

4.1. Categorical Form

We now shift gears, turning to a distinct form of logic with an equally venerable heritage. While the logic of the last two chapters traces back to the work of the ancient Stoic logicians, the type of formal logic explored here finds its roots in the writings of Aristotle. The guiding idea will be the same as before, however: the validity or invalidity of an argument depends solely on its logical form. What changes here is just the kind of logical form under study.

The following two arguments, for example, strike us as clearly valid.

All gamblers are people who take risks.
All people who take risks are people Jack likes to party with.
(So,) All gamblers are people Jack likes to party with.

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[All surfers are fit.
No TV critics are fit.
(So,) No surfers are TV critics.]

Again we see a common formal skeleton underlying both arguments, which we can depict like so (using “G,” “H,” and “I” as blanks where subject matter goes).

All G are H
All H are I
(So,) All G are I

But note well what remained when the subject matter was stripped away, and what went away. The subject

[Term logic]

1. Categorical Sentences. The Aristotelean tradition

Each categorical sentence begins with a **quantifier** phrase – either “All” or “Some”. If the sentence begins with “All” its quantity is **universal**; it is a **universal sentence**. If the sentence begins with “Some” its quantity is **existential**.

Following the quantifier, a categorical sentence has two plural noun phrases. Each of these is a **term**. The two terms of a categorical sentence are linked by the word “are”. Here are some examples.

All men are mortal beings.
Some men are mortal beings.

Each term in a categorical sentence also has a **value**¹. If the term begins with “non-” that term is **negative**; otherwise it’s **positive**.

Positive Terms:

men
 mortal beings

Negative Terms:

non-men
 non-mortal beings

The first term of a categorical sentence (between the quantifier and “are”) is the **subject** term. The second term of the sentence (after “are”) is the **predicate** term.

¹ Something similar to “value” is been traditionally called “quality”. But quality applied to the entire categorical sentence, whereas value here applies to a single term. In this presentation, **sentences do not have values, only terms do**. However, if we restrict ourselves to the four traditional sentence-types discussed below, the value of the sentence is just the value of its **predicate** term.