



Six Classes of Fallacies

Schaum's Easy Outlines: Logic, by John Nolt, Dennis Rohatyn, Achille Varzi

Fallacies in Latin mean to deceive. These are mistakes in argument that affect their cogency.

Six classes of fallacies:

- A. Fallacies of relevance occur when the premises of an argument have no bearing upon its conclusion and may have a distractive element diverting attention away from this problem.
- B. Circular reasoning is the fallacy of assuming what we are trying to prove.
- C. Semantic fallacies result when the language employed to construct arguments has multiple meanings or is excessively vague in a way that interferes with assessment of the argument.
- D. Inductive fallacies occur when the probability of an argument's conclusion, given its premises, is low, or at least less than the arguer supposes.
- E. Formal fallacies occur when we misapply a valid rule of inference or follow a rule which is invalid.
- F. Fallacies consisting of argument with false premises.

A. Fallacies of Relevance

- 1. Ad hominem (against the person) abusive fallacies attack a person's age, character, family, gender, ethnicity, social or economic status, personality, appearance, dress, behavior, or professional, political, or religious affiliations, and suggest not accepting such a person's view.
- 2. The fallacy of guilt by association (or poisoning the well) attempts to repudiate a claim by attacking not the claim's proponent, but the reputation of those to whom they associate or agree.
- 3. Tu quoque (you too) fallacies attempt to refute a claim by attacking the proponent on the grounds that he or she is a hypocrite, upholds a double standard of conduct, or is inconsistent in enforcing a principle, suggesting that the arguer is unqualified to make the claim, and we should not accept the claims. But, there is an important distinction between a person's words and actions.
- 4. Vested interest fallacies attempt to refute a claim by arguing that its proponents are motivated by the desire to gain something; they suggest that if not for this vested interest, the arguer would hold a different view, and so we should discount their views.
- 5. Circumstantial ad hominem fallacies (similar to vested interest fallacies) attempt to refute a claim by arguing that its proponents endorse two or more conflicting propositions, and so we may disregard one or all of those judgments.

6. Straw man fallacies attempt to refute a claim by confusing it with a less plausible claim (the straw man) and then attacking the less plausible claim instead of addressing the original issue. Even a good argument against the less plausible claim is irrelevant to the real issue.
7. Ad baculum (appeals to force or appeals to the stick) fallacies attempt to establish a conclusion by threat or intimidation.
8. Ad verecundiam (appeals to authority) fallacies occur when we accept (or reject) a claim merely because of the prestige, status, or respect we accord it proponents (or opponents).
9. Ad populum (appeals to people) fallacies occur when we infer a conclusion merely on the grounds that most people accept it. This bandwagon effect relies on peer pressure or social conformity, asking us to join forces with others (in the know).
10. Ad misericordiam (appeals to pity) fallacies ask us to excuse or forgive an action on the grounds of extenuating circumstances. An appeal to pity may be either legitimate or fallacious, depending of whether or not the allegedly extenuating circumstances are relevant.
11. Ad ignorantiam (appeals to ignorance) fallacies suggest a false dichotomy. Either our evidence for a claim is conclusive or the claim itself is false. However, a claim may not be true even if our evidence for it is inconclusive.
12. Ignoratio elenchi (missing the point) fallacies occur when the premises of an argument warrant a different conclusion than the one the arguer draws. This is particularly problematic if the “real” conclusion contradicts or undermines the one actually argued.
13. Red herring fallacies are using an extraneous or tangential matter to divert attention away from the issue posed by an argument.

B. Circular Reasoning (petition principii or begging the question)

Circular reasoning occurs when an argument assumes its own conclusion. Such an argument is always valid (since if the assumptions are all true, the conclusion must also be true) and is relevant (for what could be more relevant to a conclusion than the conclusion itself?).

Question-begging epithets

Complex questions can be rhetorical tricks.

C. Semantic Fallacies

Semantic fallacies occur when the language employed to express an argument has multiple meanings or is excessively vague in ways that interfere with the assessment of the argument's cogency.

Ambiguity (or equivocation) is multiplicity of meaning and results from a word or phrase having more than one meaning.

Ambiguous reasoning

Amphiboly is ambiguity in sentence structure

Vagueness

Accent refers to emphases that generate multiple (and sometimes misleading) interpretations.

D. Inductive Fallacies

Inductive fallacies occur when the inductive probability of an argument is low.

Hasty generalization

Faulty analogy

Gambler's fallacy

False cause

E. Formal Fallacies

Formal fallacies occur when we misapply a valid rule of inference or follow a rule that is invalid

Denying the antecedent

Affirming the consequent

F. Fallacies of False Premises

Argument bases on false premises

False dichotomy (for or against, no neutral)

22 Common Fallacies (video)

1. Appeal to Natural Fallacy – everything natural is good.
2. Black and white thinking – no room for third alternatives.
3. Ad Hominem – Attack the person who presented the argument.
4. Genetic Fallacy – Judge an idea or argument based on its origin or history.
5. Slippery Slope – Don't do A which might lead to B which might lead to undesirable C
6. Argue from Ignorance – 2015 Poll: 30% of GOP voters support bombing Agrabah, the fictional city from Aladdin, from the tales of the 1001 Arabian nights.
7. Cherry Picking = confirmation bias.
8. Ad Populum (Appeal to the People) – Most people believe it so it must be true Appeals to emotion – Guilt tripping, peer pressure.
9. Post Hoc ergo Propter Hoc “After this so because of this” – A happened before B, so A cause B.
10. Straw Man Fallacy – misrepresent an argument to more easily defeat it.
11. Relativist Fallacy – An OBJECTIVE issue (e.g. $1+1 = 2$) is true for you but false for me and we are both correct. “God either exists or does not exist” is an objective issue.

12. Absolutism – When we make no exceptions for rules that have exceptions.
13. Begging the Question or Circular reasoning – The conclusion is stated or assumed in the premises; e.g. Consciousness is physical because consciousness is just the brain.
14. Equivocation – shift the meaning of a word in an argument.
15. Hasty Generalization – Illegitimately generalize from a non-representative sample.
16. Fallacy of Composition – Invalidly infer the quality of the whole from the quality of the parts; e.g. all bricks are small, so the wall is small. All things in the universe have a cause, therefore the whole universe has a cause.
17. Fallacy of Division – Invalidly infer the quality of the parts from the quality of the whole.
I have a soul so my cells have little souls.
18. Lottery Fallacy – Invalidly infer X must be designed because X is so improbable.
19. Appeal to dubious/inappropriate authority – God doesn't exist because Hawking said so.
20. Red Herring – Change the subject or relevancy just to distract. E.g. Cheat on your tax is OK because other people do it too.
21. Playing God Fallacy – To think we should not intervene in the natural course of events because intervening would be playing God.
22. Non Sequitur “Does not follow” – Conclusion does not follow the premises.