

Logical Fallacies

Logical fallacies are flaws in reasoning. They often sound true and reasonable but can undermine or weaken an argument.

Fallacies of Relevance--arguments based on evidence that is not relevant to the topic

- **Ad hominem** arguments attack the people who hold the opposing position rather than the position itself. People's arguments may be sound even if you question their characters.
 - **Example:** He claims that social media use by children should be restricted, but he is just a grumpy old man who has never had children of his own, so what does he know?
 - **Tip:** Focus on the reasoning of the argument rather than the character of your opposition.
- **Ad populum (Bandwagon)** arguments attempt to get the audience to accept their position because others accept it. A position may be wrong even if it is widely accepted.
 - **Example:** Facebook has more users than any other social media site. Thus, Facebook must be the best choice.
 - **Tip:** Make sure that you aren't trying to get people to agree with you just because others do.
- **A Red Herring** distracts the audience from what is really at stake. The arguer goes off on a tangent and never returns to the main point.
 - **Example:** This medication is proven to reduce risk of heart disease. Heart disease can be caused by smoking. Smoking also causes cancer.
 - **Tip:** Outline your supporting points. Make sure that you can explain how each point supports your main idea.
- **Other Fallacies of Relevance:** Appeal to Authority, Appeal to Emotion

Component Fallacies--arguments based on faulty inductive or deductive reasoning

- **A Hasty Generalization** makes an assumption about a group based on inadequate evidence. Often the sample size is too small or atypical to be representative of the whole group. Stereotypes about people are a common example of a hasty generalization.
 - **Example:** My friend Amy recently traveled on an airplane for the first time, and the flight attendant was impolite and did not provide good service. This shows that everyone who works on an airplane is unkind and unhelpful.
 - **Tip:** Many generalizations include words like *all*, *ever*, *always*, and *never*. Often, a statement would be more accurate if qualifiers like *most*, *many*, *some*, *usually*, and *seldom* were used.
- **A Straw Man** argument waters down an opponent's argument (or portrays it as different than it really is) and then attacks it. The watered-down argument is easier to defeat than the original argument.
 - **Example:** He says he is against big banks. He would have us hide all our cash in our beds! That is not only impractical, but it is unsanitary and lacks security.
 - **Tip:** Always be accurate when stating an opponent's argument. Try to articulate their position in a way that they would agree with.

- **An Either-Or (False Dichotomy)** argument sets up a false dichotomy, arguing that there are only two alternatives in a situation that is much more complex.
 - **Example:** Either people will support the building of the dam, or they are eco-terrorists.
 - **Tip:** Does your argument only give two alternatives? Are there other alternatives that you haven't mentioned? If there are more alternatives, include them or explain why they should be excluded.
- **A Slippery Slope** argument claims that if we allow one event, that event will set off a chain of events leading to a terrible consequence. It assumes that there will be no way to stop once the chain of events has been set in motion.
 - **Example:** If women are required to cook while taking care of children, the children will distract the woman, and the kitchen will catch on fire, causing smoke damage not only to the house, but also to the woman's and children's lungs.
 - **Tip:** If your argument includes a chain of events, make sure that one event reasonably leads to the next.
- **A False Cause (Post hoc)** fallacy occurs when a writer assumes that, because event B comes after event A, event A caused event B. Correlation does not equal causation.
 - **Example:** Yesterday I got soaked in the rain. Now, I am coming down with a cold. Getting soaked must have caused my cold.
 - **Tip:** If you argue that event A caused event B, you must give more evidence than the order of the events. Tell your readers how event A caused event B.
- **Other Component Fallacies:** Circular Reasoning, Begging the Question

Fallacies of Ambiguity--arguments in which important terms are ambiguous and the meaning of which shift throughout the argument

- **Equivocation** moves from one meaning of a word to a different meaning of the same word.
 - **Example:** The sign outside the gas station said "Fine for loitering," so she told her friend that it was fine to hang out there.
 - **Tip:** Ask yourself if the important words in your argument have more than one meaning and if you stay with one of those meanings throughout your argument.
- **Division** infers that what applies to the group also applies to the individual.
 - **Example:** Giant pandas are at risk of dying out. Tian Tian, who lives at the National Zoo in Washington, D.C., is a giant panda; therefore, Tian Tian is at risk of dying out.
 - **Tip:** Be sure that what applies to a group in general also applies to the individual about which you are writing.
- **Other Fallacies of Ambiguity:** Composition, Accent

More explanation of logical fallacies can be found in *Everyone's an Author*, pages 400 – 402. For even more explanation, visit The Writing Center @ UNC, writingcenter.unc.edu/handouts/fallacies/.