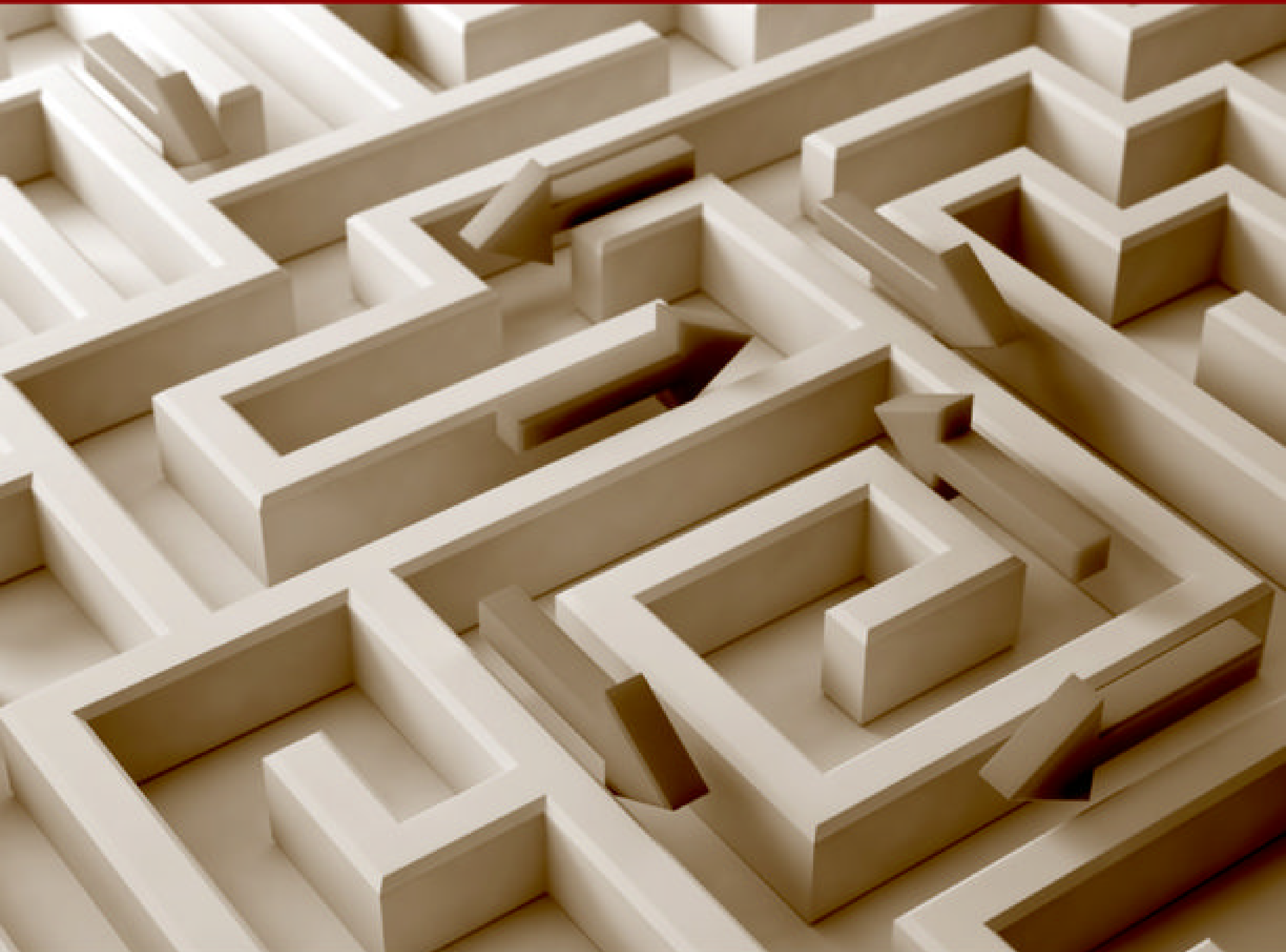
Critical Thinking for Helping Professionals

A SKILLS-BASED WORKBOOK

FOURTH EDITION



Eileen Gambrill & Leonard Gibbs

Critical Thinking for Helping Professionals

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A Skills-Based Workbook
Fourth edition

EILEEN GAMBRILL
LEONARD GIBBS

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Contents

Preface ix
Acknowledgments xiii
Note from Eileen Gambrill xv
Detailed Table of Contents xvii

PART 1 CRITICAL THINKING AS A GUIDE TO DECISION MAKING

Exercise 1 Making Decisions About Intervention 67
Exercise 2 Reviewing Your Beliefs About Knowledge 73
Exercise 3 Controversy: Invaluable for Problem Solving and Learning 79
Exercise 4 Critical Thinking and Advocacy 89

PART 2 RECOGNIZING PROPAGANDA: THE IMPORTANCE OF QUESTIONING CLAIMS

Exercise 5 Critically Appraising Human Services Advertisements 103
Exercise 6 Does Scaring Youth Help Them "Go Straight?" 109
Exercise 7 Detecting Misleading Problem Framing 113
Exercise 8 Following the Money 117
Exercise 9 The Language of Propaganda 123

