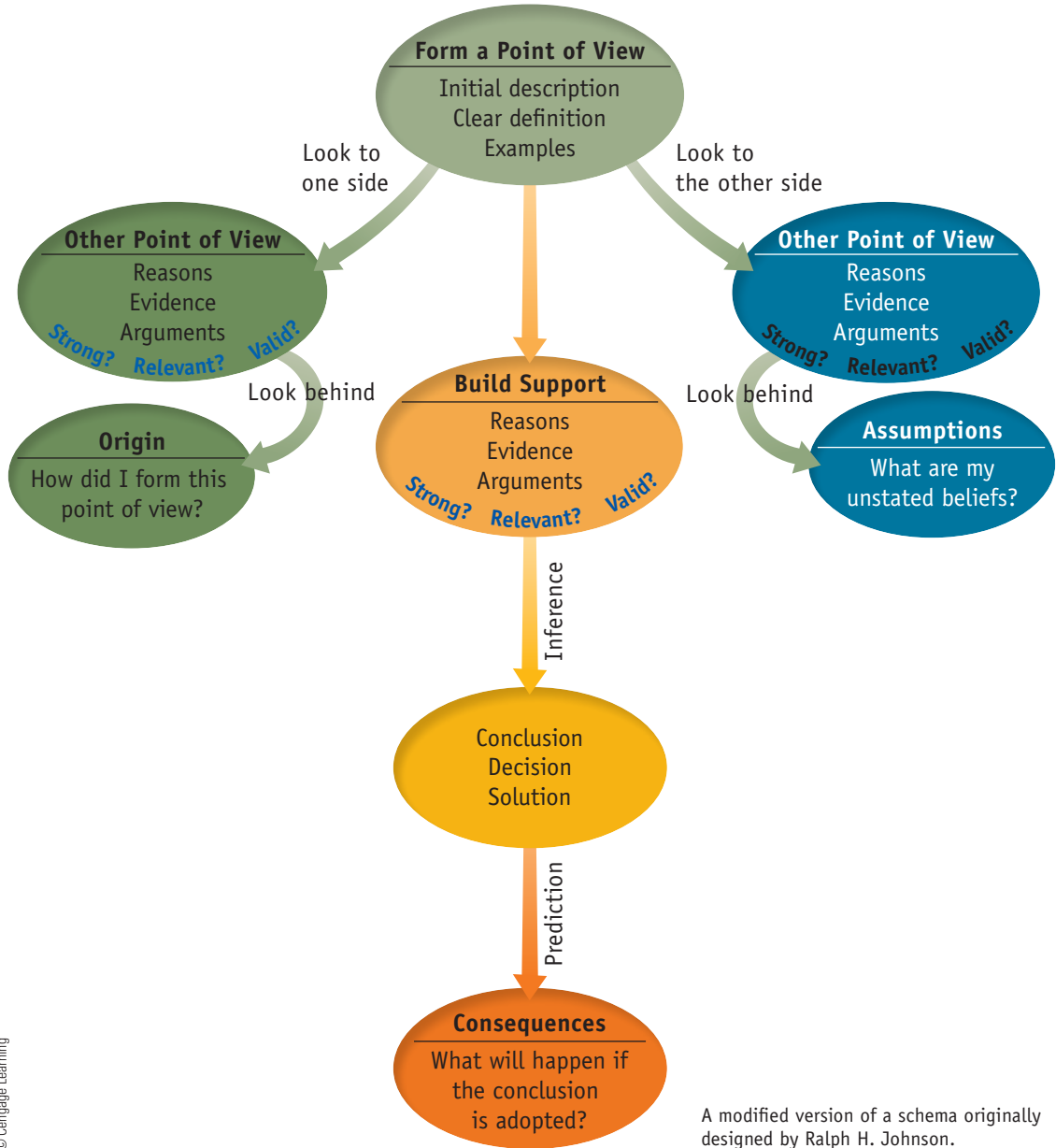


12<sup>th</sup> Edition

# THINKING CRITICALLY

JOHN CHAFFEE

## The Critical Thinker's Guide to Reasoning



EDITION  
**12**

# Thinking Critically

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Australia • Brazil • Mexico • Singapore • United Kingdom • United States

**Thinking Critically, Twelfth  
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Cover Images: iStock.com/stnazkul;  
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Library of Congress Control Number: 2017950066

ISBN: 978-1-337-55850-1

Loose-leaf Edition:

ISBN: 978-1-337-55851-8

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Printed in the United States of America

Print Number: 01

Print Year: 2017

# Brief Contents

<b>1</b>	Thinking .....	3
<b>2</b>	Thinking Critically .....	49
<b>3</b>	Solving Problems .....	99
<b>4</b>	Perceiving and Believing.....	139
<b>5</b>	Constructing Knowledge.....	195
<b>6</b>	Language and Thought.....	257
<b>7</b>	Forming and Applying Concepts.....	303
<b>8</b>	Relating and Organizing.....	339
<b>9</b>	Thinking Critically About Moral Issues.....	373
<b>10</b>	Constructing Arguments.....	421
<b>11</b>	Reasoning Critically.....	461
<b>12</b>	Thinking Critically, Living Creatively.....	519

*For Jessie and Joshua*

# Contents

Preface xv

## CHAPTER 1

## Thinking

3

- Living an “Examined” Life 4
- A Roadmap to Your Mind 9
- Working Toward Goals 10
  - Achieving Short-Term Goals 12
  - Achieving Long-Term Goals 13
- Images, Decision Making, and Thinking About Visual Information 14
  - Images, Perceiving, and Thinking 15
- An Organized Approach to Making Decisions 20
- Living Creatively 24
  - “Can I be Creative?” 25
  - Becoming More Creative 27
- Thinking Ahead 42



### Thinking Critically About New Media

*Learn to think critically about new media on page 34.*



### Thinking Critically About Visuals

*Learn to think critically about what you see on pages 6, 8, 16, 33, and 38.*

The Print Collector/Alamy Stock Photo

## CHAPTER 2

## Thinking Critically

49

- Thinking Actively 53
  - Influences on Your Thinking 53
  - Becoming an Active Learner 54
- Carefully Exploring Situations with Questions 55
- Thinking Independently 58
- Viewing Situations from Different Perspectives 60
- Supporting Diverse Perspectives with Reasons and Evidence 64

v

Discussing Ideas in an Organized Way	67
Listening Carefully	69
Supporting Views with Reasons and Evidence	69
Responding to the Points Being Made	70
Asking Questions	72
Increasing Understanding	72
Reading Critically	73
Asking Questions	73
Using a Problem-Solving Approach	74
Analyzing Issues	78
What is the Issue?	78
What is the Evidence?	80
What are the Arguments?	82
What is the Verdict?	84



### Thinking Critically About New Media

Learn to think critically about new media on page 76.



