

TEACHING FOR CRITICAL THINKING

TOOLS AND TECHNIQUES
TO HELP STUDENTS
QUESTION THEIR ASSUMPTIONS

STEPHEN D. BROOKFIELD

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Published by Jossey-Bass

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One Montgomery Street, Suite 1200, San Francisco, CA 94104-4594—www.josseybass.com

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Library of Congress Cataloging-in-Publication Data

Brookfield, Stephen.

Teaching for critical thinking : tools and techniques to help students question their assumptions / Stephen D. Brookfield. — 1st ed.

p. cm. — (The Jossey-Bass Higher and adult education series)

Includes bibliographical references and index.

ISBN 978-0-470-88934-3 (hardback)

ISBN 978-1-118-14670-5 (ebk.)

ISBN 978-1-118-14671-2 (ebk.)

ISBN 978-1-118-14672-9 (ebk.)

1. Critical thinking. 2. Critical thinking—Study and teaching. 3. Psychology, Applied. I. Title.

BF441.B7915 2012

153.4'2—dc23

2011030030

Printed in the United States of America

FIRST EDITION

HB Printing 10 9 8 7 6 5 4 3 2 1

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Preface

For the last 30 years or so I have run numerous workshops at colleges and universities across the world on how to teach students to think more critically. At every campus I visit I hear many of the same laments. One is that students' attention span has become so compressed in the digital age that the cognitive stamina needed to stick with an argument until you understand it from the inside, and the intellectual rigor needed to analyze its validity in a critical way, has all but disappeared. I hear that students don't read books any more, that they don't go to the library (or even know where it is on campus), that they're gullible consumers of any conspiracy theory that gains traction on the Web, that they're celebrity-obsessed, and that they refuse to pay attention in class unless the professor makes the class as "fun" as playing a computer game.

This is a pretty low estimate of students' abilities. And I'm sure that in some cases it's right. But it just doesn't jive with the students I see organizing community projects, marching against the unilateral invasion of countries, or moving into long and heated arguments on Facebook. Neither does it compute with the fact that for many middle and high school students in the last decade, the biggest event in their year was the publication of a book. For many of my generation (I'm now in my 60s) a major early adolescent moment was a TV event—The Beatles on the *Ed Sullivan Show*. (I should point out that this was no big deal to me, since I had

grown up in Liverpool and gone to the original Cavern Club as a kid.) For my own children's generation, however, it was the publication of whatever was the latest installment in the *Harry Potter* series that was the moment of high significance. Now I know Harry Potter isn't a text on macroeconomics or an explication of Heidegger, but it was astonishing to me to see pre-teens and adolescents, who supposedly couldn't sit still to read much more than a sentence before lunging for a game controller, line up for hours to buy a book as soon as it was published, and then disappear for a day or two as they immersed themselves in it.

So if we are finding it difficult to get students to think critically, I think we need to look elsewhere than some supposed change in young people's DNA whereby the gene determining intellectual rigor and stamina has apparently been supplanted by the need to purchase the latest game controller. Instead, we need to take a long, hard look at how critical thinking is explained and taught. Having worked with students at widely varying stages of educational preparedness—from adult nonreaders to precollege developmental students with a very poor grasp of reading and writing, right up to doctoral students at Harvard University—I have been struck by what is similar across these contexts in terms of how people learn to think critically, rather than with what is different. Differences exist, to be sure, in the level of materials that can be used, but the essential dynamics of how you sequence curricula incrementally to support the development of critical thinking remain the same. So, too, do the dynamics of teaching it; for example, a group of precollege, developmental students struggling to understand the simplest passage in a college orientation handbook, or a group of doctoral students struggling to comprehend Foucault, both look to their teachers to model a critical engagement with a text and to show how they also sometimes struggle to understand what an author is saying.

