

persuasion: reason

In the rhetorical tradition, there are three modes of persuasion: appeals to ethos (character), appeals to pathos (emotion), and appeals to logos (reason). This handout will help you understand how to appeal to logos.

What is Logos?

Logos is about Arguments

Most introductions to rhetoric link *logos* to the **reasoning of the argument itself**—the logic of the claim. Though there are many ways of looking at logic (e.g., formal and informal logic), this handout addresses the principles of rhetorical logic: conclusions, premises (i.e., reasons), and assumptions.

Deduction and Induction

A helpful way to think about how people make arguments is to distinguish between deduction and induction. Generally speaking, **deduction** is the process of using established premises to arrive at a specific conclusion. This is best exemplified in the structure of the syllogism.

Syllogism	
All humans are mortal.	Major Premise
Socrates is a human.	Minor Premise
Socrates is mortal.	Conclusion

On the other hand, **induction** works by creating claims based on examples or observation.

Example: All of the humans that I have met are mortal. Therefore, all humans are mortal.

Although most reasoning fits in either of these categories, there are obvious **pitfalls with both**. In the case of deductive logic, either the premises or their arrangement within the form of the syllogism can create problems. If the conclusion flows logically from the premises, it is considered structurally **valid**. Sometimes an argument can be true but not valid or valid but not true.

Problematic Syllogisms		
True but not Valid	Valid but not True	
Humans are animals.	All bananas are atheists.	Major Premise
Dogs are animals.	Superman is a banana.	Minor Premise
The moon orbits the earth.	Superman is an atheist.	Conclusion

Since induction relies on past observation of particular objects to make generalizations, it also can lead to false conclusions: there's always the potential that the next observation can invalidate your claim.

Example: Finally observing a black swan will invalidate a claim that all swans are white.

The Rhetorical Syllogism (Enthymeme)

The rhetorical syllogism, or enthymeme, can be a powerful tool in your writing. While it is more informal than the syllogisms discussed above, it can make the same argument as a syllogism. It does so by hiding or suppressing one of its premises, thereby forcing the audience to fill in the resulting gap. The participatory nature of the enthymeme is its main source of strength.

Example: Socrates is mortal because he is a human.

This makes the same argument as the first syllogism in this handout, but it hides the steps to get there. It forces the audience to fill in the missing premise (i.e., that humans are mortal).

Consider this argument from real life:

Example: "We need to put the military on our border so that we will have stronger national security."

Again, this example tries to hide some of its terms, forcing you to fill in the gaps. A formal syllogism of this argument might look like this:

Syllogism	
Strengthening our borders increases national security.	Major Premise
Putting the military on the border strengthens the border.	Minor Premise
Putting the military on the border increases national security.	Conclusion

Realizing that most arguments are enthymemes helps you look for hidden premises.

Strategies for Appealing to Logos

What follows are some of the rhetorical tools that you can use to make logical arguments. While you will not use every tool in every situation, you should still familiarize yourself with each of them.

Note: Some of these tools may also be useful for appealing to *pathos* and *ethos*.

Evidence

Logical arguments draw on evidence, and evidence should fit certain criteria. One good measure of evidence is the STAR criteria (McInnelly & Jackson, 2011): evidence should be

- **sufficient**, meaning there should be enough evidence.
- **typical**, meaning it is not based in exceptions.
- **acceptable**, meaning that the audience accepts the source of the evidence as trustworthy.
- **relevant**, meaning it should directly support the claim.

Use this criteria when thinking about the evidence in your writing and in the writing of others.

Signposts

Using strong transitions or “signposts” not only helps your audience focus (especially in longer texts and speeches), but it helps your writing appear more ordered and rational by clearly indicating how information fits together.

Example: “There are three things that we need to do. First, we need to create jobs. Second, we need to cut taxes. And third, we need to beef up our foreign policy.”

Example: “I have heard many arguments about this subject. On the one hand, people say it will benefit only an elite few. On the other, people say that it rewards excellence and hard work.”

Note: For more information on transitions, please see our [handout](#) on this topic.

Rhetorical Questions

Questions are essential to critical thinking. Asking and answering rhetorical questions is a simple way for you to highlight the logic of your argument.

Example: “Why does a sound environmental policy benefit the economy? Well, I will tell you....”

Example: “How can you improve your proofreading skills? First, start with a hard copy. Second, try...”

Pre-buttal (Procatlepsis)

You can strengthen your argument by issuing a “prebuttal”: anticipating, raising, and answering objections to your own claims. Doing this shows your audience that you have considered your argument from every angle.

Example: “Now, I am sure that my opponent will say that this new policy will increase the deficit, but let me show you why this is not the case.”

Example: “Many people believe that tax cuts stimulate the economy, but research has shown the opposite to be true.”

Logical Fallacies

Simply put, a fallacy is an argument that is more persuasive than it should be because its conclusion rests on faulty premises and assumptions. It looks like a good argument, but it isn't.

Begging the Question (Petitio Principii)

Writers “beg the question” when their conclusions are simply reiterations of their premises. This is a form of circular argument.

Example: “He was starving because he was severely hungry.”

Example: “He knows his students’ names because he’s a good teacher. What makes a good teacher? A good teacher is someone who knows his students’ names.”

