

Barbara Gastel

Visual Strategies is a stunning and thought-provoking book. The work of a visual-communication scholar, a basic medical scientist, and a graphic designer, it contains much to engage science editors and others wanting to facilitate effective communication of research. The book does not, however, provide the basic guidance that one might expect from the subtitle A Practical Guide to Graphics for Scientists & Engineers.

The book has four main sections: an introductory chapter that provides a framework for the remaining material, a set of chapters that analyze graphics according to their purposes, a chapter that presents case studies, and a chapter on interactive graphics. Throughout, striking examples of scientific graphics illustrate the text.

In the introductory chapter, the authors state that before developing a graphic, one should ask three questions:

- Is the graphic explanatory (intended to convey a point or communicate patterns or concepts) or exploratory (intended to engage the viewer in discovery)?
- How will the graphic be used (for example, in a journal article, a poster presentation, or a grant proposal)?
- What is the first thing that the viewer should see?

Examples later in the book help show how the answers to such questions can guide one in designing or revising a scientific graphic.

The authors then introduce five concepts or tools from graphic design that one can use to “enhance the clarity . . . of science graphics”. These are compose (“organize the elements and establish their relationships”), abstract (“define and represent the essential qualities and/or meaning of the material”), color (use colors to attract attention, label, show relationships, or indicate a scale of measure), layer (add layers to show relationships), and refine (“edit and simplify”). Next come examples, mainly from journal articles, showing how each concept or tool can help graphics to communicate.

The next three chapters focus on three common functions of scientific graphics: to show form and structure, to depict processes, and to compare and contrast. These chapters present mainly “before” and “after” versions of graphics that were revised. For each pair, the authors address questions about the audience, intended use, and goal of the graphic; provide suggestions for refining it; and identify which of the five tools were used to improve it.

In the chapter that follows, “Case Studies”, researchers chronicle the evolution of graphics that they developed. Some of the case studies show how developing and refining graphics can increase researchers’ understanding of their own subject matter—much as writing and revising the text of a paper can. An interesting challenge discussed in one case study regarded conveying information to an audience whose members were in fields that had different conventions of visual presentation. In this chapter and elsewhere, some of the discussion is relatively dense and technical.

The final chapter regards interactive graphics—which, the authors indicate, scientific journals and other media are using increasingly. The authors emphasize that the principles of preparing static graphics also apply to interactive ones. Links to the interactive graphics discussed in the chapter appear in the Web site of the book (www.visual-strategies.org).

Visual Strategies has some distinctive features. The cover—of finely ribbed plastic and constructed so that the image appears to change colors when viewed at different angles—heralds a book that will be visually engaging. Thumb tabs of different colors indicate the sections of the book. A conversation between the authors and the book designer precedes the main text. Near the end, the book includes what it terms a “visual index”: it displays miniature versions of the graphics shown in each chapter, cites their sources, and indicates the pages on which they appear.

The graphics, most of which are colored, come largely from high-profile scientific and medical journals. Some, however, are from books, presentations, or Web sites. Among the types of graphics shown are diagrams of various kinds and visuals based on outputs of imaging technologies. The graphics tend to be complex and impressive.

This book is not one in which to seek, for instance, basic examples of well-designed line graphs, bar graphs, and flow charts. And, despite its subtitle, the book would not guide new researchers in designing, producing, and submitting simple graphics of types common in journals; such readers are better served by the graphics chapters in some scientific-writing textbooks. But for readers who

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Book Reviews


Robert Brown

The latest addition to the series of Chicago Guides to Writing, Editing, and Publishing from the University of Chicago Press is called What Editors Want: An Author’s Guide to Scientific Journal Publishing. Although there is much of merit in the book, I must begin this review with a grouse.

The only unfortunate thing about the book is its title. You might expect to find What Editors Want in the self-help section or romance section if only “men” or “vampires” were substituted for “editors”. But whatever dubious associations the phrasing may trigger, the real problem is the implicit promise of it. Promising to expose what all editors are looking for is just plain misleading and false advertising.

In fact, the authors come right out and contradict their title on the second page: “we must stress here that Editors, and their opinions on how things should be done, are as varied as the journals they work on, a reality that became very clear to us as we heard from editorial colleagues while writing this book.” In other words, there is nothing that all editors want because editors are all looking for different things. The fault of the title is that it purports to know what the category of editors wants, but the truth is that few blanket statements can be attributed to the members of this category. An honest title for the book would be How to Find Out What an Editor Wants. Although not as succinct or as catchy, this alternative title would be far more accurate. The virtue and value of the book are that it explains why it behooves authors to learn all they can about a journal before submitting to it; the book then goes on to explain what information authors may want to seek out and where that information may be found.

