I. Introduction

The third edition of Judith A. Boss’s *THiNK: Critical Thinking and Logic Skills for Everyday Life* was just recently published. It is part of a series of McGraw-Hill’s textbooks that are designed to be used with the company’s various online resources, including Learn-Smart, Smartbook, Connect Critical Thinking, and Create. The first edition of *THiNK* was published in 2009, and was marketed as a new and innovative textbook. *THiNK* is a soft-cover book that looks and feels like a magazine—it has colorful pictures, text, and boxes on every page; the examples are taken directly from current events; and there are photos of (what appear to be) college students talking, reading and studying throughout. In these ways, *THiNK* is remarkably similar to Peter Facione’s *THiNK Critically*. That book was first published by Pearson in 2010, and the second edition, *THiNK Critically*, by Peter Facione and a new co-author, Carol Gittens, was published by Pearson (2012) and was reviewed favorably in this journal in Spring 2013. See Hamby (2013b).

Boss’ book should not, however, be confused with Facione’s book. *THiNK*, by Boss is a perfect example of what is wrong with both the teaching of critical thinking and the textbook publishing industry in general. With respect to the former, many articles have been written in the past couple of decades about the problems with critical thinking education (Blair 2006; Hamby 2013a, 2013b; Govier 1989; Weinstein 1995), and I will not rehash these general arguments here. I will, however, draw from the insights of these critiques to indicate the ways in which using Boss’ textbook is inappropriate when teaching a course on critical thinking. With respect to textbook publishing, Boss’ book serves as a cautionary tale for publishers who seemingly allow their marketing departments to drive the look, feel, and content of their textbooks.

II. Organization, Special Features, and Exercises

The first chapter of *THiNK* is titled “Critical Thinking: Why It’s Important.” The rest of the book seems to have three main parts: informal analysis of reasoning, formal analysis of reasoning, and applications. The first part addresses the myriad ways in which our reasoning capacity can be compromised; the second focuses on the analysis and evaluation of arguments, and the third invites readers to apply the lessons from the first two to current issues in moral decision making, advertising, mass media, science and politics.

*THiNK* has six kinds of special features sprinkled throughout the book. The first, titled “Think Tank,” is a series of self-evaluation questionnaires the reader is encouraged to complete, some of which have answer-comments at the back of the book. Second, “Analyzing Images” is a series of visual images with accompanying discussion questions. Third, “Highlights” is a series of boxes that contain the main concepts in each section, highlighted in yellow. Fourth, “Critical Thinking in Action” is a series of boxes that contain summaries of current issues, like the pros and cons of video-gaming, paired with discussion questions. Fifth, “Thinking Outside the Box” is a series of biographical sketches of famous historical figures, like Rachel Carson and Albert Einstein, who have exhibited critical thinking in one way or another. And last, “Critical Thinking Issues” is a series of paired articles offering arguments on either side of a current
issue, like marijuana legalization, along with review questions for each article and discussion questions for the debate as a whole.

While the biographies in the “Thinking Outside the Box” features are often interesting, they seem to have only a tenuous connection to critical thinking. For example, on page 17, Boss discusses Elizabeth Cady Stanton, and it is implied that she is a critical thinker. Unfortunately, what Boss offers is only a story about Stanton, with no actual description of her thinking critically during this episode of her life.

The exercises, with the title “Stop and Assess Yourself,” come at the end of each section in each chapter. They are generally a list of short essay questions which could be assigned as homework or used as discussion questions in class, or both. A subset of the questions have answers, or at least plausible model answers, which are in the “Solutions Manual” at the end of the book. My main concern with the exercises and discussion questions is that the tools for completing many of the exercises in the early part of the book depend on tools and information not developed until later. For example, it is not until Chapter 6 that the reader gets to recognizing, analyzing and creating arguments; however, questions which involve these skills are asked in earlier chapters. Consider the following question from the “Critical Thinking Issue” in Chapter 1:

3. Compare and contrast the arguments used by Nancy Cantor and U. S. Supreme Court justice Sandra Day O’Connor regarding the use of affirmative action in college admissions. Which person makes the best argument? Support your answer. (Boss 2014, 35)

Or consider this question from Chapter 3:

1. Evaluate Lukianof’s and Scott’s arguments for and against free-speech zones on college campuses. Evaluate which person made the stronger argument. (Boss 2014, 99)

III. Contents of the Chapters

The book falters from the first section of Chapter 1, which lays out Boss’ definition of critical thinking and logic:

Critical thinking is a collection of skills we use every day that are necessary for our full intellectual and personal development. The word critical is derived from the Greek word kritikos, which means “discernment,” “the ability to judge,” or “decision making.” Critical thinking requires learning how to think rather than simply what to think.

