

Critical Thinking: A Student's Introduction

Chapter 5 Logical Fallacies—I

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Definitions

Logical fallacy (or fallacy): An argument that contains a mistake in reasoning

- **Fallacy of relevance:** Mistakes in reasoning that occur because the premises are logically irrelevant to the conclusion
- **Fallacies of insufficient relevance:** Mistakes in reasoning that occur because the premises, though logically relevant to the conclusion, fail to provide sufficient evidence to support the conclusion

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The Concept of Relevance

A statement is relevant to another statement if it provides at least some reason for thinking that the second statement is true or false

- A statement can be relevant to another statement even if the first statement is completely false
- A statement's relevance to another usually depends on the context in which the statements are made

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Types of Relevance, 1

Positive relevance:

Statement is positively relevant to another statement if it counts in favor of that statement

- ❖ All dogs have five legs.
Rover is a dog. So Rover has five legs.

Each premise provides at least some reason for thinking that the conclusion is **true**

Negative relevance: Statement that counts against another statement is said to be negatively relevant

- ❖ Marty is a high-school senior.
So, Marty likely has a Ph.D.

Each premise, if true, provides at least some reason for thinking that the conclusion is **false**.

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Types of Relevance, 2

Logical irrelevance: Statement is logically irrelevant to another statement if it counts neither for nor against that statement

- Example: The earth revolves around the sun. Therefore, marijuana should be legalized.

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Fallacies of Relevance

- Personal attack (Ad Hominem)
- Attacking the motive
- Look who's talking (Tu quoque)
- Two wrongs make a right
- Scare tactics
- Appeal to pity
- Bandwagon argument
- Straw man
- Red herring
- Equivocation
- Begging the question

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Personal Attack (Ad Hominem), 1

This is a fallacy that dismisses an argument by attacking the person that made the argument, rather than the person's argument or claim

- Example: Hugh Hefner argued against censorship. But Hefner is a degenerate. Therefore, his argument is worthless.

Common pattern

- X is a bad person
- Therefore, X's argument must be faulty

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Personal Attack (Ad Hominem), 2

Personal attacks are not fallacious when they appear in arguments that are trying to establish something about the character of the person

- Example 1: Millions of innocent people died in Stalin's ruthless ideological purges. Clearly, Stalin was one of the most brutal dictators of the twentieth century.
- Example 2: Becky is a pathological liar. She has twice been convicted of perjury. Therefore, her testimony is not good evidence.

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Attacking the Motive, 1

The error of criticizing a person's motivation for offering a particular argument or claim, rather than examining the worth of the argument or claim itself

- Example: Professor Michaelson has argued in favor of tenure. But why should we even listen to Professor Michaelson? As a tenured professor, of course he supports tenure.

Common pattern

- X is biased or has questionable motives
- Therefore, X's argument or claim should be rejected

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Attacking the Motive, 2

Not all attacks on an arguer's motives are fallacious

- Example: Burton Wexler, spokesperson for the American Tobacco Growers Association, has argued that there is no credible scientific evidence that cigarette smoking causes cancer. Given Wexler's obvious bias in the matter, his arguments should be taken with a grain of salt.
- The example reflects the commonsense assumption that arguments put forward by arguers with obvious biases or motivations to lie need to be scrutinized with particular care

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Look Who's Talking (Tu Quoque), 1

Fallacy is committed when an arguer rejects another person's argument or claim because that person fails to practice what he/she preaches

- Example: I don't need to stop smoking just because my doctor tells me to. He smokes, and he won't stop either!

Common pattern

- X fails to follow his/her own advice
- Therefore, X's claim or argument should be rejected

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Look Who's Talking (Tu Quoque), 2

Arguments are good or bad because of their own intrinsic strengths or weaknesses and not because of who offers them

- If an argument is good, it is good no matter who articulates it
- However, hypocritical behavior can (and should) be criticized
 - Example: I should stop smoking as my doctor told me, but so should my doctor!

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Two Wrongs Make a Right, 1

This fallacy is committed when one tries to make a wrong action look right, by comparing it to another wrong (perhaps worse) action

- Example: I don't feel guilty about cheating; everyone does it

Common forms

- X is common behavior. Therefore, X is not wrong.
- X is worse than Y. Therefore, Y is not wrong.

