BAYES' THEOREM

An Expository Presentation*

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Bayes' theorem made its appearance as the ninth proposition in an essay which occupies pages 370 to 418 of the Philosophical Transactions, Vol. 53, for 1763. An introductory letter written by Richard Price, "Theologian, Statistician, Actuary and Political Writer,"[1] begins thus:

"I now send you an essay which I have found amongst the papers of our deceased friend, Mr. Bayes, and which, in my opinion, has great merit, and well deserves to be preserved."

A few lines further on Price says:

"In an introduction which he has writ to this Essay, he says, that his design at first in thinking on the subject of it was, to find out a method by which we might judge concerning the probability that an event has to happen, in given circumstances, upon supposition that we know

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*Read before the American Statistical Association during the meeting of the American Association for the Advancement of Science in Cleveland, Ohio, December, 1930.
[1] These titles are associated with the name of Price in the frontispiece portrait of him bound with the December, 1928, issue of *Biometrika*.