

# Logical Fallacies in Argumentation

Information taken from: <http://www.unc.edu/depts/wcweb/handouts/fallacies.html>

## What are fallacies?

Fallacies are defects that weaken arguments. By learning to look for them in your own and others' writing, you can strengthen your ability to evaluate the arguments you make, read, and hear. It is important to realize two things about fallacies: First, fallacious arguments are very, very common and can be quite persuasive, at least to the causal reader or listener. You can find dozens of examples of fallacious reasoning in newspapers, advertisements, and other sources. Second, it is sometimes hard to evaluate whether an argument is fallacious. An argument might be very weak, somewhat weak, somewhat strong, or very strong. An argument that has several stages or parts might have some strong sections and some weak ones. The goal of this handout, then, is not to teach you how to label arguments as fallacious or fallacy-free, but to help you look critically at your own arguments and move them away from the "weak" and toward the "strong" end of the continuum.

## So what do fallacies look like?

For each fallacy listed, there is a definition or explanation, an example, and a tip on how to avoid committing the fallacy in your own arguments.

### 1. Hasty generalization – *Dicto simpliciter*

**Definition:** Making assumptions about a whole group or range of cases based on a sample that is inadequate (usually because it is atypical or just too small).

**Example:**

- **Stereotypes about people ("frat boys are drunkards," "grad students are nerdy," etc.) are a common example of the principle underlying hasty generalization.**
- **I went to CCA and the campus was filled with teens who wore black. Then, I went to San Dieguito and all of the teens also wore black. All teens must wear black.**
- **Fred the Australian stole my wallet. All Australians must be thieves.**

### 2. Missing the point -

**Definition:** The premises of an argument do support a particular conclusion--but not the conclusion that the arguer actually draws.

**Example:**

- **"The seriousness of a punishment should match the seriousness of the crime. Right now, the punishment for drunk driving may simply be a fine. But drunk driving is a very serious crime that can kill innocent people. So the death penalty should be the punishment for drunk driving."**
- **You should support the new housing bill. We can't continue to see people living in the streets; we must have cheaper housing. (We may agree that housing is important even though we disagree with the housing bill.)**
- **Teen bullying is a problem in high schools. Much of the bullying happens in online chat rooms on campus. We should ban all computer use on campus.**

### 3. *Post hoc* (also called false cause) –

(This fallacy gets its name from the Latin phrase "*post hoc, ergo propter hoc*," which translates as "after this, therefore because of this.")

**Definition:** Assuming that because B comes after A, A caused B. Of course, sometimes one event really does cause another one that comes later--for example, if I register for a class, and my name later appears on the roll, it's true that the first event caused the one that came later. But sometimes two events that seem related in time aren't really related as cause and event. That is, correlation isn't the same thing as causation.

**Examples:**

- **"President Jones raised taxes, and then the rate of violent crime went up. Jones is responsible for the rise in crime." The increase in taxes might or might not be one factor in the rising crime rates, but the argument hasn't shown us that one caused the other.**
- **I took EZ-No-Cold, and two days later, my cold disappeared.**
- **I had a cold on Thursday and took a test on Friday that I failed. The cold was the reason I failed the test.**
- **"A black cat crossed my path at noon. An hour later, my mother had a heart-attack. Because the first event occurred earlier, it must have caused the bad luck later." This is how superstitions begin.**

### 4. Slippery slope -

**Definition:** The arguer claims that a sort of chain reaction, usually ending in some dire consequence, will take place, but there's really not enough evidence for that assumption. The arguer asserts that if we take even one step onto the "slippery slope," we will end up sliding all the way to the bottom; he or she assumes we can't stop halfway down the hill.

**Example:**

- **"If I make an exception for you, then I will have to make an exception for everyone."**

- If we don't go to war terrorism may rule the planet.
- "If I let one person go to the bathroom during class, then everyone will want to go to the bathroom, and then no one will be in class."
- "Animal experimentation reduces our respect for life. If we don't respect life, we are likely to be more and more tolerant of violent acts like war and murder. Soon our society will become a battlefield in which everyone constantly fears for their lives. It will be the end of civilization. To prevent this terrible consequence, we should make animal experimentation illegal right now."

### 5. Weak analogy -

**Definition:** Many arguments rely on an analogy between two or more objects, ideas, or situations. If the two things that are being compared aren't really alike in the relevant respects, the analogy is a weak one, and the argument that relies on it commits the fallacy of weak analogy.