PART 3 INCREASING YOUR SKILL IN AVOIDING FALLACIES, BIASES, AND PITFALLS IN DECISION MAKING

Exercise 10 Using the Professional Thinking Form 137
Exercise 11 Reasoning-in-Practice Game A: Common Practice Fallacies and Biases 149
Exercise 12 Reasoning-in-Practice Game B: Group and Interpersonal Dynamics 167

Exercise 13 Reasoning-in-Practice Game C: More Biases 179
Exercise 14 Preparing a Fallacy/Bias Festival 191
Exercise 15 Fallacy Spotting in Professional Contexts 193
Exercise 16 Avoiding Groupthink 197

PART 4 EVIDENCE-INFORMED DECISION MAKING

Exercise 17 Applying the Steps in Evidence-Based Practice 205
Exercise 18 Working in Interdisciplinary Evidence-Informed Teams 219
Exercise 19 Preparing Critically Appraised Topics 223
Exercise 20 Involving Clients as Informed Participants 229
Exercise 21 Asking Hard Questions: Enhancing Assertive Skills 237
Exercise 22 Evaluating Service Outcomes 241
Exercise 23 Reviewing Your Expertise 249

PART 5 CRITICALLY APPRAISING RESEARCH

Exercises 24 Evaluating Effectiveness Studies: How Good Is the Evidence? 269
Exercise 25 Critically Appraising Research Reviews and Practice Guidelines 279
Exercise 26 Critically Appraising Self-Report Measures 287
Exercise 27 Estimating Risk and Making Predictions 293
Exercise 28 Critically Appraising Diagnostic Tests 303
Exercise 29 Evaluating Research Regarding Causes 309

PART 6 REVIEWING DECISIONS

Exercise 30 Critically Appraising Arguments 317
Exercise 31 Critical Thinking as a Guide to Making Ethical Decisions 327
Exercise 32 Reviewing Intervention Plans 333

PART 7 IMPROVING EDUCATIONAL AND PRACTICE ENVIRONMENTS

Exercise 33 Encouraging a Culture of Thoughtfulness *341*
Exercise 34 Evaluating the Teaching of Critical Thinking Skills *347*
Exercise 35 Forming a Journal Club *351*
Exercise 36 Encouraging Continued Self-Development Regarding the Process of Evidence-Informed Practice and Policy *355*
Exercise 37 Increasing Self-Awareness of Personal Obstacles to Critical Thinking *361*

Glossary *371*
References *377*
Index *413*

Preface

This workbook has a single purpose: those who do its exercises will reason more effectively about life-affecting practice and policy decisions. Critical thinking involves the critical appraisal of beliefs, arguments, claims, and actions to arrive at well-reasoned judgments. Will sending a youthful offender to boot camp be more effective in decreasing future offenses than placing him on probation? Will a prescribed drug forestall the progression of confusion among Alzheimer's patients in a nursing home? Will children with developmental disorders learn better if mainstreamed into regular classrooms? Professionals make many such judgments and decisions daily. Deciding which actions will help clients is an inescapable part of being a professional. Thinking critically is important in all areas of the helping professions, including practice, research, policy, administration, and advocacy. The need for critical appraisal is highlighted by the increasing revelations of bogus claims in many sources, including the peer-reviewed literature and related fraud and corruption (see Part 1). Critical thinking skills will help you spot policies and procedures that benefit agencies but not their clients, and those that maintain discriminatory patterns of service. Related skills, values, and attitudes, such as being open-minded and flexible as well as self-critical, encourage recognition of cultural differences.

This workbook is designed to learn by doing. Revisions in this fourth edition include greater attention to propaganda in the helping professions that may mislead both helpers and clients, and the greater accessibility of tools and material of value to help us avoid misleading claims that may harm clients if acted on. This workbook involves you in making decisions and allows for immediate feedback about decisions made. Think as much as you like, you cannot assess the effects of your thinking until you act and determine the outcome. For instance, did your thinking result in decisions that benefit clients? We have tried to create exercises that are enjoyable as well as instructive. Some involve cooperative learning in which you work with peers in learning adventures designed to hone your critical-thinking skills. The exercises are designed to be useful in all helping professions curricula. Some have been pretested; others have

not. Each exercise includes the following sections: Purpose, Background, Instructions, and Follow-up Questions.

The exercises illustrate the overlap between values, knowledge, and skills involved in research and practice. Research courses are typically taught separately from practice and policy courses, encouraging the false impression that research and practice are quite different enterprises. This arrangement hinders understanding of shared values, attitudes, content knowledge, and performance skills. For example, critical thinking is integral to all. Research and practice are complementary, not competing, areas. Failure to draw on practice and policy-related research is a concern in all helping professions. Related gaps were a key reason for the creation of the process and philosophy of evidence-based practice described in Parts 1 and 4. Too often, professionals do not take advantage of research related to decisions that have life-affecting consequences for clients. Because of this, clients may receive ineffective or harmful interventions.

Part l, "Critical Thinking as a Guide to Decision Making," defines critical thinking, discusses why it matters in the helping professions, and describes related values, attitudes, knowledge, and skills. This part contains four exercises. The first provides an opportunity to review criteria you use to make decisions. Exercise 2 offers an opportunity to assess your beliefs about knowledge (what it is and how to get it). Exercise 3 highlights the vital role of clashing views in problem solving, and Exercise 4 emphasizes the connection between critical thinking and advocating for clients.

