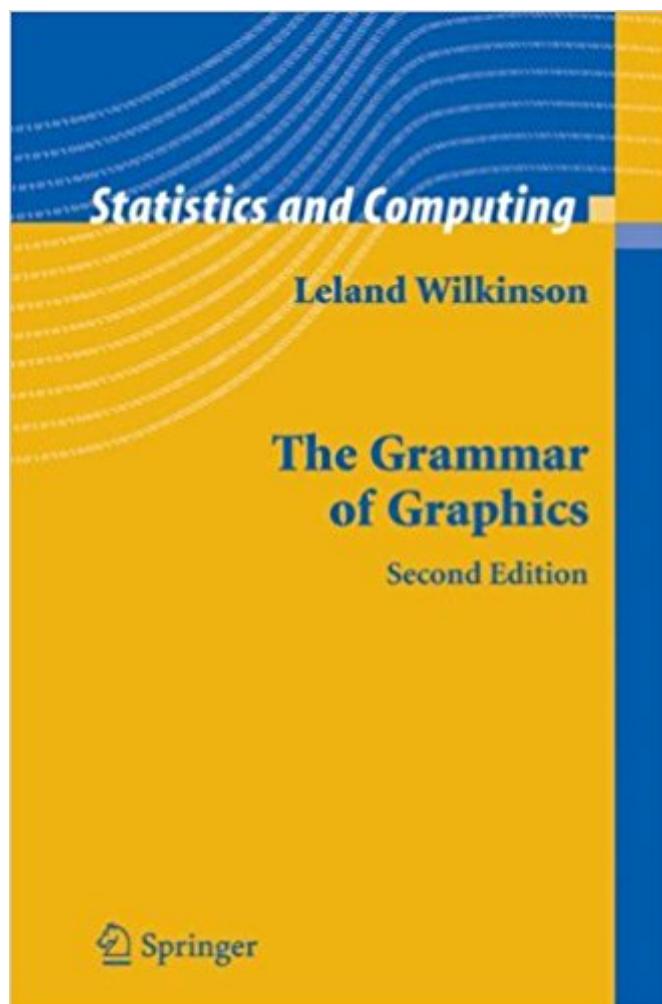The book was found

The Grammar Of Graphics (Statistics And Computing)

Synopsis

Presents a unique foundation for producing almost every quantitative graphic found in scientific journals, newspapers, statistical packages, and data visualization systems The new edition features six new chapters and has undergone substantial revision. The first edition has sold more than 2200 copies. Four color throughout.

Book Information

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Customer Reviews

From the reviews of the second edition: "This fascinating book deconstructs the process of producing graphics and in doing so raises many fascinating questions on the nature and representation of information...This second edition is almost twice the size of the original, with six new chapters and substantial revisions." Short Book Reviews of the International Statistical Institute,Â December 2005 "When the first edidtion of this book appeared in 2000 it wasÂ much praised. I called it a tour de force of the highest order. (Wainer, 2001), Edward Wegman (2000) argued that it was destined to become a classic. Now, six years later this very fine book has been much improved." Howard Wainer for Psychometrika "...The second edition is an impressive expansion beyond a quite remarkable first edition. The text remains dense and even more encyclopedic, but it is a pleasure to read, whether a novice or an expert in graphics...this book is a bargain...The second edition is a must-have volume for anyone interested in graphics." Thomas E. Bradstreet for the Journal of the American Statistical Association, December 2006 "I find myself still

thinking about the book and its ideas, several weeks after I finished reading it. I love that kind of book." Mark Bailey for Techometrics, Vol. 49, No. 1, February 2007 "Warts and all, The Grammar of Graphics is a richlyÂ rewarding work, an outstanding achievement by one of the leaders of statistical graphics. Seek it out."Â Â Nicholas J. Cox for the Journal of Statistical Software, January 2007 "The second edition is a quite fascinating book as well, and it comes with many color graphics. Anyone working in this field can see how many hours the author (plus coworkers) has spent on such a volume. â | Demands for good graphics are high and this book will help to wetten the appetite to create future computer packages that will meet this demand. An occasional reader will get insights into a modern world of computing â | ." (Wolfgang Polasek, Statistical Papers, Vol. 48, 2007)

