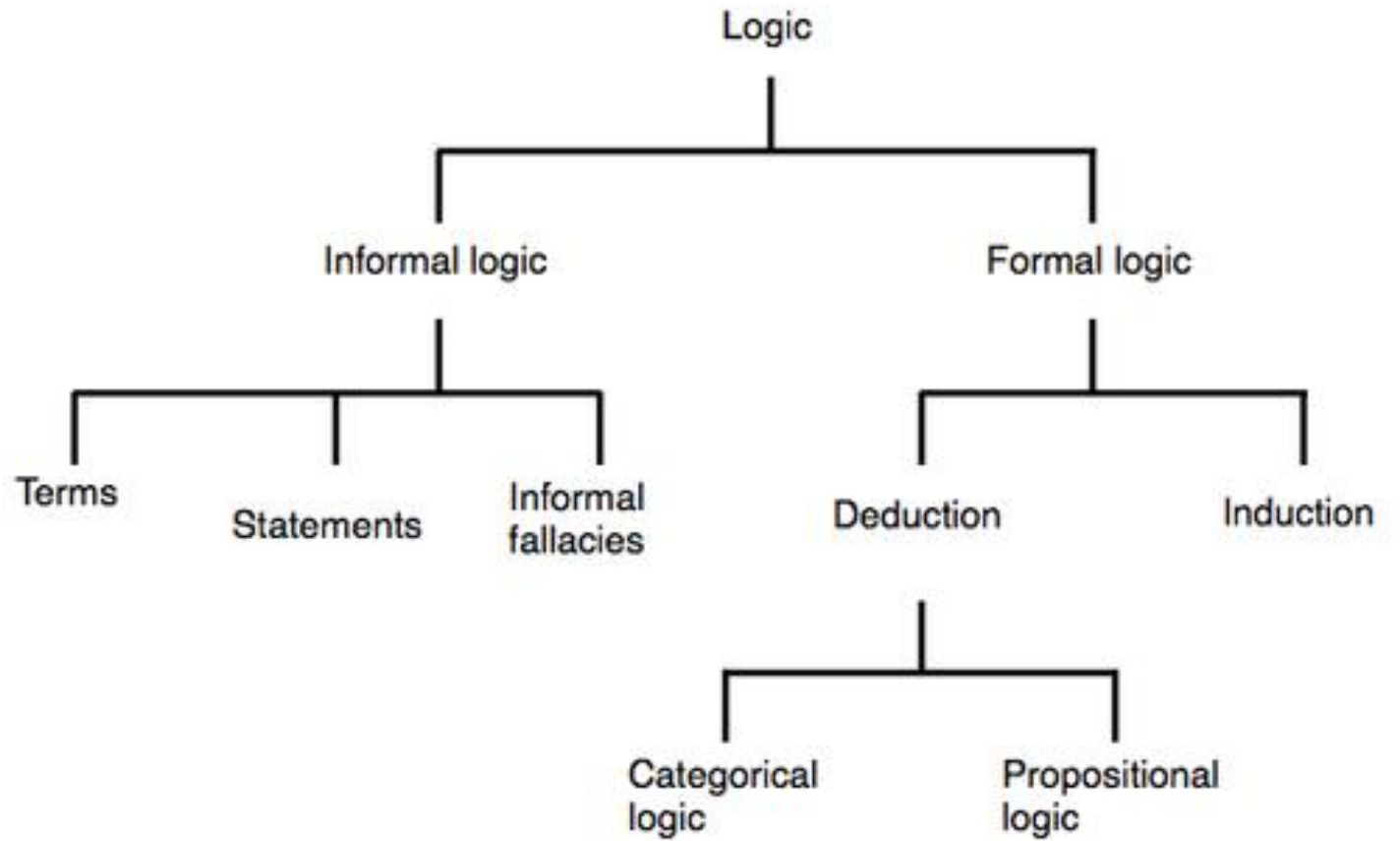


# **The Branches Of Logic, Terms, & Types Of Definitions**

**Come Let Us Reason Together: Learning  
To Love God With All Thy Mind**

**5/18/25**

# Branches Of Logic



# Formal & Informal Logic

- **Formal Logic**— “deals directly with reasoning, by considering the means of distinguishing between proper and improper modes of reasoning.” (5)
- **Informal Logic**— “deals with operations of thinking that are indirectly related to reasoning, such as defining terms, relating terms to each other, and determining relationships between statements.” (5)
  - Informal Fallacies are not “formal methods of reasoning,” therefore they are included under the branch of informal logic.
    - Ad Hominem (Personal Attack), Straw Man, Appeal to Authority, False Dilemma (Either/Or Fallacy), Slippery Slope, Etc.

# Induction & Deduction

- **Deduction**—“deals with arguments that are valid or invalid. If valid, the conclusion follows from the premises, and it does so with certainty. A valid conclusion is one that is contained within the premises; if the premises of a valid argument are true, then the conclusion must be true.” (5)
- Example:
  - If it rains, the ground will be wet.
  - It is raining.
  - $\therefore$  The ground is wet.



2

*how to argue*

# PHILOSOPHICAL REASONING

# Induction & Deduction

- **Induction**—“deals with arguments of likelihood and probability. By induction we draw conclusions from facts or experience, conclusions which go beyond those facts. Inductive conclusions are never certain, but only probable. As such they can be considered strong or weak, depending on how well experience supports the conclusion.” (5)



