

Thinking Critically about Critical Thinking:

An Introduction

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Critical thinking has long been acclaimed as an essential skill for any academic or professional endeavor. Within psychology, especially, critical thinking has been consistently championed for all students and professionals (Benjafield, 1994; Bensley, 1998; Griggs, Jackson, Marek, & Christopher, 1998; Halpern, 1998; Halpern & Nummedal, 1995; Levy, 1997; Meltzoff, 1998; Smith, 2002; Yanchar & Slife, in press). Psychologists are taught early in their careers to use their research findings to critically examine common myths and urban legends as well as debunk false beliefs and advertising ploys (e.g., Tavis, 2001). Yet, in spite of this obvious emphasis, psychologists do not typically subject psychology itself to critical evaluation. As many outside observers of psychology have noted (e.g., Bohman, 1993; MacIntyre, 1984; Taylor, 1985), mainstream psychologists often take for granted their philosophies, research methods, and professional practices. Even the tacit assumptions that guide psychological research on critical thinking are rarely critically analyzed or systematically examined. Why?

A primary reason for this neglect is that many psychologists have misunderstood critical thinking. Critical thinking has too often been mistaken for rigorous thinking. Rigorous thinking is frequently identified with “scientific analytic reasoning” (Dick, 1991, p. 84), which focuses on methodological concerns such as quality of research design, appropriateness of statistical analyses, and rigor of general reasoning. Psychologists are well known to engage skillfully in this type of thinking. Rigorous reasoning and methods are used not only to conduct psychological investigations but also to administer therapeutic practice. With few exceptions, investigators are supposed to follow the logic of their science, and clients are supposed to follow

the rationality of their therapists. This commitment to rigorous reasoning is so widespread that psychologists conceptualize most of their activities in these terms. Students of psychology are taught this type of rigor in virtually all their courses.

One of the main problems with this sort of rigorous thinking is that it selectively excludes certain topics from critical examination. For example, scientific reasoning and methods are often themselves taken for granted, exempting from critical analysis one of the core activities of psychologists. Philosophers of science point to many hidden assumptions and values in scientific methods and practices (Bernstein, 1983; Bem & de Jong, 1997; Bohman, 1993; Curd & Cover, 1998; Slife & Williams, 1995; Taylor, 1985; Toulmin, 1972). Yet, these assumptions and values are rarely included in texts or discussions of research and therapy methods in psychology. Consequently, the foundations of these methods and these practices are not themselves subjected to critical scrutiny.

This volume attempts to rectify such oversight and selectivity. It does so by adopting a conception of critical thinking that a number of philosophers and educators have contended is broader and deeper than previous conceptions. Perhaps most notably, recognized critical thinking theorists and researchers, such as Stephen Brookfield (1987) from education and Richard Paul (Paul & Elder, 2001) and Robert Ennis (1982) from philosophy, have emphasized a reformulation of critical thinking that moves beyond mere scientific analytic reasoning. If applied to psychology, this approach would inevitably lead to a critical analysis of all aspects of the discipline, including psychological research on critical thinking itself.

This reformulation of critical thinking has two parts. The first requires knowledge of the assumptions and underlying worldviews of a particular discipline or field of inquiry. In our case, this means knowledge of the current assumptions and values underlying psychology, including

ideas concerning psychology's proper methods. Sometimes students of psychology are surprised or even disappointed to discover the assumptions underlying psychology's cherished ideas and explanations. When brought into the light of day, these fundamental ideas often seem less compelling and certain than they once did. For this reason, explicating these assumptions and understanding their implications is the first step in these students becoming critical evaluators of their discipline.

The second part of this reformulation of critical thinking involves developing ideas and assumptions that are alternative to our present views. To engage seriously in critical thinking about psychology, we must seek out and ponder the most credible and convincing alternatives to psychology's currently favored ideas and methods. Often, the assumptions and guiding values of mainstream psychology are so familiar that they seem like the only possible premises for our work. Indeed, they seem more like axioms and truisms than the working assumptions or fruitful perspectives they are. Knowing there are alternative possibilities, however, allows students to question the often taken for granted assumptions of their field. This questioning is important because these assumptions may themselves need to be re-evaluated – a possibility that cannot even be seriously entertained without having alternatives to which to compare present assumptions.