The five exercises in Part 2, "Recognizing Propaganda: The importance of questioning claims," demonstrate the importance of skepticism. Human service advertisements, including the promotion of treatment programs, take advantage of propaganda methods such as vivid emotional appeals to convince us that a method works. Exercises 5 and 6 engage you in critically appraising human services advertisements and program promotion. Exercise 7 provides an opportunity to critically examine how problems are framed. Exercises 8 and 9 offer opportunities to "follow the money" (recognize the influence of profit making in the helping profession) and to increase your awareness of how language may lead you astray (e.g., weasel words).

The seven exercises in Part 3, "Increasing Your Skill in Avoiding Fallacies, Biases, and Pitfalls in Decision Making," are designed to help you to identify and avoid common biases and fallacies in making life-affecting decisions. Vignettes are provided to illustrate situations that arise

in everyday practice. Exercise 10 contains twenty-five vignettes that can be used to assess practice reasoning. The Reasoning-in-Practice Games (Exercises 11–13) involve working with other students to identify biases and fallacies. In the Fallacies Film Festival (Exercise 14), students work together to prepare a skit to demonstrate a fallacy. Exercise 15 provides an opportunity to spot fallacies in professional contexts (including your classroom). Exercise 16 describes group think ploys and provides an opportunity to learn how to spot and avoid them.

Part 4, Evidence-Informed Decision Making, contains seven exercises designed to help you acquire knowledge and skills concerning the process of evidence-informed practice, including working in teams. Exercise 17, Applying the Steps in Evidence-Based Practice, guides you in this process. Exercise 18, Working in Interdisciplinary Evidence-Informed Teams, offers an opportunity to apply the steps in a team. Exercise 19, Preparing Critically Appraised Topics, guides you in preparing user-friendly summaries of research regarding important questions that arise in practice. Exercise 20 describes how you can involve clients as informed participants. Exercise 21 offers tips and practice opportunities for raising "hard questions" about claims that must be asked if our decisions are to be informed (about ignorance as well as knowledge). Exercise 22 engages you in reviewing gaps between an agency's services and what research suggests is most effective, as well as in reviewing how you evaluate outcomes with your client. Exercise 23 guides you in reviewing your expertise.

Part 5, "Critically Appraising Research," contains six exercises. Exercise 24 provides guidelines for reviewing the quality of effectiveness studies. Exercise 25 guides you in reviewing the quality of reviews. Exercise 26, Critically Appraising Self-Report Measures, describes concerns regarding reliability and validity, and offers an opportunity to appraise a measure. Exercise 27 provides guidelines for estimating risk, making predictions, and accurately communicating risk to clients. Exercise 28 provides guidelines for reviewing diagnostic measures. Last, Exercise 29 suggests important concerns when critically appraising claims about causation.

Part 6, "Reviewing Decisions," contains three exercises that apply critical thinking skills to key components of the helping process. Exercise 30 provides guidelines for reviewing the quality of arguments. Exercise 31 provides an opportunity to think critically about practice and

policy-related ethical issues. Exercise 32 engages you in reviewing the quality of intervention.

Part 7, "Improving Educational and Practice Environments," includes five exercises. Exercise 33 provides a checklist for reviewing the extent to which an educational or work environment demonstrates a culture of thoughtfulness. Exercise 34 includes a rating form for evaluating the extent to which instructors encourage critical thinking in their classroom. Exercise 35 describes how to set up a journal club, and Exercises 36 and 37 offer guidelines for life-long learning.

If working through the exercises contained in this workbook results in better services for clients, all our efforts—both yours and ours—will be worthwhile. We welcome your feedback about each exercise. In the spirit of critical thinking, we welcome negative as well as positive comments, especially those that offer concrete suggestions for improving exercises. We hope you enjoy and learn from participating in the exercises in this book.

With adoption of this book, instructors have access to a website including the *Instructor's Manual*. The manual contains descriptions of suggestions for using each exercise, scoring instructions as relevant, and possible answers to follow-up questions.

Eileen Gambrill
Leonard Gibbs

Acknowledgments

We owe a great deal to kindred spirits both past and present who cared enough and had the courage to raise questions about the quality of services offered to clients, and who have worked to create tools and processes to help practitioners and clients to make informed decisions—informed about related ignorance as well as knowledge. All value (or did value) critical appraisal of claims to protect clients from ineffective or harmful services. We thank Macmillan Publishers (for permission to use the Professional Thinking Form).

Eileen Gambrill extends a special note of thanks to the Hutto-Patterson Chair funders, to the University of California at Berkeley for Internet and library resources, and to Sharon Ikami for her patience, goodwill, and word processing skills.

Leonard Gibbs acknowledges the influence of a great teacher, Professor Emeritus Michael Hakeem of the University of Wisconsin at Madison, and the encouragement and financial support of the University of Wisconsin at Eau Claire Foundation and the College of Professional Studies, whose support contributed to this work. Thanks to Dana Bliss, Senior Editor, Social Work, Oxford University Press, for his support and to Andrew Dominello, also of Oxford University Press.

Note from Eileen Gambrill

My dear friend and co-author, Emeritus Professor Leonard Gibbs, died June 13, 2008, following a valiant battle with metastatic prostrate cancer. He is deeply missed.

