1 What Is Critical Thinking?

Much as politicians endorse motherhood and apple pie, nearly everyone who teaches praises critical thinking.¹ College professors agree that they want their students to become critical thinkers, but so do teachers in lower grades. I’ve heard first- and second-grade teachers declare that teaching critical thinking was one of their most important jobs. Most educators are with the program.²

But we can suspect that when virtually everyone agrees that something is good, they probably define it in different ways. The word *critical* can take on many different meanings. I recall one student recoiling in horror when I spoke positively about critical thinking: “Oh, I don’t want to become a *critical* person!” Then there are sociology professors who will boldly declare that they embrace “critical race theory” or “critical animal studies” or . . . you get the idea. Used in this way, *critical* usually signals that their approach is aligned with some sort of liberal/progressive/radical/leftist political perspective. In effect, they use the word *critical* as a sort of brand name to contrast their approach with rival schools of thought that, they charge, support the status quo. While they may assume that adopting a “critical” approach makes them critical thinkers, that’s not what I will mean by “critical thinking” here.
Rather, this book views critical thinking as a set of tools for evaluating claims. A claim is any statement asserting something to be the case. We encounter claims all the time in conversations, in what we read, in the media, indeed, on pretty much every occasion we connect with other people, and we’ve all had to learn to interpret those claims. We classify claims as being more or less convincing, using terms like fact or information to identify claims that seem sound, and terms like rumor or fake to label claims that seem more dubious. Learning to make these distinctions starts early: a lot of parenting involves helping small children become better at evaluating things they hear (“He’s only teasing,” “I’m really serious,” “That’s just a story”). At some point, kids have to learn to distinguish between TV programs and the content of commercials, and to understand that advertisers’ claims may not be completely truthful. As we get older, we learn that flattery and compliments might not reveal what others actually are thinking, just as most of us learn to discount rival claims made during election campaigns. We learn to distinguish questionable claims from others that seem more likely to be true.

The ability to think critically is important. Imagine a person incapable of critical thinking: this would be someone so suggestible (and vulnerable) that he or she takes every commercial’s advice to rush out and buy the product being advertised, and finds every politician convincing. Obviously, few people are that weak. Yet while becoming skeptical or suspicious of what we’re told by people who want to sell us something is a useful skill, it isn’t enough. We constantly encounter claims in news stories, books, and articles; from radio, television, and online personalities; in blog posts, podcasts, downloaded videos, and social media. How are we to evaluate all these claims? How can we separate ones that probably can be accepted as true from those that we should doubt?
People have different standards for making these judgments. One popular standard throughout history has been to assume that we already know what is true—that there is some sacred book that contains all the truths we need to know and that we can simply judge all claims by whether they are consistent with this holy writ. Or that some great thinker—Aristotle, say, or Confucius, or Marx—already explained how the world works, and we can evaluate today’s claims in terms of how well they match those classic interpretations. Assuming you already know what’s right and true can be comforting, if only because it justifies ignoring those who hold different views. Anyone who has ever gotten into an argument about religion knows that people who believe some sort of authoritative doctrine are hard to budge.

This book presents critical thinking as a more modest, alternative approach for assessing claims. Instead of simply assuming that we already know what is true, critical thinking requires that we consider the possibility that our assumptions might be wrong. At bottom, critical thinking is about evidence. Evidence is information that can help us judge whether a claim is true. When we hear a claim, we ought to evaluate the evidence for and against it. The claim may be about something small and personal (“I love your hair in that style”) or aimed at a much larger audience (today’s top news story). It doesn’t matter. Thinking critically involves examining the evidence for a claim and deciding whether it is convincing. When this book refers to “critical thinking,” then, it will mean ways of weighing evidence and distinguishing between stronger evidence and weaker evidence.

This sort of critical thinking has a history. It began to catch on during the Enlightenment—the centuries-long movement refuting the idea that all truth could be found in the Bible or Aristotle.
Instead, people started collecting and evaluating observable facts and information—i.e., evidence. For instance, they used telescopes to make observations of the planets and stars, and what they saw convinced them that the earth revolved around the sun, thus contradicting theologians’ insistence that the earth was the center of the universe. Later, they used microscopes to identify tiny organisms that seemed to cause diseases, which led medical authorities to reluctantly reject Aristotle’s model of disease being caused by an imbalance of the body’s four humors. These were tough debates: some theologians and physicians never stopped resisting the new ideas. But today, those pieces of evidence have won out: most people accept that the earth orbits the sun, and that germs can lead to disease. Yet we continue to argue about plenty of other things. Most people now agree that evidence is important, even though they may disagree about what the evidence shows.

Critical thinking in the sense of weighing evidence is a skill. It can be learned, and one gets better at it with practice. Perhaps you’re surprised that so many educators agree that teaching critical thinking is important. After all, your high school probably didn’t offer classes in critical thinking. You took classes in mathematics or science, language or literature, and social studies or history. Still, your teachers probably thought that all those classes were teaching critical thinking skills: math taught you to perform mathematical reasoning, literature classes involved analyzing plays and poetry, history encouraged you to assess different explanations of key events, and so on. Those lessons were designed to teach you something about the substance of math, literature, and history, but they were also intended to make you a more critical thinker, someone who not only knew something about the subjects in question,
but also could apply the analytic skills those lessons taught to a variety of topics and contexts.

Learning to think critically is a major reason why there is a strong correlation between level of education and income: on average, high school graduates earn more than those who drop out; people with some college make more than those who don’t go beyond high school; those who graduate from college earn a lot more than those who don’t receive a degree; and people who go on to finish graduate or professional degrees make more than college graduates. Why should this be true? Lots of high school and college classes don’t seem directly relevant to most jobs. But the subject matter covered in those classes is less important than acquiring the critical thinking skills students need to succeed in college. A college graduate should have learned to read thoughtfully enough to comprehend difficult material, to locate information and evaluate its quality, and to develop, organize, and present their own reasoned arguments. By completing coursework—doing the assigned reading, studying for tests, writing term papers, and so on—students develop and use increasingly sophisticated critical thinking skills. At bottom, it is those relatively rare and valuable skills that qualify better-educated individuals for higher-paying jobs.

In other words, while the term critical thinking may seem vague, abstract, or impractical, it is actually the key to education. Consider a question sometimes posed to grade-school children: “There are 125 sheep and 5 dogs in a flock. How old is the shepherd?” Mathematics educators note that most children facing this question assume they must be being asked to produce a number, such as 25 (125 divided by 5). After all, arithmetic students constantly confront “word problems” that require them to calculate the correct