### Thinking Critically About Visuals

Learn to think critically about what you see on pages 52, 60, 65, 70, 79, and 92.

The Metropolitan Museum of Art/Art Resource, NY

## CHAPTER 3

## Solving Problems

99

Thinking Critically About Problems	100
Introduction to Solving Problems	101
Solving Complex Problems	103
Accepting the Problem	106
Step 1: What is the Problem?	107
Step 2: What are the Alternatives?	110
Step 3: What are the Advantages and/or Disadvantages of Each Alternative?	112
Step 4: What is the Solution?	114
Step 5: How Well is the Solution Working?	116
Solving Nonpersonal Problems	118



### Thinking Critically About New Media

Learn to think critically about new media on page 122.



### Thinking Critically About Visuals

Learn to think critically about what you see on pages 104, 111, 112, 115, and 120.

Justin Sullivan/Getty Images News/Getty Images



Actively Selecting, Organizing, and Interpreting Sensations	141
People's Perceptions Differ	143
Viewing the World Through "Lenses"	144
What Factors Shape Perceptions?	147
Perceiving and Believing	156
Believing and Perceiving	158
Types of Beliefs: Reports, Inferences, Judgments	160
Reporting Factual Information	163
Inferring	166
Judging	170
Differences in Judgments	172



### Thinking Critically About New Media

*Learn to think critically about new media on page 174.*



### Thinking Critically About Visuals

*Learn to think critically about what you see on pages 145, 151, 154, 162, and 187.*

John Jonik/The New Yorker Collection/The Cartoon Bank

Believing and Knowing	196
Knowledge and Truth	198
Stages of Knowing	199
Thinking Critically About Your Beliefs	204
Using Perspective-Taking to Achieve Knowledge	211
Beliefs Based on Indirect Experience	215
How Reliable are the Information and the Source?	216



### Thinking Critically About New Media

*Learn to think critically about new media on page 220.*



### Thinking Critically About Visuals

*Learn to think critically about what you see on pages 206, 207, 210, 228, 233, and 243.*

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- The Evolution of Language 258
- The Symbolic Nature of Language 259
  - Semantic Meaning (Denotation) 261
  - Perceptual Meaning (Connotation) 261
  - Syntactic Meaning 262
  - Pragmatic Meaning 263
- Using Language Effectively 265
- Using Language to Clarify Thinking 267
  - Improving Vague Language 271
- Using Language in Social Contexts 275
  - Language Styles 275
    - Standard American English 275
    - Slang 276
    - Jargon 278
  - Social Boundaries of Language 279
- Using Language to Influence 279
  - Euphemistic Language 280
  - Emotive Language 283



### Thinking Critically About New Media

Learn to think critically about new media on page 287.



### Thinking Critically About Visuals

Learn to think critically about what you see on pages 268, 270, and 276.

PHILIPPE HUGUEN/AFP/Getty Images

- What Are Concepts? 304
- The Structure of Concepts 306
- Forming Concepts 308
- Applying Concepts 312
  - Using Concepts to Classify 322
- Defining Concepts 326
- Relating Concepts with Mind Maps 333



### Thinking Critically About New Media

Learn to think critically about new media on page 334.



### Thinking Critically About Visuals

Learn to think critically about what you see on pages 311, 321, 323, 324, 325, and 328.

Shepard Fairey/The Amplifier Foundation

## CHAPTER 8

## Relating and Organizing

339

### Chronological and Process Relationships 341

Chronological Relationships 341

Process Relationships 344

### Comparative and Analogical Relationships 346

Comparative Relationships 346

Analogical Relationships 348

Using Analogies to Shape Our World 351

### Causal Relationships 356

Causal Chains 357

Contributory Causes 358

Interactive Causes 359



### Thinking Critically About New Media

Learn to think critically about new media on page 355.



### Thinking Critically About Visuals

Learn to think critically about what you see on pages 360, and 365.

Abid Katib/Getty Images News/Getty Images

## CHAPTER 9

## Thinking Critically About Moral Issues

373

### What Is Ethics? 375

### Your Moral Compass 378

I Would Follow My Conscience 381

I Do Not Know What I Would Do 381

I Would Do Whatever Would Improve My Own Situation 381

I Would Do What God or the Scriptures Say is Right 381

I Would Do Whatever Made Me Happy 382

I Would Follow the Advice of an Authority, Such as a Parent or Teacher 382

I Would Do What is Best for Everyone Involved 384

The Thinker's Guide to Moral Decision Making	386
Make Morality a Priority	386
Recognize That a Critical-Thinking Approach to Ethics is Based On Reason	388
Include the Ethic of Justice in your Moral Compass	388
Include the Ethic of Care in your Moral Compass	390
Accept Responsibility for your Moral Choices	391
Seek to Promote Happiness for Yourself and Others	394
Seek to Develop an Informed Intuition	396
Discover Natural Law	398
Choose to be a Moral Person	399



### Thinking Critically About New Media

*Learn to think critically about new media on page 402.*



### Thinking Critically About Visuals

*Learn to think critically about what you see on pages 383, 387, 392, and 400.*

David Silverman/Getty Images News/Getty Images

## CHAPTER 10

## Constructing Arguments

421

Recognizing Arguments	424
Cue Words for Arguments	426
Arguments are Inferences	430
Evaluating Arguments	432
Validity: Do the Reasons Support the Conclusion?	432
Truth: How True are the Supporting Reasons?	433
The Soundness of Arguments	435
Understanding Deductive Arguments	438
Application of a General Rule	438
Modus Ponens	439
Modus Tollens	440
Disjunctive Syllogism	440
Constructing Extended Arguments	446
Writing an Extended Argument	446