**Example:**

- "Guns are like hammers--they're both tools with metal parts that could be used to kill someone. And yet it would be ridiculous to restrict the purchase of hammers--so restrictions on purchasing guns are equally ridiculous."
- Employees are like nails. Just as nails must be hit in the head in order to make them work, so must employees.

### 6. Appeal to authority - *Argumentum ad verecundiam*

**Definition:** Often we add strength to our arguments by referring to respected sources or authorities and explaining their positions on the issues we're discussing. If, however, we try to get readers to agree with us simply by impressing them with a famous name or by appealing to a supposed authority who really isn't much of an expert, we commit the fallacy of appeal to authority.

**Example:**

- "We should abolish the death penalty. Many respected people, such as actor Guy Handsome, have publicly stated their opposition to it."
- "To determine whether fraternities are beneficial to this campus, we interviewed all the frat presidents." (This is a biased group to ask about the benefits of fraternities on campus.)

### 7. *Ad populum* - *Argumentum ad populum*

**Definition:** The Latin name of this fallacy means "to the people." There are several versions of the *ad populum* fallacy, but what they all have in common is that in them, the arguer takes advantage of the desire most people have to be liked and to fit in with others and uses that desire to try to get the audience to accept his or her argument. One of the most common versions is the **bandwagon fallacy**, in which the arguer tries to convince the audience to do or believe something because everyone else (supposedly) does.

**Example:**

- "Gay marriages are just immoral. 70% of Americans think so!"
- For instance, "85% of consumers purchase IBM computers rather than Macintosh; all those people can't be wrong. IBM must make the best computers."
- "Any true intellectual would recognize the necessity for studying logical fallacies." The implication is that anyone who fails to recognize the truth of the author's assertion is not an intellectual, and thus the reader had best recognize that necessity.

### 8. *Ad hominem* and *tu quoque*

**Definitions:** Like the appeal to authority and *ad populum* fallacies, the *ad hominem* ("against the person") and *tu quoque* ("you, too!") fallacies focus our attention on people rather than on arguments or evidence. In both of these arguments, the conclusion is usually "You shouldn't believe So-and-So's argument." The reason for not believing So-and-So is that So-and-So is either a bad person (*ad hominem*) or a hypocrite (*tu quoque*). In an *ad hominem* argument, the arguer attacks his or her opponent instead of the opponent's argument.

**Examples:**

- "Andrea Dworkin has written several books arguing that pornography harms women. But Dworkin is an ugly, bitter person, so you shouldn't listen to her."
- "You feel that abortion should be legal, but I disagree because you are uneducated and poor."
- "Teens want to have more of a voice in their education but they are naïve and inexperienced."
- "How can you tell me not to smoke if you haven't been able to quit smoking?"

In a *tu quoque* argument, the arguer points out that the opponent has actually done the thing he or she is arguing against, and so the opponent's argument shouldn't be listened to. Here's an example: Imagine that your parents have explained to you why you shouldn't smoke, and they've given a lot of good reasons--the damage to your health, the cost, and so forth. You reply, "I won't accept your argument, because you used to smoke when you were my age. You did it, too!" The fact that your parents have done the thing they are condemning has no bearing on the premises they put forward in their argument (smoking harms your health and is very expensive), so your response is fallacious.

### 9. Appeal to pity *Argumentum ad misericordiam*

**Definition:** The appeal to pity takes place when an arguer tries to get people to accept a conclusion by making them feel sorry for someone.

**Examples:**

- "I know the exam is graded based on performance, but you should give me an A. My cat has been sick, my car broke down, and I've had a cold, so it was really hard for me to study!"
- In the 1880s, prosecutors in a Virginia court presented overwhelming proof that a boy was guilty of murdering his parents with an ax. The defense presented a "not-guilty" plea for on the grounds that the boy was now an orphan, with no one to look after his interests if the court was not lenient. This appeal to emotion obviously seems misplaced, and the argument is irrelevant to the question of whether or not he did the crime.

### 10. Appeal to ignorance *Argumentum ad ignorantiam*

**Definition:** In the appeal to ignorance, the arguer basically says, "Look, there's no conclusive evidence on the issue at hand. Therefore, you should accept my conclusion on this issue."

**Example:**

- "People have been trying for centuries to prove that God exists. But no one has yet been able to prove it. Therefore, God does not exist."
- For example, someone might argue that global warming is certainly occurring because nobody has demonstrated conclusively that it is not. But failing to prove the global warming theory false is not the same as proving it true.

**11. Straw man – "It is a type of Red Herring"** - "Straw man" is one of the best-named fallacies, because it is memorable and vividly illustrates the nature of the fallacy. Imagine a fight in which one of the combatants sets up a man of straw, attacks it, then proclaims victory. All the while, the real opponent stands by untouched.