Critical thinking, like logic, requires good analytical skills. Logic is part of critical thinking and is defined as “the study of the methods and principles used in distinguishing correct (good) arguments from incorrect (bad) arguments.” Critical thinking involves the application of the rules of logic as well as gathering evidence, evaluating it, and coming up with a plan of action. We’ll be studying logical arguments in depth, in Chapters 5 through 8. (Boss 2014, 6)

Inasmuch as this is a “definition,” this is the only definition offered; immediately after this is an explanation that critical thinking is not the same as asserting an opinion, followed by a description of Perry’s stages of cognitive development. The problem with this as a definition is two-fold. First, the implication of the very first sentence, that “[c]ritical thinking is a collection of skills we use everyday…” is that we are all already critical thinkers. Of course, if this were true, there would be no need to take a critical thinking course or read a critical thinking textbook. Additionally, “critical thinking” itself cannot be a set of skills—that doesn’t make any sense. Critical thinking may use particular skills, but to say that it is a set of skills ignores the aspects that include strategies, meta-cognitive monitoring of, and dispositions to use these skills. And this leads to the second problem: there is no mention of any of the most common views of critical thinking.
offered by researchers in the field, such as this one given by Richard Paul and Linda Elder:

Critical thinking is, in short, self-directed, self-disciplined, self-monitored, and self-corrective thinking. It presupposes assent to rigorous standards of excellence and mindful command of their use. It entails effective communication and problem solving abilities and a commitment to overcome our native egocentrism and socio-centrism. (Paul & Elder 2008, 2)

In fact, Boss seems to make the mistake Trudy Govier (1989) and others have warned against—conflating critical thinking with formal or informal logic.

There are many other areas in which THiNK falls short as well. For example, in the very next section of Chapter 1, Boss lists the characteristics of a good critical thinker. This is a list of eight skills, and, at least for the first four, an indication of where in the book these skills will be described:

1. Analytical Skills (Chapters 2, 5-9)
2. Effective Communication (Chapter 3)
3. Research and Inquiry Skills (Chapter 4)
4. Flexibility and Tolerance for Ambiguity (Chapter 1)
5. Open-Minded Skepticism
6. Creative Problem Solving
7. Attention, Mindfulness, and Curiosity
8. Collaborative Learning

It seems odd that Boss does not give an indication whether or where the last four skills will be covered in the book. In fact, these last four are never mentioned again, except in passing, in the book at all.

A critical thinking textbook could, of course, lack a clear definition of “critical thinking,” but still fulfill the goals of exploring many of the important aspects of critical thinking. After all, there is no universally accepted concise definition of critical thinking, even though there is broad agreement by researchers in the field about the kinds of skills, attitudes and dispositions that are a part of critical thinking. THiNK, however, does not deliver on this front either. First, while some like Govier argue that teaching critical thinking is not the same as teaching informal logic, most researchers agree that the ability to identify, reconstruct and evaluate arguments is a least a part of being a critical thinker. In Boss’ book, these skills are explicitly introduced in Chapter 6, “Recognizing, Analyzing, & Constructing Arguments.” In particular, she writes the following about what the reader should expect to learn in Chapter 6:

Skill in argumentation can help us make better decisions in our personal choices as well as in our public lives. In Chapter 6 we will learn how to recognize, analyze, and construct arguments. Specifically, we will:

• Learn how to identify an issue
• Learn how to recognize the parts of an argument, including the premise, the conclusion, and premise and conclusion indicators
• Distinguish among an argument, an explanation, and a conditional statement
• Break down an argument into its premises and conclusion
• Diagram arguments
• Construct our own arguments
• Explore the basics of evaluating arguments (Boss 2014, 170-1)

