

Reasoning

There are probably a hundred ways to classify a fallacious argument (an argument using improper reasoning).

There are a couple of key things to remember about fallacies. First, just because an argument is poorly constructed, it does not necessarily follow that the conclusion is wrong. Fallacies are simply tests of reasoning that serve as clues to making decisions. Second, soundness in reason does not guarantee accuracy of claim. Fallacious reasoning may be a good way of deciding between two competing claims, but it would be a mistake to completely accept or reject a claim solely because of the reasoning employed.

1. Appeal to pity

This fallacy is committed when one uses pity to gain acceptance of a conclusion that should be based on fact, not sentiment.

Example: The most ludicrous example is the often-told story of a youth charged with killing his parents with an ax. When confronted with overwhelming evidence of his guilt, he appealed for leniency based on the fact that he was an orphan.

2. Appeal to the people

This fallacy attempts to win popular assent by arousing the emotions and enthusiasms of the crowd, rather than by appeal to the relevant facts. It is an appeal to do something because “everyone else” is doing it.

Example: You should buy a Toyota Camry because it is the number one selling car in America.

3. Appeal to ignorance

This pseudo-argument assumes that a lack of evidence to the contrary indicates that a claim must be true. It can work either way: I can argue something is false because it has never been proven; or I can argue it is true because no one has proven it false. Either claim is fallacious.

Example: Of course ghosts exist. People have been writing about ghosts for centuries, and no one has proven they don't exist.

4. Argument ad Hominem

Those who attack speakers instead of their messages.

Example: At a debate between representatives of Great Britain and California State University Fullerton, Jon Bruschke made an interesting point that helped the American side. Gary Bell, one of the British debaters, responded by asking the audience “Can you really believe someone wearing that suit?”

5. Hasty generalization

This fallacy occurs when one examines a small number of atypical cases and then creates a general “rule” to apply to all cases. In other words, hasty generalization occurs when we generalize about the whole of a group based upon pure observations of a few cases.

Example: All alcohol is dangerous and should be made illegal. After all, each year thousands of people get hurt due to drunk drivers.

6. False cause (non causa pro causa and post hoc ergo propter hoc)

There are two types of false causes: 1) to mistake a false cause for a real cause; and 2) to assume that one event causes another because it precedes it. In either situation, the true cause is unnoticed.

Example: I had cold and flu symptoms for a week. Then I took Nyquil, and within 24 hours all of the symptoms were gone. Now I always take Nyquil because it really works.

7. Equivocation

This fallacy occurs when the meaning of a word is shifted during the course of an argument.

Examples: The end of a thing is its perfection.
 Death is the end of life.
 Hence, death is the perfection of life.

 Some dogs have fuzzy ears.
 My dog has fuzzy ears.
 My dog is some dog!

8. Circular reasoning

This fallacy uses two separate arguments, although one is usually implicit. The explicit argument forms a conclusion based on an assumption presented in the premise. When asked why one should believe the premise (the implicit argument), the support provided is the conclusion of the first argument.

Example: Our university will have a strong future because its new colleges and programs will succeed. All one has to do is look at the solid future of this university to know that these programs will succeed.

9. Non sequitur

Non sequitur literally means “does not follow.” It is the fallacy that occurs when the conclusion has nothing to do with the premises, no matter how true the premises might be.

Example: The sky is blue.
 The grass is green.
 We should buy ice cream.

 Your honor, my client could not have killed John Delaney at 10:00 p.m. on the 29th of August. On that day my client held a two-hour conference in a city 150 miles away from the murder site. The conference began at 2:00 p.m., and we have dozens of witnesses to verify this fact.

10. Straw-man fallacy

Straw-men fallacies rest on the assumption that if any argument in favor of a position can be refuted, then the entire argument must be rejected. Thus, if John made 7 arguments in favor of a position, and if three of the arguments were weak, I might attack the three weak arguments and ignore the four strong arguments. If I then urged rejection of John's position, I would be committing a straw-man fallacy. This would be true even if John has only one good argument and I ignored it to attack the six weak arguments.

Examples: You have given me five reasons why you think you should get a raise. I find your claim that you need the money irrelevant and unfair to your fellow workers. You will get no raise.

We respect our parents because we are told to respect our parents. Who told us that? Our parents, of course. And they got it from their parents, who got it from their parents. It's just a long process of passing on morals. However, it does no good to pass on morals without analyzing their values. So it is time to quit respecting our parents.

11. Slippery slope

The slippery slope fallacy assumes that once an action occurs it sets off an inevitable reaction that leads to ruin.

Example: In the early 80's Ronald Reagan, Alexander Haig and others often made arguments concerning the "domino theory." The theory argues that if Nicaragua falls to the communists, then El Salvador will fall. And if El Salvador falls then Guatemala will fall. And if Guatemala falls, then Honduras will also fall to the communists. Once that happens, Mexico must fall. And after Mexico, the communist will be prepared to attack the United States from our own backyard.

12. Myth of the mean

The myth of the mean is also known as the "illusion of the average." By using meaningless averages, one can portray situations that do not really exist.

Example: Buffy could not have possibly have drowned in that mountain stream. The average depth is only 6 inches.

13. Playing with numbers

This term is often used as a catch phrase for encompassing the many possible ways of presenting numbers in a fallacious manner. The most common method is to present a statistic without providing the information that is needed to interpret it.

Examples: Last year 2500 Mercedes-Benz owners switched to BMW. If so many Mercedes owners switch to us, then clearly BMW is the superior car.

We continue to be the fastest growing store in the area. Our inventory increased 75% last year!

14. Appeal to Authority

This term applies to a type of argument in logic, consisting on basing the truth value of an otherwise unsupported assertion on the authority, knowledge or position of the person asserting it. It shows that the validity of a claim does not automatically follow from the credibility of the source. The authority may be a person with knowledge of the subject or a person without knowledge of the subject. In either case the possibility of a mistake in logic remains.

Example: Something must be true because an elected official says it is true.

Example: Dr. Smith says that I should take Bayer aspirin for a headache, Dr. Smith is a doctor, therefore he should know.

15. Red Herring

An irrelevant issue introduced to distract attention from the issue at hand.

Example: When discussing the economy, one candidate talks about the other's inexperience in leadership.

16. Faulty analogy

An argument that two things which are alike in some respect, therefore they must be alike in all other respects.

Example: Tigers and hard core pornography are alike in that they are both harmful to children.

17. Begging the Question

Assuming as a premise what you want to prove.

Example: All opponents of affirmative action are racists. If they weren't racist, they wouldn't oppose affirmative action.

18. Hand waving

Claiming that something is true because everybody knows so.

Example: We don't need evidence to support Capital Punishment as a deterrent to crime, after all, everybody knows that it is.