



Reasons for Belief and Doubt

Chapter Objectives

When Claims Conflict

You will be able to

- understand that when a claim conflicts with other claims we have good reason to accept, we have good grounds for doubting it.
- recognize that if a claim conflicts with our background information, we have good reason to doubt it.
- appreciate that when we are confronted with a claim that is neither completely dubious nor fully credible, we should proportion our belief to the evidence.
- realize that it is not reasonable to believe a claim when there is no good reason for doing so.

Experts and Evidence

You will be able to

- understand what makes someone an expert and what does not.
- understand that if a claim conflicts with expert opinion, we have good reason to doubt it.
- realize that when the experts disagree about a claim, we have good reason to suspend judgment.
- recognize fallacious appeals to authority.
- distinguish true experts from non-experts by using the four indicators of expertise.

Personal Experience

You will be able to

- understand that it is reasonable to accept the evidence provided by personal experience only if there is no good reason to doubt it.
- appreciate the importance of the common factors that can give us good reason to doubt the reliability of personal experience—impairment, expectation, and innumeracy.

fooling Ourselves

You will be able to

- appreciate why we need to resist the human tendency to resist contrary evidence.
- become sensitive to the possibility of confirmation bias.
- be alert to the possibility of the availability error.

Claims in the News

You will be able to

- gain a basic understanding of how the news media work and what factors influence the claims that they generate.
- understand the skills involved in evaluating claims in the news.

Advertising and Persuasion

You will be able to

- understand and apply the guiding principle for thinking critically about advertising.
- gain familiarity with common tactics of persuasion used in advertising.

Chapter Summary

Many times we need to be able to evaluate an unsupported claim—a claim that isn't backed by an argument. There are several critical thinking principles that can help us do this. An important one is *if a claim conflicts with other claims we have good reason to accept, we have good grounds for doubting it*. Sometimes the conflict is between a claim and your background information. **Background information** is the large collection of very well-supported beliefs that we rely on to inform our actions and choices. The relevant principle then is *if a claim conflicts with our background information, we have good reason to doubt the claim*. However, it is important to remember that one's background information might be faulty, and that the new claim is worthy of acceptance.

It is not reasonable to accept a claim if there is good reason to doubt it. In the case of claims that we can neither accept nor reject outright, we should proportion our belief to the evidence.

An **expert** is someone who is more knowledgeable on a particular subject area than most others are. The important principle here is *if a claim conflicts with expert opinion, we have good reason to doubt it*. We must couple this principle with another one: *When the experts disagree about a claim, we have good reason to suspend judgment*. When we rely on bogus expert opinion, or on the opinion of an expert not backed up by the consensus of his or her peers, we commit the fallacy known as the **appeal to authority**.

Many claims are based on nothing more than personal experience, ours or someone else's. We can trust our personal experience—to a point. The guiding principle is that *it's reasonable to accept the evidence provided by personal experience only if there's no reason to doubt it*. Some common factors that can raise such doubts are impairment (stress, injury, distraction, emotional upset, and the like), expectation, and our limited abilities in judging probabilities.

Some of the common mistakes we make in evaluating claims are resisting contrary evidence, looking for confirming evidence, and preferring available evidence. To counteract these tendencies, we need to take deliberate steps to examine even our most cherished claims critically, to search for disconfirming evidence as well as confirming, and to look beyond evidence that is merely the most striking or memorable.

Many of the unsupported claims we encounter are in news reports. Reporters, editors, and producers are under many pressures that can lead to biased or misleading reporting. The biggest factor is money—the drive for profits in news organizations, especially those owned by large corporations or conglomerates. Reporters themselves may introduce inaccuracies, biases, and personal opinions. Moreover, the people who produce the news may decide not to cover certain stories (or aspects of stories), which can sometimes provide a skewed or erroneous picture of an issue or event.

The best defense against being misled by news reports is a reasonable skepticism and a critical approach that involves, among other things, looking for slanting, examining sources, checking for missing facts, and being on the lookout for false emphasis.