Consider the first item on the list: “Learn how to identify an issue.” The text under the “Identifying an Issue” section three paragraphs long. It contains the suggestion that this “requires clear thinking and good communication skills” (Boss 2014, 171), with no further explanation, and an example in which Boss provides the first paragraph of a text and a suggestion of what the issue in the text might be. Two pages later, the second exercise in the “Stop and Assess Yourself” section, the second question asks the reader to “[i]dentify the issues in the following passages. Word all issues in the form of short questions.” (Boss 2014, 173), and lists a number of quotations from various media outlets. The skill of identifying
an issue is never revisited after this.

This example is typical of the lack of instruction throughout THiNK. There are dozens of places throughout the book in which Boss briefly describes a particular skill, but offers no strategies for developing the skill, offers no comparisons between good and bad applications of the skill, and then asks the reader to use the skill in an exercise.

One of the most problematic aspects of THiNK, though, is the myriad ways in which the author displays a clear lack of critical thinking skills. There are several places in which Boss makes an argument which is an inappropriate appeal to authority. For example, in Chapter 1, Boss makes the claim that critical thinking is “also about self-improvement and your whole development as a person” (Boss 2014, 14), and she urges the reader develop a rational life plan. The only reason even obliquely offered for doing so is that John Rawls says everyone needs to. Boss says:

*American philosopher John Rawls (1921–2002) wrote that in order to get the most out of life, everyone needs to develop a “rational life plan”—that is, a plan that would be chosen “with full deliberative rationality, that is, with full awareness of the relevant facts and after a careful consideration of the consequences….Someone is happy, when his plans are going well and his more important aspirations are being fulfilled.” (Boss 2014, 14)*

Rawls is obviously an expert in the field of philosophy, but that, of course, does not make him an expert in the field of personal development or the psychology of happiness. Furthermore, this is a misinterpretation of what Rawls actually says. In the section of *A Theory of Justice* titled “The Definition of Good for Plans of Life,” Rawls says:

*The rational plan for a person determines his good. Here I adapt Royce’s thought that a person may be regarded as a human life lived according to a plan. For Royce an individual says who he is by describing his purposes and causes, what he intends to do in his life. If this plan is a rational one, then I shall say that a person’s conception of his good is likewise rational….In order to expedite matters I shall start off with a pair of definitions and then explain and comment on them over the next several sections.*

*These definitions read as follows: first, a person’s plan of life is rational if, and only if, (1) it is one of the plans that is consistent with the principles of rational choice when these are applied to all relevant features of his situation, and (2) it is that plan among those meeting this condition which would be chosen by him with full deliberative rationality, that is, with full awareness of the relevant facts and after a careful consideration of the consequences….*

*… Someone is happy when his plans are going well, his more important aspirations are being fulfilled, and he feels sure that his good fortune will endure. (Rawls 1971, 408-9)*

Here, Rawls is concerned with a “rational life plan” only insofar as he needs a theory of the “good” to characterize a person who is in the “original position,” and make his argument that such a person would choose the kind of system Rawls is advocating. Rawls is not here claiming that any actual person should develop a life plan in the way that Boss is suggesting.

Consider another example, in the section in which Boss is actually discussing the fallacy of appeal to inappropriate authority:

*For example, it has long been assumed that milk and dairy products help maintain strong bones in adults. However, this claim has not been supported by scientific research. Instead this claim has been mainly promoted by groups that financially depend on the sale of dairy products. While the National Dairy Council extols the benefits of*
milk for people of all ages, many medical experts, including researchers at the Harvard School of Public Health and the Physicians Committee for Responsible Medicine, argue, based on research, that milk may actually accelerate the process of bone loss in adults. In light of these findings, the Federal Trade Commission, a government agency charged with protecting consumers and eliminating unfair and deceptive marketplace practices, ordered the National Dairy Council to withdraw its ads that claimed drinking milk can prevent bone loss in adults. (Boss 2014, 107)

