

LOGOS: CRITICAL THINKING, ARGUMENTS, AND FALLACIES

Heather Wilburn, Ph.D

Critical Thinking:



A photo of The Thinker by Rodin located at the Musée Rodin in Paris

With respect to critical thinking, it seems that everyone uses this phrase. Yet, there is a fear that this is becoming a buzz-word (i.e. a word or phrase you use because it's popular or enticing in some way). Ultimately, this means that we may be using the phrase without a clear sense of what we even mean by it. So, here we are going to think about what this phrase might mean and look at

some examples. As a former colleague of mine, Henry Imler, explains:

By critical thinking, we refer to thinking that is recursive in nature. Any time we encounter new information or new ideas, we double back and rethink our prior conclusions on the subject to see if any other conclusions are better suited. Critical thinking can be contrasted with Authoritarian thinking. This type of thinking seeks to preserve the original conclusion. Here, thinking and conclusions are policed, as to question the system is to threaten the system. And threats to the system demand a defensive response. Critical thinking is short-circuited in authoritarian systems so that the conclusions are conserved instead of being open for revision.¹

A condition for being recursive is to be open and not arrogant. If we come to a point where we think we have a handle on what is True, we are no longer open to consider, discuss, or accept information that might challenge our Truth. One becomes closed off and rejects everything that is different or strange—out of sync with one’s own Truth. To be open and recursive entails a sense of thinking about your beliefs in a critical and reflective way, so that you have a chance to either strengthen your belief system or revise it if needed. I have been teaching philosophy and humanities classes for nearly 20 years; critical thinking is the single most important skill you

1. Henry Imler, ed., *Phronesis An Ethics Primer with Readings*, (2018). 7-8.

can develop. In close but second place is communication, In my view, communication skills follow as a natural result of critical thinking because you are attempting to think through and articulate stronger and rationally justified views. At the risk of sounding cliché, education isn't about instilling content; it is about learning how to think.

In your philosophy classes your own ideas and beliefs will very likely be challenged. This does not mean that you will be asked to abandon your beliefs, but it does mean that you might be asked to defend them. Additionally, your mind will probably be twisted and turned about, which can be an uncomfortable experience. Yet, if at all possible, you should cherish



Hannah Arendt in 1933

these experiences and allow them to help you grow as a thinker. To be challenged and perplexed is difficult; however, it is worthwhile because it compels deeper thinking and more significant levels of understanding. In turn, thinking itself can transform us not only in thought, but in our beliefs, and our actions. Hannah Arendt, a social and political philosopher that came to the United States in exile during WWII, relates

the transformative elements of philosophical thinking to Socrates. She writes:

Socrates...who is commonly said to have believed in the teachability of virtue, seems to have held that talking and thinking about piety, justice, courage, and the rest were liable to make men more pious, more just, more courageous, even though they were not given definitions or “values” to direct their further conduct.²

Thinking and communication are transformative insofar as these activities have the potential to alter our perspectives and, thus, change our behavior. In fact, Arendt connects the ability to think critically and reflectively to morality. As she notes above, morality does not have to give a predetermined set of rules to affect our behavior. Instead, morality can also be related to the open and sometimes perplexing conversations we have with others (and ourselves) about moral issues and moral character traits. Theodor W. Adorno, another philosopher that came to the United States in exile during WWII, argues that autonomous thinking (i.e. thinking for oneself) is crucial if we want to prevent the occurrence of another event like Auschwitz, a concentration camp where over 1 million individuals died during the Holocaust.³ To think

2. Arendt, Hannah, “Thinking and Moral Considerations,” *Social Research*, 38:3 (1971: Autumn): 431.

3. Theodor W. Adorno, “Education After Auschwitz,” in *Can One Live After*

autonomously entails reflective and critical thinking—a type of thinking rooted in philosophical activity and a type of thinking that questions and challenges social norms and the status quo. In this sense thinking is critical of what is, allowing us to think beyond what is and to think about what ought to be, or what ought not be. This is one of the transformative elements of philosophical activity and one that is useful in promoting justice and ethical living.



