

Faulty Argumentation

When you are engaged in the messy business of creating an argument about something that really matters to you, it is easy to make some moves that can unravel the fabric you are weaving. Likewise, it is easy to be convinced of someone else's position based on some pretty questionable argumentative moves. These missteps in reasoning are usually identified as *logical fallacies*. Classifying those fallacies, sorting them into various categories, and carefully labeling each one has kept many rhetoricians occupied for long years. While those categorizations can be immensely useful, they also create the impression that a fallacy so named is discrete: The logical fallacy of faulty causality (post hoc, ergo sum---) is a mistake arising from the misuse of the logical arrangement of cause and effect. It is a misstep in an appeal based on *logos*. But faulty causality can be used as a scare tactic, a misstep in an appeal based on *pathos*. So, the categories are useful, but not exclusive nor exhaustive.

Logical fallacies are fairly common features of everyday communications, sometimes created intentionally to persuade an audience to the writer's point of view, and sometimes put forward unintentionally because the writer is convinced of their truth value. These missteps in reasoning, however, often defeat the purposes of trying to reason with others. They can obscure the situation an argument is designed to clarify, derail free consent by forwarding falsehoods, encourage us to make decisions without understanding our real choices, or convince us to act hastily when there is actually time to gather more information and reflect upon the potential consequences.

What follows are descriptions of the more common fallacies, sorted according to the domain of rhetorical appeal where they usually appear. The common name is followed by the Latin name, so that if you wish to read more about that particular fallacy or if you want to use it to refute someone else's argument by pointing out the misstep in reasoning, you can. Each description is followed with some tips about how to avoid making these mistakes.

Errors based on misuse of appeals based on ethos:

Personal attack—(Argumentum ad hominem). When you attack the character or credibility of people presenting a position with which you disagree, you are attacking them instead of their position. For example, when radio personality Rush Limbaugh called women who opposed his views on abortion *feminazis*, he was not making a logical response to their arguments, but disparaging them as men-hating fascists. While this was rhetorically effective in a way—the word has now made it into popular discussions, even some dictionaries—it did not provide a sound argumentative response to their position on abortion.

But this term also shows how logical fallacies can be categorized in more than one way. While it is technically a misstep in appeals based on ethos, it also works as a misstep in appeals based on pathos. By joining the word feminist to the word Nazi, Limbaugh associated feminists with the fascist party responsible for the horrendous genocide of World War II, creating an appeal based on fear.

If we treat our opponents with respect, refrain from name calling or from associating them with disreputable causes and incidents, we avoid falling into this error. Argue with their positions, not their characters.

Argument of moral equivalence—An argument that makes a minor offense equivalent to a real moral evil is really a form of false analogy. For example, when someone argues that smoking is a form of murder because second-hand smoke can cause cancer in those exposed to second-hand smoke, it makes an action commonly committed and whose consequences can be avoided by potential victims the equivalent of intentionally and willingly taking another's life. The analogy is false because the consequences in one case are proximate and potential in the case of smoking and immediate and actual in the case of the second. The reverse is also true. Arguing that a financial advisor who skims money from client accounts is the same as the shopper who samples grapes in the produce department—both parties are subject to the temptations of abundance-- takes a great moral offense and makes it the equivalent of a petty theft, glossing over the difference in magnitude, the position of special trust the financial advisor occupies, and the difference in consequences for the victims.

False authority (argumentum ad verecundiam). We often cite authoritative sources as we build an argument, and doing so builds our own credibility when we do it well. But it is a misstep in reasoning to cite someone who is an authority in one field when they give their opinion in another field. For example, if you cite the president of the National Council of Teachers of English as supporting a ban on nuclear reactors, you would be citing an authority, but not an authority on nuclear reactors.

Errors based on misuse of appeals based on pathos

Argument about tradition—(argumentum ad antiquitatem). In the musical *Fiddler on the Roof*, the father launches into song about the importance of tradition when one of his daughter's defies his wishes and marries who she chooses instead of whom he picks. He is arguing, touchingly so, for doing things because his people have always done things this way. We hear the same argument made all the time—sometimes directly and sometimes more subtly. Every time we see a flag flying behind a politician, a tradition of American patriotism is invoked. The reasonable misstep doesn't lie in the emotional

appeal to a shared love of country, but in the argument that because it *has* always been this way, it *should* always be done this way. Tradition should not be ignored---many traditions have evolved out of the shared experiences of a culture that has crafted ways of responding to threats and opportunities that make great good sense—but it should not be accepted as the guiding principle in every case.

For example, it was long argued that women were not physically capable of doing the same work as men, as demonstrated by the historical division of labor. In the 1904 Supreme Court case *Muller v. Oregon*, Louis Brandeis coupled that argument with an argument from popularity(argumentum ad populum) that every civilized nation protected women from long work hours, mixed it with some social science, and won the case. Women were legally restricted from working for more than 10 hours a day in heavy industry and that restriction was then used to bar women from all kinds of work. Today, with the widespread participation of women in every kind of occupation, we can easily spot the misstep, but when we are in the middle of it, we must be more vigilant to spot the appeal to tradition.

Argument about popularity (argumentum ad populum). This misstep is often called the Bandwagon appeal, referring to the kind of emotional excitement and desire to join the crowd that a wagon rolling along with musicians that invited folks to hop on evoked. While people rarely say outright, “Every one is doing this, so you should, too” arguments that you should do something because people you admire do it and you’ll be like them and, as you are likely to conclude, liked by them if you do it too, are very persuasive. One of the most basic human needs is for the company of others. Advertisers, as psychologist Jib Fowles points out, use this appeal all the time. Every time you see a group of guys sharing a moment of male bonding over beer, the beer manufacturers are appealing to the need for companionship. Every time a politician lists the names of prominent contributors, he or she is making an appeal to you to join that club. This appeal is misused when it is used without supplying reasons for the action, instead counting on the audience to make the emotional connection and overlook the fact that no reasons were supplied.