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Two Wrongs Make a Right, 2

There are times when an act that would otherwise be wrong can be justified by citing the wrongful actions of others

- Example: I killed the man because he was about to kill me. It was an act of self-defense.
- Not all cases are clear
 - Example: Jedediah Smith murdered three people in cold blood. Therefore, Jedediah Smith should be put to death.

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Scare Tactics, 1

This fallacy is committed when an arguer threatens harm (physical or nonphysical) to a reader or listener if he or she does not accept the argument's conclusion

- The threat is irrelevant to the truth of the conclusion
- Example: This gun control bill is wrong for America, and any politician who supports it will discover how wrong they were at the next election.

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Scare Tactics, 2

Not all threats involve fallacies

- Example: You shouldn't pass that law. If you do, it will hurt public welfare.

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Appeal to Pity, 1

Occurs when an arguer inappropriately attempts to evoke feelings of pity or compassion from his listeners or readers

- Example 1: He deserves to make the football team. If he doesn't, he will be really upset.
 - A starting position is deserved by ability, not by reaction
- Example 2: You shouldn't give me an F in the class just because I failed all the exams. I had a rough semester.
 - A grade is deserved by achievement, not by circumstance

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Appeal to Pity, 2

Such arguments are not always fallacious

- If feelings are legitimately a motivating factor for an action, then bringing out those feelings are appropriate for persuasion
 - Example: Everyone is counting on you. Make them proud! Play like the champions you are!

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Bandwagon Argument, 1

An argument that plays on a person's desire to be popular, accepted, or valued

- Example: All the really cool kids at East Jefferson High School smoke cigarettes. Therefore, you should, too.

Common form

- Everybody (or a selective group of people) believes or does X
- Therefore, you should believe or do X, too

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Bandwagon Argument, 2

Not all appeals to popular beliefs or practices are fallacious

- Example: All the villagers say it is safe to drink the water. Therefore, the water probably is safe to drink.

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Straw Man, 1

Fallacy is committed when an arguer distorts an opponent's argument or claim to make it weak (like a straw man) in turn making it easier to attack

- Example: Senator Biddle has argued that we should outlaw violent pornography. Obviously, the senator favors censorship of free speech. Frankly, I'm shocked that such a view should be expressed on the floor of the U.S. Senate. It runs counter to everything this great nation stands for. No senator should listen seriously to such a proposal.

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Straw Man, 2

- This "recasts" the plausible "anti-violent pornography" argument as a not-so-plausible "anti-free-speech" argument

Common pattern

- X's view is false or unjustified [but where X's view has been unfairly characterized or misrepresented]
- Therefore, X's view should be rejected

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Red Herring, 1

The fallacy is committed when an arguer tries to sidetrack his audience by raising an irrelevant issue and then claims that the original issue has effectively been settled by the irrelevant diversion

- Example: Many people criticize Thomas Jefferson for owning slaves. But he was one of our greatest presidents, and his Declaration of Independence is one of the most eloquent pleas for freedom and democracy ever written. Clearly, these criticisms are unwarranted.

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Red Herring, 2

It is not a fallacy simply to change the subject or evade an issue

- Example
 - Q: Congressman, now that you have been convicted of bribery and extortion, isn't it high time that you resigned from office?
 - A: How about those Yankees! A ten-game lead at the All-Star break!
- Since such arguments don't attempt to settle the original argument, no fallacy is committed

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Equivocation, 1

Committed when a key word is used in two or more senses in the same argument

- The apparent success of the argument depends on the shift in meaning
- Example: (1) Any law can be repealed. (2) The law of gravity is a law. (3) Therefore, the law of gravity can be repealed.
 - The meaning of “law” is different in (1) than it is in (2) and (3)

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Equivocation, 2

Common pattern

- All A's are B's
- C is an A
- Therefore, C is a B

The fallacy becomes apparent when the meaning of the word “law” is clarified in the previous example

- Example: (1) All laws regulating human conduct are things that can be repealed. (2) The law of gravity is an observed uniformity of nature. (3) Therefore, the law of gravity can be repealed.

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Begging the Question, 1

Fallacy is committed when an arguer states or assumes as a premise the very thing he or she is trying to prove as a conclusion

- Example 1: Capital punishment is wrong because it is ethically impermissible to inflict death as punishment for a crime
 - The conclusion is just a restatement of the premise

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Begging the Question, 2

- Example 2: Everything the Bible says is true. The Bible says that whatever it says is true. Therefore, whatever the Bible says is true.
 - This is an example of circular reasoning

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