Georg Wilhelm Friedrich Hegel, date unknown

With respect to the meaning of education, the German philosopher Hegel uses the term *bildung*, which means education or upbringing, to indicate the differences between the traditional type of education that focuses on facts and memorization, and education as transformative. Allen Wood explains how Hegel uses the term *bildung*: it is “a process of self-transformation and an acquisition of the power to grasp and articulate the reasons for what one believes or knows.”⁴ If we think back through all of our years of schooling, particularly those subject matters that

Auschwitz, ed. by Rolf Tiedemann, trans. by Rodney Livingstone (Stanford: Stanford University Press, 2003): 23.

4. Allen W. Wood, “Hegel on Education,” in *Philosophers on Education: New Historical Perspectives*, ed. Amelie O. Rorty (London: Routledge 1998): 302.

involve the teacher passing on information that is to be memorized and repeated, most of us would be hard pressed to recall anything substantial. However, if the focus of education is on how to think and the development of skills include analyzing, synthesizing, and communicating ideas and problems, most of us will use those skills whether we are in the field of philosophy, politics, business, nursing, computer programming, or education. In this sense, philosophy can help you develop a strong foundational skill set that will be marketable for your individual paths. While philosophy is not the only subject that will foster these skills, its method is one that heavily focuses on the types of activities that will help you develop such skills.

More on that...

Talbot, Marianne. 2015. "Critical Reasoning." In *Philosophy Now* 106 (Feb/March): 6-9.
https://philosophynow.org/issues/106/Critical_Reasoning

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Do Your Research:

Developing and practicing sound research skills will aid in developing critical thinking skills. Research skills are important in every field. Consider differences between research in a lab and research in a writing project. This brings us to the Quantitative & Qualitative Research Distinction.

Empirical studies typically undergo research in one of two forms: quantitative and qualitative. It is important to note that neither of these approaches are “better” than the other, simply that they are different.

Quantitative research aims to measure, test, predict, or describe certain phenomena. Quantitative research is statistical, its data numerical and quantifiable. Typically, quantitative research conducts very structured interviews and observations. For example, analyzing a child’s participation in a HeadStart program and their likelihood of attending college would fall under quantitative research.

Qualitative research aims to provide rich descriptions of

behaviors and realities. Qualitative research is naturalistic and interpretive, using more open-ended interviews and observations. Data for qualitative research may present itself in the form of interviews, transcripts, notes, or journals. For example, observing children playing in a classroom and conducting open-ended interviews with both the children and teachers on classroom behaviors would be considered qualitative research.

Lastly, it is important to understand there are times when research can be both quantitative and qualitative. This simply means that the methods from both quantitative and qualitative research are simultaneously applied to a project. One final note: do not immediately assume the type of research being applied without first thoroughly reading through the article, i.e., the presence of numerical/statistical data does not automatically make research quantitative.⁵

Arguments:

Let's turn to discuss arguments. Arguments consist of a set of statements, which are claims that something is or is not the case, or is either true or false. The conclusion of your argument is a statement that is being argued for, or the point of view

5. This section (Do your Research) was written by Micah Mckain, TCC's Undergraduate Research and Scholarly Activity Work-Study Assistant.

being argued for. The other statements serve as evidence or support for your conclusion; we refer to these statements as premises. It's important to keep in mind that a statement is either true or false, so questions, commands, or exclamations are not statements. If we are thinking critically we will not accept a statement as true or false without good reason(s), so our premises are important here. Keep in mind the idea that supporting statements are called premises and the statement that is being supported is called the conclusion. Here are a couple of examples:

Example 1: Capital punishment is morally justifiable since it restores some sense of

balance to victims or victims' families.

Let's break it down so it's easier to see in what we might call a typical argument form:

Premise: Capital punishment restores some sense of balance to victims or victims' families.

