

reasoning. In the following chapters, we continue our focus on evaluation as we learn to ask critical questions about a specific part of the reasoning structure: claims about the “facts.” Let’s see what such claims look like.

Practicing yoga reduces the risk of cancer.

Playing video games increases hand–eye coordination.

More college students are coming to classes with hangovers. *Time* magazine reports that 24 percent of college students report attending a class at least once in the last two weeks while experiencing a hangover from drinking too much the night before.

What do we make of these claims? Are they legitimate? Most reasoning includes claims such as these. In this chapter, we begin the process of evaluating such claims.

? *Critical Question: How good is the evidence: intuition, personal experience, case examples, testimonials, and appeals to authority?*

THE NEED FOR EVIDENCE

Almost all reasoning we encounter includes beliefs about the way the world was, is, or is going to be that the communicator wants us to accept as “facts.” These beliefs can be conclusions, reasons, or assumptions. We can refer to such beliefs as *factual claims*.

The first question you should ask about a factual claim is, “*Why should I believe it?*”

Your next question is, “*Does the claim need evidence to support it?*” If it does, and if there is no evidence, the claim is a *mere assertion*, meaning a claim that is not backed up in any way. You should seriously question the dependability of mere assertions!

If there is evidence, your next question is, “*How good is the evidence?*”



What evidence suggests our schools need to be saved? © Getty Images

To evaluate reasoning, we need to remember that some factual claims can be counted on more than others. For example, you probably feel quite certain that the claim “most U.S. senators are men” is true, but less certain that the assertion “practicing yoga reduces the risk of cancer” is true.

Because it is extremely difficult, if not impossible, to establish the *absolute* truth or falsity of most claims, rather than asking whether they are *true*, we prefer to ask whether they are *dependable*. In essence, we want to ask, “*Can we count on such beliefs?*” The greater the quality and quantity of evidence supporting a claim, the more we can *depend on it*, and the more we can call the claim a “*fact*.”

For example, abundant evidence exists that George Washington was the first president of the United States of America. Thus, we can treat that claim as a fact. On the other hand, there is much conflicting evidence for the belief “bottled water is safer to drink than tap water.” We thus can’t treat this belief as a fact. The major difference between claims that are *opinions* and those that are *facts* is the present state of the relevant evidence. The more supporting evidence there is for a belief, the more “factual” the belief becomes.

Before we judge the persuasiveness of a communication, we need to know which factual claims are most dependable. How do we determine dependability? We ask questions like the following:

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| What is your proof? | How do you know that’s true? |
| Where’s the evidence? | Why do you believe that? |
| Are you sure that’s true? | Can you prove it? |

You will be well on your way to being among the best critical thinkers when you develop the habit of regularly asking these questions. They require those making arguments to be responsible by revealing the basis for their arguments. Anyone with an argument that you should consider will not hesitate to answer these questions. They know they have substantial support for their claims and, consequently, will want to share their evidence in the hope that you will learn to share their conclusions. When people react to simple requests for evidence with anger or withdrawal, they usually do so because they are embarrassed as they realize that, without evidence, they should have been less assertive about their beliefs.

When we regularly ask these questions, we notice that for many beliefs there is insufficient evidence to clearly support or refute them. For example, much evidence supports the assertion that taking an aspirin every other day reduces the risk of heart attack, although some other evidence disputes it. In such cases, we need to make judgments about where the *preponderance of evidence* lies as we decide on the dependability of the factual claim.

Making such judgments requires us to ask the important question, “*How good is the evidence?*” Chapters 7 to 9 focus on questions we need to ask to decide how well communicators have supported their factual claims. The more dependable the factual claims, the more persuasive the communications.

LOCATING FACTUAL CLAIMS

We encounter factual claims as (a) *descriptive conclusions*, (b) *reasons* used to support either descriptive or prescriptive conclusions, or (c) *descriptive assumptions*. Let's examine an example of each within brief arguments.

- (a) Frequent use of headphones may cause hearing loss. Researchers studied the frequency and duration of headphone use among 251 college students and found that 49 percent of the students showed evidence of hearing impairment.

Note that “*frequent use of headphones may cause hearing loss*” is a factual claim that is a descriptive conclusion supported by research evidence. In this case, we want to ask, “Is that conclusion—a factual claim—justified by the evidence?”

- (b) This country needs tougher gun regulations. The number of gun-related crimes has increased over the last 10 years.

Note that the factual claim here is that “*the number of gun-related crimes has increased over the last 10 years*,” and it functions as a reason supporting a prescriptive conclusion. In this case, we want to ask, “Is that reason—a factual claim—justified by the evidence?”

- (c) Professors need to include more active discussions in their classrooms because too many college graduates lack critical thinking skills.

An unstated descriptive assumption links the reason to the conclusion: *Students learn how to think critically by participating in active classroom discussions.*

This factual claim is a descriptive assumption, which may or may not be dependable. Before we believe the assumption, and thus the reason, we want to ask, “How well does evidence support the assumption?” You will find that while many communicators perceive the desirability of supporting their reasons with evidence, they don't see the need to make their assumptions explicit. Thus, evidence for assumptions is rarely presented, even though in many cases such evidence would be quite helpful in deciding the quality of an argument.

The quality of evidence depends on the kind of evidence it is. Thus, to evaluate evidence, we first need to ask, "*What kind of evidence is it?*" Knowing the kind of evidence tells us what questions we should ask.

When used appropriately, each kind of evidence can be "good evidence." It can help support an author's claim. Like a gold prospector closely examining the gravel in her pan for potentially high-quality ore, we must closely examine the evidence to determine its quality. We want to know, "Does an author's evidence provide dependable support for her claim?" Thus, we begin to evaluate evidence by asking, "*How good is the evidence?*" Always keep in the back of your mind that no evidence will be a slam dunk that gets the job done conclusively. You are looking for better evidence; searching for altogether wonderful evidence will be frustrating.