3

*how to argue*

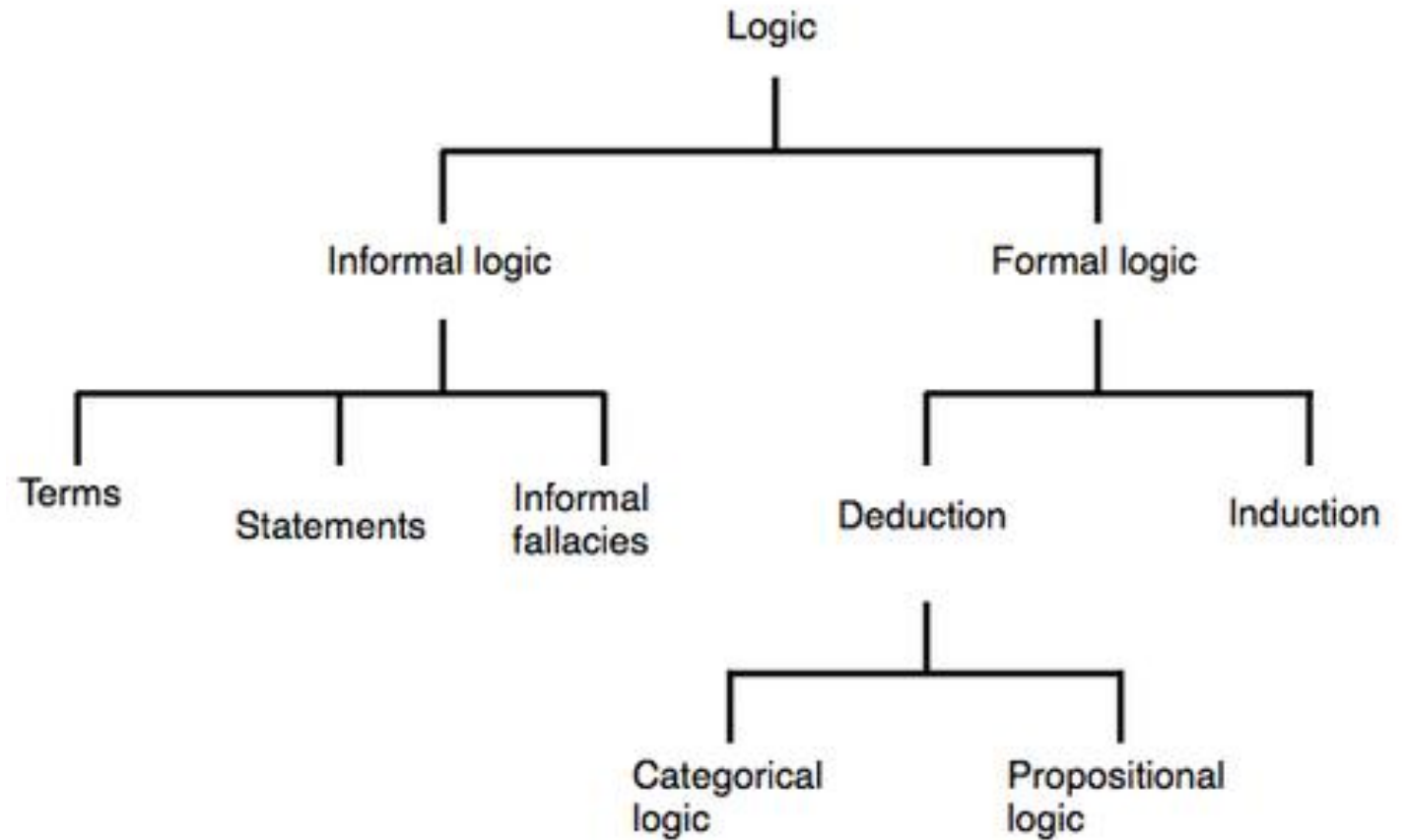
# INDUCTION & ABDUCTION

# Categorical & Propositional

- **Categorical Logic**—“deals with the syllogism, which is a type of deductive argument in which the conclusion connects one category (or term) with another, hence the name *categorical logic*.” (5)
- **Propositional Logic**— “connects entire propositions together in arguments.” (6)



# Branches Of Logic



# Term(s)

- **Term**—“a concept with a precise meaning expressed by one or more words.” (9)
  - Exact synonyms represent the same term.
  - English word *girl* & the Latin word *puella* represent the same term.
- Likewise, a single word can represent different terms.
- What does the word mad, mean?
- *Mad* can mean either “angry” or “insane.”

# Definition(s)

- **Definition(s)**—“a statement that gives the meaning of a term.” (9)
  - “Lawyers must continually define their terms, many use precise, technical language to do so. The same is true for teachers, scientists, philosophers, theologians, and most other professionals.” (9)
- There are 6 purposes & 5 types of definitions.
- Definitions show relationships between terms.
  - Man is often defined as “a rational animal.” What relationships does this definition imply?
- Definitions remove ambiguity.
  - Lexical Definition—“A definition that shows relationships or reduces ambiguity by providing a single, established meaning of a term is called a *lexical definition*. This is the sort of definition one would find in a dictionary.”
  - How is the word “love” being used in the following statements?
    - I love pizza.
    - Love your enemies.