Detailed Table of Contents

PART 1 CRITICAL THINKING AS A GUIDE TO DECISION MAKING

The introduction defines critical thinking, describes how it relates to scientific thinking and evidence-informed practice, and reviews related knowledge, skills, values, and attitudes. The purpose of both critical thinking and evidence-informed decision making is to make well-reasoned decisions.

Exercise 1 Making Decisions About Intervention 67
Professionals differ in the criteria they use to select assessment, intervention, and evaluation methods. This exercise offers an opportunity to compare the criteria used to make decisions about intervention methods in different contexts.

Exercise 2 Reviewing Your Beliefs About Knowledge 73
This exercise offers readers an opportunity to review their beliefs about knowledge (what it is and how to get it). Presented are common misconceptions and misunderstandings that may interfere with offering clients the benefits of available knowledge.

Exercise 3 Controversy: Invaluable for Problem Solving and Learning 79
Critical discussion of different views is vital to making evidence-informed decisions. This exercise provides an opportunity to address controversial issues, drawing on guidelines that contribute to a productive dialogue.

Exercise 4 Critical Thinking and Advocacy 89
Ethical obligations to clients require identifying, describing, exposing, and advocating to alter sources of avoidable misery for clients. Students work together in groups to identify a related goal and to design an advocacy plan. Additional activities are descried for further work in this area.

PART 2 RECOGNIZING PROPAGANDA: THE IMPORTANCE OF QUESTIONING CLAIMS

Exercise 5 Critically Appraising Human Services Advertisements *103*
Professionals and laypeople alike hear many claims about how to help people. In this exercise, students watch a human service advertisement and complete a questionnaire. This exercise identifies hallmarks of such advertisements and raises questions about relying on them as a guide to making decisions.

Exercise 6 Does Scaring Youth Help Them "Go Straight?" *109*
This exercise assesses viewers' skills in reasoning critically about a presentation that advocates a method for preventing criminal behavior among delinquents. It relies on the "Scared Straight" videotape.

Exercise 7 Detecting Misleading Problem Framing *113*
How problems are framed affects services clients receive. Are they framed as medical, psychological, and/or social problems? Misleading problem framing abounds—promoted by pharmaceutical companies, for example, describing anxiety as a medical problem. Ten activities are suggested to help students enhance their skills in detecting misleading framing

Exercise 8 Following the Money *117*
The helping professions and related industries are big businesses. Whenever money is concerned, conflicts of interest and related fraud and corruption may occur that drains money away from helping clients. Twelve activities are offered from which students and instructors can draw to increase their awareness of the play of special interests that may compromise quality of services offered to clients.

Exercise 9 The Language of Propaganda *123*
The purpose of this exercise is to increase students' skill in recognizing language ploys, such as inappropriate vagueness and loaded questions that may get in the way of making sound decisions. Five activities are described, including a Bingo game designed to enhance skills in detecting misuse of language.

PART 3 INCREASING YOUR SKILL IN AVOIDING FALLACIES, BIASES, AND PITFALLS IN DECISION MAKING

Exercise 10 Using the Professional Thinking Form *137*
This exercise includes twenty-five vignettes that may or may not contain a fallacy (error in reasoning). This short-answer exercise can be used to generate classroom discussion or as a measure.

Exercise 11 Reasoning-in-Practice Game A: Common Practice Fallacies and Biases *149*
Students work together in teams to read aloud or act out vignettes that may or may not contain a fallacy. Remedies for handling each fallacy are described. Game A concerns common informal fallacies in reasoning about practice decisions.

Exercise 12 Reasoning-in- Practice Game B: Group and Interpersonal Dynamics *167*
Vignettes in this game depict common sources of error that occur in case conferences, group meetings, and interdisciplinary teams.

Exercise 13 Reasoning-in-Practice Game C: More Biases *179*
Vignettes in this game illustrate common reasoning errors described in the literature on clinical reasoning, problem solving, decision making, and judgment.

Exercise 14 Preparing a Fallacy/Bias Festival *191*
In this exercise, participants work in groups to write a two-page paper that defines a chosen bias or fallacy, describes how to avoid it, and includes an original thirty- to sixty-second script for a vignette. Participants then act out their vignette while being videotaped. These vignettes are edited and then shown to others (e.g., an entire class), who try to identify the bias or fallacy.

Exercise 15 Fallacy Spotting in Professional Contexts *193*
This exercise provides practice in spotting fallacies in professional contexts. From the internet, journals, class lectures, books, students select a quote they believe demonstrates a fallacy. They record the full quote and note its source and name, define the fallacy, and explain why they think the reasoning is faulty.

Exercise 16 Avoiding Groupthink *197*
Many practice decisions take place in groups and team meetings. This exercise introduces participants to "group-think" tactics that decrease the quality of decisions, identifies related indicators, and provides practice in identifying and avoiding groupthink ploys such as abusive ad hominem arguments.

PART 4 EVIDENCE-INFORMED DECISION MAKING

Exercise 17 Applying the Steps in Evidence-Based Practice *205*
This exercise describes the process of EBP and offers an opportunity to practice implementing it.

Exercise 18 Working in Interdisciplinary Evidence-Informed Teams *219*
This exercise highlights the importance of interdisciplinary decision making and guides students in applying the process of EBP as a team.

Exercise 19 Preparing Critically Appraised Topics *223*
Components and purpose of CATs are described, and students are guided in preparing CATs.

