

○ **P. C. GÓMEZ, *STATISTICAL METHODS IN LANGUAGE AND LINGUISTIC RESEARCH***

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Notwithstanding the growth of qualitative research, where narrative data and analysis constitute the main concern for researchers, there is still a strong inclination on the part of applied linguists to investigate language-related issues through quantitative methods using statistical procedures. Accordingly, books like this one respond to a genuine need of such researchers who investigate language-related topics. Quantitatively-oriented researchers used to refer to statistical books written for a more general audience, in social sciences, psychology or education, and not necessarily for researchers in linguistics and applied linguistics. Recently, however, there have been research methods titles in applied linguistics which address statistical procedures (e.g., Dornyei, 2007; Hatch & Farhady, 1982; Hatch & Lazaraton, 1991; Mackey & Gass, 2005; Paltridge & Phakiti, 2010; Richards, Ross & Seedhouse, 2012). Moreover, there have been titles exclusively devoted to statistical procedures in applied linguistics (e.g., Bachman, 2002; Brown, 1988; Larson-Hall, 2010). It is therefore interesting to see how the current title contributes to the existing resources.

The book includes six chapters, a preface, appendices (nine of them), a bibliography and an index. Based on the chapter contents, the book can be divided into two main parts. The first part, which includes Chapters 1, 2, 3, and 4, discusses statistical concepts and procedures not much different from those materials presented in other statistical and research titles, but more related to language-related issues. The second part discusses issues related to corpus linguistics, including word frequency lists in Chapter 5 and concordance programs in Chapter 6. Readers may not find a strong link between the two parts of the book since they cover two rather independent themes.

In the first part, the book reviews statistical concepts by providing definitions and uses of measures of central tendency, variation, distributions and probability. The pace of presenting statistical concepts is good and overall, the book will make sense to (applied) linguistics researchers since it refers to and employs language-related examples such as the British National Corpus. This trend, however, gets blurred in some parts due to (a) sticking to mathematical formulas rather than concepts, like in the sections on t-test and analysis of variance, (b) not elaborating on unknown concepts and terms, like Binomial and Poisson distributions (p.46), and (c) presenting inappropriate examples, for instance, examples provided for nominal and ordinal scales (p.37). Additionally, the organisation of some sections such as “measurement scales” (p.36) seems to be unusual which adds to further problems. Measurement scales are usually presented in the order of “nominal”, “ordinal”,

“interval” and “ratio” with the logic that these levels are hierarchical so that each scale includes the features of the previous scale and adds an additional feature. For example, the ordinal scale includes the features of the nominal scale (categorisation), but also adds the categories in order. The order the measurement scales are presented in the book (rational [sic], nominal, ordinal, and interval) is however different which will make it difficult for the reader to see the intended hierarchy among the four scales.

Two other drawbacks in the first two chapters also downplay the merits of the book. In fact, the first two chapters are not edited as carefully as the rest of the book chapters. This has resulted in the first two chapters look somehow sloppy. Given that the introductory chapters are the readers’ first encounter with the book; it is therefore desirable to revise these two chapters for the next edition. Two further shortcomings of the book are firstly, inaccurate use of some terms, and secondly, lack of coherence in some parts. Examples of inaccurate use of some terms include the use of ‘histogram’ all throughout the first chapter to denote ‘bar graphs’. Moreover, instead of ‘ratio scale’, which is consistently used in all research methods books, the author has uncommonly used ‘rational scale’ (p.36). An example of incoherence can be found on page 38 where “types of variables” are presented. It is hard for the reader to make sense of this section and obtain a coherent understanding of different types of variables.

The rest of the book reads very well and is well organised though the author may want to consider including some advance organisers (learning objectives) at the beginning of each chapter, and some learning activities or tasks at the end of each chapter in future editions of the book. These two instructional and pedagogical aspects are missing in all the chapters of the book. One more missing item, it seems to me, is brief instructions in the first part of the book to help readers find out how they could carry out the statistical procedures using software packages like SPSS (IBM Corporation, 2012). The above points, while will certainly improve the book when they are considered in subsequent editions, should not downplay the merits of the book. A very good example of this book’s contribution to the current titles on statistical procedures is the discussion of ‘Discriminant Function Analysis’, or DFA. Notwithstanding this great advantage of the book, and despite the fact that the author refers the readers to SPSS to conduct this analysis, there is no instruction on how researchers could perform DFA using statistical programs like SPSS.

The second part of the book includes Chapters 5 and 6. While in the first part of the book the author tries to expose (applied) linguistics researchers to popular statistical concepts and procedures, in the second part, the author presents an excellent introduction to using corpus linguistics both in research and in teaching. Teachers and researchers who are interested in corpus linguistics would find the last two chapters of the book very useful both conceptually and procedurally. Organisationally, however, these two chapters could have been incorporated in the chapters of the first part. The author may want to consider this suggestion

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for the next edition of the book. By doing so, the author can substantiate the statistical procedures with examples from the corpora material, which may, in turn, improve the overall coherence of the book.

In conclusion, I should say I enjoyed reading this book. As a reader I could both improve my knowledge of some of the statistical procedures and obtain a better understanding of some aspects of corpus linguistics. Applied linguistics postgraduate students and researchers will find this book helpful in understanding some of the complex statistical procedures like DFA. Notwithstanding the unique contribution of the book to currently available titles, the author and the publisher may want to consider the above comments when it comes the time for future editions.

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