STATISTICS FOR THE HELPING PROFESSIONS

FRANK P. BESAG
AND
PETER L. BESAG

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To H. Warren Button, SUNY at Buffalo: Friend, Mentor, and Colleague, who so many years ago made it clear that research, like teaching, is, and must be, a protagonistic and loving activity. —F.P.B.

To Charles Loewner, Stanford University, who brought the light of his spirit and his knowledge to those around him. —P.L.B.

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PROLOGUE

Statistics for the helping professions are different than for other fields. Not that the calculations are different or that even different procedures are used. Rather, the questions asked are different. Helping professionals deal in concrete situations that directly affect the lives of people, and not just any people, but people with whom we have to work on a daily basis. Our questions deal not only with scientific truth but also with practical reality and personal concerns.

What we have needed is a book that explains not only which statistical procedures will be of help in our decison making but also which procedures should not be used and why. Helping professionals are always asking "Why?" and "Why not?" and that is the way this text is designed.

This book, then, is an attempt not only to show the "how to" of statistics, but more importantly, to show the "why" and the "why not." It is a philosophical book more than an arithmetic book. Less time is spent on computations, which computers can perform, while more time is spent on the nonmechanical aspects of statistics; for example, logical constraints, thoughtfulness, and human concern.

The book is divided into six sections:

I. Philosophy, History, and Science, Chapters 1 and 2
II. Definitions, Dialectics, and More Definitions, Chapters 3 and 4
III. Descriptive Methods, Chapters 5 through 7
IV. Probables, Improbables, Common and Rare, Chapters 2 through 11
V. Parameter Estimation and Tests of Hypotheses, Chapters 12 through 14
VI. Common Statistical Procedures, Statistical Significance, and Helping Professions' Alternatives, Chapters 15 through 18

Before leaving this prologue, the authors acknowledge that this book would not have been possible without the aid and assistance of David Farr, Professor of Educational Psychology, SUNY-Buffalo; H. Warren Button, Professor, Foundations of Education, SUNY-Buffalo; Leonard Abrams,

Lockheed Corporation; Robert Mercer, The Aerospace Corporation; William Feyerherm, Richard Cummings, Ronald Podeschi, Stephen Nolte, Barbara Lee, and Maureen Wahl, and again Maureen Wahl of the University of Wisconsin-Milwaukee. They gave generously of their time to read the manuscript and make the comments, which were so necessary. Much of the wealth of this book comes from them. Any errors in the book lie with the authors.

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