Advertising is another possible source of unsupported or misleading claims. We should realize that we generally have good reason to doubt advertising claims and to be wary of the persuasive power of advertising.

Answers to Select Textbook Exercises

Please note: These answers are for some of the questions that were not answered in Appendix B of *The Power of Critical Thinking*, Fifth Canadian Edition.

Exercise 4.1

1. The large collection of very well-supported beliefs that we all rely on to inform our actions and choices.
13. Any two: Impairment, expectation, or innumeracy
18. Relying on evidence not because it's trustworthy, but because it's memorable or striking.

Exercise 4.2

8. Reject; McPhail would likely have to have been at least in her 30s when elected, which means she would have had to be born around 1890 (which indeed she was). So to have died last year, she would have had to be nearly 130 years old, which would beat the world record for longevity by quite a lot.
9. Reject; it is common knowledge that the NDP has never held power at the federal level in Canada.
16. Reject; the claim is very likely to be false (Canada has a mediocre history at the Olympic games overall, and has generally done better in the winter, not summer, Olympics).

Study Questions

1. What critical thinking principle should we follow when claims conflict?
2. What is background information?
3. What critical thinking principle should we follow when a claim conflicts with our background information?

4. What should we do when confronted with a claim that is not quite dubious enough to summarily discard, yet not worthy of complete acceptance?
5. What is an expert?
6. What principle should we observe when a claim conflicts with expert opinion? When experts disagree about a claim?
7. What is the fallacious appeal to authority?
8. What are the four main indicators that someone is an expert?
9. What is the basic principle regarding evidence provided by personal experience?
10. What are three main factors that can give us good reason to doubt the reliability of personal experience?
11. What is *pareidolia*?
12. What is the gambler's fallacy?
13. What is confirmation bias?
14. What is the availability error?
15. What are three major factors that influence the content of the news?
16. How can reporters deliberately make themselves part of the story?
17. What are three ways to exercise reasonable skepticism toward the news media?
18. What should be our guiding principle when thinking critically about advertising?
19. What are the four most common persuasive techniques that advertisers use?
20. Describe a recent personal experience in which you have good reason to doubt the evidence provided. Why do you have reasons to doubt the evidence provided by the experience?
21. Identify at least two distinct claims you have recently heard or saw, whether in the media, online, or in your personal life, that conflict with your background information. Explain how they conflict with your background information. Does this conflict give you a good reason to reject the claim? Why or why not?
22. Identify a fallacious appeal to authority, which you recently observed either in the media, online, or in your personal life. What claim was the appeal to authority made in support of, and why was the appeal fallacious?

23. Identify a claim you recently heard or saw, whether in the media, online, or in your personal life, that was inferred erroneously on the basis of the availability error. What was the arguer's claim, and how did he or she commit the availability error?
24. Does appealing to background information in order to determine whether we should accept or reject a claim, make us susceptible to confirmation bias? Why or why not?
25. Identify a recent advertising campaign that uses one or more of the following advertising strategies: slogans, weasel words, identification, and/or misleading comparisons. Explain how the strategy or strategies are used in the ad in order to promote or sell a product or service.

Self-Assessment Quiz

Scroll down for answers.

Passages for Evaluation

For each of the following passages, determine whether you should accept the claim (entire passage or italicized claim), reject it, or proportion your belief to the evidence. Briefly support your response.

1. Dr. Soames says that his “vitamin cocktail” with antioxidants can alleviate stress and cure heart disease if taken regularly; a month’s supply of the cocktail is only \$450.00.
2. Psychic detectives who work with the police can find missing persons and solve murders. Two police departments in the greater Vancouver region vouch for the success and usefulness of one psychic detective, who has appeared on many TV talk shows.
3. The attacks of 9/11 were the result of God’s punishment for the sins of the United States.
4. The press secretary to the prime minister’s office says that the prime minister is the greatest prime minister since Sir John A. MacDonald.
5. Humans use only about 10 per cent of their brainpower for problem solving and creativity; the rest remains an untapped potential.
6. From an advertisement for a brand of toothpaste: “More dentists prefer X.”
7. Ken, a 39-year-old criminal lawyer from Smith Falls, Ontario, was camping at Lake Okanagan, British Columbia, with his college friends. After a night of heavy drinking, he sat by the lakeshore. *At 3:15 am, he was startled to see the Ogopogo, a legendary large serpent that inhabits the lake.* He now believes wholeheartedly in the existence of the lake monster!
8. The loonie was at 70.70 cents US, up 0.67 of cent from Thursday’s close, which marked the first time in a week that the dollar settled above the 70-cent US mark. [From *CBC News*, January 25, 2016]

