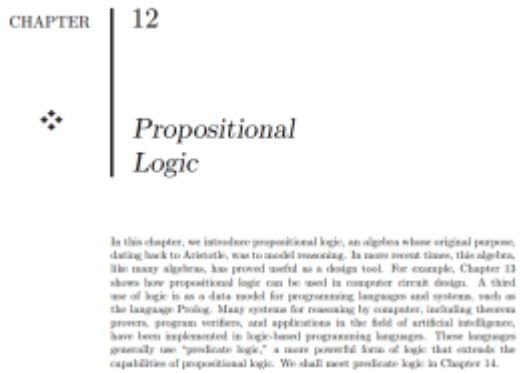
Propositional Logic, Truth Tables, and Epicurus' Objection to "Dialectic"

Post by “Cassius” of September 21, 2021 at 9:22 AM

This also comes up and looks like it might be an interesting Paper, along the lines of the one Martin was quoting from in the presentation:

http://infolab.stanford.edu/~ullman/focs/ch12.pdf



CHAPTER 12

Propositional Logic

In this chapter, we introduce propositional logic, an algebra whose original purpose, dating back to Aristotle, was to model reasoning. In more recent times, this algebra, like many algebras, has proved useful as a design tool. For example, Chapter 13 shows how propositional logic can be used in computer circuit design. A third use of logic is as a data model for programming languages and systems, such as the language Prolog. Many systems for reasoning by computer, including theorem provers, program verifiers, and applications in the field of artificial intelligence, have been implemented in logic-based programming languages. These languages generally use "predicate logic," a more powerful form of logic that extends the capabilities of propositional logic. We shall meet predicate logic in Chapter 14.