

Review of
**THEODORE HAILPERIN, *SENTENTIAL
PROBABILITY LOGIC***

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The present book can be seen both as a sequel and as a companion book to Hailperin former *Boole's Logic and Probability*, but with some substantial enhancements. Nonetheless, before analyzing the book itself it would be useful to make clear in what sense the author uses the term “probability logic”, for its use has been somewhat varied and bewildering among the several specialists working in the field. In the present context, probability logic should be understood as a logic of which the semantics is given by probability values (as such, standard two-valued classical logic is a probability logic according to this description).

The first three chapters (and the bulk) of the book is composed of material previously published in *History and Philosophy of Logic* and offer a historical overview of the subject. It starts with a short mention Leibniz's idea of developing a doctrine of degrees of probability for deciding between contrary claims (his main concern was with legal disputes) but as was the case with many of his seminal ideas, this one also was not developed into a coherent theory. For this reason, Hailperin quickly passes to Jakob Bernoulli, perusing his method for providing numerical assignments to the degrees of probability of an argument — at this point, probabilities were not thought of as applied to propositions, but as measures to the likelihood of an argument from its (contingent) premises to its conclusions. There is here a nice presentation of Bernoulli's ideas, particularly of his often difficult to understand combination of pure and mixed arguments for the obtaining of a single conclusion. Next comes, J. H. Lambert, who was one the first authors to consider probabilities in connection to propositions themselves, although Hailperin makes clear that Lambert did so using traditional syllogistic arguments within an intensional context. We are