Tufte E R. *The visual display of quantitative information.* Cheshire, CT:
Graphics Press, 1983. 197 p.
[Princeton University, NJ, and Yale University, New Haven, CT]

For statistical displays, the book analyzes excellence (mainly scientific work and cartography) and failure (mainly news graphics) in the two centuries since William Playfair developed or improved upon many of the standard data graphs. A practical theory for generating new designs is provided, based on principles for maximizing the data density and the multivariate and comparative quality of statistical displays. Most of all, the book is a celebration of data graphics. [The *SSCI*®, the *SCI*®, and the *A&HCI*® indicate that this book has been cited in more than 265 publications.]

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Statistical Graphics and Self-Publishing

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In 1975, Donald Stokes, dean of Princeton's Woodrow Wilson School, asked me to teach statistics to a dozen professional journalists who were visiting that year to learn some economics. I prepared an annotated collection of readings, with a long section on statistical graphics. The literature here was thin, too often grimly devoted to explaining the use of the ruling pen and to promulgating wrong-headed "graphic standards" indifferent to quantitative reasoning. Soon, I started writing up some ideas about my growing collection of graphics. Then John W. Tukey, the phenomenal Princeton statistician, suggested that we give a series of joint seminars. This concentrated my mind, because I had to talk for two hours every other week to the students in front of John Tukey! The seminar proved reassuring: I had something to say. Since the mid-1960s, Tukey had opened up the field, as his brilliant technical contributions made it clear that the study of statistical graphics was intellectually respectable—not just about pie charts and ruling pens.[1]
In 1977, I moved to Yale. In 1978, my book on political economy (also a *Citation Classic*) appeared.[2] By late 1982, *Visual Display* was ready. A publisher was interested but planned to print only 2,000 copies, priced at $65 per copy ($93 in 1992 dollars). Another problem was that I also wanted to control the design to make the book *self-exemplifying*—that is, the book itself would reflect the intellectual principles advanced in the book. Publishers seemed appalled at the prospect that an author might govern design.

Consequently I investigated self-publishing. I had done four previous books with real publishers and had an author's view of how to do it better. What self-publishing required was a first-rate book designer, some money, and a large garage. I found Howard Gralla, who had designed many museum catalogs with great care and craft. He was willing to work closely with this difficult author who was filled with all sorts of opinions about design. We spent the summer in his studio laying out the book, page by page. We were able to integrate graphics right into the text, sometimes into the middle of a sentence, eliminating the usual separation of text and image—one of the ideas *Visual Display* advanced. For financing, I took out another mortgage on my house (this also concentrated my mind, in part because interest rates were 18 percent at the time). The bank officer said this was the second most unusual loan that she had ever made; first place belonged to a loan to a circus to buy an elephant.

My view on self-publishing was to go all out—to make the best and most elegant and wonderful book possible, without compromise. Otherwise, why do it? If I wanted to mess it up, I could have gone to a real publisher. And, I also wanted a reasonable price so that the book would be widely accessible. It all worked out, dreamlike; there are now 140,000 copies in print. Most of all, I am delighted by the generous scholarly response to the book.

Seven years later, in 1990, Graphics Press produced its second book, my *Envisioning Information*—with extremely complicated color work (one piece of paper went through 23 different printing units, something that no rational publisher would ever do).[3] Precise control of the words and images on the page, maximizing resolution of printed images, and pushing the technology are all part of the intellectual expression of my ideas about information design. Making the book is part of the scholarship. Thus, Graphics Press is forever a single-author publisher.

My current project is a book entitled *Visual Explanations.* I hope to finish it before the millennium.

1. Tukey J W. *The collected works of John W. Tukey. Volume V. Graphics: 1965-1985.* (Cleveland W S, ed.) Pacific Grove, CA: Wadsworth & Brooks/Cole, 1988. 436 p.
2. Tufte E R. *Political control of the economy.* Princeton, NJ: Princeton University Press, 1978. 168 p. (Cited 470 times.)
   [See also: Tufte E R. Citation Classic. *Current Contents/Social & Behavioral Sciences* 20(6):20, 8 February 1988, and *Current Contents/Arts & Humanities* 10(6):20, 8 February 1988.]
3. ─────. *Envisioning information.* Cheshire, CT: Graphics Press, 1990. 126 p. (Cited 60 times.)