The footnote #11 above on Public Health refers us to a 1997 study titled “Milk, Dietary Calcium, and Bone Fractures in Women: A 12-Year Prospective Study,” by D. Feskanich, W.C. Willett, M.J. Stampfer, and G.A. Colditz. In the abstract of this study, the authors say:

Objectives. This study examined whether higher intakes of milk and other calcium-rich foods during adult years can reduce the risk of osteoporotic fractures.... Conclusions: These data do not support the hypothesis that higher consumption of milk or other food sources of calcium by adult women protects against hip or forearm fractures. (Feskanich, et al. 1997, 992)

So, to what is Boss referring when she says that researchers argue that milk may accelerate bone loss? The authors of this study do not come to that conclusion, but they do make the following claims their introduction:

Numerous clinical investigations have demonstrated that calcium supplementation can retard bone loss among adult women. However, inconsistent results from prospective studies and interventions trials have not provided strong support for a positive association between adult calcium intake and osteoporotic fractures. Though bone fragility may be largely explained by low bone mass, direct investigation of the effects of diet on bone fractures is warranted because characteristics of bone other than mass, such as microscopic fatigue damage and the loss of connectivity in supporting trabeculae, contribute to fracture risk. Furthermore, foods high in calcium may contain other factors that influence fracture risk. (Feskanich, et al. 1997, 992)

But this doesn’t answer our question because the authors have not said anything here about milk per se; they have only made a very qualified claim about “calcium supplementation.”

In addition, Boss claims that researchers at the Physicians Committee for Responsible Medicine (PCRM) also argue that milk accelerates bone loss. However, she neither gives references for this, nor explains that the PCRM is a group that advocates a vegan lifestyle and has been censured by the American Medical Association (AMA) for being a “pseudo-physicians group” and giving advice that could be dangerous to Americans (AMA 1991).

IV. Textbook “Innovation”

There are several ways in which McGraw-Hill has been marketing Judith Boss’ THiNK, as well as a number of their other books in their “M series.” The first is the innovative design of the books themselves, the second is the connections with McGraw-Hill’s suite of online learning tools, and the last is the reported learning outcomes of students who have used the books in courses at universities and colleges across the country. Specifically, in 2009 McGraw-Hill marketed the first edition of Boss’ THiNK as follows:

“Real Thinking for Real Life” For your classes in Critical Thinking, McGraw-Hill introduces THiNK, the latest in its acclaimed M Series. Critical Thinking begins by listening and we began THiNK by listening to and observing students and instructors. McGraw-Hill conducted extensive research to gain insight into
students’ studying and buying behavior, as well as instructor challenges. Students told us they wanted more portable texts with innovative visual appeal and content that is designed according to the way they learn. Instructors told us they wanted a way to engage their students without compromising on high quality content.

THiNK is critical thinking come to life. This innovative text provides instructors with scholarly yet succinct content on critical thinking and logical argumentation in a format that captivates students. With current examples, exercises, and applications, and powerful pedagogy that links concepts within and between chapters, THiNK directs students to make connections between skill development and application to their college studies, careers, and personal lives.

More current, more portable, more captivating, plus a rigorous and innovative research foundation adds up to: more learning. When you meet students where they are, you can take them where you want them to be. (McGraw-Hill Publishing 2009)

And the third edition of THiNK was described like this:

THiNK offers instructors core content and pedagogy in a succinct magazine format that teaches them the importance of overcoming feelings and opinions to commit to positions based on reason and logic. Boss’s 3rd edition is powered by Connect Critical Thinking, a state of the art digital learning environment that helps you connect your students to their coursework. Whether accessing online homework and quizzes, or assigning SmartBook and LearnSmart, the first and only adaptive learning experience, Connect provides a complete digital solution for your classroom. With extensive opportunity for application and practice, and groundbreaking digital content, THiNK directs students to make connections between skill development and apply it to their college studies, careers, and personal lives. (McGraw-Hill Publishing 2014)

Connect Critical Thinking is McGraw-Hill’s course management system (à la Blackboard, etc.) specifically designed to work with their critical thinking texts. It includes the textbook, online assignments, and a bank of quiz and exam questions. McGraw-Hill bills Smartbook as an “adaptive reading experience” and LearnSmart as an “adaptive learning system.” In layman’s terms, Smartbook is an e-reader that incorporates exercises into the reading process and LearnSmart is a platform for students to quiz themselves on course content.

