Critical Thinking: A Student's Introduction

Chapter 6
Logical Fallacies—II

Fallacies of Insufficient Evidence

- Inappropriate appeal to authority
- Appeal to ignorance
- False alternatives
- Loaded question
- Questionable cause
- Hasty generalization
- Slippery slope

- Weak analogy
- Inconsistency
- Composition and division

6-2

Inappropriate Appeal to Authority, 1

Occurs when an arguer cites an authority who, there is good reason to believe, is unreliable

Circumstances when a witness or an authority is unreliable

- When the source is not a genuine authority on the subject at issue
- When the source is biased or has some other reason to lie or mislead
- When the accuracy of the source's observations is questionable

6-3

Inappropriate Appeal to Authority, 2

- When the source cited (example, a reference work, or an Internet source) is known to be generally unreliable
- When the source has not been cited correctly or the cited claim has been taken out of context
- When the source's claim conflicts with expert opinion
- When the issue is not one that can be settled by expert opinion
- When the claim is false or highly improbable on its face

6-4

Appeal to Ignorance, 1

Occurs when an arguer asserts that:

- A claim must be true because no one has proven it false
- A claim must be false because no one has proven it true

Example: There isn't any intelligent life on other planets. No one has proven that there is.

6-5

Appeal to Ignorance, 2

Exceptions
- Fruitless searches: Applies only when a careful search has been conducted, and it is likely that the search would have found something if there had been anything there to be found
  - Example: We've searched this car from top to bottom looking for the stolen jewels, and no trace of them has been found. Therefore, probably the jewels aren't in the car.
- Cases in which special rules require that a claim be rejected as false unless a certain burden of proof is met
  - Example: Innocent until proven guilty

6-6

False Alternatives, 1

Fallacy occurs when an arguer poses a false either/or choice

- Example: Either we elect a Republican as president, or crime rates will skyrocket. Obviously, we don't want crime rates to skyrocket. Therefore, we should elect a Republican as president.

6-7

False Alternatives, 2

Can also involve more than two false choices

- Example: There are just three types of base hits in baseball: a single, a double, and a triple. Slugger got a base hit but didn't get a single or a double. Therefore, Slugger must have gotten a triple.
  - This example ignores the possibility that Slugger may have hit a home run

6-8

False Alternatives, 3

A false choice can be expressed as an "if-then" statement as well

- Example: If we don't elect a Democrat, then the economy will go down the tubes. Obviously, we don't want that. So, we should elect a Democrat.

6-9

Loaded Question, 1

Occurs when an arguer asks a question that contains an unfair or unwarranted presupposition such that either way you answer it, you will appear to endorse an assumption

Examples

- Have you stopped cheating on your exams?
- Where did you hide the bodies?
- Are you still in favor of this fiscally irresponsible bill?

6-10

Loaded Question, 2

Usually, multiple questions are rolled up into one

- Example: I would like to say to the Minister of Finance that his policies are directly responsible for the fact that 1,185 more Canadians are without jobs every single day, 1,185 more Canadians with families to feed and mortgages to pay. How long is the Minister prepared to condemn 1,200 more Canadians every day to job loss and insecurity because he is too stubborn and too uncaring to change his policies?

6-11

Loaded Question, 3

- Question 1: Are the Minister of Finance's policies directly responsible for the fact that 1,185 Canadians lose their jobs every single day?
- Question 2: If so, are these policies allowed to continue because the Minister is too stubborn and uncaring to change his policies?
- Question 3: If the Minister is too stubborn and uncaring to change his policies, how much longer will this stubborn and uncaring attitude continue?

6-12

Loaded Question, 4

To respond to a loaded question effectively, one must distinguish the different questions being asked and respond to each individually

6-13

Questionable Cause, 1

Fallacy is committed when one claims, without sufficient evidence, that one thing is the cause of something else

Types

- **Post hoc fallacy**: Assuming without adequate evidence that because one event, A, occurred before another event, B, A is the cause of B
  - Example: I drank a cup of ginseng tea and the next morning my sniffles were gone. The tea must have made me better.