Loaded Question

Loaded questions are framed in such a way that the answer is already assumed in the question. Answering either “yes” or “no” will result in an admission of guilt.

Example: “Have you stopped cheating on your husband?”

Example: “Did you write the paper yourself this time?”

Hasty Generalization

A hasty generalization is a conclusion based on dramatically insufficient evidence.

Example: “I’m never dating a *Star Wars* fan again. I have dated two and they were both incredibly boring!”

Example: “That waiter was so rude. You just can’t find good service anywhere these days.”

Correlation vs. Causation (Post Hoc, Ergo Propter Hoc)

Literally “after this, therefore because of this,” this fallacy describes the reasoning that assumes that since B took place after A, A must have caused B. Events may be correlated, but that doesn’t necessarily mean that there is causation present.

Example: “Don’t go swimming in the Atlantic. My uncle went swimming there and the next week was diagnosed with cancer.”

Example: “You should chew gum if you have acne. I had a huge zit once, and it went away after I chewed gum.”

Oversimplification

This argument reduces all possible causes of a situation into a single simple one.

Example: “If people wouldn’t have tried to buy houses they couldn’t afford, the economy wouldn’t have collapsed in 2008!”

Example: “Just stop eating fast food, and you won’t get sick.”

Composition

Writers commit the compositional fallacy when they assume that the attributes of individual parts will manifest themselves equally in the whole. Parts can possess a certain quality individually but lose it through interaction with the other pieces.

Example: “The L.A. Lakers are going to be unstoppable this year: they have Kobe Bryant, Steve Nash, Pau Gasol, and Dwight Howard playing for them!”

Example: “I always find a seat at the theater when I get there early. So if everyone got there early, no one would have trouble finding a seat.”

Division

This is the faulty assumption that the characteristics and attributes of the whole will be equally shared by its parts.

Example: “The Beatles was an exceptionally talented band, so the solo careers of each of the band members must be equally amazing.”

Example: “We got an A+ on our group paper, so each of us should do well on our individual papers.”

Appeal to Ignorance (Argumentum ad Ignorantiam)

This is the “appeal to ignorance,” which claims that a proposition must be true simply because there is no evidence to refute it. This also works the other way: that something is false because no one has proved it to be true. Absence of evidence is not evidence of absence.

Example: “God must exist because no one has ever proven that he hasn’t!”

Example: “Since scientists haven’t found any evidence of extraterrestrials, we can assume they don’t exist.”

Straw Person

This rhetorical move reduces an opponent's position to something ridiculous and indefensible, thus making it extremely easy to attack.

Example: "When my opponent argues for higher taxes on the wealthy, what he really is arguing for is class warfare. Do we really want to elect a candidate who wants to tear our country apart?"

Example: "Who could ever believe in evolution? Evolution means that one animal will give birth to a new, different type of animal. But have you ever seen a monkey give birth to a human or a cat give birth to an iguana?"

Red Herring

In the past, prisoners escaping from jail would supposedly rub the notoriously stinky red herring over their tracks to throw the police dogs off of their scent. Likewise, some writers will make irrelevant assertions or argument to distract or divert the audience from another issue.

Example: "My opponent promised to begin to slow the rise of the oceans and heal the planet. My promise is to help you and your family!"

Example: "You're worried about our department's funding? Just look at the other departments. They are much worse off!"

"No True Scotsman"

A "no true Scotsman" argument occurs when writers recategorize or qualify their argument in order to dismiss a counterargument.

Example: "No Scotsman watches *The Big Bang Theory*."
"My uncle is from Scotland, and he watches it."
"Well, no *true* Scotsman watches it."

Example: "Republicans don't believe in abortion."
"My aunt's a Republican, and she supports a woman's right to choose."
"Well, *real* Republicans don't believe that."

Equivocation

When writers equivocate, they obscure the truth of their argument by using words with multiple or ambiguous meanings.

Example: "Evolution is just a theory, and a theory is just someone's guess."

Example: "If dogs and trees both have bark, why are the trees so silent?"

False Dilemma

This fallacy occurs when writers reduce issues down to a simple either-or situation. This act of creating false dichotomies or binaries is an example of black-and-white thinking.

Example: "You are either with us or against us."

Example: "If I don't finish this degree, I'm never going to find a job."

Shifting the Burden of Proof (Onus Probandi)

Writers making a claim have the responsibility to prove that claim. When writers shift that burden to others, especially to those who disagree, they commit this fallacy. In essence, they are saying, "It's

not my job to prove I'm right, it's your job to prove me wrong."

Example: "I believe that unicorns exist."

"Do you have proof?"

"It's just what I believe. I don't need to prove it. You can't prove that they don't exist, can you?"

Example: "Capitalism is ruining the Internet."

"How do you know that?"

"That's just how it is. How do you know that it's not ruining the Internet?"

Is-Ought and Ought-Is (Naturalistic and Moralistic Fallacies)

These two fallacies work hand in hand: one argues that just because things are a certain way, it means that they should be that way (naturalistic fallacy), and the other argues that just because something should be a certain way, it is that way (moralistic fallacy).

Is-Ought (Naturalistic): "People lie to each other all the time. Dishonesty is a part of us. We shouldn't remove it."

Ought-Is (Moralistic): "Adultery is wrong, so I don't believe that humans are biologically capable of being attracted to more than one partner at a time."

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