

From syllogism to common sense . . .

Exercise Sheet 2: Categorical Syllogisms

To be discussed on 24 November 2011

1. For each of the following syllogisms, show via Venn diagrammes whether they are valid. For the invalid ones, state all fallacies they commit.

Parts a)–c) are those from Exercise 3 on Sheet 1.

- a) Some evergreens are objects of worship, because all fir trees are evergreens, and some objects of worship are fir trees.
 - b) No stubborn individuals who never admit a mistake are good teachers, so, since some well-informed people are stubborn individuals who never admit a mistake, some good teachers are not well-informed people.
 - c) All proteins are organic compounds, hence all enzymes are proteins, as all enzymes are organic compounds.
 - d) All cats are mammals, but no fish are mammals. Ergo, some cats are not fish.
2. The following argument is obviously not a categorical syllogism. Under which assumptions can we still use knowledge of categorical propositions and syllogisms to conclude the validity of this argument? Explain how its validity is derived.

Hint: try reducing to three terms, then use multiple inference mechanisms.

No bags of feathers are heavy objects. Some bags of feathers are large objects. Therefore, some light objects are not small objects.