9. My six-year-old son was able to play a beautiful version of Bach's first suite for unaccompanied cello, even though he has never played the instrument before!
10. Long-term aerobic exercise prevents age-related brain changes.
11. "Share the coast with friends and family this season. *Standard vehicle fares are half price on select sailings on all routes.* Restrictions apply." [From an advertisement for BC Ferries, printed in the *Vancouver Province*, Sunday Nov. 1, 2015]
12. *The best place to eat in Lijiang is probably in the Naxi restaurant near the water wheel.* I ate there when I visited last summer. It was a great meal!
13. Many Christians are members of the Roman Catholic faith.
14. Space aliens stole my baby!
15. Jenny McCarthy is convinced that vaccines cause autism. I don't see why a good and caring mother like Jenny would lie, so it must be that vaccines do cause autism.
16. Where's the curvature? Science is supposedly all about observation and evidence; but just look with your own eyes! The Earth is flat as a pancake!
17. The Earth is older than 6000 years.
18. Wayne Gretzky says that Ford automobiles are built for life in Canada. I should buy one!
19. "O.J. Simpson says: 'I'm Khloe Kardashian's Real Dad!'" (From *The National Enquirer*, March 10, 2016)
20. I ate breakfast this morning.
21. I'm absolutely positive I saw Justin Trudeau at the subway station yesterday. But CBC News says he is currently on a trip to India. The one in India must be a political decoy!
22. I am certain I heard my phone ringing, but I don't see any contact notifications on my phone. CSIS (Canadian Security Intelligence Service) must have intercepted and blocked the call.
23. Steph Curry says that men did not land on the moon. I'm pretty sure he did not become one of the wealthiest, and most successful professional athletes on the planet without having a good head on his shoulders. So it must be that men never did land on the moon.
24. The existence of a real, material world outside my mind is an illusion, foisted upon me by a malevolent, demonic, deceiver.
25. You should buy Kellogg's Frosted Flakes. They're gr-r-reat!

Answers to Self-Assessment Quiz

Passages for Evaluation

1. **Reject.** (Antioxidants might be healthful, but it is very unlikely that they can “cure” heart disease. Moreover, Soames seems to be selling vitamins for a very high price—giving us extra reason to be suspicious of his claims.)
2. **Reject.** (While it might be that some detectives have consulted the psychics, there is no evidence that psychics have any special abilities.)
3. **Reject.** (There is no way to know what God’s intentions are, but there is high support for the claim that the attacks were committed by terrorists.)
4. **Reject.** (The claim is clearly biased, and it would be very difficult to ascertain who is the best prime minister as there are multiple criteria by which we need to judge.)
5. **Reject.** (There are many more functions that depend on our brains than problem solving and creativity—our brains control our bodily functions, perceptions, and the experience of pleasure and pain, for example.)
6. **Reject.** (The claim contains an incomplete comparison and furthermore is taken from an advertisement.)
7. **Reject.** (Ken might be an authority on some aspects of the criminal law, but his observations should be doubted on account of his impairment due to intoxication and the likely poor light conditions at 3:15 am. Besides, our background information should suggest that it would be very astounding if the Ogotopo actually exists!)
8. **Accept.** (CBC is a legitimate news source and is reliable regarding the value of our currency. Besides, the information is unlikely to be inconsistent with your background information.)
9. **Reject.** (Your background information should suggest that this is unlikely, given the difficulty of playing the cello at all, let alone a complex piece such as the Bach suite! An untrained child is not going to be able to play the piece.)
10. **Reject.** (The claim that exercise can *prevent* age-related brain changes is very strong and inconsistent with background knowledge, although the weaker claim that it might inhibit brain deterioration is plausible. Exercise is good for many aspects of our health, so it would not be surprising that it supports brain health.)
11. **Proportion one’s belief.** (The claim comes from an advertisement, which should make one wary. However, the claim has a weasel word (“select”) that weakens the claim significantly (it is less likely to be false). The company is probably going to reduce some fares by 50%, but you should be careful if you are planning a trip using the ferry.)
12. **Proportion one’s belief.** (It depends on who is saying this. If the speaker is reliable regarding dining choices, then you might give the restaurant a try. However, one should be very suspicious of the claim that the restaurant is the “best”; surely this will be controversial.)
13. **Accept.** (This is likely to be part of your background information, or at least should be if you are a college student.)
14. **Reject.** (While theoretically possible, you should be very suspicious about claims regarding specific actions of space aliens. There is no source given, and we don’t know anything about the situation.)
15. **Reject** (Jenny McCarthy is a well-known celebrity, not a credible expert on the topic of autism and/or vaccines. The arguer makes a fallacious appeal to authority.)
16. **Reject** (The claim that the Earth is flat, conflicts both with our background information, and with the consensus of expert opinion. The apparent lack of curvature is an optical illusion)