Exercise 20 Involving Clients as Informed Participants *229*
Professional codes of ethics call for informed consent on the part of clients and for professionals to draw on practice and policy-related research. An Evidence-Informed Client Choice Form is included for involving clients as informed participants. (See also Exercise 27 regarding accurate communication of risks to clients.)

Exercise 21 Asking Hard Questions: Enhancing Assertive Skills *237*
Offering clients effective services requires asking questions regarding the evidentiary status of practices and policies such as: How good is the evidence? Suggestions for raising such questions are given in this exercise, as are practice opportunities.

Exercise 22 Evaluating Service Outcomes 241
Agency services differ in the extent to which they are likely to help clients attain hoped-for outcomes. In this exercise, students compare services in their agency with what research suggests is most likely to help clients attain hoped-for outcomes.

Exercise 23 Reviewing Your Expertise 249
Components of expertise are described as well as challenges in developing expertise, including avoiding common errors in different problem-solving practice. In Exercise 23.1 students select one component of expertise they would like to enhance, design a plan, and try it out. Exercise 23.2 engages students in describing an error they tend to make as well as contributing factors and planning how to decrease it.

PART 5 CRITICALLY APPRAISING RESEARCH

Exercise 24 Evaluating Effectiveness Studies: How Good Is the Evidence? 269
This exercise provides an opportunity to evaluate an effectiveness study related to a practice or policy of interest, drawing on critical appraisal tools. It also provides an opportunity to learn about different ways to estimate effect size.

Exercise 25 Critically Appraising Research Reviews and Practice Guidelines 279
Characteristics of rigorous systematic reviews and meta-analyses are described and contrasted with incomplete, unrigorous reviews. The importance of critical appraisal of practice guidelines is emphasized.

Exercise 26 Critically Appraising Self-Report Measures 287
This exercise provides an opportunity to review concepts central to self-report measures, such as reliability and validity, and to apply them to measures.

Exercise 27 Estimating Risk and Making Predictions 293
Helping clients involves estimating risk and making predictions about what people may do in the future. Students learn how to accurately represent risk by using

frequencies instead of probabilities. The importance of providing information about absolute as well as relative risk is emphasized.

Exercise 28 Critically Appraising Diagnostic Tests *303*
Professionals make decisions about which assessment measures to use. In this exercise, readers review criteria that should be relied on when evaluating diagnostic tests.

Exercise 29 Evaluating Research Regarding Causes *309*
This exercise involves students in critically appraising research reports and claims regarding presumed causes of problems. Background material identifies related concepts, including necessary and sufficient causes, and describes different kinds of evidence used in support of claims. Students then apply this background information to related material in the professional literature and/or popular sources.

PART 6 REVIEWING DECISIONS

Exercise 30 Critically Appraising Arguments *317*
Helping clients requires reviewing arguments for and against certain beliefs and actions. Accepting or rejecting these arguments can profoundly affect client welfare. This exercise describes key features of an argument (i.e., conclusion, premises, warrants) as well as the characteristics of sound arguments.

Exercise 31 Critical Thinking as a Guide to Making Ethical Decisions *327*
Some writers argue that the most important purpose of critical thinking is to help professionals arrive at ethical decisions. In this exercise, students consider practice situations from an ethical point of view using vignettes from the Reasoning-in-Practice games.

Exercise 32 Reviewing Intervention Plans *333*
Policies and plans may succeed or fail depending on how soundly they have been conceived. This exercise includes a form for rating the soundness of plans and provides an opportunity to apply it to a case example.

PART 7 IMPROVING EDUCATIONAL AND PRACTICE ENVIRONMENTS

Exercise 33 Encouraging a Culture of Thoughtfulness *341*
In this exercise, students plan how to maintain critical thinking values and skills in educational and work settings guided by a list of possibilities from which they can choose.

Exercise 34 Evaluating the Teaching of Critical Thinking Skills *347*
Students (and/or instructors) can use the form included in this exercise to rate the extent to which an instructor encourages critical thinking (e.g., encourages questions, describes well-argued alternative views on controversial issues).

Exercise 35 Forming a Journal Club *351*
The purpose and facilitating characteristics of journal clubs are described as well as how to create a journal club.

Exercise 36 Encouraging Continued Self-Development Regarding the Process of Evidence-Informed Practice and Policy *355*
The importance of continued self-development of evidence-informed practice skills is discussed, examples of specific skills are given, and students are guided in increasing a skill.

Exercise 37 Increasing Self-Awareness of Personal Obstacles to Critical Thinking *361*
Students are encouraged to examine potential obstacles to critical thinking including the kind of excuses used for poor quality services and to work toward decreasing specific obstacles.

Glossary *371*
References *377*
Index *413*

Critical Thinking for Helping Professionals

PART 1
Critical Thinking as a Guide to Decision Making

Reasoning, problem solving, and decision making are closely related, and the tasks they involve overlap. We make decisions to address concerns and problems. Professionals and clients make decisions about which problems and risks to focus on, how to frame them (e.g., which kind they are—is anxiety a "mental illness?"), which information to collect, which interventions to consider, how to evaluate progress, and which criteria to use to evaluate the accuracy of related claims (see Box 1.1). Their views are shaped by societal values and related contingencies, for example, about requisites of a "just society" and which problems should be focused on. Decisions are made about what to do—nothing, watchful waiting, active intervention. Consider the following:

- An advertisement for a residential treatment center for children claims, "We've been serving residents for more than fifty years with success." Would you refer a client to this center? What kind of evidence could you seek to evaluate this claim?
- A social worker says: "This child is at risk of abuse. She should be taken into care immediately." What questions would you ask? Why?
- You read "Cognitive–Behavior Therapy: Proven Effectiveness" (Leahy, 2011). Is it true? Effective for what?
- Your physician recommends arthroscopic surgery for your degenerative knee. Should you take her advice?