This book was written for statisticians, computer scientists, geographers, researchers, and others interested in visualizing data. It presents a unique foundation for producing almost every quantitative graphic found in scientific journals, newspapers, statistical packages, and data visualization systems. While the tangible results of this work have been several visualization software libraries, this book focuses on the deep structures involved in producing quantitative graphics from data. What are the rules that underlie the production of pie charts, bar charts, scatterplots, function plots, maps, mosaics, and radar charts? Those less interested in the theoretical and mathematical foundations can still get a sense of the richness and structure of the system by examining the numerous and often unique color graphics it can produce. The second edition is almost twice the size of the original, with six new chapters and substantial revision. Much of the added material makes this book suitable for survey courses in visualization and statistical graphics. From reviews of the first edition: "Destined to become a landmark in statistical graphics, this book provides a formal description of graphics, particularly static graphics, playing much the same role for graphics as probability theory played for statistics." Journal of the American Statistical Association "Wilkinsonâ ™s careful scholarship shows around every corner. This is a tour de force of the highest order." Psychometrika "All geography and map libraries should add this book to their collections; the serious scholar of quantitative data graphics will place this book on the same shelf with those by Edward Tufte, and volumes by Cleveland, Bertin, Monmonier, MacEachren, among others, and continue the unending task of proselytizing for the best in statistical data presentation by example and through scholarship like that of Leland Wilkinson." Cartographic Perspectives "In summary, this is certainly a remarkable book and a new ambitious step for the development and application of statistical graphics." Computational Statistics and Data Analysis About the author:

Leland Wilkinson is Senior VP, SPSS Inc. and Adjunct Professor of Statistics at Northwestern University. He is also affiliated with the Computer Science department at The University of Illinois at Chicago. He wrote the SYSTAT statistical package and founded SYSTAT Inc. in 1984. Wilkinson joined SPSS in a 1994 acquisition and now works on research and development of visual analytics and statistics. He is a Fellow of the ASA. In addition to journal articles and the original SYSTAT computer program and manuals, Wilkinson is the author (with Grant Blank and Chris Gruber) of Desktop Data Analysis with SYSTAT. Â Â

I boought this book because I am getting increasingly interested in data visualization. I've played around with ggplot2, and went to Edward Tufte's seminars, and eventually found my way to this book.As the other reviewers mention, this is NOT a how-to book. It's a much deeper, fundamnetal treatment of how data and graphics connect, and how we represent them. So, it's not as much a "useful" book, except insofar as it changes the way you put together your next graph.This book crystalized a lot of concepts I already understood, though only vaguely and intuitively. Like, a legend and an an axis are really the same thing, and that a stacked bar and a pie chart are identical except for the coordinate system used.It's quite a dense slog to read this book, so I recommend you pick it up and read a few pages here and there, and follow through on the issues that catch your interest.It's not for everyone, but I suspect it could make anyone communicate better through graphs.

This is a standard text. Excellent

This is an unusual book. It should be of interest to those who have to display data in graphic form, but it is not a typical book of that kind. A subset of those who enjoy Tufte (The Visual Display of Quantitative Information, 2nd edition) or Cleveland (The Elements of Graphing Data,Visualizing Data) will also enjoy this. This book does not attempt to coach you on how to make good graphics, but if that is your goal it attacks a related, important aspect: rules that connect the data and the graphic. Obviously then, it might be of great interest to computer scientists and theoreticians. The grammar described in the book is also object oriented in design which helps to make the code quite elegant. In my instance, I am a "power-user" of the SPSS statistics software package, and the ideas in this book have been partially implemented in SPSS since around 2005 (Version 14.0). This is absolutely not a user's guide or a how-to manual for using SPSS. If, however, you already have a working knowledge of the latest SPSS graphics and its related programming language then this

