



# **Analyzing Categorical Data (Springer Texts in Statistics)**

Jeffrey S. Simonoff

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Categorical data arise often in many fields, including biometrics, economics, management, manufacturing, marketing, psychology, and sociology. This book provides an introduction to the analysis of such data. The coverage is broad, using the loglinear Poisson regression model and logistic binomial regression models as the primary engines for methodology. Topics covered include count regression models, such as Poisson, negative binomial, zero-inflated, and zero-truncated models; loglinear models for two-dimensional and multidimensional contingency tables, including for square tables and tables with ordered categories; and regression models for two-category (binary) and multiple-category target variables, such as logistic and proportional odds models.

All methods are illustrated with analyses of real data examples, many from recent subject area journal articles. These analyses are highlighted in the text, and are more detailed than is typical, providing discussion of the context and background of the problem, model checking, and scientific implications. More than 200 exercises are provided, many also based on recent subject area literature. Data sets and computer code are available at a web site devoted to the text. Adopters of this book may request a solutions manual from: textbook@springer-ny.com.

#### From the reviews:

"Jeff Simonoff's book is at the top of the heap of categorical data analysis textbooks...The examples are superb. Student reactions in a class I taught from this text were uniformly positive, particularly because of the examples and exercises. Additional materials related to the book, particularly code for S-Plus, SAS, and R, useful for analysis of examples, can be found at the author's Web site at New York University. I liked this book for this reason, and recommend it to you for pedagogical purposes." (Stanley Wasserman, The American Statistician, August 2006, Vol. 60, No. 3)

"The book has various noteworthy features. The examples used are from a variety of topics, including medicine, economics, sports, mining, weather, as well as social aspects like needle-exchange programs. The examples motivate the theory and also illustrate nuances of data analytical procedures. The book also incorporates several newer methods for analyzing categorical data, including zero-inflated Poisson models, robust analysis of binomial and poisson models, sandwich estimators, multinomial smoothing, ordinal agreement tables...this is definitely a good reference book for any researcher working with categorical data." *Technometrics, May* 2004

"This guide provides a practical approach to the appropriate analysis of categorical data and would be a

suitable purchase for individuals with varying levels of statistical understanding." *Paediatric and Perinatal Epidemiology*, 2004, 18

"This book gives a fresh approach to the topic of categorical data analysis. The presentation of the statistical methods exploits the connection to regression modeling with a focus on practical features rather than formal theory...There is much to learn from this book. Aside from the ordinary materials such as association diagrams, Mantel-Haenszel estimators, or overdispersion, the reader will also find some less-often presented but interesting and stimulating topics...[T]his is an excellent book, giving an up-to-date introduction to the wide field of analyzing categorical data." *Biometrics, September 2004* 

"...It is of great help to data analysts, practitioners and researchers who deal with categorical data and need to get a necessary insight into the methods of analysis as well as practical guidelines for solving problems."

International Journal of General Systems, August 2004

"The author has succeeded in writing a useful and readable textbook combining most of general theory and practice of count data." *Kwantitatieve Methoden* 

"The book especially stresses how to analyze and interpret data...In fact, the highly detailed multi-page descriptions of analysis and interpretation make the book stand out." *Mathematical Geology, February 2005* 

"Overall, this is a competent and detailed text that I would recommend to anyone dealing with the analysis of categorical data." *Journal of the Royal Statistical Society* 

"This important work allows for clear analogies between the well-known linear models for Gaussian data and categorical data problems. ... Jeffrey Simonoff's Analyzing Categorical Data provides an introduction to many of the important ideas and methods for understanding counted data and tables of counts. ... Some readers will find Simonoff's style very much to their liking due to reliance on extended real data examples to illuminate ideas. ... I think the extensive examples will appeal to most students." (Sanford Weisberg, SIAM Review, Vol. 47 (4), 2005)

"It is clear that the focus of Simonoff's book is different from other books on categorical data analysis. ... As an introductory textbook, the book is comprehensive enough since all basic topics in categorical data analysis are discussed. ... I think Simonoff's book is a valuable addition to the literature because it discusses important models for counts ...." (*Jeroen K. Vermunt, Statistics in Medicine, Vol. 24, 2005*)

"The author based this book on his notes for a class with a very diverse pool of students. The material is presented in such a way that a very heterogeneous group of students could grasp it. All methods are illustrated with analyses of real data examples. The author provides a detailed discussion of the context and background of the problem. ... The book is very interesting and can be warmly recommended to people working with categorical data." (EMS - European Mathematical Society Newsletter, December, 2004)

"Categorical data arise often in many fields .... This book provides an introduction to the analysis of such data. ... All methods are illustrated with analyses of real data examples, many from recent subject-area journal articles. These analyses are highlighted in the text and are more detailed than is typical .... More than 200 exercises are provided, including many based on recent subject-area literature. Data sets and computer code are available at a Web site devoted to this text." (T. Postelnicu, Zentralblatt MATH, Vol. 1028, 2003)

"This book grew out of notes prepared by the author for classes in categorical data analysis. The presentation is fresh and compelling to read. Regression ideas are used to motivate the modelling presented. The book focuses on applying methods to real problems; many of these will be novel to readers of statistics texts .... All chapters end with a section providing references to books or articles for the inquiring reader." (C.M. O'Brien, Short Book Reviews, Vol. 23 (3), 2003)



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author giving his/her effort to put every word into satisfaction arrangement in writing Analyzing Categorical Data (Springer Texts in Statistics) nevertheless doesn't forget the main stage, giving the reader the hottest along with based confirm resource details that maybe you can be considered one of it. This great information may drawn you into completely new stage of crucial imagining.

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