there are some recent indications that these results can be obtained using less artificial and more direct methods (D. N. Shanbhag, 1979).

In spite of these reservations there is no doubt that the book has very successfully filled a longstanding gap in the literature and will be of immense usefulness to applied probabilists, statisticians and qualitatively oriented researchers dealing with probabilistic modelling who up until now were deprived of a comprehensive and carefully written compendium on elementary algebraic operations with one-dimensional random variables. It is hoped that a future edition of this book will incorporate a more detailed discussion of the algebra of multi-dimensional-random variables in view of the substantial demand and increase in applied probabilistic models based on multivariate distributions.

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*Unitary group representations in physics, probability, and number theory*, by George Mackey, Benjamin/Cummings, Reading, Mass., 1978, xiv + 402 pp., $19.50.

Even to one who does not wish to "buy" group representations as the end all or be all that it sometimes pretends to be, this is a very nice book. In particular, with Jauch's *Foundations of quantum mechanics* [1] on the one side and the present *Unitary group representations* by Mackey on the other, one has some forceful and interesting arm-chair reading in store. One should also keep Dirac's *Principles of quantum mechanics* [2] close at hand. In fact this reviewer was struck by and reminded of Dirac's elegant style and spare exposition when reading the present account by Mackey, even though the formats are different.

Mackey's book is the now published version of what are commonly called Mackey's Oxford notes [3] for lectures given there in 1966–1967. Although the treatment does include some discussion of applications to or perhaps more correctly relations to topics in probability, number theory, statistical