



The Power of Critical Thinking

Chapter Objectives

- To understand the meaning of *critical thinking* and the importance of the terms *systematic*, *evaluation*, *formulation*, and *rational standards*.
- To understand how critical thinking is related to logic, the truth or falsity of statements, knowledge, and personal empowerment.

Why It Matters

You will be able to

- appreciate why critical thinking is better than the passive acceptance of beliefs.
- appreciate the relevance of the claim “The unexamined life is not worth living” to critical thinking.
- understand why the following claims are dubious: “Critical thinking makes people too critical or cynical,” “Critical thinking makes people cold and unemotional,” and “Critical thinking is the enemy of creativity.”
- appreciate the usefulness of critical thinking in all human endeavours.

How It Works

You will be able to

- distinguish between statements and non-statements.
- understand the basic concepts of reasons, argument, inference, premise, and conclusion.
- use indicator words to help pinpoint premises and conclusions.
- distinguish between passages that do and do not contain an argument.
- identify arguments in various contexts and distinguish between arguments and superfluous material, arguments, and explanations, and premises and conclusions.

Chapter Summary

Critical thinking is the systematic evaluation or formulation of beliefs or statements by rational standards. Critical thinking is systematic because it involves distinct procedures and methods. It entails evaluation and formulation because it is used to both assess existing beliefs (yours or someone else's) and to devise new ones. Critical thinking operates according to reasonable standards whereby beliefs are judged according to the reasons and reasoning that support them.

Critical thinking matters because our lives are defined by our actions and choices, and our actions and choices are guided by our thinking. Critical thinking helps guide us toward beliefs that are worthy of acceptance and that can help us be successful in life, however we define success.

A consequence of not thinking critically is a loss of personal freedom. If you passively accept beliefs that have been handed to you by your family and your culture, then those beliefs are not really yours. If they are not really yours and you let them guide your choices and actions, then they—not you—are in charge of your life. Your beliefs are yours only if you critically examine them for yourself to see if they are supported by good reasons.

Some people believe that critical thinking will make them cynical, emotionally cold, and creatively constrained. However, there is no good reason to believe that this is the case. Critical thinking does not necessarily lead to cynicism. It can complement our feelings by helping us sort them out, and it does not limit creativity—it helps perfect it.

Critical thinking is a rational, systematic process that we apply to beliefs of all kinds. As we use the term here, *belief* is just another word for *statement* or *claim*. A **statement** is an assertion that something is or is not the case. When you're engaged in critical thinking, you are mostly either evaluating a statement or trying to formulate one. In both cases your primary task is to figure out how strongly to believe the statement (based on how likely it is to be true). The strength of your belief will depend on the strength of the reasons in favour of the statement.

In critical thinking, an argument is not a fight but a set of statements—statements supposedly providing reasons for accepting another statement. The statements given in support of another statement are called the **premises**. The statement that the premises are used to support is called the **conclusion**. An **argument**, then, is a group of statements in which some of them (the premises) are intended to support another of them (the conclusion). It is important not to confuse arguments with explanations. Arguments are intended to give us reasons to believe that something is the case. An **explanation** tells us why or how something is the case.

Being able to identify arguments is an important skill on which many other critical thinking skills are based. The task is made easier by **indicator words** that frequently accompany arguments and signal that a premise or conclusion is present. Premise indicators include *for*, *since*, and *because*. Conclusion indicators include *so*, *therefore*, and *thus*. Indicators are not foolproof—these terms have many other uses, so one must exercise judgment in using indicators to identify premises and conclusions.

Arguments almost never appear neatly labelled for identification. They usually come embedded in many statements that are not part of the arguments. Arguments can be complex and lengthy. Your main challenge is to identify the conclusion and premises without getting lost in all the other verbiage.

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 1.1

6. If you passively accept beliefs that have been handed to you by your parents, your culture, or your teachers, then those beliefs are not really yours. If they are not really yours, and you let them guide your choices and actions, then they—not you—are in charge of your life.
16. False: You can disagree with another person's statement without supporting your disagreement.
22. Example: I haven't seen Helen since last week!

Exercise 1.2

5. Not a statement (question)

Exercise 1.3

2. Not an argument (explanation)
5. Not an argument (a command and a statement)

Exercise 1.4

2. Argument (Conclusion: Therefore, you are not fit to serve in your current position. Premise: You have neglected your duty on several occasions. Premise: You have been absent from work too many times.)
3. Not an argument.

Exercise 1.5

1. Premise: Canada has a terrific, publicly-funded healthcare system. Premise: Canada has a very low crime rate.
7. Premise: The mayor denied that he was in a conflict of interest, even though he clearly was. Premise: When asked to define conflict of interest, the mayor got it wrong.
13. Premise: It is right for students to oppose any arbitrary decisions by the administration. Premise: This tuition increase is an arbitrary decision by the administration.