Illustrating the New Conception of Critical Thinking

To illustrate these issues, consider two examples, one from everyday life and the other from the world of professional psychology.

Danny and his mother Jill. Consider first the situation of young Danny and his mother Jill. Jill wants to critically evaluate the problems that Danny is having at school. She spends considerable time taking a rigorous reasoning approach to the problem. She reads about what

scientists and psychologists have to say about Danny's behavior and symptoms, and even investigates recent empirical studies. Jill eventually comes to the conclusion that Danny might be diagnosed with ADHD (Attention-Deficit Hyperactivity Disorder). When she questions her family physician about this possibility, he immediately confirms Jill's suspicions and prescribes a drug to "correct" Danny's problem. The importance of rigorous thinking in Jill's solution to her problem is undeniable, both in the process of Jill's thinking and in the scientists' investigations of these behaviors.

However, there is a great deal more to a thoroughly critical analysis of this situation. Truly critical thinking would also examine some of the assumptions made in this process of diagnosis and prescription as well as consider possible alternative perspectives that might be helpful to the problem. In fact, recent interview studies show that many people like Danny and his mother take for granted that the prescribed medication is largely, if not solely, responsible for the decrease in Danny's ADHD behaviors (e.g., Burchfield & Slife, 2003). In other words, they make the common but thoroughly debatable assumption that Danny's biology (with the drug changes) strongly determines these behaviors – the assumption of biological determinism. As a result, Danny believes that he has little or no personal responsibility or choice about his "bad" (ADHD) behaviors at school, because personal responsibility and choice are typically associated with an alternative set of assumptions, namely that Danny has some capacity for free will and personal responsibility that is usually an important dimension of his behavior. For this reason, Danny gives up making any effort to control his problematic behaviors.

Danny's mother has similar ideas about her responsibilities as a parent. She assumes, for instance, that his diagnosis and treatment mean that his problems at school cannot be blamed on her faulty parenting. After all, she cannot be held responsible for Danny's difficulties if his

biology is responsible for them. Her experiences with Danny's diagnosis and treatment also teach her that she has limited parental responsibility for any of Danny's future difficulties, because neither Danny nor her parenting controls them (see Chapter 6 for more on this assumption). The point of this illustration is to ask a vital question: Is it not important to identify and examine such assumptions when diagnosing and treating children for ADHD? Might not the assumption of biological determinism lead Jill and Danny to overlook other possibly valuable resources in their struggle for Danny's well-being? Could the tacit assumption of biological determinism lead them to overlook important dimensions of the problem, and direct them, inadvertently, to view themselves as somewhat passive and unable to control the situation?

Empirically supported treatments. Consider another example of critical thinking in the heart of professional psychology. Many psychologists today believe that counselors and psychotherapists should only use therapeutic strategies that have been critically evaluated (cf. Messer, 2001). According to the conventional idea of critical thinking in psychology – rigorous thinking – the proper evaluation of counseling strategies or techniques consists of employing scientific reasoning and testing to demonstrate their effectiveness. Indeed, a list of these strategies has now been drawn up as “empirically supported treatments” (EST's), with some psychologists proposing that these should be the only treatments permitted in psychotherapy (Division 12 Task force, 1995). Should therapeutic approaches be restricted in this manner?

Many critics of EST's, including many psychologists, believe that this approach is too narrow, limited, and mechanical (e.g., Bohart, 1998; Messer, 2001). However, many EST supporters view these critics as better at protesting the EST movement than stating clearly what is wrong with the movement or proposing constructively a better alternative. Indeed, from the perspective of many EST advocates, the critics of EST's have little to recommend other than an unsystematic, “anything goes” approach.

