

LOGICAL FALLACIES

USING LOGIC IN WRITING

How to identify

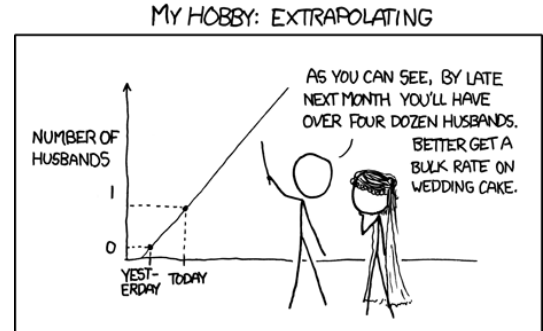
Fallacies are common errors in reasoning that undermine or invalidate the logic of your argument. Fallacies can be either illegitimate arguments or irrelevant points, and are often identifiable because they lack evidence that supports their claim.

Types of Fallacies

The following fallacies are all conclusions based on faulty premises:

Slippery slope: If A happens, then eventually through a series of small steps, through B, C,... X, Y, Z will happen, too. So, if we don't want Z to occur, A must not be allowed to occur either.

If we ban Hummers because they are bad for the environment eventually the government will ban all cars, so we should not ban Hummers.



The author equates banning Hummers with banning all cars, which is not the same thing.

Hasty Generalization: a conclusion based on insufficient or biased evidence; rushing to a conclusion without all the relevant facts.

Even though it's only the first day, I can tell this is going to be a boring course.

Here the author bases his/her evaluation of the entire course on only one class, and the first, for that matter. To make a fair and reasonable evaluation the author must attend several classes, look over the books, or talk to the professor or classmates.

Post hoc ergo propter hoc: If A occurred after B, then B must have caused A.

I drank bottled water and now I am sick, so the water must have made me sick.

The illness could be the fault of the burrito the night before or a flu bug. Without further evidence, there is no reason to assume the water caused the sickness.

Genetic Fallacy: a conclusion based on an argument that the origins of a person, idea, institute, or theory determine its character, nature, or worth.

The Volkswagen Beetle is an evil car because it was originally designed by Hitler's army.

The character of a car and the character of the people who built the car are not inherently related.

Begging the Claim: The conclusion that the writer should prove is validated within the claim.

Filthy and polluting coal should be banned.

Arguing that coal pollutes the earth and thus should be banned would be logical. Instead, the evidence (pollution) is wrapped into the conclusion, not identified as a reason.

Circular Argument: restates the argument rather than actually proving it.

George Bush is a good communicator because he speaks effectively.

The conclusion that Bush is a "good communicator" and the evidence used to prove it ("he speaks effectively") are essentially the same idea. More specific evidence regarding his rhetoric is needed to prove either half of the sentence.

Either/or: oversimplifies the argument by reducing it to only two sides or choices.

We can either stop using cars or destroy the earth.

The author ignores a range of other options such as developing cleaner technology, car sharing, and more eco-friendly community planning.

LOGICAL FALLACIES (cont'd)

Ad hominem: “to the man”; an attack on a person’s character rather than on her/his arguments.

Green Peace's strategies aren't effective because they are all dirty, lazy hippies.

The author doesn't even name particular Green Peace strategies, much less evaluate those strategies on their merits. Instead, the author attacks the characters of group members.

Ad populum: “to the people”; an emotional appeal that speaks to positive (patriotism, religion, democracy) or negative (terrorism or fascism) concepts, rather than the issue at hand.

If you were a true American you would support the rights of people to choose whatever vehicle they want.

There is no inherent connection between “true American” identity and car-buying.

Red Herring: a diversionary tactic that avoids the key issues, often by avoiding opposing arguments.

The level of mercury in seafood may be unsafe, but how else will fishermen support their families?

The author switches the discussion away from food safety and talks instead about an economic issue. While one situation may affect the other, these two issues neither logically support nor directly oppose one another.

Straw Man: oversimplifies an opponent's viewpoint and then attacks that hollow argument.

People who don't support the proposed state minimum wage increase hate the poor.

The author attributes the worst possible motive to an opponent's position, when in reality, the opposition probably has complex and sympathetic arguments in support their point. To truly oppose the argument, this author would need to address its complexity.

Moral Equivalence: compares minor misdeeds with major atrocities.

That parking attendant who gave me a ticket is as bad as Hitler.

This comparison is unfair and inaccurate.

Using Logic in Writing

Crafting a logical sequence into a written argument can be difficult. Don't assume that an audience will easily follow your logic. When converting logical syllogisms into written arguments, remember to:

- lay out each premise clearly.
- provide evidence for each premise.
- draw a clear connection to the conclusion.

Does Logic Always Work?

Logic is an effective persuasion tool; however, readers may not be persuaded if they use different premises to reach a conclusion. Therefore, arguments must often spend as much time convincing readers of the legitimacy of the *premises* as for the *conclusions*.

Premise 1: The government that governs *best*, governs *least*.

Premise 2: The government I am proposing does very little governing.

Conclusion: Therefore, the government I am proposing is best.

Some readers may be persuaded by this logic. Others may follow this logic instead:

Premise 1: The government that governs *best*, governs *most*.

Premise 2: The government proposed by the speaker does very little governing.

Conclusion: Therefore, the government proposed by the speaker is bad.

To win over these readers, the speaker must first convince them of the premises.

Bibliography

In creating this handout, we consulted and/or modified information from the following sources:

The Purdue OWL: <http://owl.english.purdue.edu/owl/resource/724/01/>>