Exercise 1.6

1. Conclusion: You are not well-suited to being a pizza delivery driver.
6. Conclusion: There is nothing to make you act ethically.

Exercise 1.7

1. Argument.
Conclusion: Ted Rogers was a great leader.
Premise: He turned the tiny media company he inherited from his father into a multi-billion dollar corporation.
Premise: He was renowned for his passion and energy.
Premise: He donated millions of dollars to worthy charities.

Study Questions

1. Is critical thinking primarily about what you think or how you think?

2. What is critical thinking?
 - a) In what way is critical thinking systematic?
 - b) What does it mean to say that critical thinking operates according to rational standards?
3. Why does critical thinking matter?
 - a) How is critical thinking related to the quality of our lives?
 - b) What's wrong with dispensing with critical thinking and accepting whatever beliefs or statements come our way?
 - c) How can a lack of critical thinking cause a loss of personal freedom?
4. Does critical thinking necessarily make one excessively critical or cynical? Why or why not?
5. How do critical thinking and our emotions complement each other?
6. How do critical thinking and creativity complement each other?
7. In what way is critical thinking “thinking outside the box”?
8. What is a statement or claim?
9. What is an argument?
 - a) In what way is an argument a combination of statements?
 - b) What is a premise?
 - c) What is a conclusion?
 - d) How is an argument different from non-argumentative prose?
10. What is the difference between an argument and an explanation?
11. What are indicator words and how can they help you locate arguments?
12. According to the text, what is the best advice for anyone trying to uncover or dissect an argument?
13. What are some of the ways that critical thinking can help us to be more successful in life?
14. What is logic, and what is the nature of its relationship to critical thinking?
15. How can thinking critically help us to avoid making mistakes in reasoning? Provide an example, to illustrate.
16. What did Scottish philosopher David Hume mean when he said that “reason is, and ought only to be the slave of the passions”?
17. Why are decisions about what to believe some of the most important decisions we ever make? Provide one or two examples, to illustrate.

Self-Assessment Quiz

Scroll down for answers.

Claim Identification

Identify which of the following are claims.

1. I do not like the taste of durian.
2. Durian? Yuck!
3. Please do not bring durian on the Metro.
4. Durian is a large tropical fruit.
5. Calgary is the capital city of Alberta.
6. Is Auston Matthews the captain of the Maple Leafs?
7. Identification, please.
8. Victoria is the capital city of British Columbia.
9. Bring me those books, Damien.
10. Connor McDavid won the Art Ross Trophy.

Argument Identification

Indicate whether each of the passages below constitutes an argument. For each argument, specify both the conclusion and the premises.

1. I take a Vitamin D supplement everyday in order to maintain healthy bones.
2. Neither the Leafs nor the Canucks are likely to win the Stanley Cup this year. These are the only teams that I support. Therefore, no team that I support will win the Stanley Cup this year.
3. David Bowie died on 10 January 2016. That was just days after releasing his album “Blackstar.”
4. I am unhappy about the incoming flux of Syrian refugees. It makes me so angry that we are giving these refugees free food and shelter, but we have so many homeless right here in Vancouver!
5. It is probable that God exists because many very intelligent people believe that God exists. If many intelligent people believe something, then it is probably true.