Box 1.1 Questions Regarding Different Kinds of Claims

1. About "problems"

- What problems are selected for attention: How important is each? Who says so and on what basis?
- Exactly how is it defined? What are specific examples?
- What kind of problem is it claimed to be? What are underlying assumptions?
- What controversies exist regarding this problem?
- Is there a remedy?
- Should action be taken? What should be done?
- What evidence is there regarding the previous questions? Are claims true?

2. About assessment, diagnosis, risk, and prediction

- Is a measure reliable? Were the most important kinds of reliability checked?
- Is a measure valid? Does it measure what it is designed to measure? What kinds of validity were investigated?
- What is the false-positive rate?
- What is the false-negative rate?
- What is the absolute risk reduction (see Exercise 27)?
- Are key-valued "end states" accurately predicted (rather than surrogates)?
- What percentage of predictions are accurate?
- How good is the evidence for all of the above? Are claims true?

3. About causes

- Is correlation confused with causation?
- How strong are associations?
- Could associations found be coincidental?
- Could a third factor be responsible?
- Are root causes distinguished from secondary causes?
- Are boundaries or necessary conditions clearly described (circumstances where relationships do not hold) (Haynes, 1992)?
- Are well-argued alternative views accurately presented?
- Are the interventions based on presumed causes effective?
- Are vague multifactorial claims made that do not permit critical tests?
- How good is the evidence for all the entries in no. 3? Are claims true?

4. About effectiveness/prevention

- Are claims true? Were critical tests carried out? What were the results?
- What is the number needed to treat (NNT)?
- How rigorous were the tests?
- Were outcomes of key value to clients focused on?
- Are reviews of related research of high quality (e.g., rigorous, comprehensive in search, and transparent in description of methods and findings)?
- Was the possibility of harmful effects investigated? What is the number needed to harm?
- How long do effects persist? What was the duration of follow-up?

- You read on the website of the National Alliance on Mental Illness: “One in four adults—approximately 61.5 million Americans—experience mental illness in a given year.” Is this claim true? What information would you seek?
- You read an article suggesting that collective bargaining fights gentrification. What questions would you raise? Why?

Questionable criteria for evaluating claims are shown in Box 1.2.

There are great stakes in how problems are framed, and people with vested interests devote time, money, and effort to influence framing (Loeske, 1999). Is it true that “the treatment of diabetes can be a useful metaphor for understanding the treatment of generalized anxiety disorder (GAD)” (Marker & Aylward, 2012, p. 33)? Is obesity a disease as now claimed? Does psychotropic medication do more harm than good (Gøtsche, 2015a, 2015b)? How a problem is framed (e.g., as an individual and/or social problem) influences the selection of intervention methods.

Box 1.2 Questionable Criteria for Evaluating Knowledge Claims

Criteria	Example
Authority (what the “experts” say)	“If Freud said it, it must be true.”
Popularity (argument ad populum)	“Many social workers use genograms. I’m going to use this too.”
Anecdotal experience	“I’ve used facilitated communication successfully with five clients. This works!”
Tradition	“That’s the way we have always done it. We should continue to use these methods.”
What’s new	“It’s the latest thing. We should try it too.”
Uncritical documentation	Accepting a claim based on vague, undocumented evidence
Case examples	“I used narrative therapy with my client and she improved dramatically.”
Testimonials	“I believe it works because Mrs. Rivera said she tried it and it helped.”
Characteristics of the person	“She presents a good argument, but look at the school she graduated from” (ad hominem).
Manner of presentation	“She gave a convincing talk. I’m going to use her methods.”
Good intentions	In response to a question about an agency’s effectiveness you say, “We really care about our clients.”
Intuition	“I just knew that support groups would be best.”
Entertainment value	“This is a fascinating account of depression. I think it is correct.”
Emotional reactions	“I trust my feelings when making decisions.”

Source: Gambrill, E. (2013a). *Social work practice: A critical thinker’s guide* (3rd Ed.). New York: Oxford University Press, p. 75.