### Thinking Critically About New Media

*Learn to think critically about new media on page 444.*



### Thinking Critically About Visuals

*Learn to think critically about what you see on pages 423, 436, and 441.*

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Inductive Reasoning	462
Empirical Generalization	463
Is The Sample Known?	463
Is The Sample Sufficient?	464
Is The Sample Representative?	464
Fallacies of False Generalization	466
Hasty Generalization	466
Sweeping Generalization	467
False Dilemma	468
Causal Reasoning	468
The Scientific Method	469
Controlled Experiments	472
Causal Fallacies	478
Questionable Cause	478
Misidentification of the Cause	479
Post Hoc Ergo Propter Hoc	479
Slippery Slope	480
Fallacies of Relevance	481
Appeal to Authority	482
Appeal to Tradition	482
Bandwagon	483
Appeal to Pity	483
Appeal to Fear	484
Appeal to Flattery	485
Special Pleading	485
Appeal to Ignorance	488
Begging the Question	488
Straw Man	489
Red Herring	490
Appeal to Personal Attack	490
Two Wrongs Make A Right	491
The Critical Thinker's Guide to Reasoning	498
What is My Initial Point of View?	498
How Can I Define My Point of View More Clearly?	498
What is an Example of My Point of View?	498
What is the Origin of My Point of View?	500
What are My Assumptions?	500

- What Reasons, Evidence, and Arguments Support My Point of View? 501
- What are Other Points of View on this Issue? 501
- What is My Conclusion, Decision, Solution, or Prediction? 502
- What are the Consequences? 502



### Thinking Critically About New Media

Learn to think critically about new media on page 492.



### Thinking Critically About Visuals

Learn to think critically about what you see on pages 486, 489, 497, 505, and 511.

Source: makeameme.org

## CHAPTER 12

## Thinking Critically, Living Creatively

519

- Living a Life Philosophy 520
- Choose Freely 522
  - Condemned to be Free 522
  - Free Choice: the Mainspring of Human Action 523
  - Creating Yourself Through Free Choices 525
  - Because You are Free . . . 526
  - Using your Freedom to Shape your Life 528
  - Escaping From Freedom 529
  - Increase your Freedom by Eliminating Constraints 530
- Deciding on a Career 534
  - Thinking Errors in Career Decisions 536
  - Creating Your Dream Job 536
  - Discovering Who You Are 537
  - What are your Interests? 537
  - What are your Abilities? 539
  - Finding the Right Match 541
- Choosing the “Good Life” 547
- Meaning of Your Life 548
  - Final Thoughts 550



### Thinking Critically About New Media

Learn to think critically about new media on page 542.



### Thinking Critically About Visuals

Learn to think critically about what you see on pages 521, 527, 531, 534, 546, and 548.

Kevin Mazur/Getty Images for Tony Awards Productions/Getty Images Entertainment/Getty Images

Glossary 556

Index 562

# Readings

## CHAPTER 1 THINKING

MALCOLM X WITH ALEX HALEY From *The Autobiography of Malcolm X*  
LESLEY DORMEN AND PETER EDIDIN "Original Spin"

## CHAPTER 2 THINKING CRITICALLY

DANIEL GOLEMAN "Jurors Hear Evidence and Turn It into Stories"  
AMY R. GRENIER "The Immigrant Bias: Reflecting on *Serial*"

## CHAPTER 3 SOLVING PROBLEMS

NICHOLAS CARR "Is Google Making Us Stupid?"

## CHAPTER 4 PERCEIVING AND BELIEVING

THE *NEW YORK TIMES* "Five Accounts of the Assassination of Malcolm X"  
DAN BAUM "The Price of Gun Control"  
JEFF MCMAHAN "Why Gun 'Control' Is Not Enough"  
LISA WADE "The (Terrifying) Transformative Potential of Technology"  
JOE SCARBOROUGH "Morning Joe"

## CHAPTER 5 CONSTRUCTING KNOWLEDGE

KEN CALDEIRA "The Great Climate Experiment"  
PATRICK BUCHANAN "Global Warming: Hoax of the Century"  
TYLER HAMILTON "Why media tell climate story poorly"

## CHAPTER 6 LANGUAGE AND THOUGHT

WILLIAM LEAST HEAT-MOON "From Blue Highways"  
THE *NEW YORK TIMES* "An Account of Avianca Flight 52"  
ROBIN TOLMACH LAKOFF "Ancient Greece to Iraq, the Power of Words in Wartime"  
YVES SMITH "Twitter, Communication, and My Intermittent Inner Luddite"  
CAITLIN DEWEY "The Surprising Truth About How Twitter Has Changed Your Brain"  
MEGHAN M. BIRO "Social Media Is Not the Death of Meaningful Communication"

## CHAPTER 7 FORMING AND APPLYING CONCEPTS

KATE RICE “New ‘Non-Traditional’ American Families”

BOB MORRIS “We Are Family”

LISA BELKIN “Three Grown-Ups and a Baby”

JOEL KOTKIN “The Rise of Post-Familialism: Humanity’s Future?”

NICHOLAS JACKSON “Infographic: The American Identity According to Social Media”

## CHAPTER 8 RELATING AND ORGANIZING

JOSEPH BRUCHAC “Indian Renaissance”

DRAKE BENNETT “Thinking Literally: The Surprising Ways That Metaphors Shape Your World”

GRAIN.ORG “GMOs: Fooling—Er, ‘Feeding’—The World For 20 Years”

RICHARD MANNING “Eating the Genes: What the Green Revolution Did for Grain, Biotechnology  
May Do for Protein”

THE EDITORS OF *SCIENTIFIC AMERICAN* “Do Seed Companies Control GM Crop Research?”