6. We should hire Priyanka because she has worked in computer sales for two years and has excellent letters of recommendation. Besides, she has taken a Critical Thinking course.
7. Nor does one have to be brilliant in all respects to be a good and creative problem-solver. A classic instance, of course, is that of Albert Einstein, who was not especially competent at basic mathematics and whose school marks were far from distinguished. But despite the fact that he was average in some ways, Einstein was able to produce dazzlingly creative ideas in mathematics and physics. [Steve Allen, *Dumbb*]
8. So, how can you begin to create or work on improving the plot of your breakout novel? Where do you start? What should you be thinking about? Think about this: Make conflict deeper, richer, more layered, more unavoidable, and more inescapably true. [Donald Maass, *Writing the Breakout Novel*]
9. Perhaps the simplest and easiest to understand is the argument of the First Cause. (It is maintained that everything we see in this world has a cause, and as you go back in the chain of causes further and further you must come to a First Cause, and to that First Cause you give the name of God.) . . . [But there] is no reason why the world could not have come into being without a cause; nor, on the other hand, is there any reason why it should not have always existed. [Bertrand Russell, *Why I Am Not a Christian*]
10. Some people claim that there are no moral facts or moral knowledge. Moral judgments or statements don't express facts; they are just not the type of thing that can be true or false. Moral statements are, instead, expressions of emotion, such as "capital punishment—boo!" or "euthanasia—hooray!" This view is known as emotivism, and it has some serious problems. It conflicts with common sense. If emotivism is true, then moral disagreement is impossible. But moral discourse does seem to involve disagreements. [Lewis Vaughn, *The Case for Humanism: An Introduction*]
11. Many great composers, such as Mozart, were Austrian.
12. If the Leafs sign William Nylander, then they will beat the Capitals in the playoffs. If the Leafs beat the Capitals, then they will win the Stanley Cup. So, if the Leafs sign William Nylander, then they will win the Stanley Cup.
13. Ontario Premier Doug Ford and Jason Kenney, leader of Alberta's United Conservative Party, joined forces Friday for a raucous, campaign-style rally against the provincial carbon tax, where each aimed most of their comments at Alberta Premier Rachel Notley and Prime Minister Justin Trudeau. [David Dormer, *CBC News*, "The worst tax ever": Doug Ford and Jason Kenney hold campaign-style rally against carbon levy." October 5, 2018]
14. Carbon taxes don't work as promised. North America's first such tax, in neighbouring British Columbia, is failing to reduce emissions. Emissions from driving are rising faster than population growth in BC, despite a carbon tax higher than Gov. Inslee's proposal. [Brier Dudley, *The Seattle Times*, "Look to BC for evidence carbon tax doesn't work." January 25, 2018]
15. Since 1850, average global temperatures have warmed due to anthropogenic greenhouse gas emissions.

Answers to Self-Assessment Quiz

Claim Identification

1. **Claim** (this is a true or false statement of the speaker's tastes)
2. **Not a claim** (neither true nor false)
3. **Not a claim** (command)
4. **Claim** (true statement about durian)
5. **Claim** (false statement about Calgary)
6. **Not a claim** (question)
7. **Not a claim** (request)
8. **Claim** (true statement about Victoria)
9. **Not a claim** (command)
10. **Claim** (true statement about Connor McDavid)

Argument Identification

1. **Not an argument** (The passage explains why the speaker takes Vitamin D.)
2. **Argument** (Premise: Neither the Canucks nor the Leafs are likely to win the Stanley Cup this year. Premise: These are the only teams I support. Conclusion: No team that I support will win the Stanley Cup this year.)
3. **Not an argument** (Neither claim supports the other.)
4. **Not an argument** (The writer is saying why he is unhappy; he doesn't give reasons to support the truth of a claim.)
5. **Argument** (Premise: Many very intelligent people believe that God exists. Premise: If many intelligent people believe something, then it is probably true. Conclusion: God probably exists.)
6. **Argument** (Premise: Priyanka has worked in computer sales for two years. Premise: she has excellent letters of recommendation. Premise: she has taken a Critical Thinking course. Conclusion: We should hire Priyanka.)
7. **Argument** (Premise: Albert Einstein was not especially competent at basic mathematics and whose school marks were far from distinguished. Premises: Einstein produced dazzlingly creative ideas in mathematics and physics. Conclusion: One does not have to be brilliant in all respects to be a good and creative problem-solver.)
8. **Not an argument** (There are no claims. All the sentences are either questions or imperatives.)
9. **Argument** (Premise: The first cause argument maintains that everything we see in this world has a cause, and as you go back in the chain of causes further and further you must come to a First Cause, and to that First Cause you give the name of God. Premise: There is no reason why the world could not have come into being without a cause; nor, on the other hand, is there any reason why it should not have always existed. Conclusion (implicit): The first cause argument fails.)
10. **Argument** (Premise: If emotivism is true, then moral disagreement is impossible. Premise: Moral discourse does seem to involve disagreements. Conclusion: Emotivism has some serious problems.)
11. **Not an argument** (This is a claim, not an argument. It provides an example or an illustration, not a premise in support of a conclusion)
12. **Argument** (Premise: If the Leafs sign William Nylander, then they will beat the Capitals in the playoffs. Premise: If the Leafs beat the Capitals in the playoffs, then they will win the Stanley Cup. Conclusion: If the Leafs sign William Nylander, then they will win the Stanley Cup)

13. **Not an argument.** (This passage is a report, not an argument. It contains a claim, about Doug Ford, Jason Kenney, and a campaign style rally, but it does not offer that claim in support of any other claims, and nor is it supported by any premises)
14. **Argument** (Premise: North America's first carbon tax, in neighbouring British Columbia, is failing to reduce emissions. Premise: Emissions from driving are rising faster than population growth in BC, despite a carbon tax higher than Gov. Inslee's proposal. Conclusion: Carbon taxes don't work as promised)
15. **Not an argument** (This is a statement, not an argument. Specifically, it is a causal claim, which provides an explanation of global warming, not an argument for its existence)