(1963) who considered alternating direction methods for solving the iterative formula

$$(1 - r\delta^2\hat{x})(1 - r\delta\hat{y}^2)u^{(m+1)} = [(1 - r\delta x^2)(1 - r\delta\hat{y}^2) + r(\delta\hat{x}^2 + \delta\hat{y}^2 + \tfrac{1}{6}\delta\hat{x}^2\delta\hat{y}^2)]u^{(m)}.$$

It is not possible to factorize the right-hand side of this formula, and so it cannot be split into Peaceman–Rachford form like (5). As a result the examination of the convergence of the procedure is considerably more difficult and the method more complicated than the method of the present paper. The second attempt was by Cannon and Douglas (1964) who proposed a three-level alternating-direction iterative method. The presence of the extra level, of course, adds undue complication to the numerical procedure.

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Book Review

Principles of Coding, Filtering and Information Theory, by Leonard S. Schwarz, 1963; 255 pages. (London: *Cleaver-Hume Press Ltd.*, 72s.)

Information Transmission, by Elwyn Edwards, 1964; 133 pages. (London: *Chapman and Hall Limited*, 15s.)

Here are two admirable books on the same subject, but written for very different people—Schwarz for the mathematical engineer and Edwards for the experimental psychologist. As this is not evident from the short titles, care should be taken to select the right book before ordering from a catalogue! Schwarz's *Principles of Coding, Filtering and Information Theory* covers modern statistical communication theory, coding, generalized harmonic analysis, signal detection and feedback communication, all treated in an elementary but fully professional manner. It is distinguished by exceptional clarity of expression, and every noteworthy aspect of the subject is introduced in the one convenient volume, which is well referenced.

Elwyn Edwards' *Information Transmission* is entirely different because it makes no assumption of mathematical literacy on the part of the reader. It comes as a shock to find that the experimental psychologist is thought to need an explanation of brackets and indices, but in thirteen pages the author gives all the mathematics he needs. (The definition of probability was demolished by Jeffreys long ago, but no matter.) It has always seemed to the reviewer that experimental psychologists cannot do anything very much with information theory except to use its definitions and terms. These provide him with something to plot. At the present stage, as at ten years ago, one can only hope that the concepts prove suggestive—clearly the author's hope also. He is to be congratulated on explaining the subject so simply and so readably.

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