Logical Fallacies - II

Fallacies of Insufficient Evidence



Mistakes in reasoning that occur because the premises, though logically relevant to the conclusion, fail to provide sufficient evidence to support the conclusion.

Inappropriate Appeal to Authority



When an arguer cites a witness or authority who, there is good reason to believe, is unreliable.

Types

Is the Source Not an Authority on the Subject at Issue?

∃ Example

My barber told me that Einstein's general theory of relativity is a lot of hogwash. I guess Einstein wasn't as smart as everybody thinks he was.

Authority

Definition

A person who possesses special knowledge, competence, or expertise in a particular field.

Is the Source Biased?

:≡ Example

Mrs. Cox has testified that her son Willie was home with her at the time when Willie is alleged to have shot Steve Wilson. Even though Willie's fingerprints were found on the

murder weapon and six witnesses have identified Willie as the assailant, I can't believe that a good woman like Mrs. Cox would lie to protect her son. I think Willy is innocent.

Is the Accuracy of the Source's Observations Questionable?

: Example

After taking LSD and drinking seven beers, Jill claims she had a conversation with Elvis's ghost in the alley behind McDearmon's Bar. I've never known Jill to lie. So, I think we should believe her.

Is the Source Known to Be Generally Unreliable?

∃ Example

Scientists' Research Reveals . . . It Takes 3 Million Years for a Human Soul to Reach Heaven . . . And No One from Earth Has Arrived There Yet!

Has the Source Been Cited Incorrectly?

∃ Example

It states in the Constitution that there must be a "wall of separation" between church and state. Publicly funded school vouchers clearly violate this wall of separation. Therefore, publicly funded school vouchers are unconstitutional.

Does the Source's Claim Conflict with Expert Opinion?

: Example

Dr. Duane Gish, a biochemist with a Ph.D. from Berkeley and former senior vice president of the Institute for Creation Research, has argued that there is no credible evidence supporting the theory of evolution. In view of Dr. Gish's expertise on this subject, we should conclude that evolution is a myth.

Is the Source's Claim Not One That Can Be Settled by an Appeal to Expert Opinion?

∃ Example

Dr. Stanford P. Higginbotham, a leading social philosopher, has argued that capital punishment is always morally wrong. Given Dr. Higginbotham's impressive credentials, we should conclude that capital punishment is always morally wrong.

Is the Claim Highly Improbable on Its Face?

: Example

Old Doc Perkins says he has an eighty-year-old friend who can run a 100-yarddash in less than ten seconds. Old Doc is one of the most trusted members of this community. So, if Old Doc says he has an eighty-year-old friend who can run a 100-yard dash in less than ten seconds, I, for one, believe him.

Appeal to Ignorance

Definition

When an arguer asserts that a claim must be true because no one has proven it false or, conversely, that a claim must be false because no one has proven it true.

: Example

No one has proven that three-eyed, four-armed, polka-dotted gremlins don't exist deep in the interior of the moon. Therefore, it's reasonable to believe that such creatures do exist deep in the interior of the moon.

False Alternatives

Definition

When an arguer poses a false either/or choice.

:≡ Example

Look, the choice is simple. Either you support a pure free-market economy or you support a communist police state. Surely you don't support a communist police state. Therefore, you should support a pure free-market economy.

Loaded Question

Definition

When an arguer asks a question that contains an unfair or unwarranted presupposition.

:≡ Example

Joe: Have you stopped cheating on exams?

Pete: No!

Joe: Oh, so you admit that you still cheat on exams?

Pete: No, I meant to say yes!

Joe: Oh, so you admit that you used to cheat on exams?

Pete: No!

Questionable Cause

Definition

When an arguer claims, without sufficient evidence, that one thing is the cause of something else.

Types

Post Hoc Fallacy

Definition

When an arguer assumes, without adequate evidence, that because one event, A, occurred before another event, B, A is the cause of B.

:≡ Example

How do I know that ginseng tea is a cure for the common cold? Last week I had a bad case of the sniffles. I drank a cup of ginseng tea, and the next morning my sniffles were gone.

Mere Correlation Fallacy

Definition

When an arguer assumes, without sufficient evidence, that because A and B regularly occur together, A must be the cause of B or vice versa.

: Example

Aztec high priest: Every spring we sacrifice a virgin to the sun god, and every summer the life-giving rains come. Therefore, sacrificing a virgin to the sun god causes the life-giving rains to come.

Oversimplified Cause Fallacy

Definition

When we assume, without adequate evidence, that A is the sole cause of B when, in fact, there are several causes of B.

: Example

SAT scores have fallen sharply since the 1960s. Clearly, students are watching too much TV

Hasty Generalization

Definition

When we draw a general conclusion from a sample that is biased or too small.

: Example

Small-business owner: I've hired three San Pedrans in the past six months, and all three were lazy and shiftless. I guess most San Pedrans are lazy and shiftless.

Slippery Slope



When we claim, without sufficient evidence, that a seemingly harmless action, if taken, will lead to a disastrous outcome.

:≡ Example

Bans on so-called assault weapons must be vigorously opposed. Once the gungrabbing liberals have outlawed assault weapons, next they'll go after handguns. After that, it will be shotguns and semiautomatic hunting rifles. In the end, law-abiding citizens will be left totally defenseless against predatory criminals and a tyrannical government.

Pattern

- 1. The arguer claims that if a certain seemingly harmless action, A, is permitted, A will lead to B, B will lead to C, and so on to D.
- 2. The arguer holds that D is a terrible thing and therefore should not be permitted.
- 3. In fact, there is no good reason to believe that A will actually lead to D.

Weak Analogy

Definition

When an arguer compares two (or more) things that aren't really comparable in relevant respects.

≔ Example

Lettuce is leafy and green and tastes great with a veggie burger. Poison ivy is also leafy and green. Therefore, poison ivy probably tastes great with a veggie burger, too.

Pattern

1

- 1. A has characteristics w, x, y, and z.
- 2. B has characteristics w, x, and y.
- 3. Therefore, B probably has characteristic z too.

2

- 1. A is an x, and A is a y.
- 2. B is an x, and B is a y.
- 3. C is an x, and C is a y.
- 4. D is an x.
- 5. Therefore, D is probably a y too.

Inconsistency

Definition

When an arguer asserts inconsistent or contradictory claims.

:≡ Example

Moral relativist: Hey, get with the times, man! All value judgments are relative. And that's the absolute truth.

Example 6.1

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- 1. loaded question
- 4. false alternatives
- 7. false alternatives
- 10. questionable cause
- 13. equivocation
- 16. hasty generalization
- 19. false alternatives
- 22. hasty generalization
- 25. weak analogy
- 28. no fallacy