In *Teaching for Critical Thinking* I build on my last three decades of experience running workshops and courses on critical thinking

to explore how students learn to think this way, and what teachers can do to help students develop this capacity. In writing the book I'm very aware (as I outline in Chapter Two) that notions of exactly what constitutes critical thinking vary significantly across disciplines. Of the different intellectual traditions informing this idea, it is the critical theory tradition that has had the biggest influence on me, followed by the tradition of American pragmatism. But I didn't want to write a book that explored only how critical theory conceived of critical thinking. If you're interested in reading my work in that area, *The Power of Critical Theory: Liberating Adult Learning and Teaching* (2004) and *Radicalizing Learning: Adult Education for a Just World* (coauthored with John D. Holst, 2010) both explore this territory.

I wrote this book as if the readership were the same as the typical group of faculty who show up to workshops I run at most campuses I visit. I usually have instructors attending from every disciplinary area and department represented in the school. Biologists are next to theologians, mechanical engineers next to women's studies instructors, mathematicians next to romance language teachers, business educators next to art historians, and so on. In such an environment I have to be able to talk to people in a language that is generic enough to foster a shared understanding of critical thinking, and in a way that helps them adapt general principles to specific disciplinary contexts. There's little point in running a workshop on critical thinking if no one can actually agree on what constitutes that kind of thinking, and if only a segment of the faculty thinks the workshop has any relevance for their discipline. So much of the early part of this book tries to establish some general protocols of what critical thinking is, and how it can be taught, that make sense across widely varying disciplinary areas.

I've tried to write this book in a personal, relaxed, conversational style. I've used contractions, written in the first person, and as much as possible I've tried to keep extensive bibliographic

references to a minimum. Essentially, I've tried to write the book in the same tone that I would speak to a group of colleagues. As I wrote I tried to imagine I was having lunch or coffee with a group of college teachers from different disciplines, and I was trying to answer the questions they had about how to get their students to think critically. So if you want a book written in a third person manner in which the author's biases and experiences are held in check and each point is extensively referenced, this is not the book for you. There are plenty of other texts out there that will be much more along the lines you seek. But if you want a text in which the author is engaged in a personal conversation with you, and academic jargon is put on the backburner and only used when absolutely necessary, then I hope this will meet that description.

Whenever I go to any professional development activity, I always feel my time has been well spent if I've learned something new I can try with my students. That's the spirit in which this book is written. I've tried to cram into its pages as many practical activities, exercises, protocols, techniques, and specific suggestions as I could. My assumption is that anyone who reads this will want to walk away with some new ideas about what they could do differently in their classrooms, or with some additional items in their pedagogic tool kit or back pack that they can try out the next time they meet with their students. If you see anything in here that might be helpful to you, please feel no compunction at all about stealing it and changing it so it makes better sense in your own classroom. The best teachers are good burglars, contextually attuned plunderers—they are always on the lookout for something they haven't tried before that, with a few adaptations, will work with their students. If this book gives you a few ideas you can steal and adapt then it will have been worth the effort in writing.

In the spirit of creative, contextually informed plundering let me also draw your attention to my home page: http://www.stephenbrookfield.com/Dr._Stephen_D._Brookfield/Home.html.

I've put pretty much all my classroom exercises up online for free download on that home page. Just go to the *Workshop Materials* link and scroll down the various PDF files and PowerPoint presentations and you'll find any number of exercises and activities contained there. If you see something that looks helpful—grab it with my blessing! That's why I've put it up there.

Overview of the Book

The book opens with an attempt in Chapter One to outline a basic protocol of critical thinking as a learning process that focuses on uncovering and checking assumptions, exploring alternative perspectives, and taking informed actions as a result. I explain three different categories of assumptions—paradigmatic, prescriptive, and causal—and I argue that assumptions are rarely universally right or wrong, but that they are more or less contextually appropriate. Throughout the chapter I try to draw on my own experience of using critical thinking to help me deal with clinical depression as a way of concretizing what can sometimes be an abstract idea.

Chapter Two then looks more closely at the different intellectual traditions informing the idea of critical thinking. One of the problems in holding conversations with colleagues about how to get students to think more critically is that different conceptions of what critical thinking looks like are held by teachers in different disciplines. I explore five different interpretations of this idea framed by, in turn, analytic philosophy and logic, the hypothetical-deductive method in the natural sciences, pragmatism, psychoanalysis, and critical theory. Where possible, I try to show connections between these traditions and to argue that aspects of the basic protocol outlined in Chapter One can be found in all of them.

