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Nota di contenuto	Cover; Title Page; Copyright Page; CONTENTS; Preface; Acknowledgments; 1 Basics of Hierarchical Log-linear Models; 1.1 Scaling: Which Variables Are Considered Categorical?; 1.2 Crossing Two or More Variables; 1.3 Goodman's Three Elementary Views of Log-linear Modeling; 1.4 Assumptions Made for Log-linear Modeling; 2 Effects in a Table; 2.1 The Null Model; 2.2 The Row Effects-Only Model; 2.3 The Column Effects-Only Model; 2.4 The Row- and Column-Effects Model; 2.5 Log-Linear Models; 3 Goodness-of-Fit; 3.1 Goodness-of-Fit I: Overall Fit Statistics; 3.1.1 Selecting between $\chi^2$ and $G^2$ ; 3.1.2 Degrees of Freedom; 3.2 Goodness-of-Fit II: $R^2$ Equivalents and Information Criteria; 3.2.1 $R^2$ Equivalents; 3.2.2 Information Criteria; 3.3 Goodness-of-Fit III: Null Hypotheses Concerning Parameters; 3.4 Goodness-of-fit IV: Residual Analysis; 3.4.1 Overall Goodness-of-Fit Measures and Residuals; 3.4.2 Other Residual Measures; 3.4.3 Comparing Residual Measures; 3.4.4 A Procedure to Identify Extreme Cells; 3.4.5 Distributions of Residuals; 3.5 The Relationship between Pearson's $\chi^2$ and Log-linear Modeling; 4 Hierarchical Log-linear Models and Odds Ratio Analysis; 6.1.2 Poisson Models; 6.1.3 GLM for Continuous Outcome Variables; 6.2 Design Matrices: Coding; 6.2.1 Dummy Coding; 6.2.2 Effect Coding; 6.2.3 Orthogonality of Vectors in Log-linear Design Matrices; 6.2.4

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7.4 Interpretation of Higher Order Interactions  
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9.2 Virtues of Nonhierarchical and Nonstandard Log-linear Models

#### Sommario/riassunto

"Over the past ten years, there have been many important advances in log-linear modeling, including the specification of new models, in particular non-standard models, and their relationships to methods such as Rasch modeling. While most literature on the topic is contained in volumes aimed at advanced statisticians, Applied Log-Linear Modeling presents the topic in an accessible style that is customized for applied researchers who utilize log-linear modeling in the social sciences. The book begins by providing readers with a foundation on the basics of log-linear modeling, introducing decomposing effects in cross-tabulations and goodness-of-fit tests. Popular hierarchical log-linear models are illustrated using empirical data examples, and odds ratio analysis is discussed as an interesting method of analysis of cross-tabulations. Next, readers are introduced to the design matrix approach to log-linear modeling, presenting various forms of coding (effects coding, dummy coding, Helmert contrasts etc.) and the characteristics of design matrices. The book goes on to explore non-hierarchical and nonstandard log-linear models, outlining ten nonstandard log-linear models (including nonstandard nested models, models with quantitative factors, logit models, and log-linear Rasch models) as well as special topics and applications. A brief discussion of sampling schemes is also provided along with a selection of useful methods of chi-square decomposition. Additional topics of coverage include models of marginal homogeneity, rater agreement, methods to test hypotheses about differences in associations across subgroup, the relationship between log-linear modeling to logistic regression, and reduced designs. Throughout the book, Computer Applications chapters feature SYSTAT, Lem, and R illustrations of the previous chapter's material, utilizing empirical data examples to demonstrate the relevance of the topics in modern research"--