

Baronett, *Logic* (4th ed.)
Chapter Guide

Chapter 4: Informal Fallacies

Arguments fail when the conclusion does not follow necessarily or probably from the premises. A **formal fallacy** is a logical error that occurs in the form or structure of an argument and is restricted to deductive arguments. An **informal fallacy** is a mistake in reasoning that occurs in ordinary language and concerns the content of the argument rather than its form.

A. Why Study Fallacies?

Fallacies are instances of flawed reasoning whose premises do not offer good grounds for believing the conclusion. By studying fallacies you will be less likely to commit these mistakes.

B. Fallacies Based on Personal Attacks or Emotional Appeals

The following four fallacies are based on **personal attacks** against the person making the argument, not on the merit of the argument itself.

1. **Ad hominem abusive**: The fallacy is distinguished by an attack on alleged character flaws of a person instead of the person's argument.
2. **Ad hominem circumstantial**: When someone's argument is rejected based on the circumstances of the person's life.
3. **Poisoning the well**: The fallacy occurs when a person is attacked *before* she has a chance to present her case.
4. **Tu quoque**: The fallacy occurs when a person attempts to avoid the issue at hand by claiming the other person is a hypocrite whose actions and words are inconsistent.

The following three fallacies are based on **emotional appeal**, relying on the arousal of a strong emotional state or psychological reaction to get us to accept a conclusion.

5. **Appeal to the people**: The fallacy occurs when an argument manipulates a psychological need or desire for belonging to a group so a reader or listener will accept the conclusion.
6. **Appeal to pity**: The fallacy results from an exclusive reliance on a sense of pity or mercy for support of a conclusion.

- 7. Appeal to fear or force:** A threat of harmful consequences (physical or otherwise) used to force acceptance of a course of action that would otherwise be unacceptable.

C. Weak Inductive Argument Fallacies

Generalization fallacies occur when there is a mistaken application of a generalization such that the premise(s) supply only very weak support for the truth of the conclusion.

- 8. Rigid application of a generalization:** When a generalization or rule is inappropriately applied to the case at hand. The fallacy results from the belief that a generalization or a rule is universal (meaning it has no exceptions).
- 9. Hasty generalization:** An argument that relies on a small sample that is unlikely to represent the population.
- 10. Composition:** There are two forms of the fallacy: (1) The mistaken transfer of an attribute of the individual *parts of an object* to the *object as a whole*. (2) The mistaken transfer of an attribute of the individual *members of a class* to the *class itself*.
- 11. Division:** There are two forms: (1) The mistaken transfer of an attribute of an *object as a whole* to the individual *parts of the object*. (2) The mistaken transfer of an attribute of a *class* to the individual *members of the class*.
- 12. Biased sample:** An argument that uses a nonrepresentative sample as support for a statistical claim about an entire population.

False Cause Fallacies occur when a causal connection is assumed to exist between two events when none actually exists, or when the assumed causal connection is unlikely to exist.

- 13. Post hoc:** The fallacy occurs from the mistaken assumption that just because one event occurred before another event, the first event *must have caused* the second event. Subtypes of this fallacy are *Coincidence*, resulting from the accidental connection between two events, and the *Common Cause* fallacy, which occurs when one event is believed to cause a second event, when in fact both events are the result of a common cause.
- 14. Slippery slope:** An argument that attempts to connect a series of occurrences such that the first link in a chain leads directly to a second link and so on, until a final unwanted situation is said to be the inevitable result.

D. Fallacies of Unwarranted Assumption or Diversion

Fallacies of unwarranted assumption assume the truth of some unproved or questionable claim; when the assumptions and lack of support are exposed, the weak points of the argument are exposed.

- 15. Begging the question:** In one type, the fallacy occurs when a premise is simply reworded in the conclusion. In a second type, called circular reasoning, a set of statements seem to support each other with no clear beginning or end point. In a third type, the argument assumes certain key information that may be controversial or is not supported by facts.
- 16. Complex question:** The fallacy occurs when a single question actually contains multiple parts and an unestablished hidden assumption.
- 17. Appeal to ignorance:** An argument built on a position of ignorance claims either that (1) a statement must be true because it has not been proven to be false or (2) a statement must be false because it has not been proven to be true.
- 18. Appeal to an unqualified authority:** An argument that relies on the opinions of people who either have *no* expertise, training, or knowledge relevant to the issue at hand, or whose testimony is not trustworthy.
- 19. False dichotomy:** The fallacy occurs when it is assumed that only two choices are possible, when in fact others exist.

Fallacies of diversion occur when the meanings of terms or phrases are changed (intentionally or unintentionally) within the argument, or when our attention is purposely (or accidentally) diverted from the issue at hand.

- 20. Equivocation:** The fallacy occurs when the conclusion of an argument relies on an intentional or unintentional shift in the meaning of a term or phrase in the premises.
- 21. Straw man:** The fallacy occurs when an argument is misrepresented in order to create a new argument that can be easily refuted. The new argument is so weak that it is “made of straw.” The arguer then falsely claims that his opponent’s real argument has been defeated.
- 22. Red herring:** The fallacy occurs when someone completely ignores an opponent’s position and changes the subject, diverting the discussion in a new direction.
- 23. Misleading precision:** A claim that appears to be statistically significant but is not.
- 24. Missing the point:** When premises that seem to lead logically to one conclusion are used instead to support an unexpected conclusion.

E. Recognizing Fallacies in Ordinary Language

Being aware of the ways in which reasoning goes wrong aids us in recognizing errors that occur in beautifully written or otherwise inspired passages. It is especially helpful to us when we are confronted with a topic to which we have an emotional connection or pre-existing belief. It’s difficult to be open-minded, that is, to be ready to have your beliefs challenged. More difficult still is when you are the one who has to challenge yourself!