Ethical and Moral Issues

Decisions made involve moral and ethical issues in a number of ways. One pertains to which problems/behaviors are selected for attention and how they are defined—for example, as legal, ethical, medical, or moral (Conrad, 2007; Szasz, 1961, 2007). Views of problems have life-affecting consequences for clients. If we act on inaccurate accounts, we may focus on irrelevant factors, recommend ineffective or harmful intervention methods, or continue intervention too long or withdraw it too soon. History shows that good intentions do not protect us from harming clients (e.g., McCord, 2003; Rose, Bisson, & Wessley, 2004; Scull, 2005, 2015; Silverman, 1980). Examples of iatrogenic effects (helper-induced harm) include removing all teeth in women with depression (Scull, 2005). Gøtzsche (2015a) argues that prescribed psychotropic medication taken by people 65 and older kills more than 500,000 people per year and disables tens of thousands more. Medical errors in American hospitals are now the third leading cause of death in the Unites States (James, 2013). Medication errors are common (Aspden, Wolcott, Bootman, & Cronenwett, 2007). When ineffective methods fail, clients may feel more hopeless about achieving hoped-for outcomes. Szasz (1961, 2007) has long argued that ethical and moral issues are obscured by claiming that distress, such as anxiety, and (mis)behaviors, such as aggression, are medical (mental health) issues. Viewing overeating, gambling, and violence toward others as brain diseases removes responsibility from those involved. Szasz (1965) suggests that such beliefs "act as *social tranquilizers* that obscure the everyday fact that life for most people is a continuous struggle . . . for a 'place in the sun,' 'peace of mind,' or some other moral value" (p. 24). Attention to environmental circumstances, such as lack of employment paying a living wage, that create distress encourages empathic understanding of clients; "there, too, may go I." It is in this sense that Gøtzsche (2008) considers humanistic thinking as two of the four components that form the basis of clinical decisions: ethical norms (e.g., to help and to avoid harm) and "understanding the client as a fellow human being" (p. 150).

Uncertainties, Ambiguities, and Competing Contingencies

Judgments and decisions are made in the face of uncertainty. Some can be removed; much cannot. Uncertainty may concern (1) the nature of

the problem, (2) the outcomes desired, (3) what is needed to attain them, (4) the likelihood of attaining outcomes, and (5) measures that best reflect the degree of success. Decisions are influenced by ignorance as well as knowledge. Ignorance may be personal (e.g., a physician may not be aware of the dangers of prescribing psychotropic medication to older people) or objective (e.g., no one knows the answer to many questions). Was important information missing? Was this a matter of "strategic ignorance"—deliberately created by someone or some organization (McGoey, 2012)? Decisions are characterized by ill-defined goals, ambiguity, missing data, and shifting and competing goals and values. They are influenced by agency policies and practices (Abramovitz & Zelnick, 2015). They often involve high stakes and multiple players, and are made under time pressures. Social control functions in child welfare, mental health systems, and the criminal justice system may compete with the goals of clients. These different functions highlight ethical, moral, and value issues and their potential clash.

Problems that confront clients, such as lack of housing or healthcare, may be "wicked" problems with no clear formulation (Rittel & Webber, 1973). Rarely is all relevant information available, and it is a challenge to integrate different kinds of data. Even when empirical information is available about the probability that different remedies result in desired outcomes, this knowledge is usually in the form of general principles that do not allow specific predictions about individuals. The criteria on which decisions should be based are in dispute, and empirical data about the effectiveness of different options are often lacking. People have different beliefs about the kinds of evidence that should be used to make decisions and how much should be shared with clients. Judgments may require distinguishing between causes and secondary effects, problems and the results of attempted solutions, personal and environmental causes, and links between clinical assumptions and related research. A variety of biases and fallacies compromise problem solving. And, we are gullible, often accepting views uncritically.

Critical Thinking: Integral to Problem Solving and Ethical Behavior

Critical thinking is a unique kind of purposeful thinking in which we use standards such as clarity and fairness. It involves the careful examination and evaluation of beliefs and actions to arrive at well-reasoned decisions.

As Paul and Elder (2014) suggest, "much of our thinking, left to itself, is biased, distorted, partial, uninformed, or downright prejudiced . . . . Critical thinking begins, then, when we start thinking about our thinking with a view to improving it" (p. 366). Critical thinkers attempt to "live rationally, fairmindedly, and self-reflectively" (p. 366). Related characteristics suggested by Paul (1993, p. 63) and Paul and Elder (2014) are as follows:

- Clear versus unclear
- Accurate versus inaccurate
- Relevant versus irrelevant
- Deep versus narrow
- Consistent versus inconsistent
- Logical versus illogical
- Complete versus incomplete
- Significant versus trivial
- Adequate (for purpose) versus inadequate
- Fair versus biased or one-sided

Critical thinking involves clearly describing and critically evaluating claims and arguments, no matter how cherished, and considering alternative views when needed to arrive at decisions that do more good than harm. This means paying attention to reasoning (how we think), not just the product. It involves asking questions you, as well as other people, may prefer to ignore such as: Do our services do more good than harm? (see Box 1.1). It may require blowing the whistle on harmful practices and policies (e.g., Grant, 2012). It requires paying attention to context (to link personal troubles to public issues (Mills, 1959). This is why there is so often lots of talk about critical thinking, but little actual critical inquiry, and it is why caring about clients is so important; it provides a source of courage to ask questions that have life-affecting consequences. Our ethical obligations of helping clients and avoiding harming them also provide a vital source of courage. Critical thinking can help you to clarify and solve problems or to discover they are not solvable. What problems are clients trying to solve? How would they like their lives to be different? How can you discover client strengths and environmental resources? Philosopher Karl Popper (1994) views all of life as problem solving and notes that we often seek problems (e.g., how to traverse a river on a raft). The skills, values, and traits related to critical thinking can help you minimize mistakes, such as not recognizing a problem;

confusing the consequences of a problem for the problem; ignoring promising alternatives; delaying a decision, which results in harm; and not following up your client (Caruth & Handlogten, 2000). Critical thinking can help you avoid confirmation biases. Dewey (1933) views reflection as "active, persistent, and careful consideration of any belief or supposed form of knowledge in the light of the grounds that support it, and the further conclusions to which it tends" (p. 118). This self-reflection is integral to critical thinking (e.g., Schön, 1983).