6-14

Questionable Cause, 2

- **Mere correlation fallacy**: Suggesting, without sufficient evidence, that because A and B regularly occur together, A must be the cause of B or vice versa
  - Example: I ate eggs every morning this week, and every day I failed an exam. I should stop eating eggs so I can pass my exams.
- **Oversimplified cause fallacy**: Suggesting, without adequate evidence, that A is the sole cause of B when, in fact, there are several causes of B
  - Example: SAT scores have been dropping. Clearly, kids have been watching too much TV.

6-15

Hasty Generalization, 1

Occurs when one draws a general conclusion from a sample that is biased or too small

- Example 1 (biased sample): I polled 100 professors from 100 schools. Less than only 25% of them believed in God. I guess most Americans don't believe in God anymore.
- Example 2 (too small of a sample): 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.

6-16

Hasty Generalization, 2

Not every argument that jumps to a conclusion is a hasty generalization

- Example: That large biker with the swastika tattoo and the brass knuckles looks friendly enough. I bet he wouldn't mind if I introduced myself with a joy buzzer handshake.
  - Since this argument draws a conclusion about one biker, and not all (or most) of them, it is not a "generalization" at all

6-17

Slippery Slope, 1

Fallacy is committed when one claims, without sufficient evidence, that a seemingly harmless action, if taken, will lead to a disastrous outcome

Common pattern

- The arguer claims that if a certain seemingly harmless action, A, is performed, A will lead to B, B will lead to C, and so on to D
- The arguer holds that D is a terrible thing and therefore should not be allowed to happen

6-18

Slippery Slope, 2

- In fact, there is no good reason to believe that A will actually lead to D

Many slippery-slope arguments leave out some or all of the intermediate steps that an arguer believes will occur

- Example: Dr. Perry has proposed that we legalize physician-assisted suicide. No sensible person should listen to such a proposal. If we allow physician-assisted suicide, eventually there will be no respect for human life.

6-19

Slippery Slope, 3

Sometimes, there are good reasons for thinking that a very bad outcome may result from a seemingly harmless first step

- It is justified if one presents good evidence that "A" will lead to "D," and if "D" should be avoided, then "A" should be avoided

6-20

Weak Analogy, 1

Fallacy occurs when an arguer compares two (or more) things that aren't really comparable in relevant respects

- Example: Lettuce is leafy and green and tastes good on burgers. Poison ivy is also leafy and green. Therefore, poison ivy probably tastes good on burgers too.

6-21

Weak Analogy, 2

Common forms

- Pattern 1: A has characteristics w, x, y, and z. B has characteristics w, x, and y. Therefore, B probably has characteristic z too.
- Pattern 2: A is an x, and A is a y. B is an x, and B is a y. C is an x, and C is a y. D is an x. Therefore, D is probably a y too.
- Pattern 3: A is an x. This is like B is a y.

6-22

Weak Analogy, 3

Three-step method to critically evaluate if an argument contains a weak analogy
- List all important similarities between the cases
- List all important dissimilarities between the cases
- Decide whether, on balance, the similarities are strong enough to support the conclusion

6-23

Inconsistency

Fallacy is committed when an arguer asserts inconsistent or contradictory claims
- Example 1: Nobody goes there anymore. It's too crowded.
- Example 2: Robert F. Kennedy: "People say I am ruthless. I am not ruthless. And if I find the man who is calling me ruthless, I shall destroy him."

6-24

Composition and Division, 1

Fallacy of composition: Assuming, without good reason, that what is true of the parts is also true of the whole

- Example: Each of my monthly car payments is low. So the total price of the car will be low.

Fallacy of division: Assuming, without good reason, that what is true of a whole is also true of its parts

- Example: This box is heavy, so everything in this box must be heavy

6-25

Composition and Division, 2

Ways in which people commit the fallacy of division

- Assuming that what is true of a group as a whole, as a composite thing, must be true of every member of that group
  - Example: This snowflake is white, so every atom in this snowflake must be white
- Assuming that what is true of a group considered collectively, as a class, is equally true of each individual member of the group or of some particular member of that group
  - Example: Finns are highly literate. Therefore, Lasse, a 2-year-old Finnish child, must be literate.

6-26