This unsystematic approach appears to return psychology to the same chaotic situation that gave rise to the use of rigorous thinking and methods in the first place – a situation in which psychotherapists were not properly held accountable. Thus, the critics of EST's often fan the fires of their own discontent.

This controversy presents a classic case of the need for a truly critical analysis in the expanded sense recommended in this book. Of course, a complete analysis of this controversy is not appropriate or even possible here, though aspects of this issue and a number of others like it are examined in some detail in the chapters that follow (e.g., Chapters 3 and 4). For the purpose of illustration, however, it may be sufficient here to point to one of the many unexamined, and possibly quite problematic, assumptions underlying the EST controversy – the assumption that effectiveness is needed. Is there any more frequently used concept in professional psychology than “effectiveness”? Effectiveness is often touted as professional psychology's highest ideal, but what is it really?

The Meaning of Effectiveness. Perhaps the core meaning of effectiveness is that some method or technique reliably and predictably produces some desired end or result. If we want a therapeutic method to be effective, we must first specify the end or outcome of the technique we desire. The problem is that merely wanting effectiveness tells us nothing about what ends or goals are truly worthwhile. There are effective terrorists and thieves just as there are effective teachers and clergy. The profound differences among these types of effectiveness involve the human and moral quality of the ends they serve, not their productivity or efficiency. In this sense, rigorous reasoning and empirical methods are perhaps best suited for assessing the effectiveness of means, not for judging the quality or worth of ends. Surely a comprehensive approach to understanding and improving human life has to include both. Surely critical thinking requires an evaluation of the ideas associated with means and ends, even if the latter are less empirically accessible.

To take the matter a step further, the enormous emphasis placed on effectiveness in professional psychology often reflects an assumption that much of everyday life is a matter of maximizing effectiveness and control over our environments and ourselves. However, many critics in recent decades – including psychologists such as Erich Fromm (1969/41) and John Schumaker (2001) as well as philosophers such as Christopher Lasch (1991), Jürgen Habermas (1973), Alasdair MacIntyre (1984), to mention just a few – have argued that our emphasis on mastery, control, and cost-benefit (effectiveness) analyses are actually a major source of emotional problems, mental illness, and relationship problems. In the minds of these thinkers, mastery and effectiveness are often splendid things, but they need to be subordinated to more worthy and lasting purposes in living. If psychology does not take such critical perspectives into account, it runs the risk of inadvertently perpetuating some of the ills it tries to cure.

Of course, everyone has their own values and biases. However, the purpose of this brief illustration on EST's is not to argue for one moral outlook or philosophy over another. Rather, it is to point out that the extensive discussion of effectiveness in psychology is based on a number of unexamined assumptions and tacit values that are worthy of serious reconsideration. As needed and helpful as rigorous and scientific thinking is, it is inadequate to the tasks associated with truly critical thinking. Paul Wachtel (1997), a psychotherapist noted for critical thinking in the fullest sense, put it this way:

We need a good deal more critical thought about how to conceptualize the issues, about what is worth knowing, and about the various ways in which what has been observed thus far can be understood. We need to examine more closely the assumptions that underlie our questions. For our questions are our destiny; once we have framed a question, the answer already lies in wait, concealed as the statue is in the sculptor's block of marble...Psychology has been obsessed with answers. This book is concerned mainly with questions. (p. xvii)

This book, too, is concerned mainly with questions. However, as Wachtel observes, good questions – which already frame good answers – originate from critical thinking that examines “more closely the assumptions that underlie our questions.”

The Literature on Critical Thinking

Does the research literature on critical thinking in psychology address the importance of unexamined assumptions? How do specialists in this research conceptualize critical thinking? A review of this literature reveals careful empirical studies as well as instructive theoretical insights. However, few if any of the investigators working in this area have advocated the need to think critically about fundamental assumptions. Although these authors invariably endorse the need to think critically about and thus empirically investigate all sorts of claims (e.g., folk psychology, advertising), they rarely recommend that the assumptions underlying these investigations be critically examined.

