
"I have a great subject (statistics) to write upon, but feel keenly my literary incapacity to make it easily intelligible without sacrificing accuracy and thoroughness." Galton's confession, quoted at the start of chapter 12, neatly summarises the problems faced by introductory statistics books aimed at users; having jettisoned any pretence to a watertight, rigorous development, they can only fairly be judged by the extent to which the mathematical pill has been sugared without it turning into pure fudge.

First impressions of the typically large American text under review are decidedly inauspicious: the reader is "feather-bedded" to the extent that, although arguments such as "additivity of variances leads to \( \text{var}(X) = \sigma^2/n \) are included, the mean and variance of the standard distributions are just quoted, some mainstream results are relegated to exercises (such as, p 42, "show by example, or prove mathematically, that \( \sigma^2 = \frac{\Sigma x^2}{N} - \left(\frac{\Sigma x}{N}\right)^2 \)" and any section mentioning calculus is optional and marked with an ominous "tombstone", \( \Box \). In a couple of places, this softly-softly approach backfires: for example, only histograms with equal class intervals are discussed in the text which makes it difficult fully to carry through a limiting argument to introduce the idea of a probability density function and — the most misleading sentence in the book — "Probabilities such as \( P(\mu - 1.\sigma < x < \mu + 1.\sigma) \) can be determined using calculus to integrate under the normal density function." (p 166) Granted this capitulation on the mathematical front, however, the overall level of heuristic motivation is excellent and statistical procedures are very clearly described: time and time again, I found myself nodding in agreement with the author's emphases and "underlinings" which clearly reflect authentic classroom experience. Especially attractive are the references to computer packages such as Minitab and B-STAT (a package specific to the book), historical remarks, and the use of non-hackneyed real data from a variety of interesting situations, both in the text and exercises. The mathematics involved and statistical ground covered never stray much above A level, but the amount of fine detail is greater. In this country, the book may be a useful source of contextually unusual (routine) exercises, the treatment of linear/multiple regression/correlation and ANOVA (in chapters 11, 12, 13, 15) is sufficiently different from most home-grown school statistics texts to be worth noting and, of the other 12 chapters, chapter 8 (quality control), chapter 10 (statistical decision theory, based on the notion of expected monetary value) and chapter 14 (time series, forecasting and index numbers) will be of particular interest to anyone teaching the commercial/industrial statistical topics which, like Dunsinane Wood, are creeping on to the edges of some of the revised A level syllabuses.

NICK LORD


At first sight the remorselessly abstract approach of the author to fundamental mathematics (= plenty of basics + glimpses ahead to "A-level and slightly beyond" pure mathematics) will strike a chord with any secondary school teacher challenged (as I seem to be each year!) by the question, "But what is the use of matrices?". Despite my best endeavours, inventing stories about rival garages selling various grades of petrol, there is perhaps no gainsaying the fact that the cart has been put before the horse and that I am trying to get the class to use a telephone directory (matrices) before they have been introduced to the telephone (thinking linearly). The author's underlying philosophy is most clearly stated in Chapter 13:

"The approach adopted in the present course has been to state the "Rules of Play" (= axioms) right at the beginning. ... such a line of attack eliminates many of the obscurities of the more conventional presentations. ... I believe that such an (axiomatic) approach is preferable to one which confronts beginners with a plethora of do's and don'ts, produced ad hoc, out of the proverbial hat ... I see no point in asking the beginner to ponder until he or she recreates six millenia of human achievement ... Heuristic methods ... leave too much to