Slippery slope. Creating a chain of events that leads to ever more dire consequences can either be a compelling argument that engages both the logic and emotions of an audience or it can be a manipulation of the emotions designed to convince an audience to go along with you in spite of the fact that the series of unfortunate events is not causally linked. For example, if I wanted to put an end to childhood obesity in this nation, I might propose that we needed to ban fast food advertisements during prime time programming in the same manner that we banned advertisements for hard liquor. I could argue that these advertisements persuade children that fast food is better than wholesome homemade meals, that one kid’s meal leads to another, and those meals establish a pattern of regular dining on fast food, leading relentlessly to the exclusive consumption of fast food, and resulting in an entire generation of obese adults who grapple

with a host of health problems, and then become a burden on our public health system until they eventually die from complications.

The trouble with this argument arises from both a misuse of emotional appeals and logical appeals. It misuses appeals to the emotions by amplifying fear, creating a scenario designed to make an audience afraid of potential consequences. Advertising companies that are selling alarm systems very often rely on a slippery slope argument that generates fear. But the slippery slope argument also misuses logic by proposing that causality exists where only possibility does. For example, is there any evidence that watching fast food advertisements causes children to purchase the fast food advertised? Is eating one kid's meal the proximate cause of the next trip past the drive-in window or could it be attributed to an over-scheduled family or a lack of nutritional knowledge? Is there evidence to bolster the claim that eating fast food is the leading contributor to adult obesity?

Now, if I were able to supply answers and evidence for each of those links in the logical chain, I would have a compelling argument. But if I cannot, then I am simply speculating while acting like I am reasoning. That is a logical fallacy.

Errors based on the misuse of appeals to logos

Arguments about cause (Post hoc ergo propter hoc) The literal translation is “after this, therefore because of this.” For example, you wash your car, and then it rains. This may be true more often than we wish, but your local meteorologist might beg to differ if you argue that washing your car caused it to rain.

This error usually occurs when people are trying to explain away a mistake or something they do not really understand. For example, if you log in to your course site and then your computer freezes, you might decide that the course site caused the freeze and subsequently offer that as the reason that you couldn't post to the discussion board. However, the real reason your computer froze was because you had four browser windows running simultaneously, one of them playing music, one streaming video, three IM programs ferrying messages to your friends, and an interactive game underway when you finally decided to take a look at the homework. So, while the freeze occurred after you opened the course site, the course site did not cause it.

This error of false cause is sometimes accompanied by two other forms of errors in logic.

Joint effect: When you argue that your computer froze because you opened the course site, you may be right—in part. The course site, however, was merely the straw that broke the camel's back. All of the other open programs were the

underlying bale of hay that beast was bearing. The freeze was actually caused by an underlying cause—an inadequate processor.

Insignificant: You are also attributing the cause of the freeze to something that is really not that important or did not contribute much to the disaster.

Here's an example of all three at work. A driver is doing 90 on I-75 when he runs over a wet patch, hits the brakes, and then slams into the guard rail. He explains to the police officer that the water on the roadway caused this unfortunate event. The officer is not convinced. He points to the long skid marks and asks the driver how fast he was going. The officer clearly does not believe that the water was a significant cause of the event. While the driver is trying to figure out what sounds like a believable estimate, the officer leans in and sniffs. With the new evidence he gathers this way, he now believes that the speed and the wet patch may both have contributed to the accident, but both are joint effects of the drinking that preceded the driving.

Straw man: When a writer attacks another writer's work by either misrepresenting the other's argument or by treating a weaker or subordinate point as if it were the main point, they are just setting the other person up as a straw man so that they can easily knock him down and make their own argument look stronger. For example, let's say you are arguing with the financial aid office about the delay in your tuition payment for the semester, a delay that is causing you to lose your seat in crowded classes, get dunning notices from the parking office, and otherwise ruining your life. In listing all the ill effects of not receiving the promised aid on schedule, you claim that you cannot even afford to get your books. Rather than explain the delay with solid reasons, offer an apology, or assist you in amending the situation, the financial aid clerk launches into a sermon about how financial aid is not intended for book fees, and you are making false accusations. While she may be right about using the aid for books, that was not your main point. The clerk has made your comments about books the straw man so that she can win the point and dismiss your claim.

Hasty generalizations: If you are making an inductive argument, building up to a main point by providing multiple examples of a general trend, you have to make sure that you lay your ground work carefully and state the generalization you build to in a way that shows you are arguing for probability rather than certainty or you are likely to make a hasty generalization. For example, if the local food critic visits the bistro, doesn't like his lunch, and then writes that the chef has committed mortal sins against good taste and that none of his food is edible, the critic has unfairly generalized from one instance. His sample is too limited to support his statement. Who knows? Maybe the chef got so anxious when he spotted the critic that he couldn't sauté to save his soul.

These are just a few of the kinds of argumentative missteps writer's can make when they do not carefully attend to the purpose and ethics of writing. For more kinds of logical fallacies and examples of them, try these sites:

[Http://www.virtuescience.com/logical fallacies.html](http://www.virtuescience.com/logical%20fallacies.html)

<http://www.fallacyfiles.org/aboutgnc.html>

(this author has an interesting political bent, but his work on fallacies is really interesting.)