aside from more complete treatments of a few points and a new chapter outlining the theory of abstract valued random variables. Although it lacks a systematic and unifying approach, the book remains a useful source book, containing valuable material on many parts of probability theory.

<div align="right">J. L. Doob</div>

An introduction to the calculus of variations. By C. Fox. Oxford University Press, 1950. 8+271 pp. $4.50.

This book is designed as a text for undergraduate students. It includes a large number of examples, and devotes Chapters 5, 6, and 7 to applications to mechanics, relativity, and elasticity. Unfortunately it is not written so as to give the student clear ideas about the calculus of variations. Much of it is phrased in the language of pre-Weierstrassian days. A basic difficulty is the author's failure to define what is meant by a weak relative extreme. This leads him to state proofs of sufficient conditions for such extrema which are quite unsatisfactory. An instance of the author's methods of reasoning may be quoted from page 32, where he deduces the equation $f_{y'} = \int_{x_1}^x f_y dx + c$ by integrating $d/dx(f_{y'}) = f_y$, and so concludes that $f_{y'}$ must be continuous along an extremizing curve. In Chapter 2, Jacobi's transformation of the second variation is carried out without assuming that the required solution of the Jacobi equation does not vanish on the interval (x_1, x_2). On p. 64 and at other places, the author shows ignorance of the conditions for a quadratic form to be definite. His discussion of multiple integrals is exceedingly vague, and can be of no possible use to the students. In particular the Jacobi condition is not properly stated. Reference is made to conjugate curves, with a suggestion of analogy with conjugate points, but no clear statement. In the discussion of isoperimetric problems, there is no proof of the multiplier rule, and there are lacunae in the discussion of the multiplier rule for the problem of Lagrange. Most of the references are to Forsyth's *Calculus of variations.* (Cf. the review of Forsyth's book by G. A. Bliss, Bull. Amer. Math. Soc. vol. 34 (1928) p. 512.)

<div align="right">L. M. Graves</div>

The meaning of relativity. By Albert Einstein. 3d ed., rev. Princeton University Press, 1950. 4+165 pp. $2.50.

The first edition (1923) was reviewed in this Bulletin, vol. 30, p. 71. The second edition (1945) contained an additional appendix discussing certain advances since 1921, and the third edition added a