

# Temporal truth and bivalence: logical remarks on Aristotle's *De Interpretatione 9*

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## Abstract

The controversy over the famous Sea Battle Argument, presented by Aristotle in *De Interpretatione 9*, dates back to antiquity. According to the reading labeled as traditional, the conclusion of the argument is the denial of the universal law of bivalence, according to which every statement is true or false.

The label may be inappropriate, as there is historical evidence that this reading was not predominant even among the ancient followers of Aristotle, the so-called Peripatetics. They would have seen it as incompatible with the definition of truth and the sacred law of excluded middle that Aristotle vindicates in Book Gamma of the *Metaphysics*.

This disparaging judgment on the logical theses that the traditional reading finds in *DI 9* is shared by contemporary logicians like Quine, who qualifies them as simply delusional. I believe that this judgment, and the scruples of the Peripatetics, are unfounded.

First, I intend to show that the temporal concept of truth that Aristoteles introduces in *DI 9* is not contrary, but complementary, to the temporally neutral concept of truth he elucidates in the *Metaphysics*. Secondly, I intend to show that the heterodox logical theses sustained in *DI 9* can underpin a systematic and coherent semantics for propositional logic.

More than that, by resorting in an anachronistic vein to concepts and methods peculiar to contemporary logic, I intend to show that a formal semantics can be defined for classical propositional calculus that perfectly reflects the heterodox theses of *DI 9*. It is remarkable that, although this semantics amounts, on the metalinguistic level, to the refusal of the logical universal law of bivalence, it preserves, on the object language level, all instances of the law of excluded middle, as well as everything else that classical propositional logic takes to be a logical truth.

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