

Section 5. The three acts of the mind (B)

This section gives you the outline for all of logic. It is an expansion of the previous section (Section 4) and a summary of the rest of the book.

The basis for the science and art of logic is two facts: the fact that human beings think, and the fact that thought has a structure. That structure can be classified from various points of view and for various purposes. For instance, a physiologist or physician might distinguish brain activity of the autonomic nervous system (e.g. breathing) from activity of the frontal lobes (self-conscious thought). A moralist might distinguish thoughts that are voluntary, and under our control, from those that are involuntary, since we are responsible only for what is under our control. A Marxist would distinguish thoughts supposedly produced by a Capitalist system from those produced by a Communist system. But from the viewpoint of logic, we distinguish three kinds of thoughts, three "acts of the mind":

- 1. Simple apprehension**
- 2. Judging**
- 3. Reasoning**

"Simple apprehension" is a technical term. It means basically "conceiving," "understanding," or "comprehending" one object of thought, one concept, such as 'mortal' or 'man' or 'triangle' or 'triangle with unequal angles.' Animals apparently cannot perform this act of understanding; if they can, they do not express it in words. Computers certainly cannot do this; a computer no more *understands* what you program into it than a library building understands the information in the books you put into it.

Judging is more complex than simple apprehension. Instead of just thinking "one concept, like 'man,' it relates two concepts, like "man" and "mortal," to each other by predicating one term (the predicate) of the other (the subject) in judging that, e.g., "Man is mortal" or "Man is not a triangle."

As judging is more complex than simple apprehension, reasoning is more complex than judging. As judging moves from one act of simple apprehension (the subject) to another (the predicate), reasoning moves from two or more judgments (the premises, or assumptions) to another (the conclusion) in arguing that if the premises are true, then the conclusion must be true. E.g. "All men are mortal, and I am a man, therefore I am mortal," or "A man is not a triangle, and that is a triangle, therefore that is not a man."

The mental products produced in the mind by the three acts of the mind are:

- 1. Concepts (the products of conceiving)**
- 2. Judgments (the products of judging)**
- 3. Arguments (the products of reasoning, or arguing)**

Distinguishing between the acts and their objects is not crucial for logic. What is crucial is distinguishing the three acts, and the three objects.

These three mental entities (concepts, judgments, and arguments) are expressed in logic as:

1. Terms

2. Propositions

3. Arguments (the most usual form of which is the **syllogism**)

They are expressed in language as:

1. Words or phrases (less than a complete sentence)

2. Declarative sentences

3. Paragraphs, or at least two or more declarative sentences connected by a word like 'therefore' which indicates an argument

Examples:

1. "Man"

2. "Socrates is a man."

3. "All men are mortal, and Socrates is a man, therefore Socrates is mortal."

(Logic does not deal with *interrogative sentences* (questions, like "What time is it?"), *imperative sentences* (commands or requests, like "Pass the mustard, please"), *exclamatory sentences* (like "Oh! Wow! What a hit!"), or *performative sentences* (like "I dub thee knight"), but only with declarative sentences, sentences that claim to state a truth.) Non-declarative sentences are not propositions.

The difference between *logic* and *language* is (1) that languages are man-made artifices and therefore (2) there are many languages that are different in place and time, while (1) logic is not made but discovered, and (2) there is only one logic. There is no "Chinese logic" or "American logic," no "19th century logic" or "20th century logic," or even "masculine logic" or "feminine logic," just logic. (What is often called "feminine logic" is intuition rather than logic: a formidable and invaluable power of the mind but not teachable by textbooks.) Like mathematics, logic is objective, universal, and unchangeable in its basic laws or principles. But the forms in which these unchangeable laws of logic are expressed are linguistic forms, and these forms are changing and varied.

A *term* has no structural parts. It is a basic unit of meaning, like the number one in math or like an atom in the old atomic theory (when they believed atoms were unsplitable and had no parts).

A *proposition* has two structural parts: the subject term and the predicate term. *The subject term is what you're talking about. The predicate term is what you say about the subject.* The word "subject" and "predicate" mean the same thing in logic as in grammar.

An *argument* has two structural parts: the premises and the conclusion. The premises are the propositions that are assumed. They are the reasons or evidence for the conclusion. The conclusion is the proposition that you are trying to prove.