

L7

- Reasoning \neq Argument
- reasoning is the method to arrive at a conclusion

Inductive reasoning: The method of arriving at a conclusion by looking at several examples, and generalizing a rule from those examples.

Because I have seen several instances of X followed by Y, I can hypothesize that X mostly follows by Y. Since X is now occurring, Y will follow.

Everyone who is married that I have met are happy. Marriage makes people happy. I am getting married. I will be happy.

gambler's fallacy - superstitious.

If probabilities of a situation is 1, the argument isn't actually inductive it becomes deductive - check this lecture

Most-likely - inductive

P1 = Most snake-bites lead to death

P2 = A snake bit John

C = John will most likely die.

- What IS this lol?
you can have addition of information which can change the conclusion in an inductive argument

Deductive arguments are valid, invalid, sound, unsound.

Inductive arguments are only strong and weak.

You can identify inductive argument by identifying the inductive leap.

Premises contain 'some', 'one', 'most'.

Conclusion contain 'most' or 'all'.

Premises contain 'past' or 'present'. Conclusion 'present' or 'future'.

Premises contain series of events. Conclusion contains a causal link.

Post hoc, ergo propter hoc.

If a conclusion does not incontrovertibly follow from the premise, then it's not a good deductive argument.

The technical term is validity.

A deductive argument is valid if and only if (iff):

- It is impossible for its conclusion to be false and premises to be true.
- It would be contradictory for conclusion to be false if all premises are true.
- True premises guarantee a true conclusion
- If the premises are true, it is necessary for the conclusion to be true.
- If the premises are true, then it is absurd and contradictory for the conclusion to be false.

All circles have parallel sides. q is a circle. Hence q has parallel sides
valid argument, but premise is false (is it lol? infinite sides).

We cannot use hidden premises

Premise and conclusion can be true, but the argument can be invalid

- Arguments need evidence-based conclusion
- Premises should deal with the truth of the conclusion
- So, the conclusion has to deal with the premises

A deductive argument is valid if and only if (iff):

- It is impossible for its conclusion to be false and premises to be true.
- It would be contradictory for conclusion to be false if all premises are true.
- True premises guarantee a true conclusion
- If the premises are true, it is necessary for the conclusion to be true.
- If the premises are true, then it is absurd and contradictory for the conclusion to be false.

if the premises are not of a correct form, what can you tell about the argument