Inference

* Induction: moving from specific to general (arguments based on observation or experience)
* Deduction: moving from general to specific (arguments based on laws, rules or widely accepted principles)

Gravity example

Types of Explanatory Conclusions

1. Causal claims (“treatment x causes improvement in strength and mobility”)
2. Claims about the beliefs and aptitude of other people (“The American people want security more than prosperity”)
3. Interpretations of others intended meanings (“She is always late, so she must not really want to do this”)
4. Historical claims that certain things happened (“he woke up in a bathtub of ice, missing a kidney”)

Getting the data

* Designing experiments, including planning to control variables
* Seeking evidence and counterevidence
* Seeking other possible explanations
* Evaluating the strength of available evidence, with a focus on methodology

Judging conclusions

* The proposed conclusion would explain the evidence
* The proposed conclusion is consistent with all known facts
* Competitive alternative explanations are inconsistent with facts
* The proposed conclusion

Causal arguments

* Truck, bicycle, and car example
* What causes the accident
* The “one significant difference” idea
* (inductive)
* Two important rules:

Cause must precede the effect in time

Correlation does not prove causation.

Example: economics of obesity

* In the study, one of the first to examine the economic effects of obesity on mature men and women, the researches examined a wide range of demographic , physical and mental health characteristics to see whether these factors explained the economic differences between obese and non obese women.
* Average adjusted individual net worth (women)
* Normal to overweight --- $225,973
* Mildly obese --- $247,140
* Moderately to severely obese --- $90,303
* Bruh idk this was a whole screens worth of data ion even think was important and I couldn’t get it all unfortunately

Ask Testable Questions

* Do infants dream?
* Does caffeine make people anxious?
* Are some people born evil?
* Does smoking lead to lung cancer?
* Are dreams an indication of our unconscious desires and conflicts?
* Is physical therapy beneficial?

**What to believe?**

**What type of argument is this?**

**Evaluating the overall strengths and weaknesses of ana argument**

**We can begin evaluating the overall strengths and weaknesses of an argument by asking three**

**Questions:**

What types of arguments are presented?

(anecdotal/ personal experience, authority/expert opinion, theoretical position/ research findings etc.)

How relevant and logical are the arguments?

(Some arguments may not be relevant or logically connected to the central claim, of they’re irrelevant or illogical, we need to exclude them

Is the overall argument imbalanced in any way?

(Does it include Important questions? ……..)

**Credibility**

Aggression is biologically caused

Because **Data**

Men generally have higher levels of testosterone than women, and are also more aggressive than women (Knight 1996)

Because **Expert opinion**

Codeine is found in prescription strength cough and cold medications, and trigger aggression

(Spiga, 1990)

But **common belief**

Everyone knows that children are very innocent and loving most of the time. they learn aggression from parents, peers. And media

But **Expert opinion**

spectators model their behavior on the behaviors they observe (bandura, 1989)

But **Personal experience**

I get very aggressive in the morning if I don’t get my coffee

But **population statistic**

Crime rates tend to be higher in countries with a considerable gap between the rich and the poor

What type of argument is this?

1. Date from an experiment
2. Population statistics
3. Common sense belief
4. Personal experience
5. Expert opinion

Assessment of relevance

Are all the reasons and objections relevant? Do the propositions below relate to the claim above? Which proposition is irrelevant?

Viewing pornography increases aggressive male behavior towards females

Because

The sales rate of pornographic magazines in the different U.S states is positively correlated with rape rates (baron, 1984)

But he closed it rip