Conclusion: Capital punishment is morally justifiable.

Example 2: Because innocent people are sometimes found guilty and potentially

executed, capital punishment is not morally justifiable.

Premise: Innocent people are sometimes found guilty and potentially executed.

Conclusion: Capital punishment is not morally justifiable.

It is worth noting the use of the terms "since" and "because" in these arguments. Terms or phrases like these often serve as signifiers that we are looking at evidence, or a premise.

Check out another example:

Example 3: All human beings are mortal. Heather is a human being. Therefore,

Heather is mortal.

Premise 1: All human beings are mortal.

Premise 2: Heather is a human being.

Conclusion: Heather is mortal.

In this example, there are a couple of things worth noting: First, there can be more than one premise. In fact, you could have a rather complex argument with several premises. If you've written an argumentative paper you may have encountered arguments that are rather complex. Second, just as the arguments prior had signifiers to show that we are looking at evidence, this argument has a signifier (i.e. therefore) to demonstrate the argument's conclusion.

So many arguments!!! Are they all equally good?

No, arguments are not equally good; there are many ways to make a faulty argument. In fact, there are a lot of different types of arguments and, to some extent, the type of argument can help us figure out if the argument is a good one. For a full elaboration of arguments, take a logic class! Here's a brief version:

Deductive Arguments: in a deductive argument the conclusion necessarily follows the premises. Take argument Example 3 above. It is absolutely necessary that Heather is a mortal, if she is a human being and if mortality is a specific condition for being human. We know that all humans die,

so that's tight evidence. This argument would be a very good argument; it is valid (i.e. the conclusion necessarily follows the premises) and it is sound (i.e. all the premises are true).

Inductive Arguments: in an inductive argument the conclusion likely (at best) follows the premises. Let's have an example:

Example 4: 98.9% of all TCC students like pizza. You are a TCC student. Thus, you like pizza.

Premise 1: 98.9% of all TCC students like pizza

Premise 2: You are a TCC student.

Conclusion: You like pizza. (*Thus is a conclusion indicator)

In this example, the conclusion doesn't necessarily follow; it likely follows. But you might be part of that 1.1% for whatever reason. Inductive arguments are good arguments if they are strong. So, instead of saying an inductive argument is valid, we say it is strong. You can also use the term sound to describe the truth of the premises, if they are true. Let's suppose they are true and you absolutely love Hideaway pizza. Let's also assume you are a TCC student. So, the argument is really strong and it is sound.

There are many types of inductive argument, including: causal arguments, arguments based on probabilities or statistics, arguments that are supported by analogies, and arguments that are based on some type of authority figure. So, when you encounter an argument based on one of these types, think about how strong the argument is. If you want to see

examples of the different types, a web search (or a logic class!) will get you where you need to go.

Fallacies:

Some arguments are faulty, not necessarily because of the truth or falsity of the premises, but because they rely on psychological and emotional ploys. These are bad arguments because people shouldn't accept your conclusion if you are using scare tactics or distracting and manipulating reasoning. Arguments that have this issue are called fallacies. There are a lot of fallacies, so, again, if you want to know more a web search will be useful. We are going to look at several that seem to be the most relevant for our day-to-day experiences.

More on
that...

Schoeneberg,
Henrik. 2016.
"Bad

1. **Inappropriate Appeal to Authority:** We are definitely going to use authority figures in our lives (e.g. doctors, lawyers, mechanics, financial advisors, etc.), but we need to make sure that the authority figure is a reliable one. Things to look for here might include: reputation in the field, not holding widely controversial views, experience, education, and the like. So, if we

take an authority figure's word and they're not legit, we've committed the fallacy of appeal to authority.

Example 5: I think I am going to take my investments to Voya. After all, Steven Adams advocates for Voya in an advertisement I recently saw.