Something in the sentence quoted above may look like a typo: the capitalization of “Editors”. This is not a typo; it is the idiosyncratic choice made in the book. Why, one may ask, is “Editor” capitalized when “author” and “publisher” are not? I could neither find nor divine a reason for it. I was left wondering whether the misleading title and gratuitous majuscule may have been choices that an editor imposed on otherwise level-headed and plain-dealing authors. Who knows? But if that were the case, then it partly fulfills the promise of the title with an ironic twist: what editors want is not always what readers want.

If other readers can get past or forgive the unfortunate title, as I cannot, what does the book have to offer them? Well, for one, a decent subtitle. The book is a bona fide author’s guide. As I said above, the book has little to say about what editors want, because few such generalizations can be made, but what the book tries earnestly to do is equip readers with a set of questions and a list of resources that will enable them to research an answer to the question of wants for themselves about any particular publication that interests them. The folly is for authors to think that they need not concern themselves with that question. And the antidote to that folly is often simply to read the directions.

An example of one bit of advice in the book that I liked is what the authors have to say about responding to peer reviews in a revised resubmission. The authors urge researchers to compose their resubmission cover letter as a point-by-point address of reviewer comments wherein each comment is followed by a response written in contrasting type. Such a presentation makes the cover letter easy for reviewers and editors to read and assess, of course, but the authors further urge researchers to let the point-by-point format be a tool useful to them in the act of revision. When the time comes to begin revising, the authors recommend ordering reviewer comments either according to priority or according to sequence, that is, the sequence of the researcher’s paper. Then, as researchers make their revisions, they write a response to each comment as they address it in revision. Building the point-by-point document in this fashion makes the reviewer comments function like a rubric, prompt, and checklist all in one. And when the revision is complete, the researcher will have already composed the cover letter as a consequence of revising.

But, if researchers find themselves in disagreement with any of the reviewers’ comments, the authors suggest, as one possible solution, building the disagreement into the paper as a rhetorical strategy. The researcher can write the alternative interpretation into the paper as one point of view and then follow it with a refutation. The result is a rebuttal that acknowledges a reviewer’s interpretation while honing the researcher’s own interpretation against it.

The authors also do a good job of informing readers about the realities of contemporary scientific journal publishing. They provide overviews of the mechanism and ethics of peer review, copyright and permission, digitization of workflows and content, commercialization and economics of STM publication, calculation of journal impact factors, and the open-access movement.

Is it this information about the realities of STM publishing that may make this book, which is really an author’s guide, a

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Inside each of us, at least some of the time, the part of us that feels (the emotional side) seems to be at war with the part of us that thinks (the rational side). The two sides are in constant competition for control. If you’ve ever wondered why New Year’s resolutions get broken almost as fast as they’re made or had that extra cookie when you really shouldn’t or favored watching a movie or show instead of getting a pressing report done, you understand the constant conflict between our emotional and rational sides.

**SWITCH: How To Change Things When Change Is Hard**, by Dan and Chip Heath, emerged from the Heath brothers’ questioning why lasting change is so hard to make. Full of amusing illustrative anecdotes and real-life narratives of people who have been able to master the three main behaviors that lead to change—directing the rational mind (the rider), motivating the emotional mind (the elephant), and creating a supporting environment for change to occur (the path)—this book offers ideas on ways to make the process of change easier to elicit—not easy, only easier.

This book is definitely an enjoyable and inspirational read for anyone even only remotely curious about change. Between the numerous hilarious stories and interesting research studies on change management, such as Roy Baumeister’s chocolate-chip cookie study and the 1%-or-less milk campaign, prepare to be entertained and amused, all while learning how to effect lasting change on any scale or level.

**Wura Jacobs**

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have a more advanced or more conceptual interest in graphic communication in science, the book can be a visual and intellectual treat. Science editors might enjoy noting the parallels between revising text to communicate more effectively and revising a graphic to do so. On a more practical level, learning from the book can help editors to guide authors in improving graphics.

Clearly the product of much long work by the authors, designer, and other contributors, this book merits more than a single reading. I look forward to viewing some of the images more carefully and reflecting more deeply on parts of the text. And I hope to use concepts from the book in my editing, peer reviewing, writing, and teaching.

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worthwhile read for editors as well? I came to the book as an editor by trade, and I found that the discussion of STM publishing realities seeded my mind with some ways of explaining the workings of publishing to the authors with whom I communicate in my full-time and freelance work.

Finally, the book might help publishers to revamp their author submission sites or instructions. Because the book puts readers in the mindset of an author coming innocently to scientific journal publishing, it may suggest to a publisher why authors are making regular submission mistakes that otherwise could be curbed with a retooled author interface or refined set of instructions.