Attention turns in Chapter Three to a crucial question: what do students say are the teaching methods and approaches that most help them learn to think critically? Drawing on thousands of

student testimonies, many of which have been documented in students' Critical Incident Questionnaires (CIQ), I identify five major themes that seem to hold true across different contexts for learning. These are (1) that critical thinking is best experienced as a social learning process, (2) that it is important for teachers to model the process for students, (3) that critical thinking is best understood when grounded in very specific events or experiences, (4) that some of the most effective triggers to critical thinking are having to deal with an unexpected event (or disorienting dilemma, as it is sometimes called), and (5) that learning critical thinking needs to be incrementally sequenced. Students like to learn to apply the process to relatively impersonal situations or data and then, slowly over time, bring the process to bear more and more on their own direct thinking.

What the opening steps of a critical thinking course or program might look like is outlined in Chapter Four. I look at when teaching critical thinking should be a focus, how to build a case for critical thinking to students who are skeptical about it, the use of clickers and hand held devices, and how to use the Scenario Analysis approach as a beginning exercise that can be adapted across disciplines. Chapter Five then looks at how to move to more complex critical thinking protocols such as Crisis Decision Simulation, Critical Debate, Exemplars and Flaws, and Quotes to Affirm and Challenge. It ends with a description of a highly complex exercise, the Critical Conversation Protocol.

In Chapter Six the focus shifts to how to encourage critical reading and writing. I try to dispel some common misconceptions about what it means to read critically, and then review what should be the basic components of a critical review of a text. These components are that (1) the student understands the text in the terms the author sets for it, (2) the student can conduct a critical analysis of it, and (3) the student can take a position regarding its relative merit in a field of inquiry. Each of these three components is then broken down to its constituent elements. The chapter then turns

to how to teach students to write more critically. I explain how to give highly specific feedback to students, including the use of Color Coded Critical Feedback, the Hatful of Quotes exercise, the Peer Writing Protocol, and the role of faculty modeling. The chapter ends with me doing a critical appraisal of a couple of passages from one of my own books—*Becoming a Critically Reflective Teacher* (1995)—to model for readers the same approach I am describing in the classroom.

One of the problems with making critical thinking a generic student behavior is that its implementation is spotty, varying from unit to unit, department to department, and school to school. In Chapter Seven I explore how to embed a general protocol of critical thinking across an institution. I begin by suggesting how a general definition of critical thinking can be crafted, and then examine what a Freshman Seminar on critical thinking might look like. I then return to the problem of how to build a case for critical thinking that was visited in Chapter Four, and this time I go into more depth about how this might be accomplished. I then look at how critical thinking can be incorporated into specific course assignments, how to introduce it in the syllabus, how to create connections between subject matter content and this kind of thinking, how to embed Critical Thinking Audits into assignments, and how to make such thinking part of the capstone experience.

Chapter Eight revisits in more depth the ways in which critical thinking is a social learning process, and it reviews ways in which typical classroom discussions can be conducted with a more critical edge. I outline what a critical discussion looks like and then look at some specific activities that can be crafted for critical thinking. These are the Circle of Voices, Circular Response, Chalk Talk, Spot the Error, Structured Silence, the Inferential Ladder, and the Appreciative Pause. The chapter ends with examples of discussion questions that encourage critical thinking, questions that uncover evidence, and questions that generate multiple perspectives.

The penultimate Chapter Nine pauses to review some of the most common misunderstandings of critical thinking, some challenges that have been issued to it, and some of the risks students experience when they try to learn it. Common misunderstandings are that being critical is the same as tearing something down or finding fault, that thinking critically leads to the paralysis of analysis, that it always involves fundamental change, that it's the same as problem solving, and that it always has a clear outcome. Challenges I explore are those posed by a gender analysis where critical thinking is seen as a masculine doubting game, by cultural analysis that identifies the Eurocentric rationality preeminent in critical thinking, and by postmodern analysis that critiques the notion of using critical thinking to come to greater self-awareness. The risks students face are those of impostorship, cultural suicide, lost innocence, and road running, and each of these is reviewed. The chapter ends with another affirmation of the importance of peer learning communities to critical thinking.