## CHAPTER 9 THINKING CRITICALLY ABOUT MORAL ISSUES

ROBERT COLES “The Disparity Between Intellect and Character”

PETER SINGER “The Singer Solution to World Poverty”

## CHAPTER 10 CONSTRUCTING ARGUMENTS

GORE VIDAL “Drugs”

A. M. ROSENTHAL “The Case for Slavery”

JON RONSON “How One Stupid Tweet Blew Up Justine Sacco’s Life”

CLYDE HABERMAN “Shaming: The Pillory at the Center of the Global Village”

NICK BILTON “When the Cyberbully is You”

JILLIAN JORDAN, PAUL BLOOM, MOSHE HOFFMAN, AND DAVID RAND “What’s the Point of Moral  
Outrage?”

## CHAPTER 11 REASONING CRITICALLY

JOHN SABINI AND MAURY SILVER “Critical Thinking and Obedience to Authority”

ANAHAD O’CONNOR “Pressure to Go Along with Abuse Is Strong, but Some Soldiers Find  
Strength to Refuse”



# Preface

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**C**ritical thinking is the cornerstone of higher education, the hallmark of an educated person, and teaching a course in critical thinking is one of the most inspiring and rewarding experiences a teacher can have. Because the thinking process is such an integral part of who we are as people, the prospect of expanding students' thinking implies expanding who they are as human beings—the perspective from which they view the world, the concepts and values they use to guide their choices, and the impact they have on the world as a result of those choices. Teaching students to become critical thinkers does not mean simply equipping them with certain intellectual tools; it involves their personal transformation and its commensurate impact on the quality of their lives and the lives of those around them. This is truly education at its most inspiring!

*Thinking Critically*, Twelfth Edition, is a comprehensive introduction to the cognitive process and helps students develop the higher-order thinking abilities needed for academic study and career success. Based on a nationally recognized interdisciplinary program in Philosophy and Critical Thinking established in 1979 at LaGuardia College (The City University of New York), and involving more than 4,500 students annually, *Thinking Critically* integrates various perspectives on the thinking process drawn from a variety of disciplines such as philosophy, cognitive psychology, linguistics, and the language arts (English, reading, and oral communication).

*Thinking Critically* addresses a crucial need in higher education by introducing students to critical thinking and fostering sophisticated intellectual and language abilities. Students apply their evolving thinking abilities to a variety of subjects drawn from academic disciplines, contemporary issues, and their life experiences. *Thinking Critically* is based on the assumption, supported by research, that learning to think more effectively is a synthesizing process, knitting critical thinking abilities together with academic content and the fabric of students' experiences. Thinking learned in this way becomes a constitutive part of who students are.

---

## Features

This book has a number of distinctive characteristics that make it an effective tool for both instructors and students. *Thinking Critically*

- ***teaches the fundamental thinking, reasoning, and language abilities that students need for academic success.*** By focusing on the major thinking and language abilities needed in all disciplines, and by including a wide variety of readings, the text helps students perform more successfully in other courses.

- ***stimulates and guides students to think clearly about complex, controversial issues.*** The many diverse readings provide in-depth perspectives on significant social issues. More important, the text helps students develop the thinking and language abilities necessary to understand and discuss intelligently these complex issues.
- ***presents foundational thinking, reasoning, and language abilities in a developmentally sequenced way.*** The text begins with basic abilities and then carefully progresses to more sophisticated thinking and reasoning skills. Cognitive maps open each chapter to help students understand the thinking process as well as the interrelationship of ideas within that chapter.
- ***engages students in the active process of thinking.*** Exercises, discussion topics, readings, and writing assignments encourage active participation, stimulating students to critically examine their own and others' thinking and to sharpen and improve their abilities. The text provides structured opportunities for students to develop their thinking processes in a progressive, reflective way.
- ***provides context by continually relating critical-thinking abilities to students' daily lives.*** Once students learn to apply critical-thinking skills to situations in their own experiences, they then apply these skills to more abstract, academic contexts. In addition, by asking students to think critically about themselves and their experiences, the text fosters their personal development as mature, responsible critical thinkers.
- ***integrates the development of thinking abilities with the four language skills so crucial to success in college and careers: reading, writing, speaking, and listening.*** The abundant writing assignments (short answer, paragraph, and essay), challenging readings, and discussion exercises serve to improve students' language skills.
- ***provides a design for a visual culture.*** The four-color design supports visual learning styles, prompts students to think critically about the way print media messages are shaped, and helps clarify distinctions between the many different features and elements of the book's pedagogy—text, readings, and other elements.
- ***includes coverage of analyzing visual information.*** A section in Chapter 1, “Images, Decision Making, and Thinking About Visual Information,” discusses and models the ways in which the medium shapes the message, and introduces concepts for critical evaluation of visual information. Each chapter also includes a feature, “Thinking Critically About Visuals,” that engages students in comparing and evaluating images drawn from current events and popular culture.
- ***includes substantive treatment of creative thinking.*** Chapters 1 and 12 begin and end the book by linking critical thinking to creative thinking. Chapter 1 analyzes the creative process and develops creative-thinking abilities, providing a template for approaching issues and problems both critically and creatively

throughout the text. Chapter 12, “Thinking Critically, Living Creatively,” reinforces these connections and encourages students to create a life philosophy through moral choices.

- **includes a chapter on ethics.** Chapter 9, “Thinking Critically About Moral Issues,” was developed at the suggestion of reviewers who noted the deep engagement many students have with the moral and ethical choices our complex and interconnected society requires them to make.
- **includes a section on constructing extended arguments.** Chapter 10, “Constructing Arguments,” includes a section, “Constructing Extended Arguments,” that presents a clear model for researching and writing argumentative essays.
- **includes a critical-thinking test.** “Tom Randall’s Halloween Party (The Test of Critical Thinking Abilities)” developed by the author, is included in the Instructor’s Resource Manual and in interactive form on the student website, and provides for a comprehensive evaluation of student thinking and language abilities. Using a court case format arising from a fatal student drinking incident, the test challenges students to gather and weigh evidence, ask relevant questions, construct informed beliefs, evaluate expert testimony and summation arguments, reach a verdict, and then view the entire case from a problem-solving perspective.
- **provides students with a method for integrating self-assessment throughout the course.** The “Assessing Your Strategies and Creating New Goals” section at the end of each chapter helps students monitor their own progress. Self-assessment ratings provide an ongoing opportunity for students to evaluate their critical- and creative-thinking abilities, as well as how thoughtful and enlightened their choices are. It suggests strategies that students can methodically apply to improve their thinking abilities and, thus, their lives.
- **provides new readings, films, and visuals for students to analyze and critique.** In addition to the casebook approach, the text gives students a richer context in which to read individual perspectives on current issues.

