Avoiding Logical Fallacies in Writing

A logical fallacy is an error in reasoning. Fallacies are most often identified when a conclusion, claim, or argument is not properly supported by its premises (supporting statements). The following is a list of common logical fallacies:

Ad Hominem

Translation: "To the people", from Latin
Definition: Countering an argument by attacking the opponent's character, rather than the argument itself.
Example: "Reza Aslan, a religious scholar with a Ph.D. in the sociology of religions from the University of California and author of the new book *Zealot: The Life and Times of Jesus of Nazareth*, went on FoxNews.com's online show Spirited Debate to promote his book only to be prodded about why a Muslim would write a historical book about Jesus."
Why a fallacy? The interviewer is countering the author's arguments by attacking his faith, rather than his arguments as outlined in the book.

Argument from Ignorance

Also Known as: Ad Ignorantium; Non-Testable Hypothesis
Definition: An argument that cannot be refuted because it has not been proven wrong; arguments from ignorance often based on untested/untestable claims.
Example:
A: "I believe in UFOs."
B: "But they've never been proven to exist…"
A: "But they've never been proven to *not* exist."
Why a fallacy? A's argument that UFOs exist cannot be proven because UFOs have never been proven to not exist; scientific inquiry cannot conclusively determine that they cannot exist. Hence, this is an untestable claim.

Appeal to Authority

Also known as: Argument from authority
Definition: An argument believed to be true, because it is presented by a figure perceived to carry legitimate authority.
A: "This doctor says that a low-carb diet is an effective method to lose weight, so I'm going to cut out all breads and pasta."
B: "Shouldn't you cut out your high-fat meat as well?"
A: "According to the doctor, I can eat as much meat as I want, and I'll still lose weight."
B: "Are the doctor's conclusions supported by the medical community?"
A: "I don't know, but he's a doctor, right? His arguments have to be legit."
Why a fallacy? A supports the doctor's claims regarding a low-carb diet based on the assumption that, as a doctor, he has the education and experience to carry legitimate authority. However, just because the doctor speaks from authority, this doesn't mean his claim is true, especially if support from the medical community is questionable.

Begging the Question

Definition: An argument that includes a conclusion within a premise; or assuming as true something that needs to be proved.

A: I'm so sorry my sister wasn't that friendly to you at the party yesterday.

B: Oh, the vegan? Let me guess, she saw me going for the chicken wings, didn't she?

Why a fallacy? B's second question assumes that A's vegan sister doesn't like him because he eats meat.

Similar to: **Circular Reasoning**

Definition: Restating the claim, rather than trying to prove or support it.

Difference: In circular reasoning, the premise and conclusion are the same; in Begging the Question, the premise and conclusion may be different

Example: Some US presidents were considered excellent communicators because they spoke effectively.

Why a fallacy? Being an "excellent communicator" and "talking effectively" are essentially the same thing; hence, the same point is being used to explain the same point.

False Analogy

Definition: An argument based on the assumed similarity between the two things being compared, when in fact they are not similar.

Example:

A: "I decided to go vegetarian because I find the state of the meat industry abhorrent. The way the animals are treated is like the way the Nazis treated the Jews in the concentration camps."

Why a fallacy? Although it is true that the living conditions of animals in the present meat industry can be terrible, it is fundamentally different to the living conditions of the Jews in Nazi Europe; A is presenting them as more alike than they are.

False Dilemma

Also Known as: Black-or-White; Either/Or; Excluded Middle; False Dichotomy

Definition: Simplifying an issue to where only two possibilities, outcomes, or choices are available, when in fact, more exist.

A: "How do you propose we tackle terrorism?"

B: "Either we kill them or they kill us."

Why a fallacy? B is simplifying the issue of terrorism to two possibilities: kill, or get killed. There are number of possibilities (e.g. diplomacy) between these two extremes that are being ignored.

Hasty Generalization

Definition: A conclusion based on insufficient or biased evidence; often involves mistaking a small incident for a larger trend.

A: "I got a bad mark on my first assignment; this is going to be a bad course."

Why a fallacy? A is concluding that just because he got a bad mark on his first assignment, he is going to get bad marks on all the rest.

Moral Equivalence

Definition: Assuming that two moral issues have similar weight, even though they may be completely different; often equates minor incidents with major events.

A: "The professor that gave me a bad mark on my assignment because I made one small mistake is a total Nazi."

Why a fallacy? A is equating the hard-marking professor with the Nazis, when the implications of the actions of both is completely different. The professor just gave the student a lower-than-expected grade, while the Nazis killed millions of people in the 1930s and 40s.

Post Hoc ergo Propter Hoc

Translation: "After this, therefore because of this" (Latin).

Definition: A conclusion based on the premise that if B occurs after A, then B must happen because of A; assumes cause and effect for two events that are related based only on their positions in time.

A: "I ate out, but now I am sick, so the food I ate while out must have made me sick."

Why a fallacy? A is assuming that because he ate out *before* getting sick, the food he ate must have made him sick. However, the food he ate is only one of a multitude of reasons why he might be sick.

Similar to: **Correlation not Causation**

Definition: A conclusion based on the premise that an observed correlation between A and B means that A caused B; this excludes the possibility of an external factor causing the correlative relationship between A and **B**.

Difference: Post Hoc is based on a temporal relationship between two events, whereas Correlation not Causation can be any kind of relationship.

Red Herring

Definition: Avoiding opposing arguments by diverting attention away from the core issue being argued; this is often done by raising tangential issues mid-debate.

Example: North Korea consistently blaming US "imperialist" aggression for their domestic problems.

Why a fallacy? By laying blame on the US, the North Korean government is trying to distract the populace from its own difficulties in properly managing domestic affairs.

Slippery Slope

Definition: A conclusion based on the premise that if A happens, then B will happen, then C, and so on, which will lead to (a much more extreme) Z, therefore A should not be accepted/occur; in other words, A is equated with Z.

A: "If we legalize soft drugs, like marijuana, more people will be interested in using hard drugs, and then crime rates will increase, which will result in the failure of society as we know it. So we should ban drugs altogether."

Why a fallacy? A assumes that opening the door to soft drugs will eventually cause the collapse of society, through a number of small intermediate steps that may not necessarily follow.

Straw Man

Definition: Countering an argument by attacking a different position than the one argued; this is often done by misrepresenting the opponent's argument in order to make it easier to counter, and then countering the misrepresented argument.

A: "I support a woman's right to control her body, thus I support abortion."

B: "You realize that you're supporting mass-murder, right? Women who abort their fetuses are killing innocent lives."

Why a fallacy? B is misrepresenting A's argument about women having control over their own bodies by equating abortion to murder, then countering A's argument on the basis that by supporting abortion, he is, in fact, supporting mass-murder.

Please note that this is not an exhaustive list of fallacies; there are many others. If you have questions about the logic of your argument(s), talk to your professor or TA, and/or come to see one of the peers at the Student Learning Commons

Sources
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Handout created by Helen Bowman, SFU student and Learning and Writing Peer Educator, 2013

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