

Philosophy 201: Critical Thinking
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Unit 1: Arguments

What is Critical Thinking?

We all have beliefs. I believe that plants need water to survive. I believe that \$200 is too much money to spend on a haircut. I believe that there are limits to what we should allow in free speech. Some of these beliefs are easier to evaluate than others. Not everyone is going to agree with my beliefs. How is it that we are supposed to know when a belief is worth having? That is what we are going to explore in this class. We are going to look at different techniques that will help us decide what beliefs we want to hold true.

Don't let your emotions cloud your judgement.

We need rational standards to help us decide whether or not a belief is worth having.

"The unexamined life is not worth living." Socrates

Critical thinking is the process of evaluating the ideas and information that you are presented with. When we behave as critical thinkers we don't immediately accept an idea that we've heard as true. We ask questions, we demand reasons and evidence and then we evaluate those reasons and evidence before we decide for ourselves whether some belief is worth having. Critical thinking is work. Becoming a critical thinker is a lifetime endeavour. In this class you will be exposed to techniques that will help you to become a critical thinker.

What is an Argument?

How do we know if some statement is true? Well, sometimes we can make an observation to see if it is true. If I want to know if the garbage has been taken out to the curb for pick up, I just look out the window. But what if the truth of a statement cannot be easily observed? Or what if we want to know if an idea is true? What kind of observation do we make then? For instance, what if we want to know whether or not the statement "all citizens should vote" is true? We might disagree on the truth or falsity of this statement. I might

think that it is important for the government to represent the will of all people, and the best way to reach this goal is for everyone to vote. My friend Joe might think voting is a useless activity because the available candidates don't actually represent his views. How do we know which person is right? What Joe and I have been doing here is called arguing. We aren't having a fight. It's not that kind of argument. Instead, we have each laid out a position to try to convince you of something. I argued that it is true that all citizens should vote. Joe argued that the same sentence is false.

An argument is a use of language that tries to *convince* someone that some statement is true or false.

My argument looked like this:

It is important for the government to represent the will of all people.
The best way to have the government represent the will of all people is to
have all citizens vote.
All citizens should vote.

The reasons that I give are called **premises** and they are listed above the line. The statement that I'm trying to convince you is true is called the **conclusion**. It goes below the line. Writing the argument in this way (premises above the line, conclusion below the line) is called writing the argument in **standard form**.

An argument is made up of statements that are either true or false.
The dog has fleas. Unhand that man!

An argument tries to *convince* you that some statement is true. (That is, there is an inference made.)

The **premises** are given as reasons to believe the **conclusion**.

Here are a couple of examples of arguments. In each argument, some kind of error has been made. Let's see if we can determine what has gone wrong in each case.

People who are poor do not have good-paying jobs.
If you don't have a good-paying job then you are lazy.
So, poor people are lazy.

All snakes are reptiles.
All snakes are legless.
Therefore, all reptiles are legless.

So, there are a number of problems that can arise in arguments. You can be given false or irrelevant evidence in the premises so that your conclusion doesn't actually follow. Or, the evidence may be good but there is a problem with the pattern of reasoning that the argument follows. That kind of error is called a mistake of the *form* of the argument. We will learn how to identify both of these problems.

Examples

"It is difficult to gauge the pain felt by animals, because pain is subjective and animals cannot talk."

The Ethics of Animal Testing, *The Economist*, April 7, 1984, p. 87

Poverty offers numerous benefits to the nonpoor.

Antipoverty programs provide jobs for middle-class professionals in social work and public health.

Such workers' future advancement is tied to the continued growth of bureaucracies dependent on the existence of poverty.

You have neglected your duty on several occasions, and you have been absent from work too many times. Therefore, you are not fit to serve in your current capacity.

Racial profiling is not an issue for white people, but it is a serious issue for visible minorities.

... a decaying satellite can look like an incoming warhead to a sensor,
That is the reason we have a man in the loop.

General J. Hartlinger, interview in "Nuclear War by Accident – Is it Possible?", U.S. News and World Report. Dec. 19, 1983, p. 27.

Our days on the Earth are few, so laugh and be merry!

There are words that can help us determine which sentences are meant to be premises and which one is the conclusion. These are called **indicator words**. The indicator word is placed in front of the sentence that it applies to.

Premise Indicators

since
because
for
as
as shown by
given that
assuming that
inasmuch as
as indicated by
due to the fact that

Conclusion Indicators

therefore
thus
so
then
hence
accordingly
consequently
which implies that
it follows that
as a result

Example

Since London is north of Chatham, and Chatham is north of Ridgetown, it follows that London is north of Ridgetown.

Note: Just because a sentence has one of these indicators words does not guarantee that the sentence is part of an argument. You must determine that there is an argument first, and if it is an argument, the indicator words will help you determine which sentences are premises and which sentence is the conclusion.

Since Kleo graduated from medical school her income is probably very high.

Since Kleo graduated from medical school there have been many changes in medical techniques.

Explanations

We use language for a whole host of purposes. In addition to arguments, we can use language to provide illustrations, expositions, tell stories and to express emotion. One expression of language that is often confused with arguments is the explanation.

Instead of trying to *convince* us that a statement is true, an explanation tells us *why (or how)* a statement is the case.

Can you see the difference between these two examples?

Adam stole the money; three people saw him do it.

Adam stole the money because he needed it to buy food.

To determine if the passage is an argument,

- 1) Pretend that it is an argument and determine which sentence would have to be the conclusion.
- 2) Determine if the other sentences in the passage are used to *convince us* that the conclusion is true. If yes, then it is an argument. If no, then the passage is something other than an argument.

HINT: If the conclusion is obviously true then the passage is probably not being used to convince you that it is true.

Examples – Are the following passages arguments? If they are, then identify the conclusion.

The Sun shines yellow because its light travels with a wavelength of 570 – 580 nm.

A COVID-19 vaccine should be given to health professionals first. They are the greatest people at risk of catching the disease.

If we don't fight for equal treatment under the law then we cannot have a just society.

If we don't fight for equal treatment under the law then we cannot have a just society. Having a just society should be our highest priority, so we must fight for each person's equal treatment under the law.

Alonzo asserted that the government should be able to arrest and imprison anyone if they are suspected of terrorist acts. But that's ridiculous. Doing that would be a violation of basic civil liberties guaranteed in the Canadian Charter of Rights and Freedoms.

A person never becomes truly self-reliant. Even though he deals effectively with things, he is necessarily dependent upon those who have taught him to do so. They have selected the things he is dependent upon and determined the kinds and degrees of dependence. -- B. F. Skinner, *Beyond Freedom and Dignity*

My grandfather doesn't like using computers. He finds the technology changes too quickly.

Mammals are warm-blooded animals that have a backbone and are fed milk by their mothers. Thus, dolphins and orcas are mammals whereas sharks are not.