---

## New to the Twelfth Edition

The twelfth edition of *Thinking Critically* features a greatly expanded treatment of thinking critically about social media and other digital concerns; provides new readings, films, and visuals for students to analyze and critique; and includes new casebooks of readings that give students a richer context in which to read individual perspectives on current issues.

**Greatly expanded treatment of thinking critically about social media and the Internet.** Since the last edition of this book, our culture—and consciousness—have experienced a seismic change, one powered by the explosive growth of the Internet,

social media, and smartphone technology (and addiction!). The consequences of this digital explosion have been stunning and far-reaching. Lived reality has found itself in competition with virtual reality; facts and truth have found themselves challenged by “alternate” facts and truths; and empirically grounded news reporting has found itself threatened by “fake” news reporting. But while the culture and social consciousness has been accelerating at warp speed, developing the abilities to think critically about this evolving new reality have been left behind at an increasing rate. This is extraordinarily alarming. Our fundamental ability to analyze our experience intelligently so that we can make sound judgments and informed decisions is being obfuscated by the pace of events and the smog of confusion and ignorance. It is for this reason that I decided to focus this twelfth edition of *Thinking Critically* on this new virtual reality, seeking to provide a comprehensive and in-depth understanding of the cultural tsunami in which we have been swept up. To accomplish this challenging task, I enlisted two colleagues who are experts in this digital revolution and are also accomplished teachers of the Critical Thinking course: Cheri Lynne Carr and Shannon Proctor. Guided by my superb editor, Sarah Edmonds, Cheri and Shannon assumed a leadership role in the revision, taking responsibility for nearly every aspect of the revision process. This involved contributing new sections and revising existing ones; identifying new readings, films, and visuals; and creating new casebook sections with readings and questions. The result has been an invaluable expansion and interweaving of the existing structure of *Thinking Critically*, and I am indebted to them for their dedication and insight in meeting the goals of this revision. The new themes and features explored in this revision include the following:

- Fostering creativity through crowdsourcing
- New media dangers such as reputation killers, cyberbullying, trolling, and catfishing
- New problems involving technology, such as time wasting, nomophobia, smartphone addiction, and surfing dangers
- Distinguishing perception from fact, reality from virtual reality
- The role of social media in the murder case of Adnan Syed
- Alternate facts, fake news, viral memes, and the search for authentic knowledge and truth beyond political spin and clickbait
- A critical-thinking approach to evaluate the validity, accuracy, bias, and relevance of online information using online tools
- Does Hollywood shape our concept of gender?
- Using word clouds to highlight important textual relationships
- Freedom of speech and privacy on the Internet
- Viral outrage in the case of Justine Sacco
- How does social media shape your thinking? Echo chambers and bias bubbles created by your social media and online news feeds

- Searching online for the right career
- Are genetically modified foods really “Frankenfood”?
- Who counts as an American?
- Should anonymity affect moral reasoning?
- Where do you get inspiration?

**A casebook approach to readings reveals multiple perspectives on the important events of the day** and enriches students’ understanding of the larger context of each issue. For easy reference, all the readings in the book are listed after the detailed table of contents. The new readings included in this twelfth edition include the following:

- “The Surprising Truth About How Twitter Has Changed Your Brain,” by Caitlin Dewey
- “Social Media Is Not the Death of Meaningful Communication,” by Meghan M. Biro
- “How One Stupid Tweet Blew Up Justine Sacco’s Life,” by Jon Ronson
- “Mob Shaming: The Pillory at the Center of the Global Village,” by Clyde Haberman
- “When the Cyberbully Is You” by Nick Bilton
- “What’s the Point of Moral Outrage?” by Jillian Jordan, Paul Bloom, Moshe Hoffman, and David Rand

**Expanded lists of “Suggested Films” help students explore the chapter’s topics through the medium of film.** A description of each of the seventy suggested films helps students and instructors decide which are most interesting and relevant to their current study.

**New photos in “Thinking Critically About Visuals” features and throughout the chapters give students material for critical thinking and evaluation.** Each chapter features new photographs in the “Thinking Critically About Visuals” boxes and elsewhere. These 31 new photographs, along with the many others in the book, challenge students to think critically about the role of images in viewers’ perceptions and about their own responses to them.

---

## MindTap

MindTap® English for John Chaffee’s *Thinking Critically*, Twelfth Edition, is the digital learning solution that powers students from memorization to mastery. It gives you complete control of your course—to provide engaging content, to challenge every individual, and to build their confidence. Empower students to accelerate their progress with MindTap. MindTap: Powered by You.

MindTap gives you complete ownership of your content and learning experience. Customize the interactive assignments, emphasize the most important topics, and add your own material or notes in the eBook.

- Interactive activities on grammar and mechanics promote application to student writing.
- An easy-to-use paper management system helps prevent plagiarism and allows for electronic submission, grading, and peer review.
- A vast database of scholarly sources with video tutorials and examples supports every step of the research process.
- Professional tutoring guides students from rough drafts to polished writing.
- Visual analytics track student progress and engagement.
- Seamless integration into your campus learning management system keeps all your course materials in one place.

The Resources for Teaching folder provides support materials to facilitate an efficient course setup process focused around your instructional goals: the Educator's Guide offers an inventory of MindTap activities correlated to common planning objectives, so that you can quickly determine what you need. It also includes a syllabus that offers an example of how these activities could be incorporated into a sixteen-week course schedule. The Instructor's Manual provides suggestions for additional activities and assignments.

