

Introduction to Induction & Deduction

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Deductive Argument

- **Deductive Arguments-** An argument in which the truth of the premises absolutely guarantees the truth of the conclusion
- Its just not possible that the premises is true and conclusion is false
 - Example-
 - No A is B
 - C is A
 - So C is not B

Deductive Research Approach

- Works from more general to the more specific
- It is most associated with scientific investigation
- Researcher studies what others have done, reads existing theories and then test hypothesis
- Top-down approach
- Conclusion follows logically from premises

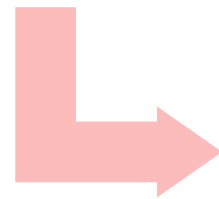
Deductive Research Approach

Theory

Hypothesis

Observations

Confirmation



Inductive Argument

- An argument where the truth of the premises gives good reason to believe the conclusion, but does not absolutely guarantee the truth of the conclusion
- Example- None of the medieval texts we have studied argues against the existence of God (May be argument is made but not transmitted to us)
- So, nobody in the Middle Ages argued against the existence of God

Content of Inductive Argument

- How probabilities the things we are interested in behave uniformly
 - Example- It is quite probable that my nerves will play in the same stimulus, same way all the time and it is highly unprobeable that there is a language which everyone speaks in the world
 - Background theories in terms of human body and linguistic community play an important role in deciding how much evidence we need in order to prove the theories

Content of Inductive Argument

- Whether data are representative or not
 - Example- Data that represent the subject matter as a whole, and not just a special part of it
 - Suppose life expectancy data
 - Information on rich people
 - The data will not be representative as socio-economic makes a big difference to the life expectancy
 - Hence data is required from groups like middle income group, low income group, farmers

Inductive Approaches in Research with some examples

- Induction Approach- Researcher begins with collecting data that is relevant to their topic
- Substantial amount of data- gets a bird's eye view of their data
- Looks for pattern in the data
- Work to develop the theory that could explain the pattern

Inductive Research Approach

- Moving from specific observations to broader generalisations and theories
- Bottom up Approach
- Conclusion is likely based on premises
- Involves a degree of uncertainty



Inductive
Research



Gather
Data



Look for
pattern



Develop
Theory

Inductive Research