In the final chapter (Chapter Ten) I return to a deeper examination of a theme that surfaces regularly through the book, the importance of teachers modeling for students their own engagement in critical thinking. I explore how this can be accomplished through the use of appropriate autobiographical examples, how criticality can be modeled for colleagues, what modeling looks like in an online environment, and the risks associated with modeling.

Audience

The chief audience for this book is teachers in a wide range of higher and adult education institutions—community colleges, four-year colleges, universities, vocational institutes, proprietary schools, online institutions—who are trying to get their students to think critically. I hope I have written in such a way that teachers

in GED classrooms or in community colleges can find as much in here as teachers in elite private Ivy League institutions. I also think that trainers in a wide range of corporate and nonprofit organizations and professional developers in different workplace settings (the military, hospitals, churches, social work, early childhood development, community health) will be able to do some good creative adaptations of the exercises and activities described throughout the book. So really anyone who thinks that for part of their work they're trying to get others to think critically about something should find something of interest in the book.

Acknowledgments

There are so many people who make a book what it is, and there's no way I can thank them all. But first, I'd like to acknowledge the thousands of teachers and other human service professionals who've attended my workshops across the world and been gracious enough to fill out the Critical Incident Questionnaires I peppered them with, as well as asking such wonderfully unanswerable questions and recounting such wonderfully different experiences. In trying to respond to you I learned a great deal about teaching for critical thinking. I hope this book doesn't embarrass you. Thanks, too, to the University of St. Thomas, and to Dr. Sue Huber in particular, for supporting me with the sabbatical time to write the bulk of this manuscript. There is nothing like waking up in the morning and knowing that the only thing you have to do that day is try and get your thoughts in order and then put them down on paper. For me it's a luxury I always appreciate. The fact that I was able to be relaxed and conversational in this book is down to David Brightman at Jossey-Bass, an editor who always encouraged me to write personally to practitioners, rather than to impress fellow academics. And thanks to Suzanne Copenhagen for skillful copy-editing that zipped the manuscript along.

More personal thanks are due to my various band mates in The 99ers (the world's best punk/pop/rockabilly/surf band) over the period the book was written. The 99ers is my main creative outlet outside of academe, and if you're ever in the Twin Cities you should stop by to see us play a gig. There's nothing like smashing a power A-chord to make you forget about the complexities of critical thinking! So thanks to Molly Holley, Colin Selhurst, Chris Cave, Erik John, and Derek Kosky for giving me so many nights of pure musical fun. Finally, as always, thanks to the Rochester girl, Kim Miller, for being a partner through my life.

Stephen Brookfield
St. Paul, Minnesota

About the Author

The father of Molly and Colin, and the husband of Kim, Stephen D. Brookfield is currently Distinguished University Professor at the University of St. Thomas in Minneapolis-St. Paul, Minnesota. He received his B.A. degree (1970) from Lanchester College of Technology (Coventry, UK) in modern studies, his M.A. degree (1974) from the University of Reading (UK) in sociology, and his Ph.D. degree (1980) from the University of Leicester (UK) in adult education. He also holds a postgraduate diploma (1971) from the University of London, Chelsea College (UK), in modern social and cultural studies and a postgraduate diploma (1977) from the University of Nottingham (UK) in adult education. In 1991 he was awarded an honorary doctor of letters degree from the University System of New Hampshire for his contributions to understanding adult learning. In 2003 he was awarded an honorary doctorate of letters from Concordia University for his contributions to adult education. In 2010 Muhlenberg College awarded him an honorary doctorate of letters for educational leadership in the scholarship of teaching.