To help students transfer their knowledge of concepts into thoughtful action, the “Reflection in Action” questions that follow each chapter ask students to think about how critical thinking can be used to enrich their decision making, problem solving, beliefs, and values in their lives outside the classroom. Each question corresponds to one major section of the chapter, and you can assign one, several, or all the questions in a chapter to your students. Answers are submitted online, and you can select whether to grade these written responses or to check them off as having been submitted.

Students can practice their ability to identify logical fallacies in the game “What's That Fallacy?” Questions are organized under twenty-five themes of interest to students, such as “Game of Phones,” “All Nighter,” “Rise Up,” and “Ask Siri,” and questions worth one hundred to four hundred points comprise each theme. Students are presented with a statement, dialogue, news item, or scenario and are asked to identify whether a fallacy is present or which fallacy is used.

---

## Acknowledgments

Many persons from a variety of disciplines have contributed to this book at various stages of its development over the past editions, and I thank my colleagues for their thorough scrutiny of the manuscript and their incisive and creative comments. In

addition, I offer my deepest gratitude to the faculty members at LaGuardia who have participated with such dedication and enthusiasm in the Critical Thinking program, and to the countless students whose commitment to learning is the soul of this text. And for this twelfth edition of *Thinking Critically*, I have already acknowledged in the previous section the stellar contributions of Cheri Lynne Carr and Shannon Proctor, who assumed leadership responsibility in the revision process.

The following reviewers also provided evaluations that were of great help in preparing the twelfth edition:

Leslie Aarons, LaGuardia Community College  
Minerva Ahumada, Arrupe College  
Don Braunstein, University of Phoenix  
Mitch Butts, Pitt Community College  
Melinda Campbell, National University  
Payal Doctor, LaGuardia Community College  
Mel Ervin, Lamar University  
William Gibson, Brandman University  
Sherry Goodyear, Luna Community College  
Joy Harrison, Mt. Sierra College  
Allyn Kahn, Champlain College  
Vera Kennedy, West Hills College  
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Jason Whitesitt, Yavapai College  
Karen Zempel, Bryant & Stratton College

I have been privileged to work with a stellar team of people at Cengage who are exemplary professionals and also valued friends. Monica Eckman, Product Director, has been steadfast in her personal and professional support of *Thinking Critically* in its various editions, and I am deeply grateful. Vanessa Coloura, Product Manager, provided wise guidance and crucial decisions in overseeing this revision of *Thinking Critically*; her steady hand at the helm and insightful suggestions at key junctures were essential. My heartfelt thanks go to Sarah Edmonds who, in her role as Content Developer, provided the comprehensive direction and creative vision for this splendid edition that will be crucial for the book's continued success. I am appreciative of the excellent support provided by the product assistant, Shelby Nathanson, and Michael Lepera and (once again) Aimee Bear, the senior content project managers, were assiduous in making sure the production process

moved ahead flawlessly. I also extend my thanks to the senior production director Samantha Ross Miller for her expert oversight. I am indebted to Marissa Falco, who as senior art director oversaw the stunning new design of this edition, and my thanks go also to the digital content specialist, Elizabeth Cranston. Ann Hoffman was, as usual, unusually conscientious in her role as IP analyst, and I am grateful once again for the expert work of the manufacturing planner, Betsy Donaghey. I am indebted to Betsy Hathaway for her essential contributions and I extend my appreciation to the marketing manager, Kina Lara, for her talented and innovative efforts on behalf of *Thinking Critically*.

Finally, I thank my wife, Heide, and my children, Jessie and Joshua, for their complete and ongoing love, support, and inspiration. It is these closest relationships that make life most worth living. And I wish to remember my parents, Charlotte Hess and Hubert Chaffee, who taught me lasting lessons about the most important things in life. They will always be with me.

Although this is a published book, it continues to be a work in progress. In this spirit, I invite you to share your experiences with the text by sending me your comments. I hope that this book serves as an effective vehicle for your own critical-thinking explorations in living an examined life. You can contact me online at JChthink@aol.com; my mailing address is LaGuardia College, City University of New York, Humanities Department, 31-10 Thomson Avenue, Long Island City, NY 11101.

John Chaffee



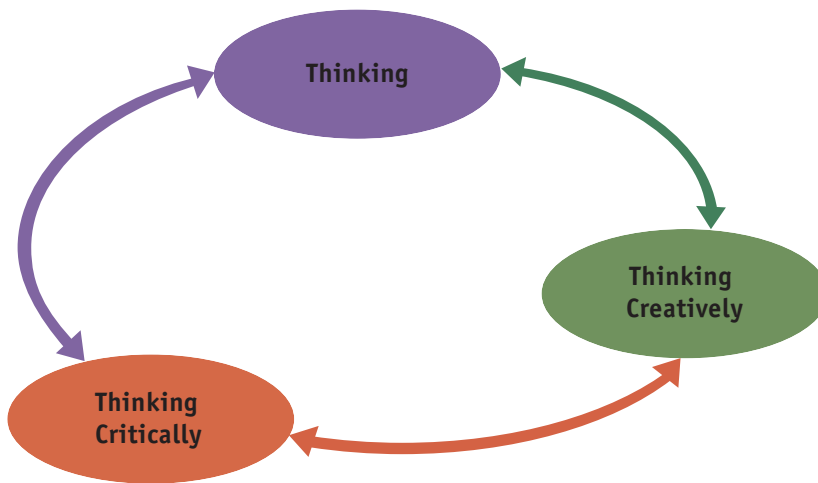




Chuck Thomas Close (born July 5, 1940, Monroe, Washington) is an American painter and photographer who achieved fame as a photorealist through his massive-scale portraits. How does this self-portrait change when viewed from a distance versus close up? The writer Oscar Wilde once said, "The only normal people are the ones you don't know well." How do people look different from a distance versus close up?

The Museum of Modern Art/Licensed by SCALA/Art Resource, NY

# Thinking



*Thinking can be developed and improved by*

- becoming aware of the thinking process.
- carefully examining the thinking process.
- practicing the thinking process.

**T**hinking is the extraordinary process we use every waking moment to make sense of our world and our lives. Successful thinking enables us to solve the problems we are continually confronted with, to make intelligent decisions, and to achieve the goals that give our lives purpose and fulfillment. It is an activity that is crucial for living in a meaningful way.