Critical Thinking as Radical: Raising Questions and Understanding Context

Critical thinking is one of the most radical activities in which anyone can engage. The term *reflectio*n is popular; but, as Steven Brookfield notes, "Reflection is not by definition critical" (1995, p. 8). Like any subject, critical thinking can be approached from a narrow view or a broad view. A narrow view focuses on reasoning and related biases and fallacies, such as post hoc ergo propter hoc—assuming that because you get better after taking a pill, the pill was responsible for the change, when you were just about to get over your cold in the natural course of events (Skrabanek & McCormick, 1998). Recognizing the fallacies and biases described in this book—and avoiding their influence—should result in sounder decisions. Critical thinking requires attention to context: political, social, and economic factors that affect both problems and decisions, including research drawn on (see later discussion of science in this chapter). Such factors influence which problems we focus on and how we do so. Neither clients nor professionals may be aware of the extent to which decisions are shaped by such influences. Paul (1993) uses the term *sociocentric biases* to refer to societal influences on our beliefs (see also Paul and Elder [2014]).

Who knows what and when, and who is permitted to ask probing questions, and what happens when they do so are part of our history, as illustrated by the death of Socrates. You may be considered a troublemaker by asking questions that may reveal knowledge others prefer to hide. Who has the right to know what and when? Consider, also, the fate of William Tynedale, who was burned at the stake when finally caught because he translated the Bible into English. Only the priests were supposed to have access to "the word." What is "the word" today? What words cannot be spoken? What words cannot be questioned? What problems are hidden? What problems are created, for example, by those with special interests

(e.g., the pharmaceutical industry)? These questions illustrate the role of political, social, and economic factors in shaping what is viewed as a problem and what kind; often, there is a social control interest and effect (e.g., Foucault, 1977; Illich, Zola, McNight, Caplan, & Shaiken, 1977; Szasz, 1987). Evans and Giroux (2015) argue that dissent is ever more oppressed in the United States facilitated by increasing surveillance. Some groups and individuals have the resources to hide knowledge and promote ignorance, such as the harmful effects of prescribed medication (see the later discussion of fraud and corruption in this chapter). Public relations firms and advertising agencies are key in this process.

The Technological Society in Which We Live

We live in a technological society. Advertising, therapy, classification systems, human relations, and management are techniques that involve a "set of steps to produce desired outcomes" (Stivers, 2001, p. 9). There is a press for ever-greater efficiency and standardization, as can be seen in the widespread use of psychiatric labels that obscure individual differences, and epidemic uses of prescribed medication to solve life's challenges (one out of every four women now takes a psychotropic medication [Holland, 2015]). Professional, corporate, and governmental interests as well as diverse technologies are ever-more intertwined. Conrad (1979) views technology (e.g., prescription drugs) as one of three forms of medical social control. (The other two are collaboration between healthcare provider institutions and ideology conveyed by the use of language.) Ellul (1965) argues that propaganda, encouraging action with "as little thought as possible" (p. 180), is an integral part of such a society in which moral problems are translated into social problems, and in which we expect technology to solve our problems (Stivers, 2001). It helps us to "adjust" to the alienating effects of such a society. It both creates and fulfills needs. It may be intentional or not. It must affect all people but appear personal. Propaganda distributed via schools, television, newspapers, magazines, radio, the Internet, professional education, and peer-reviewed publications is designed to integrate us into our society. The main function of such integrative propaganda is to maintain the status quo—(adjust) us into our society as happy, unthinking consumers.

> **Propaganda is most vicious not when it angers but when it ingratiates itself through government programs that fit our desires or world views [*sic*], through research or religion that supplies pleasing answers, through news that captures our interest, through educational materials that promise utopia, and through pleasurable films, TV, sports, and art . . . . the chief problem of propaganda is its ability to be simultaneously subtle and seductive—and to grow in a political environment of neutralized speakers and disempowered communities. (Sproule, 1994, p. 327)**

Propaganda prevents confusion and anxiety created by competing propagandas; it provides group belonging in a society in which stress is endemic because of the faster pace, overorganization, loss of community, and competition.

Follow the Money

The helping professions and related activities are huge businesses (e.g., the nursing home industry; hospitals and healthcare systems, including the insurance industry; the pharmaceutical and medical device industries; the substance abuse treatment industry; the residential youth program industry; and the nutritional supplement industries). Closely related industries include the public relations and advertising industry; the contract research industry, which conducts research and prepares articles; and the publishing industry. Medical writing firms prepare articles and "push" therapies produced by those who pay them (e.g., see Singer, 2009). Whenever large sums of money are involved, conflicts of interests that compromise pursuit of avowed aims, such as helping clients and avoiding harm, are inevitable, including those that result in crimes (Barak, 2015). Professional organizations such as the American Psychiatric Association, the American Psychological Association, and the National Association of Social Workers compete for turf and may have conflicts of interest that harm clients (Camilleri & Parke, 2010). Certain states/behaviors/conditions are promoted as a problem (and others ignored), and certain causes and remedies are highlighted. Loeske (1999) uses the term *social problems industry* to refer to all related groups, including politicians, the government, and the media.