Phil/LPS 31 Introduction to Inductive Logic
Lecture 6

David Mwakima
dmwakima@uci.edu
University of California, Irvine

April 24th 2023

Topics

- Ampliative Inference vs. Non-ampliative Inference
- Necessary Propositions vs. Contingent Propositions
- Apriori knowledge vs. Aposteriori knowledge
- Deductive inference vs. Inductive inference

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  4. If the conclusion is false, at least one of the premises is false.

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- But in every case of inductive reasoning, as in the second set of examples, the inference is not necessarily truth preserving because the conclusion "goes beyond" what is in the contents of the concepts involved.

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- Let us say that a proposition p is a description of a possible world. A possible world is “a way the world is or could have been.”
- According to possible world semantics, which we use to characterize the models of modal logic, the truth of a proposition is always relative to some possible world, which may not be the actual world.

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- Some philosophers go further and say that if p is necessary, then $\neg p$ is contradictory. The thought here is that since a contradictory formula is unsatisfiable (false in every possible world), its negation must be true in every possible world. (Use Truth Tables to check this. A row in a truth table is a possible world.)

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- Corresponding to this characterization of necessity, some philosophers say that if p is contingent, then $\neg p$ is satisfiable. That is, the denial of p is not contradictory.

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- Can you think of propositions that are contingent?

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- Can you think of any knowledge claims K that are known apriori? How about those that are known aposteriori?

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- Exercise: are there aposteriori necessary propositions?

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- See Homework 5 for the distinction between monotonic and non-monotonic inference. We shall study the relation of conditional probability later.