# Definition(s)

- Definitions reduce vagueness.
  - Precising Definition—“seeks to make more precise what was previously vague or fuzzy.”
    - What is the difference between a “tall” person and a “tall” tree?
- Definitions increase vocabulary.
  - What are some new words you have recently learned or heard being used?
  - Stipulative Definition—“when a new word is invented, or an existing word is applied in a new way.”

# Definition(s)

- Definitions can explain concepts theoretically.
  - What is H<sub>2</sub>O?
  - Theoretical Definition—“accepting a theory about the term being defined.”
  - If you accept a theoretical definition, you accept the theory behind it; if you accept the definition of man as an evolved ape, you accept the theory of evolution.
- Definitions can influence attitudes.
  - How would you define the word “abortion?”
  - Persuasive Definitions— “definitions aim[ed] at persuading the listener one way or another toward the term being defined.”

# Summary & Practical Advice

- “Definition give meanings for terms. Definitions can show relationships between terms, remove ambiguity, reduce vagueness, increase vocabulary, explain concepts theoretically, and influence attitudes. Along with these purposes are five types of definitions; lexical, precisising, stipulative, theoretical, and persuasive.” (13)
- Defining terms is one of the most important things you can do when engaging in a dialogue with someone.
- Do not accept someone else’s premise until they have adequality defined their terms.

# Works Cited

*Introductory Logic: The Fundamentals of Thinking Well.* Moscow, ID: Canon Press, 2014.