

Lecture 14

More informal fallacies:

- False Cause**
- Hasty Generalization**
- Weak Analogy**
- Begging the Question**
- Affirming the Antecedent/Denying the Consequent**

False Cause

This fallacy is committed when one concludes that A causes B, when in fact all that has been shown is a correlation between A and B.

During the past two months, every time the cheerleaders have worn blue ribbons, the basketball team has won. So if we want to keep winning, they had better continue to wear the blue ribbons.

Children become able to solve complex problems, predict the behavior of others, and think of objects objectively at the same time that they learn language. Therefore, learning a language is what causes these abilities.

Every time Jerome Bettis carries more than 30 times, the Steelers win. So all Cowher has to do to keep the Steelers winning is to give the ball to Bettis at least 30 times a game.

Is science based on false-cause fallacies?

Four possible explanations for a correlation between A and B:

- 1. Coincidence**
- 2. A causes B**
- 3. B causes A**
- 4. A and B both caused by C**

Everyone who eats fruit X has a sunburn.

- 1. Coincidence**
- 2. Cancer causes fruit eating**
- 3. Fruit eating causes cancer**
- 4. Something else causes both**

Hasty Generalization

Is committed when the arguer draws a conclusion about all members of a group from characteristics of a few members. It is a fallacy if there is no reason to think that the example individuals are typical. (Sample might be too small, or the sampling might be systematically biased.)

I think I won't accept the job at Office Depot. My boss would be a woman, and at my last job my boss was a woman, and she was the worst boss I've ever had.

You spend all your time watching football! I've called you over a dozen times in the last few months, and every single time you're watching football! Don't you have a job, or any friends?

Farmer Bob used Stinky Winky fertilizer at three spots in his corn field, and at those three spots the corn plants died. All the other plants in the field lived. Stinky Winky fertilizer is obviously bad for corn plants.

Weak Analogy

Is committed when the arguer uses an analogy to support the conclusion, but the analogy is inappropriate.

**A has features W, X, Y and Z
B has features W, X, Y and Z
C has features W, X, Y and Z
D has features W, X, Y, so
D also has feature Z**

My old car was blue, and had cloth seats. It also got great gas mileage. I want to get a car with good gas mileage again, so I'm buying Mike's old Dodge Quad-Cab pickup. It's blue and has cloth seats.

This fossilized skeleton has a jaw bone similar to that of a horse. It's teeth are also quite similar, as is the abdominal cavity and feet. So it was probably a herbivore, like horses are.

Giraffes and gorillas have fur, eat plants, and have names that start with Gs. They are also very large. Guinea pigs also have a name that starts with a G, have fur, and eat plants, so they are also probably very large.

Comparison between false cause, hasty generalization, and weak analogy.

All are based on noticing a correlation and then drawing a bad conclusion from that correlation.

False cause is the only of the three that requires a causal chain, can usually tell if some sort of control is implied.

Might have loads of correlation data, correlation may in fact hold. Problem is the causal relation.

Correlation between Bettis carries and Steeler wins does hold

Begging the question

This fallacy occurs when an arguer attempts to establish some conclusion P by appealing to some premises such that one or more of the premises illicitly assumes that P is true.

Bill: Of course God exists.

Jean: How do you know?

Bill: It says so in the Bible.

Jean: So? Why should we believe the Bible?

Bill: The Bible is the word of God, and God doesn't lie!

Why are you for capital punishment? It's simple to prove you wrong. Killing human beings is always wrong. Capital punishment is killing a human being. Therefore, capital punishment is wrong.

Mike said that he wasn't sick last week, but just had allergies. Yeah, right! He comes in sneezing and coughing, and then the next day 2 people get sick, and if Mike hadn't come in then they wouldn't have become sick -- and he says that he just had allergies!

Affirming the consequent/denying the antecedent

These fallacies are committed by attempting to fallaciously derive a conclusion from a conditional.

1. $P \supset Q$

2. P

\therefore 3. Q

1. $P \supset Q$

2. $\sim Q$

\therefore 3. $\sim P$

Affirming the consequent

1. $P \supset Q$

2. Q

\therefore 3. P

Denying the antecedent

1. $P \supset Q$

2. $\sim P$

\therefore 3. $\sim Q$

If Mark got the early flight, then he should be here already. He is here, so he must have been on the early flight.

If Mark got the early flight, then he should be here already. Mark didn't get the early flight, and so he can't be here yet.

Christy: So what makes you so sure I forgot to deposit my paycheck.

David: Look, if you did forget to deposit your check, then our balance would be zero. I just checked our balance and it is zero. So you must have forgotten to deposit it.