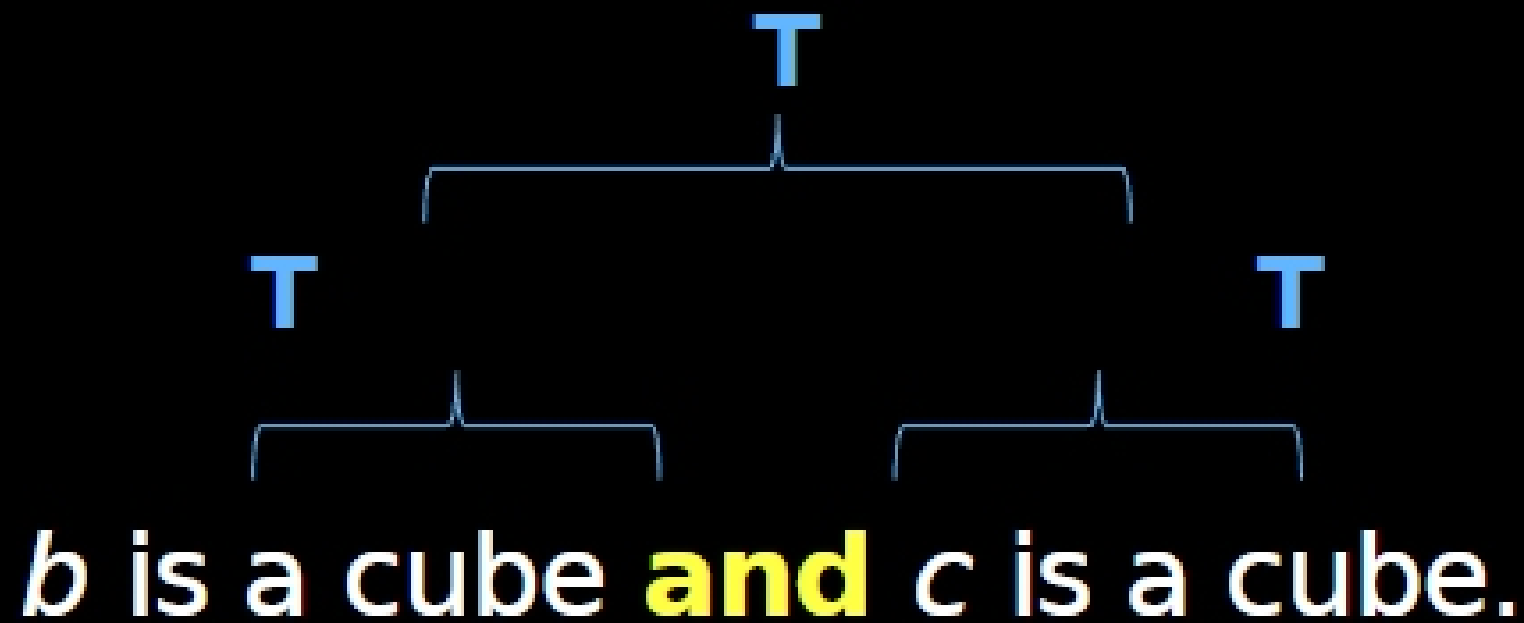


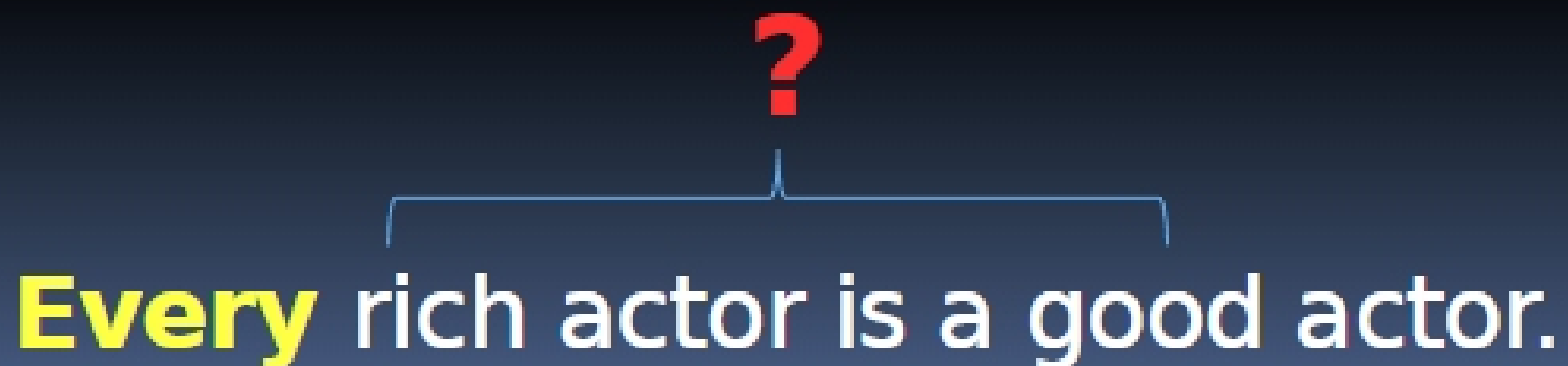
Truth-functional form . . .

We complicated our FOL when we introduced quantifiers. Remember that quantified expressions are *not* truth-functional (i.e., the truth values of quantified expressions don't 'build up' from the truth values of the atomic parts of those expressions in any straightforward way)

Quantification is *not* truth-functional:



VS.



How we identified **tautologies** in the good old days:

*Replace each atomic sentence with a **capital letter** and see if the necessary truth of the sentence is apparent even when we're 'blinded' to the meanings of the atomic sentences and predicates ...*

Cube(a) \vee \neg Cube(a)

\square **A \vee \neg A**