Stephen began his teaching career in 1970 and has held appointments at colleges of further, technical, adult, and higher education in the United Kingdom, and at universities in Canada (University of British Columbia) and the United States (Columbia University, Teachers College and the University of St. Thomas). In 1989 he was Visiting Fellow at the Institute for Technical and

Adult Teacher Education in what is now the University of Technology, Sydney, Australia. In 2002 he was Visiting Professor at Harvard University Graduate School of Education. During 2003–2004 he was the Helen Le Baron Hilton Chair at Iowa State University. He has run numerous workshops on teaching, adult learning, and critical thinking around the world and delivered many keynote addresses at regional, national, and international education conferences.

In 2001 he received the Leadership Award from the Association for Continuing Higher Education (ACHE) for “extraordinary contributions to the general field of continuing education on a national and international level.” In 2008 he received the University of St. Thomas John Ireland Presidential Award for Outstanding Achievement as a Teacher/Scholar, and also the University of St. Thomas Diversity Leadership Teaching and Research Award. Also in 2008 he was awarded the Morris T. Keeton Medal by the Council on Adult and Experiential Learning for “outstanding contributions to adult and experiential learning.” In 2009 he was inducted into the International Adult Education Hall of Fame.

He is a four-time winner of the Cyril O. Houle World Award for Literature in Adult Education: in 1986 for his book *Understanding and Facilitating Adult Learning: A Comprehensive Analysis of Principles and Effective Practices* (1986), in 1989 for *Developing Critical Thinkers: Challenging Adults to Explore Alternative Ways of Thinking and Acting* (1987), in 1996 for *Becoming a Critically Reflective Teacher* (1995), and in 2005 for *The Power of Critical Theory: Liberating Adult Learning and Teaching* (2004). *Understanding and Facilitating Adult Learning* also won the 1986 Imogene E. Okes Award for Outstanding Research in Adult Education. These awards were all presented by the American Association for Adult and Continuing Education. The first edition of *Discussion as a Way of Teaching: Tools and Techniques for Democratic Classrooms* (2nd ed., 2005), which he coauthored with Stephen Preskill, was a 1999 Critics Choice of the Educational Studies Association. His other

books are *Adult Learners, Adult Education, and the Community* (1984), *Self-Directed Learning: From Theory to Practice* (1985), *Learning Democracy: Eduard Lindeman on Adult Education and Social Change* (1987), *Training Educators of Adults: The Theory and Practice of Graduate Adult Education* (1988), *The Skillful Teacher: On Technique, Trust, and Responsiveness in the Classroom* (2nd ed., 2006), *Teaching Reflectively in Theological Contexts: Promises and Contradictions* (coedited with Mary Hess, 2008), *Learning as a Way of Leading: Lessons from the Struggle for Social Justice* (coauthored with Stephen Preskill, 2008), *Handbook of Race and Adult Education* (coedited with Vanessa Sheared, Scipio Colin III, Elizabeth Peterson, and Juanita Johnson, 2010), and *Radicalizing Learning: Adult Education for a Just World* (coauthored with John D. Holst, 2010).

Teaching for Critical Thinking

What Is Critical Thinking?

As a reader and a working classroom teacher I always appreciate a chapter, or even a book, that starts by telling me what I'm going to be reading in the next few pages. That way, if it's of no interest to me I can skip it and spend my time doing something more useful or pleasurable (hopefully both). So let me begin this introduction by saying that in this chapter I want to introduce what I understand as the basic process of critical thinking. This entails (1) identifying the assumptions that frame our thinking and determine our actions, (2) checking out the degree to which these assumptions are accurate and valid, (3) looking at our ideas and decisions (intellectual, organizational, and personal) from several different perspectives, and (4) on the basis of all this, taking informed actions. I also propose a basic typology of different kinds of assumptions that critical thinking unearths and scrutinizes—paradigmatic, prescriptive, and causal.

I'm also using this chapter to make some strong claims about critical thinking. I argue that if you can't think critically your survival is in peril because you risk living a life that—without your being aware of it—hurts you and serves the interests of those who wish you harm. If you can't think critically you have no chance of recognizing, let alone pushing back on, those times you are being manipulated. And if you can't think critically you will behave in ways that have less chance of achieving the results you want. So critical thinking is not just an academic process that leads

to good scores on SATs, elegantly argued essays, or experimental hypotheses that can stand the toughest scrutiny. It is a way of living that helps you stay intact when any number of organizations (corporate, political, educational, and cultural) are trying to get you to think and act in ways that serve their purposes.