On its higher education website, McGraw-Hill offers a summary of its “McGraw-Hill Education Connect Effectiveness Study 2013.” The first summary aggregates the findings from studies done at 34 different colleges and universities across the country (http://connect.customer.mcgraw-hill.com/studies/archive/subject/). Each of these studies was done by individual instructors, independently from one another (although it is not clear whether they are independent of McGraw-Hill). In these studies, average student grades, pass rates, attendance rates and retention rates for a particular course of students who used Connect (sometime with LearnSmart and/or Smartbook, sometimes without) are compared with those did not use Connect. Average student grades, pass rates, attendance rates and retention rates all seemed to improve, although the results of significance tests are not given.

There are two things that are misleading about these results, however. First, there is no indication on the web site that the details of these studies have not been published in peer-reviewed journals, on open websites or anywhere else that I have been able to find. Thus, all we have are the summaries posted
at the McGraw-Hill website. Because of this, the specification of the control groups for all of these studies is vague at best. It is not clear the control groups were using the McGraw-Hill textbook, but without Connect, or if the control groups were using different textbooks, or no textbook at all. It is also not clear if the control groups had access to alternative kinds of supplementary materials, like practice quizzes, even if they were not accessed thorough Connect.

Second, none of these studies is done specifically on the Connect Critical Thinking platform, nor has any been done using Boss’ THiNK. The publisher’s blurb does not imply that such studies have been done, but it takes quite a bit of work on the McGraw-Hill website to figure out that none of the research that has been done on Connect and the other tools involves any of McGraw-Hill’s critical thinking textbooks and accompanying critical thinking online platforms and materials. Thus, while it seems that a case could be made (although one would need much more information than McGraw-Hill provides to make it) that the Connect platform, along with the LearnSmart and Smartbook tools increase student learning in some areas, there is no evidence that students who use Boss’ THiNK and/or the accompanying critical thinking platforms and tools have better learning outcomes than students who use a different book and/or a different set of online tools.

As for the design of the book itself, the implication by the publisher’s blurb is that the research McGraw-Hill conducted on students’ study habits drove the decision to create Boss’ THiNK to look like a magazine. According a McGraw-Hill representative, the ethnographic research referenced above was done by Confier Research, an anthropological research company. They studied a diverse group of first-year students at various 2- and 4-year colleges across the country for a semester. I was not able to learn how many students or colleges of each type were included in the study; nor was I able to learn what information from the study was considered salient by McGraw-Hill when designing the textbooks.

It is exactly this “magazine-like” aspect of the book, however, that is so off-putting. In a critical thinking course, some of the most important things the students are supposed to be learning is to see beyond the superficial aspects of an issue or controversy; they are supposed to be learning how marketers and advertisers try to shape our buying habits, sway our opinions and cater to our most uncritical biases and prejudices; they are supposed to be learning that real information is difficult to obtain, and that real issues are messy. They should not be learning that they need to pay attention only to what is pleasing to the eye; that all the important information about something can fit in a brightly colored box; or that thinking critically about an issue is the same as voicing their opinions. It certainly might be the case that a textbook that students like to read could help them learn, even if the “style” of the textbook seems antithetical to the objective in this case. After all, a student won’t learn anything from a textbook she never opens, but as there is no evidence that students using Boss’ book are actually learning more than other students, I am not inclined to endorse a book that even students can tell is a marketing ploy.

V. Conclusion

I cannot recommend that anyone teaching a critical thinking course adopt THiNK: Critical Thinking for Everyday Life by Judith Boss. While it is clear is that McGraw-Hill believes that creating a textbook that looks like a magazine will sell more textbooks, it is our hope as educators that students taking critical thinking will learn not to be swayed by such tactics. More important than the hypocritical magazine-style of the book, though, is that the content of THiNK does not teach or promote the critical thinking skills that we all want our students to develop.
References


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