**Definition:** One way of making our own arguments stronger is to anticipate and respond in advance to the arguments that an opponent might make. In the straw man fallacy, the arguer sets up a wimpy version of the opponent's position and tries to score points by knocking it down. But just as being able to knock down a straw man, or a scarecrow, isn't very impressive, defeating a watered-down version of your opponents' argument isn't very impressive either.

**Example:**

- "Feminists want to ban all pornography and punish everyone who reads it! But such harsh measures are surely inappropriate, so the feminists are wrong: porn and its readers should be left in peace."
- "Mr. Jones thinks that capitalism is good because everybody earns whatever wealth they have, but this is clearly false because many people just inherit their fortunes," when in fact Mr. Jones had not made the "earnings" argument and had instead argued, say, that capitalism gives most people an incentive to work and save. The fact that some arguments made for a policy are wrong does not imply that the policy itself is wrong.

**12. Red Herring** – The name of this fallacy comes from the sport of fox hunting in which a dried, smoked herring, which is red in color, is dragged across the trail of the fox to throw the hounds off the scent. Thus, a "red herring" argument is one which distracts the audience from the issue in question through the introduction of some irrelevancy

**Definition:** Partway through an argument, the arguer goes off on a tangent, raising a side issue that distracts the audience from what's really at stake. Often, the arguer never returns to the original issue.

**Example:**

- "Grading this exam on a curve would be the most fair thing to do. After all, classes go more smoothly when the students and the professor are getting along well."
  - Let's try our premise-conclusion outlining to see what's wrong with this argument: Premise: Classes go more smoothly when the students and the professor are getting along well. Conclusion: Grading this exam on a curve would be the most fair thing to do. When we lay it out this way, it's pretty obvious that the arguer went off on a tangent--the fact that something helps people get along doesn't necessarily make it more fair; fairness and justice sometimes require us to do things that cause conflict.
- We should stop school bullying. Schools are providing computers where students are able to bully other students online. We should ban school computers.
- "Whether the administration's policy on fetal stem cell research will slow scientific research or not, we have yet to resolve the privacy issues that genetic research raises."
- "So you think that doctor-assisted suicide is morally acceptable? You probably also think that an unborn human being is just a 'choice'."

### 13. False dichotomy

**Definition:** In false dichotomy, the arguer sets up the situation so it looks like there are only two choices. The arguer then eliminates one of the choices, so it seems that we are left with only one option: the one the arguer wanted us to pick in the first place. But often there are really many different options, not just two--and if we thought about them all, we might not be so quick to pick the one the arguer recommends!

**Example:**

- "Caldwell Hall is in bad shape. Either we tear it down and put up a new building, or we continue to risk students' safety. Obviously we shouldn't risk anyone's safety, so we must tear the building down."

#### **14. Begging the question (*petitio principii*)- a type of "missing the point" and often called circular reasoning**

**Definition:** A complicated fallacy; it comes in several forms and can be harder to detect than many of the other fallacies we've discussed. Basically, an argument that begs the question asks the reader to simply accept the conclusion without providing real evidence; the argument either relies on a premise that says the same thing as the conclusion (which you might hear referred to as "being circular" or "circular reasoning"), or simply ignores an important (but questionable) assumption that the argument rests on. Sometimes people use the phrase "beg the question" as a sort of general criticism of arguments, to mean that an arguer hasn't given very good reasons for a conclusion, but that's not the meaning we're going to discuss here.

**Examples:**

- "Active euthanasia is morally acceptable. It is a decent, ethical thing to help another human being escape suffering through death." Let's lay this out in premise-conclusion form: **Premise:** It is a decent, ethical thing to help another human being escape suffering through death. **Conclusion:** Active euthanasia is morally acceptable. If we "translate" the premise, we'll see that the arguer has really just said the same thing twice: "decent, ethical" means pretty much the same thing as "morally acceptable," and "help another human being escape suffering through death" means "active euthanasia."
- Since I'm not lying, it follows that I'm telling the truth.
- "God exists." "How do you know that God exists?" "The Bible says so." "Why should I believe the Bible?" "Because it's the inspired word of God."

#### **15. Equivocation**

**Definition:** Equivocation is sliding between two or more different meanings of a single word or phrase that is important to the argument.

**Example:** "Giving money to charity is the right thing to do. So charities have a right to our money." The equivocation here is on the word "right": "right" can mean both something that is correct or good (as in "I got the right answers on the test") and something to which someone has a claim (as in "everyone has a right to life").