If we look at the criteria for evaluating arguments that appeal to authority figures, it is pretty easy to see that Adams is not an expert in the finance field. Thus, this is an inappropriate appeal to authority.

2. Slippery Slope

Arguments: Slippery slope arguments are found everywhere it seems. The essential characteristic of a slippery slope argument is that it uses problematic premises to argue that doing 'x' will ultimately lead to

Arguments That Make Your Smarter." In *Philosophy Now* 115 (Aug/Sept): 26-27. https://philosophynow.org/issues/115/Bad_Arguments_That_Make_You_Smarter
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& password); those without a subscription can access a limited number of articles monthly using the URL provided.

other actions that are extreme, unlikely, and disastrous. You can think of this type of argument as a faulty chain of events or domino effect type of argument.

Example 6: If you don't study for your philosophy exam you will not do well on the exam. This will lead to you failing the class. The next thing you know you will have lost your scholarship, dropped out of school, and will be living

on the streets without any chance of getting a job.

While you should certainly study for your philosophy exam, if you don't it is unlikely that this will lead to your full economic demise.

One challenge to evaluating slippery slope arguments is that they are predictions, so we cannot be certain about what will or will not actually happen. But this chain of events type of argument should be assessed in terms of whether the outcome will likely follow if action 'x' is pursued.

3. **Faulty Analogy:** We often make arguments based on analogy and these can be good arguments. But we often use faulty reasoning with analogies and this is what we want to learn how to avoid.

When evaluating an argument that is based on an analogy here are a few things to keep in mind: you want to look at the relevant similarities and the relevant differences between the things that are being compared. As a general rule, if there are more differences than similarities the argument is likely weak.

Example 7: Alcohol is legal. Therefore, we should legalize marijuana too.

So, the first step here is to identify the two things being compared, which are alcohol and marijuana. Next, note relevant similarities and differences. These might include effects on health, community safety, economic factors, criminal justice factors, and the like.

This is probably not the best argument in support for marijuana legalization. It would seem that one could just as easily conclude that since marijuana is illegal, alcohol should be too. In fact, one might find that alcohol is an often abused and highly problematic drug for many people, so it is too risky to legalize marijuana if it is similar to alcohol.

4. **Appeal to Emotion:** Arguments should be based on reason and evidence, not emotional tactics. When we use an emotional tactic, we are essentially trying to manipulate someone into accepting our position by evoking pity or fear, when our positions should actually be backed by reasonable and justifiable evidence.

Example 8: Officer please don't give me a speeding ticket. My

girlfriend broke up with me last night, my alarm didn't go off this morning, and I'm late for class.

While this is a really horrible start to one's day, being broken up with and an alarm malfunctioning is not a justifiable reason for speeding.

Example 9: Professor, I'd like you to remember that my mother is a dean here at TCC. I'm sure that she will be very disappointed if I don't receive an A in your class.

This is a scare tactic and is not a good way to make an argument. Scare tactics can come in the form of psychological or physical threats; both forms are to be avoided.

5. **Appeal to Ignorance:** This fallacy occurs when our argument relies on lack of evidence when evidence is actually needed to support a position.

Example 10: No one has proven that sasquatch doesn't exist; therefore it does exist.

Example 11: No one has proven God exists; therefore God doesn't exist.

The key here is that lack of evidence against something cannot be an argument for something. Lack of evidence can only show that we are ignorant of the facts.

6. **Straw Man:** A straw man argument is a specific type of argument that is intended to weaken an opponent's position so that it is easier to refute. So, we create a

weaker version of the original argument (i.e. a straw man argument), so when we present it everyone will agree with us and denounce the original position.

Example 12: Women are crazy arguing for equal treatment. No one wants women hanging around men's locker rooms or saunas.

This is a misrepresentation of arguments for equal treatment. Women (and others arguing for equal treatment) are not trying to obtain equal access to men's locker rooms or saunas.

