answers to Selected Exercises	381
Index	421

1 Critical Thinking?



A. Are You Convinced?	1
B. Claims	2
C. Arguments	5
• Exercises for Chapter 1	8

A. Are You Convinced?

Everyone's trying to convince you of something: You should go to bed early. You should drop out of college. You should buy a Dodge Ram truck. You should study critical thinking And you spend a lot of time trying to decide what you should be doing, that is, trying to convince yourself: Should I take out a loan? Is chocolate really bad for my complexion? Should I really date someone who owns a cat?

Are you tired of being conned? Of falling for every pitch? Of making bad decisions? Of fooling yourself? Or just being confused?

Thinking critically is a defense against a world of too much information and too many people trying to convince us. But it is more. Reasoning is what distinguishes us from beasts, for many of them can see better, hear better, and are stronger. But they cannot plan, they cannot think through, they cannot discuss in the hopes of understanding better.

I used to go to city council meetings in the small town where I live. The public was invited to participate, and when a heated discussion took place in which I was interested, I often contributed. I was able to clarify the issues, and when I said my piece the majority often agreed with me, because I could see the issues, I could present my ideas well. That, too, is thinking critically.

An older student was in the spring term of his senior year when he took this course. He was majoring in anthropology and planned to do graduate work in