produced by our proximity to the Earth. The curvature can be seen easily from higher altitudes, such as those at which commercial planes routinely fly.)

17. **Accept** (this claim is part of our well-supported background information. It cannot be rejected without discarding vast swaths of well-established scientific findings from multiple and various scientific disciplines including astronomy, geology, paleontology, physics, and chemistry. A consensus of expert opinion in each of these, and many other credible scientific disciplines supports this claim.)
18. **Proportion one's belief** (Though Wayne Gretzky is unequivocally a hockey superstar, this does not make him a reliable expert when it comes to automobile purchases. The fact that Gretzky is not an expert does not automatically entail that we should reject his pitch for Ford automobiles, but it does mean we should proportion our belief to the very weak evidence provided by this particular appeal to authority.)
19. **Reject** (The *National Enquirer* is “fake news”—a tabloid newspaper, whose main purpose is to entertain rather than inform.)
20. **Accept** (This claim, based on very recent personal experience, should be accepted unless there is some reason to doubt it.)
21. **Reject** (Though political decoys do exist, one shouldn't take their personal experience as evidence of the existence of one, if there is good reason to accept the evidence provided by one's personal experience. In this case, the CBC's reliable report that Justin Trudeau was in India at the time the arguer allegedly observed him at the subway station, provides a good reason for the arguer to doubt the evidence provided by their personal experience.)
22. **Reject** (In the absence of any credible evidence that CSIS interfered with a phone call, a more probable explanation of the arguer's experience is pareidolia. It is likely that the arguer heard a noise which sounded like their phone ringing (perhaps a different phone in an adjacent room), and on the basis of that vague stimuli, erroneously inferred that it was their phone that had been ringing. Since, however, in this case they have good reason to reject the evidence provided by their personal experience (the lack of contact notifications on their phone), they should also reject the belief about CSIS interfering with a phone call, which they inferred on the basis of that personal experience.)
23. **Reject** (Steph Curry may be a great basketball player, but he is not a credible expert on NASA's space program. This arguer has made a fallacious appeal to authority.)
24. **Reject** (This claim, deployed by Descartes in his *Meditations on First Philosophy* as a source of possible doubt, nevertheless conflicts with a large collection of our well-supporting beliefs, known collectively as our “background information.”)
25. **Proportion one's belief** (The fact that Kellogg's uses a catchy advertising slogan, “They're Gr-r-reat!” does not automatically entail that you should reject their pitch about Frosted Flakes; in itself, however, the slogan provides us very little credible information, or evidence in support of Kellogg's claim that you should buy their product, especially since the source of that claim is a Kellogg's advertisement, the primary purpose of which is to promote and sell something, rather than to provide objective and accurate information.)