Many specific texts appear, particularly in their titles, to critically evaluate psychology's methods, such as Meltzoff's (1998) *Critical Thinking about Research* and Benjafield's (1994) *Thinking Critically about Research Methods*. However, these texts concentrate almost exclusively on showing how the tools of traditional science can rigorously assess claims and test hypotheses. They do not cast critical light on the nature of these methods, nor do they bring to this light their historical context, assumptions, and implications. Critical thinking is thus couched rather narrowly in terms of rigorous reasoning, namely, the quantity and quality of empirical support for claims, theories, and therapies. Critical thinking as discussed by Brookfield (1987) and the authors of this book is largely ignored.

The general literature on critical thinking in psychology also champions rigorous reasoning (Bensley, 1998; Halpern, 1984; 1998; Halpern & Nummedal, 1995; Lehman, Lempert,

& Nisbett, 1988; Levy, 1997; McGovern, Furumoto, Halpern, Kimble, & McKeachie, 1991; Smith, 2002; Stanovich, 1998; Zechmeister & Johnson, 1992). A review of this literature suggests that scientific analytic reasoning has shaped much of our discipline's consciousness about the nature of excellent thinking: excellent thinkers are professionals and students who can reason well about methods, variables, and the logicity of their thinking within the canons of empirical science.

This view of excellent thinking is also reflected in the reasoning and methods of many approaches to psychotherapy and counseling – in at least three ways. First, a critical appraisal of therapeutic methods is almost always considered complete with scientific analytic reasoning, such as testing their effectiveness through the methods of science (Messer, 2001). Second, therapeutic methods are themselves thought to be administered rigorously and rationally, as indicated by the use of therapy manuals and standardized diagnoses (Division 12 Task force, 1995). Third, rigorous reasoning has itself become a standard for identifying client problems and desired treatment outcomes, such as in cognitive behavioral therapy (e.g., Beck, Rush, Shaw, & Emery, 1984). A lack of rigorous reasoning is frequently viewed as an important problem for clients, where they are viewed as “irrational,” while rigorous reasoning about the conduct of their lives is often considered a preferred method and outcome of treatment.

If psychologists seek to champion critical thinking and grant it prominent status in the discipline, why is critical discussion confined to the rigor of reasoning and methods alone? Analysis of fundamental assumptions is virtually nonexistent in psychology's general textbooks and the more specific critical thinking literature. On the relatively few occasions that assumptions are mentioned in this literature, they are treated in only a cursory way (e.g., Bensley, 1998; Halpern, 1998). Fundamental questions about the very nature and purpose of

commonly accepted psychological methods, theories, and therapies simply are not addressed (e.g., Smith, 2002). These authors seem to assume that rigorous reasoning is all that is required to deal with the challenges of understanding psychological life and facilitating human flourishing. Or perhaps critical thinking in the broader sense of this book seems unnecessary to these authors because the only alternative to careful, rigorous reasoning – as they conceive of it – is blind intuition, irrational dogma, or ineffable mysticism.

The authors of this volume believe otherwise. We believe there are profound and pressing reasons for taking a richer view of critical thinking and making it a routine part of our work as social scientists and professional psychologists. Restricting ourselves to rigorous reasoning alone is a fool's errand, even in our practical lives. Our difficulties in coping with some person or problem do not always result from overt tactics or conscious reasoning about the situation. They may also stem from faulty assumptions about another's motives or the way the world works, which a moment of insight or a good word from a friend helps us understand. Indeed, as we go about our daily lives, we are constantly revising our assumptions (often realizing that we were making them for the first time), considering alternatives, and beginning to make progress instead of just spinning our wheels. Critical thinking in this reformulated sense is part of thoughtful, meaningful living.