How Critical Thinking Saved My Life

As a way of leading into these ideas I want to begin on a personal note by showing how critical thinking saved my life. A few years ago I was at rock bottom emotionally. I was one of the 20 million Americans diagnosed with clinical depression and anxiety, convinced most days that I was on the verge of death and feeling worthless and ashamed about my inability to control my state of mind. I spent a great deal of energy hiding my depression as best I could from family, friends, and colleagues, and steadfastly refused to seek medical help. Since, objectively, I had nothing to be depressed about (I had a job I loved and a loving family) my response to my depression was to tell myself to snap out of it. I believed the way to beat depression was to reason my way through it, to tell myself that since there was no earthly reason I should be depressed, I ought to just stop being that way. My depression's persistence and debilitating effect were heightened dramatically because I wasn't thinking critically about it. Once I started to do this, things improved dramatically. So, I begin this chapter with a bold statement; the ability to think critically about one's assumptions, beliefs, and actions is a survival necessity.

I've written about this period of depression in much greater detail elsewhere (Brookfield, 2011) and this may be entirely too much information about me for you to digest so early! If that's the case, then skip this introductory section and go to the next section, Hunting Assumptions. If you're still with me I want to focus on just one point—what was getting in the way of my dealing with my depression was my inability to think critically about it. What

I mean by that is that I refused to consider the possibility that any of my assumptions regarding my depression were wrong. For example, I assumed that the right way to deal with depression was to think your way out of it. I assumed that depression was a sign of weakness, unless external circumstances (such as divorce, being fired, or the death of a loved one) warranted it. Because I assumed I was weak, I assumed I needed to hide my condition from peers and colleagues. More fundamentally, I assumed that if I was a real man I would be able just to stare this condition down and force myself out of it by an act of will. I assumed it was up to me to “dig deep” (as the sports cliché has it) and dredge up the mental strength to beat it.

Some of the assumptions I’ve just outlined were on the surface and were reasonably easy to identify. These mostly had to do with how I understand cause and effect. For example, I reasoned that depression was caused by external circumstances and therefore, since my circumstances were good, it was a mistake to be depressed. The assumption that by engaging in intentional self-talk (“come on now, don’t be ridiculous, it’s all in your head, you are in great shape, there’s no reason at all to feel the way you do”) I could move beyond depression was also causal. Causal assumptions can always be stated as cause and effect linkages, as in “if I do A, then B will happen.” Hence, they are both explanatory and predictive. They explain why the past happened by establishing the causes of particular events. They predict the future by positing what will be the consequences and effects of certain decisions.

Some of the assumptions about depression I reviewed were more about how good professionals (which is how I thought of myself) are supposed to behave. These were prescriptive assumptions. Prescriptive assumptions are assumptions we hold about what are desirable ways of thinking or acting. They can usually be recognized by their inclusion of the word *should*, as in “a good professional should be able to respond to cultural diversity,” or “a good marriage is one in which partners can be totally honest with

each other.” Prescriptive assumptions state what a good friendship or relationship looks like, what should be the characteristics of a truly democratic decision, or how social resources should be allocated. I held a prescriptive assumption that a normal, fully functioning person copes well with life and doesn’t get depressed. I believed that good professionals don’t let irrational feelings of depression, worthlessness, or shame dominate their lives.

The third type of assumptions I held about depression was harder for me to uncover and challenge. These assumptions lay deeper within my mental structures and were not immediately apparent to me. They were so much a part of my outlook, and so central to my self-identity, that when they were pointed out to me as being assumptions I was tempted to reply, “that’s not an assumption, that’s reality.” Specifically, I assumed that a fully functioning man is logical, clear-headed, and determined, a sort of steely-jawed, no nonsense mental equivalent of an early Clint Eastwood character, or Howard Roark in Ayn Rand’s *The Fountainhead*. Although I would have strenuously denied it at the time, I had assumed that the ideology of patriarchy—the belief that men are governed by reason, women by emotion, and therefore that men’s powers of rationality equip them to be natural leaders—was correct. As I say, this was *not* an assumption I held consciously. It was much more subtle than that; it had wormed its way into my consciousness, so to speak. I call this kind of assumption a paradigmatic assumption.