book will put that whole approach in context, and massively increase your understanding of the technology "behind the scenes". Many technical audiences might benefit regardless of their using or not using SPSS Statistics.Unlike Tufte, you will find no hand drawn graphics, or illustrations crafted in Adobe illustrator - they can be both beautiful and effective but such graphics would not belong in this book. All of the graphics here are created using a computer and a grammatical description and arise directly out of a data set. Making a graphic elegant and clear is the work of the designer, the purpose of the grammar is to insure that the graphic is tied to data, and to separate graphics that make sense from graphics that are non-sense. To paraphrase the book, graphics that are grammatically correct may or may not be ugly, but can never be meaningless.In a brilliant final chapter the author explains that the famous Minard's Napoleon's march chart (see Tufte) has some incorrect data, and that Minard took some liberties with the data. The conclusion: a beautifully designed and crafted graphic does not assure 100% accuracy. Whereas to quote the author, "a graphic without a concept of a variable is not a statistical graphic". So, if you make the variables available (in a data set) to your audience you make it all that much harder to mislead with graphics. Although Tufte's books have a VERY different style, avoiding lying with graphics is an important, recurring theme.So if you are technically inclined, and especially if you are an SPSS user, seek out this book. It is a great companion to the literature on chart aesthetics. Before you dive in, note that this book is several hundred pages long. SPSS user's should look over the "GPL Reference" first to determine if this is a topic you are willing to dedicate time to.

Most of what other reviewers say has factual accuracy. But first I must say that the "subset" of people who enjoy CLEVELAND (WILLIAM S.)'s works will enjoy the Grammar of Graphics book.Sorry, but people who enjoy TUFTE are not potential candidates for this book because Tufte has way too little to say about graphics (despite his books, lectures, which ultimately are about $$$ for Tufte). Tufte's main thing is his admonition "don't do chart junk" followed by his second favorite thing: join with him and disparage the "cognitive style" of PowerPoint. The former is true, but is not terribly subtle. As for the second, the tool of PowerPoint need not be used in the boring "cognitive style" with bullets and "branding". I for one have made plenty of PowerPoint presentations totally unlike these.The summary of "subset"s of folks: William S. Cleveland followers: yes, you'll love this book; those who mistake Tufte for the ultimate graphical guru probably will find this book "too much". Note that the author of the Grammar of Graphics book literally says how Cleveland wins the citations contest in his book. No surprise, because Cleveland has made many creative developments for statistical graphics and has also studied graphical perception. (As just ONE of a

myriad of examples: residuals are very badly "mis-read" by our perception when there is a steeply sloped curve; residual in y- direction may be very large, but we see only a very much shorter perpendicular distance.)(Finally, in fairness, Tufte has had two good ideas -- but only two compared to Cleveland's several dozen. Tufte's tics-at-data (for x- and y- separate marginal distributions [essentially 1-D scatterplots made by tics]) and Tufte's white-grid-run-thru-of-bar-plots are his two contributions of any substance.)OK. Thanks for bearing with my review which, thus far, has covered the Cleveland and Tufte subsets of readers. Time for the Grammar of Graphics book character itself --without context of being a Cleveland reader or a Tufte Reader.If you have not experienced reading Cleveland's books (Elements of Graphing Data and/or Visualizing Data), I admit that this book will be more difficult for you.The above point aside, you should know, like other reviewers said, that this book is not a how-to. Nor is it like Cleveland's books -- chock full of guideline principles. There are plenty of principles in the book, but with its size, the CONCENTRATION of principles to pages of text is low.THE BEST PERSPECTIVE ON THIS BOOK: The best perspective is to not sweat consuming every little detail. Especially skip all the formalisms (even though this is ostensibly the topic of the book!) Instead, just enjoy. This is one book definitely to apply your highlighter to. Forget the formalisms completely. Concentrate on the important points made throughout -- but you'll need to highlight them. If you come to the book from Cleveland (William S.) it will be easier for you to spot the important points. Just don't think you have to learn details and formalisms.One tip -- Cleveland reader or not -- whenever there is any text suggesting a perspective, that text may well be calling for your highlighter -- not always, but often.Go for principles, perspectives and ignore formalisms. You'll be more at ease and enjoy the book.If you think you might do both William S. Cleveland's books AND the Grammar of Graphics book -- no question, do Cleveland first (Elements of Graphing Data [more basic] and Visualizing Data [more advanced statistical questions addressed graphically]).P.S. I don't recall if other reviewers mentioned it, but Wilkinson (author of Grammar of Graphics) is creator of the SYSTAT statistical software package.

This book is closely related with the upcoming new book "ggplot2" by Hadley Wickham. "ggplot2" is an R package for producing elegant graphics based on the Grammar of Graphics.

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