BOOK REVIEWS

"A DICTIONARY OF STATISTICAL TERMS"

M.G. Kendall and W.R. Buckland.

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The last 60 years have seen an enormous growth in stat-
istical literature.   This dictionary of 3,000 terms offers
an invaluable service by standardizing terms and notation that
have arisen in this period, up to 1978.   This fourth edition
is a revised and extended version of the first edition of 1957.
Moreover, it is the only manual of its kind.

The major areas of statistics are covered.   Terms from
probability theory, decision theory, multivariate analysis,
stochastic processes, nonparametrics etc. are included.   In
addition, terms associated with specific applications in the
disciplines of economics, psychology etc. are given; thus the
entries range from 'least favourable distribution' to 'Lasp-
eyres' Index'.   The authors have interpreted terms in the
broad sense; for instance theorems such as Cochran's theorem,
technical terms such as 'variance' and particular concepts
such as 'estimation' are included, as well as the usual 'tests
of hypotheses' and various statistical distributions.

The manner in which the entries are explained reveals a
British rather than an American approach to statistics in that
the explanations are mostly given in a non-mathematical cont-
ext.   For instance, percentiles are described as 'The set of
partition values which divide the total frequency into one
hundred equal parts', rather than in relation to distribution
functions.   This non-mathematical bias means that terms such
as 'probability measure', a Von Mises functional' and 'contig-
uity' are omitted.   Emphasis is on placing the terms in the
context from which they arose.   As mentioned on the sleeve of
the book, 'the authors have tried to attribute terms to those
who originally introduced them into the literature'.   Thus

they appeal to a wide audience as the reader is given access
to the concepts involved.

A distinctive feature is that well known terms are tre-
ated at great length.   There is, for example, a fascinating
description of 'degrees of freedom', and of the concept of
'probability' which give a flavour of the historical contr-
oversies surrounding these terms.

Some terms largely extinct in the literature are given
extensive treatment, for example 'clisy'.   On the other hand,
the concept of 'permutation distributions' and 'permutation
tests' is confined to three lines.   Extensive treatment is
given to distribution theory and parametric inference while
terms from nonparametric statistics such as 'Walsh averages'
and "McNemar's test' are not mentioned.   So the treatment is
rather uneven, perhaps reflecting the authors' personal biases.
Another criticism is that the last ten years have seen a rapid
growth in the field of robust statistics.   Necessarily, the
dictionary cannot be expected to contain all the new terms
which have arisen from this field, but those it does contain
from the growth in robust statistics are unsatisfactory, in
the light of recent developments.   An example of this is that
in the definition of robustness, the terms qualitative and
quantitative robustness are not used.

In conclusion it is clear that this is a very welcome
addition to the literature.   It should be of great value to
graduate students, consultants in statistics and researchers
in statistics from other disciplines.   It is a useful refer-
ence book for statisticians generally, and it is hoped that
with future revisions, it will eventually become the guide for
all statisticians.

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