Content Overview

To help psychologists advance their discipline in thoughtful and meaningful ways, the content of this book is organized into six parts, each part corresponding to a major subdiscipline of psychology: clinical/counseling, social, neuroscience/experimental, cognitive, developmental, and statistical/methodological. Each part consists of two chapters that critically examine several important topics or issues within a subdiscipline. Because truly critical thinking involves an

understanding of both the current and alternative assumptions underlying each topic or issue, each part consists of two chapters – one that excavates current assumptions and one that explores plausible alternative assumptions.

The book opens with a critical examination of several pivotal issues in the subdiscipline of clinical/counseling psychology. In the first chapter of this pair, Frank Richardson, himself a counseling psychologist, identifies tacit assumptions and values that underpin professional psychology and may be the source of often-discussed problems and blind spots in this field. Blaine Fowers, also a counseling psychologist, sketches an alternative to psychotherapy assumptions, drawing on the field of virtue ethics, that portrays personal development, psychological well-being, and the good life in a fresh and potentially fruitful way.

The chapters of Part 2 address issues in social psychology. To begin this part, social psychologists Jeff Reber and Lisa Osbeck investigate the strengths and limitations of the traditional assumptions underlying social psychology topics such as sociality, love, and helping behavior. In light of these limitations, theoretical psychologist Ed Gantt provides alternatives to these assumptions by borrowing from social constructionist psychology, hermeneutic philosophy, and ethical phenomenology.

Part 3 is concerned with several important issues and themes of experimental psychology, specifically neuroscience. In the first chapter, neuroscientist and pharmacologist Dawson Hedges collaborates with Colin Burchfield to outline the main current assumptions of neuroscience research on mental disorders, especially research on depression and antidepressants. The next chapter contains a proposal for reframing these assumptions of neuroscience. Theoretical psychologist Brent Slife teams up with neuroscientist Ramona

Hopkins to discuss how this alternative proposal might better fit neuroscience data and provide valuable new insights into neuroscience investigations of children diagnosed with ADHD.

The fourth part of the book investigates several key issues in cognitive psychology. In the first chapter, Robert Bishop, a philosopher of science and mind, explicates the assumptions underlying current understandings of memory, traditional models of reasoning, and the computer metaphor for the human mind. In the second chapter, cognitive psychologist Stephen Yanchar explores interesting and fruitful alternative ways to understand how people experience the world and engage in activities such as acting and remembering.

Part 5 addresses significant topics in developmental psychology. In the current assumptions chapter, developmental psychologists Brian Vandenberg and Shawn O'Connor use Piaget's theory to cast light on some of the deepest presuppositions of this subdiscipline. They discuss the broader historical context of cosmological, geological, and biological theories of development. Developmentalist John Christopher analyzes in the second chapter how our Western cultural understandings have deeply colored familiar theories of development. He then outlines an alternative approach that might overcome this Western bias while still speaking to common features of human development across cultures.

The final part of the book evaluates several pivotal topics in the subdiscipline concerned with statistics and methods, including hypothesis testing, measurement, and the interpretation of results. Statistician and methodologist Richard Williams describes the current assumptions that underlie these notions, while two psychological researchers with expertise in the philosophy of science, Jeff Sugarman and Jack Martin, propose alternative conceptions of human science inquiry.

Suzanne Kirschner, a theoretical psychologist, concludes the book by identifying many of the common ideas that cut across the chapters. She points to some fascinating thematic connections both across the chapters describing current assumptions and across the chapters that discuss alternative conceptions of each subdiscipline. These themes include issues of mind/body dualism, social atomism, individualism, meaning-centeredness, free will/determinism, contextualism, and many others. Ultimately, as Dr. Kirschner observes, the purpose of all 12 chapters is to help the students of psychology reflect more deeply upon the premises and methods of the field.

The authors believe that this reflection will help students in three important ways. First, students will realize that psychological theories and ideas – including those that initially seemed unquestionable – are based on fallible assumptions and subject to critical examination. Second, students will learn the advantages and disadvantages of available ideas, allowing them to become sophisticated consumers of these ideas as well as more careful about their own positions on psychological issues. Third, students will understand these ideas within a broader intellectual framework, situating psychology within the larger enterprise of science and the humanities.

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