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Syllogisms

Major premise: All men are mortal who fought Sparta.
Minor premise: Socrates is a man who fought Sparta.
Conclusion: Socrates is mortal.

The clause "who fought Sparta" is usually omitted (see below), following John Stuart Mill's original. As my 7th graders correctly pointed out, however, that invalidates the major premise, since it neglects Enoch, Elijah, and the Second Coming, even if we bypass the question of the immortality of the soul. I will point out, though, that for an argument to be a "valid argument", as opposed to a "correct argument", it is enough for its conclusion to follow from its premises.

We can rewrite the syllogism using "If" as:

If:
(a) all men are mortal, and
(b) Socrates is a man,
then
(c) Socrates is mortal.

Or:
"If all men are mortal and Socrates is a man, then Socrates is mortal."

Here is the syllogism of Aristotle (387-322 B.C.), who founded the science of logic:

Major Premise: To fight against neighbours is evil.
Minor Premise: The Thebans are our neighbors.
Conclusion: To fight against the Thebans is evil.

Using a syllogism for equalities:

Major Premise: $\frac{part}{20} = \frac{percent}{100}$.
Minor Premise: Multiplying both sides of an equation by 20 doesn't change an equation's truth.
Conclusion: $part = \frac{20 \cdot percent}{100}$.

Major Premise: $part = \frac{20 \cdot percent}{100}$.
Minor Premise: $percent = 5$.
Conclusion: $part = \frac{20 \cdot 5}{100} = 1$.

"The Fallacy of Equivocation." Using a word with one meaning in the premise, and another in the conclusion. Here is an example[1]

Major Premise: Noisy children are a real pain.
Minor Premise: Two aspirin will make small pains go away.
Conclusion: Two aspirin will make noisy children go away.

Historical Note: From "The Origin of All Men Are Mortal," David A. Wheeler, https://dwheeler.com/essays/al men-are-mortal.html, 2021-06-07 (original 2019-07-07):

> The earliest document I can find with this specific example is from 1843, specifically *A System of Logic: Ratiocinative and Inductive, Presenting a Connected View of the Principles of Evidence and the Methods of Scientific Investigation*, by John Stuart Mill, 1843 (first edition), Book II, Chapter 3, page 245.
> ...
> On 2016-05-25 Mauro ALLEGRANZA reported on the Philosophy Stack Exchange that Sextus Empiricus (c. 160 - c. 210 CE) made a somewhat similar statement in *Outlines of Scepticism (Pyrrhōneioi hypotypōseis)*, Book II, 164 [ER:I need to verify this]
> Socrates is human.
> Everything human is an animal.
> Therefore, Socrates is an animal.'

Aristotle talks about syllogisms in his *Prior Analytics*, but he uses A, B, C, instead of real examples. The closest I can find is this from chapter 24 of Book II (68b-69), https://web.archive.org/web/200404291157 (about 350 B.C., my formatting):

> For example let A be evil, B making war against neighbours, C Athenians against Thebans, D Thebans against Phocians. If then we wish to prove that to fight with the Thebans is an evil, we must assume that to fight against neighbours is an evil. Evidence of this is obtained from similar cases, e.g. that the war against the Phocians was an evil to the Thebans. *Since then*
> *to fight against neighbours is an evil,*
> *and to fight against the Thebans is to fight against neighbours,*
> *it is clear that to fight against the Thebans is an evil.*

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[1] "Equivocation," *Fallacy of the Week*, Sykes. http://fallacyoftheweek.professorsykes.com/fallacy-types/equivocation/.