

Logical Fallacies - Handout

A Logical Fallacy is an argument that *sounds* logical, but, in reality, the premises given for the conclusion do not provide proper support for the argument. *An example: birds fly in the sky; airplanes fly in the sky; therefore, airplanes are birds.*

1. Post Hoc Ergo Propter Hoc* *or, for those of you who aren't up on your Latin, "after the fact therefore because of the fact"

The "post hoc" fallacy consists of attributing a cause and effect relationship (Y was caused by X) based on the fact that Y came after X. This fallacy is committed whenever someone claims or implies an event which occurred *after* another event must have been *caused* by it.

2. Third Cause

The "third-cause" fallacy is a variation on the *post hoc* fallacy in which it is claimed that X causes Y when it can be demonstrated that *both* X and Y are caused by Z. When third causes are ignored, it's often possible to marshal very impressive statistical evidence in support of a non-existent causality.

3. Alleged Certainty

The fallacy of "alleged certainty" is the most basic of all fallacies: the arguer assumes that the point he or she is trying to prove is correct in the first place. Generally, those employing this fallacy begin with a statement such as "everyone knows that. . . ." or "it is universally acknowledged that. . . ." Be careful, though – some things really *are* true. For example, almost every adult Canadian knows (or should know) that Ottawa is the capital of Canada, so it would not be a mistake to automatically accept this fact as certain. To qualify as an "alleged certainty," something that still needs to be proven must be asserted as true.

4. Complex Question

A "complex question" is a fallacy that combines two unrelated – or tenuously related – questions into a query that requires a single answer.

5. Ad Hominem "Ad hominen" is a Latin phrase meaning "against the man."

This fallacy should not be confused with a legitimate challenge to authority. When someone makes a claim based on their own authority, it's perfectly logical to call that authority into question. The "ad hominem" fallacy comes into play when that person's argument or viewpoint is discounted because of character flaws that have nothing to do with the arguments at issue.

6. Appeal to Authority

The fallacy of "appeal to authority" occurs when an argument is asserted as true on the

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sole grounds of its endorsement by an authority figure or a perceived authority figure. Simply using an expert testimony is not a fallacy; it is good reasoning. However, such appeals become fallacious: 1) when the authority figure does not have any expertise in the area under discussion 2) when opposite opinions of other authorities are suppressed or 3) when the testimony of the authority figure is given disproportionate weight in relation to other considerations.

7. Slippery Slope

The "slippery slope" fallacy is an attempt to divert attention away from the question at issue by arguing that a certain decision, if made, would set in motion a series of increasingly severe consequences. These consequences are then presented as the consequences of the question at hand, rather than as the consequences of a series of future decisions that may or may not be made.

8. False Dilemma

The "false dilemma" fallacy presents an issue as if there were only two possible solutions. False dilemmas should be distinguished from true dilemmas. Sometimes, there really are only two choices: everything in the world is either a dog or a non-dog. But everything isn't either a dog or a cat. In most, but not all, situations, there are middle grounds or other options that make it irresponsible to force a choice between two alternatives.

9. Appeal to Tradition

The "appeal to tradition," or appeal to the status quo, is the assertion that an idea or course of action is "good" because it is traditional, comfortable, or the way that things have always been done. Traditional appeals, though not logical, are often very powerful because old ideas and old policies are, if not perfect, at least non-threatening.

10. Appeal to Fear

The "appeal to fear" is the notion that if some course of action is or is not pursued, terrible consequences will occur. The more common name for this fallacy is "scare tactics."

11. Appeal to Popularity ("bandwagoning")

The fallacy of appeal to popularity, or bandwagoning, is the claim that you should believe something or do something because everybody else believes it or does it. We tend to see a kind of emotional security in doing and thinking what other people do and think.

12. Straw Man Fallacy

Misrepresenting someone's argument in order to make it easier to attack.

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