Paradigmatic assumptions are the deeply held assumptions that frame the whole way we look at the world. When we discover paradigmatic assumptions it often comes as a shock. In the case of depression I had no real awareness of just how strongly I had successfully internalized the assumptions of patriarchy. Patriarchy views men as natural leaders and decision makers because they are guided by reason and logic, unlike women who are regarded as being guided by irrational emotion. Patriarchy says that a “real” man has no need for drugs to fight depression and, moreover, that

a real man doesn't suffer from depression in the first place. Because men are deemed to be naturally strong and in command they assume that if they simply tell themselves not to be depressed that will take care of the problem.

I had been well socialized over five decades into accepting the ideology of patriarchy, and it was so much a part of me that it was very difficult for me to see just how powerfully that ideology was shaping my behavior. But I'm convinced that one reason I didn't seek help until after years of misery was because I believed that if I was a "proper man," a "real man," I wouldn't need a psychiatrist, or drugs, to help me deal with depression. All I would need was manly inner fortitude. "I'm a man, I'm supposed to be ruled by reason, I should be able to keep my feelings under control" was the inner voice that rumbled beneath my more conscious conversations. To take drugs to deal with a problem was something that would be OK if I was a woman, but was surely a sign of weakness for a man. So month after month, year after year, I refused to consider any suggestion of medication. This refusal was underscored by the fact that the only people I knew who were taking medication for mental problems were all women. There was no male I was aware of under meds for depression.

One thing I learned about overcoming shame was that for me, a man, it required a process of ideological detoxification. I had to understand just how deeply and powerfully the ideology of patriarchy had been implanted in me over my five decades on the planet. And I had to understand, too, that stopping it from determining how I thought about, and responded to, my own depression would be a long haul. Even today, despite having written books on critical theory (Brookfield, 2004) and radicalizing learning (Brookfield and Holst, 2010)—both of which explore how to resist ideological manipulation—I still feel there's an unseemly lack of manliness, or grit, in my suffering from and disclosing my depression.

A second paradigmatic assumption I had to uncover had to do with the etiology of depression. I assumed that people feel

depressed because something bad has happened to them. So the fact that depression had settled on me seemingly out of the blue was completely puzzling. Yes, 9/11 had happened a few months before, and yes, I had nursed my mother during her last weeks of cancer a year earlier, and yes, some test results I had received had been worrying—but none of those seemed to account for the overwhelming anxiety and depression that gripped me. The paradigmatic assumption that depression was rationally caused, and therefore treated by the application of reason, took me years to unearth, challenge, and discard. I had always considered myself a sentimental person, given to emotional reactions to people, compassion, sport, music, and film, and had no idea of just how deeply the epistemology of European rationality was assimilated within me. Challenging and changing my unquestioning belief in rationality with the assumption that depression was the result of chemical imbalances in the brain was enormously difficult. I was so fixated on my inability to reason myself out of feeling depressed that I was unable to consider any other way of understanding how depression was caused.

Once this second paradigmatic assumption was challenged then many of my causal and prescriptive assumptions started to totter. Having managed to reframe my assumptions about the etiology of depression, it became much easier to keep the debilitating effects of shame under control. If depression is linked to chemical imbalances in the brain, I could tell myself, then part of its treatment has to be pharmaceutical. Suddenly, drugs didn't seem a sign of weakness, an indication that I was a pathetic excuse as a human being. After all, my psychiatrist told me, you're fine with taking drugs for bodily imbalances such as high cholesterol, high blood pressure, acid reflux—why should taking drugs to redress chemical imbalances in the brain be any different? Instead of assuming that depression was always caused by the existence of depressing external circumstances that a real man should be able to transcend, I started to see it as a medical condition like asthma, diabetes, or