This book is designed to help you understand the complex, incredible process of thinking. You might think of this text as a map to guide you in exploring the way your mind operates. This book is also founded on the conviction that you can improve your thinking abilities by carefully examining your thinking process and working systematically through challenging activities. Thinking is an active process, and you learn to do it better by becoming aware of and actually using the thought process, not simply by reading about it. By participating in the thinking activities contained in the text and applying these ideas to your own experiences, you will find that your thinking—and language—abilities become sharper and more powerful.

College provides you with a unique opportunity to develop your mind in the fullest sense. Entering college initiates you into a community of people dedicated to learning, and each discipline, or subject area, represents an organized effort to understand some significant dimension of human experience. As you are introduced to various disciplines, you learn new ways to understand the world, and you elevate your consciousness as a result. This book, in conjunction with the other courses in your college experience, will help you become an “educated thinker,” expanding your mind and developing your sensibilities.

Achieving the goal of becoming an educated thinker involves two core processes that are the mainsprings of our thoughts and actions: **thinking critically** and **thinking creatively**. The process of *thinking critically* involves thinking for ourselves by carefully examining the way that we make sense of the world. Taking this approach to living is one of the most satisfying aspects of being a mature human being.

We are able to think critically because of our natural human ability to *reflect*—to think back on what we are thinking, doing, or feeling. By carefully thinking back on our thinking, we are able to figure out how our thinking operates and thus learn to do it more effectively. In this book, we will systematically explore the many dimensions of the way our minds work, providing the opportunity to deepen our understanding of the thinking process and stimulating us to become more effective thinkers.

Of course, carefully examining the ideas produced by the thinking process assumes that ideas exist that are worth examining. We produce such ideas by thinking creatively.

#### **thinking critically**

Carefully exploring the thinking process to clarify our understanding and make more intelligent decisions.

#### **thinking creatively**

Using our thinking process to develop ideas that are unique, useful, and worthy of further elaboration.

## Living an “Examined” Life

Over 2,500 years ago, the Greek philosopher Socrates cautioned, “The unexamined life is not worth living,” underscoring the insight that when we don’t make use of our distinctive human capacity to think deeply and act intelligently,

our lives have diminished meaning. In a warning that is at least as relevant today as it was when he first spoke it, Socrates cautioned his fellow citizens of Athens:

“You, my friend—a citizen of the great and mighty and wise city of Athens—are you not ashamed of heaping up the greatest amount of money and honor and reputation, and caring so little about wisdom and truth and the greatest improvement of the soul, which you never regard or heed at all?”

Today’s world is a complex and challenging place in which to live. The accelerated pace at which many people live often makes them feel as though they are rushing from deadline to deadline, skating on the surface of life instead of exploring its deeper meanings. What is the purpose of your life? Who are you, and who do you want to become? These are essential questions that form the core of life, and yet the velocity of our lives discourages us from even posing these questions, much less trying to answer them.

Your efforts to become thoughtful and reflective, to explore the nature of yourself and the meaning of your life, are made even more difficult by the unthinking world in which we live. Consider all of the foolish opinions, thoughtless decisions, confused communication, destructive behavior, and self-absorbed, thoughtless people whom you have to deal with each day. Reflect on the number of times you have scratched your head and wondered, “What was that person thinking?” And how many times have you asked yourself, “What was I thinking?” The disturbing truth is that many people don’t think very well; they are not making use of their potential to think clearly and effectively.

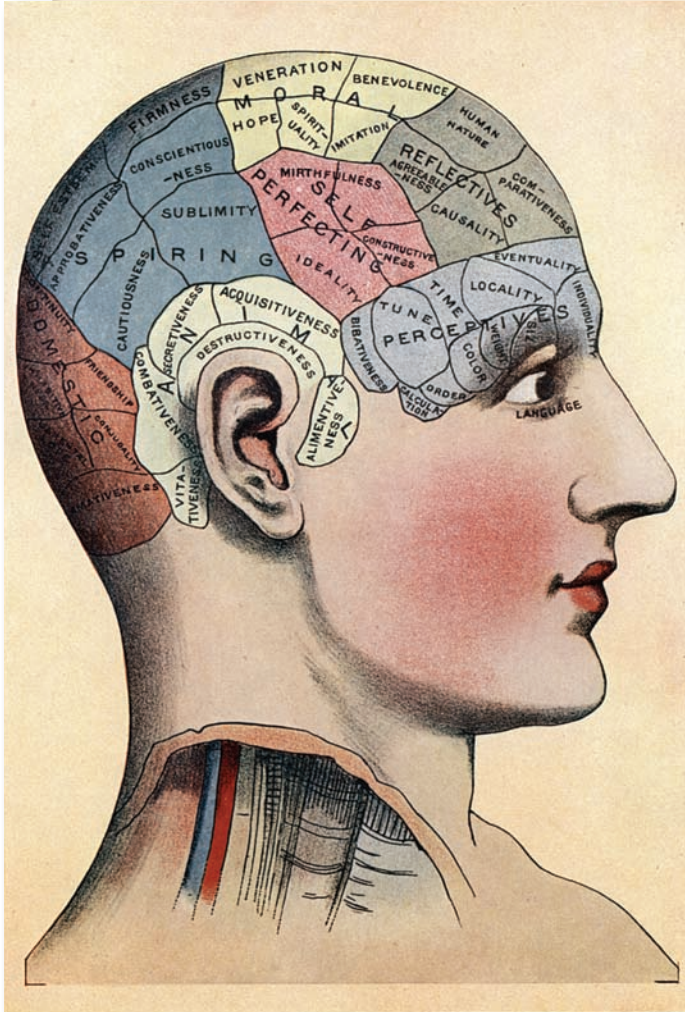
Every day you encounter a series of choices, forks in your life path that have the cumulative effect of defining you as a person. In thinking about these choices, you may discover that habitual patterns occur in your life and rarely change. If you find that your life comprises a collection of similar activities and routines, don’t despair; this is typical, not unusual. However, it may be an indication that you are not living your life in the most thoughtful fashion possible, that your choices have become automatic, and that your experiences are fixed in certain “ruts.” If this is the case, it may be time to reflect on your life, reevaluate the choices you are making, and consider living in a more reflective and creative fashion.

