of Khachian's algorithm with some suggestions for improvement using deeper cuts. This part is independent of Part I.

The book is written and presented excellently, and the subjects are well researched. It will be of interest to L.P. specialists, particularly those concerned with the development of software. It will be of limited interest to the general O.R. practitioner, mainly in attracting attention to the importance of guarding against redundancy in formulation.

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Distribution-Free Statistical Methods
J.S. MARITZ
Chapman and Hall, U.K., 1982. 261pp. £14.00
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In the abundance of texts on the market dealing with the application of distribution-free statistical techniques, very few disciplines have been ignored. This is not surprising since, from the practical viewpoint, they are methods which do not rely for their validity on many assumptions about the form of the distribution that is taken to have generated the sample values.

A "first principles" approach to the subject area, relying on the fundamental notion of randomisation to derive exact hypothesis tests (generally only under the assumption that the underlying distribution is continuous and symmetrical), makes this book both novel and interesting. While taking this approach, Maritz usefully obtains some of the well-known "non-parametric" methods (Spearman's correlation, Kruskal–Wallis ANOVA,...) by transformation of the data to ranks. The text is, however, restricted to location problems, but not only considers conventional hypothesis testing but also the application of such ideas to point estimation.

The mathematical nature of the text would suggest that it should be used for final-year undergraduates (or postgraduates) of a mathematical statistics degree. As such, it would make an excellent course text for unifying general statistical ideas and indicating the derivation of exact hypothesis tests. Of particular pedogogic note is the clear exposition of the notion of efficacy of a test and its application in the comparative measure for two tests known as asymptotic relative efficiency. A large number of empirical examples give an excellent balance between theory and application, and thus one must commend the author in that his well-written and thoughtful text succeeds in introducing "the distribution-free way of thinking". For large data sets, obvious difficulties arise in following the permutation argument, but this can be obviated by taking a normal approximation to the conditional distribution under the null.

In conclusion, despite these praises, it must be said that this text would seem to offer little to an O.R. audience. However, it must be recommended to any mathematical statistician.

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