The best way to avoid this fallacy is to make sure that you are not oversimplifying or misrepresenting others' positions. Even if we don't agree with a position, we want to make the strongest case against it and this can only be accomplished if we can refute the actual argument, not a weakened version of it. So, let's all bring the strongest arguments we have to the table!

7. **Red Herring:** A red herring is a distraction or a change in subject matter. Sometimes this is subtle, but if you find yourself feeling lost in the argument, take a close look and make sure there is not an attempt to distract you.

Example 13: Can you believe that so many people are concerned with global warming? The real threat to our country is terrorism.

It could be the case that both global warming and terrorism are concerns for us. But the red herring fallacy is committed when someone tries to distract you from the argument at hand by bringing up another issue or side-stepping a question. Politicians are masters at this, by the way.

8. **Appeal to the Person:** This fallacy is also referred to as the ad hominem fallacy. We commit this fallacy when we dismiss someone's argument or position by attacking them instead of refuting the premises or support for their argument.

Example 14: I am not going to listen to what Professor 'X' has to say about the history of religion. He told one of his previous classes he wasn't religious.

The problem here is that the student is dismissing course material based on the professor's religious views and not evaluating the course content on its own ground.

To avoid this fallacy, make sure that you target the argument or their claims and not the person making the argument in your rebuttal.

9. **Hasty Generalization:** We make and use generalizations on a regular basis and in all types of decisions. We rely on generalizations when trying to decide which schools to apply to, which phone is the best for us, which neighborhood we want to live in,

what type of job we want, and so on. Generalizations can be strong and reliable, but they can also be fallacious. There are three main ways in which a generalization can commit a fallacy: your sample size is too small, your sample size is not representative of the group you are making a generalization about, or your data could be outdated.

Example 15: I had horrible customer service at the last Starbucks I was at. It is clear that Starbucks employees do not care about their customers. I will never visit another Starbucks again.

The problem with this generalization is that the claim made about all Starbucks is based on one experience. While it is tempting to not spend your money where people are rude to their customers, this is only one employee and presumably doesn't reflect all employees or the company as a whole. So, to make this a stronger generalization we would want to have a larger sample size (multiple horrible experiences) to support the claim. Let's look at a second hasty generalization:

Example 16: I had horrible customer service at the Starbucks on 81st street. It is clear that Starbucks employees do not care about their customers. I will never visit another Starbucks again.

The problem with this generalization mirrors the previous problem in that the claim is based on only one experience. But there's an additional issue here as well, which is that the claim

is based off of an experience at one location. To make a claim about the whole company, our sample group needs to be larger than one and it needs to come from a variety of locations.

10. **Begging the Question:** An argument begs the question when the argument's premises assume the conclusion, instead of providing support for the conclusion. One common form of begging the question is referred to as circular reasoning.

Example 17: Of course, everyone wants to see the new Marvel movie is because it is the most popular movie right now!

The conclusion here is that everyone wants to see the new Marvel movie, but the premise simply assumes that is the case by claiming it is the most popular movie. Remember the premise should give reasons for the conclusion, not merely assume it to be true.

11. **Equivocation:** In the English language there are many words that have different meanings (e.g. bank, good, right, steal, etc.). When we use the same word but shift the meaning without explaining this move to your audience, we equivocate the word and this is a fallacy. So, if you must use the same word more than once and with more than one meaning you need to explain that you're shifting the meaning you intend. Although, most of the time it is just easier to use a different word.

Example 18: Yes, philosophy helps people argue better, but should we really encourage people to argue? There is enough hostility in the world.

Here, argue is used in two different senses. The meaning of the first refers to the philosophical meaning of argument (i.e. premises and a conclusion), whereas the second sense is in line with the common use of argument (i.e. yelling between two or more people, etc.).

Check your Understanding

Select the best answer for each item.



An interactive H5P element has been excluded from this version of the text. You can view it online here:
<https://open.ocolarnok.org/ethics/?p=32#h5p-1>

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