You are an artist, creating your life portrait, and your paints and brush strokes are the choices you make each day. This metaphor provides you with a way to think about your personal development and underscores your responsibility for making the most intelligent decisions possible.

You have the capacity to create a richly fulfilling life, but you must develop and make full use of your thinking potential to do so. By becoming a true educated thinker, you will have the tools to unlock the mysteries of yourself and meet the challenges of the world.

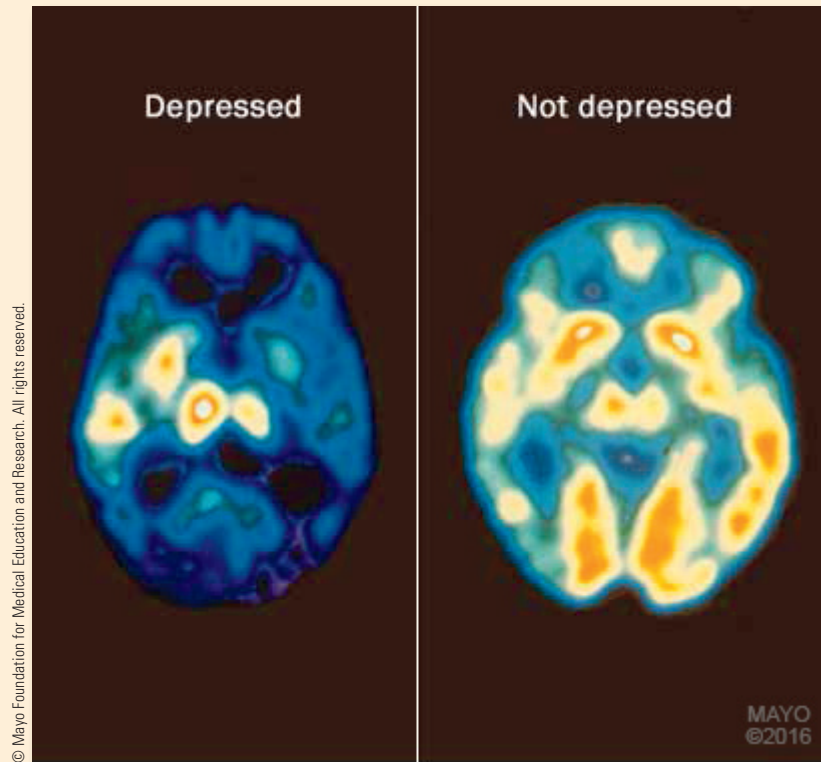
## Thinking Critically About Visuals

### The Mystery of the Mind and Scientific Developments



These images depict different understandings of the human mind. The first image represents phrenology, a science popular in the 1800s but now debunked, that claimed personality traits and dispositions could be determined by the size and shape of various parts of the skull. The second is a functional magnetic resonance image (fMRI), a modern neuroscientific technology used to measure blood flow in the brain in order to determine changes in activity that are used to infer what an individual is thinking about.

Compare the two images to identify what visual qualities suggest trustworthiness. Does the phrenology diagram or the fMRI seem more accurate? Why? How might a critical thinking student from the 1800s have viewed these images? What about a student in 2100? Do scientific facts ever change?



## Thinking Critically About Visuals

### You Are the Artist of Your Life

In what ways does this metaphor help you understand your personal development? In what ways does it highlight the role of personal responsibility in your life? Although Chuck Close suffered a catastrophic spinal artery collapse in 1988 that left him severely paralyzed, he has continued to paint and produce work that remains sought after by museums and collectors. What life lessons can we learn from the way he has responded to adversity? We all have our own unique challenges to meet in order to find our life path, just as Chuck Close has overcome physical disability to achieve great success. What choices will you have to make in order to reach your full potential as a person?



AP Images/Mark Lennihan



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## A Roadmap to Your Mind

This book is designed to help you become an educated thinker by providing you with many opportunities to use your mind in ways that will strengthen and elevate your thinking abilities. Many of these abilities—such as working toward your goals, solving problems, or making intelligent decisions—will already be familiar to you. Others, such as understanding the conceptualization process or constructing rigorous extended arguments, may be less so. But whatever your degree of familiarity, and no matter what your level of expertise, you can always improve your thinking abilities, and doing so will enrich your life in countless ways. Here is a brief preview of the thinking abilities you will be studying in this book—the very same abilities that you will be *using to think with* as you study them!

- Establishing and achieving your goals (Chapter 1)
- Becoming an intelligent and effective **decision maker** (Chapter 1)
- Becoming a confident and productive **creative thinker** (Chapter 1)
- Becoming an independent, informed, and open-minded **critical thinker** (Chapter 2)
- Learning to analyze and discuss complex, controversial ideas in an organized fashion (Chapter 2)
- Becoming a powerful and successful **problem solver** (Chapter 3)
- Becoming familiar with the perceptual “lenses” through which you view the world, and understanding the way these lenses shape and influence your entire experience (Chapter 4)
- Learning to develop informed, well-supported beliefs and achieve authentic knowledge of important issues (Chapter 5)
- Learning to critically analyze information and images presented in the media, the Internet, and popular culture (Chapter 5)
- Developing your ability to understand and use **language** effectively in order to express your ideas clearly and coherently (Chapter 6)
- Learning to form and apply concepts in order to understand the world in a clear, sophisticated way (Chapter 7)
- Developing your ability to relate and organize concepts in complex thinking patterns (Chapter 8)
- Learning to think critically about ethical issues and moral beliefs (Chapter 9)
- Learning to construct logically valid and compelling arguments to support your point of view (Chapter 10)
- Learning to evaluate the soundness of deductive and inductive arguments and detect illogical ways of thinking (“fallacies”) (Chapters 10, 11)
- Developing your ability to make enlightened choices and work toward creating a meaningful and fulfilling life (Chapter 12)