

edited by Susan M Shirley

## Subtleties of Scientific Style



Matthew Stevens

SUBTLETIES OF SCIENTIFIC STYLE.  
MATTHEW STEVENS. THORNLEIGH,  
NEW SOUTH WALES (AUSTRALIA):  
SCENCESCAPE EDITING; 2007. 112 PAGES.  
PAPERBACK \$12.00. ISBN-13: 0-9578877-  
2-8.

Matthew Stevens's *Subtleties of Scientific Style* is a welcome addition to my collection of books on scientific writing. Stevens wrote this book for hands-on editors to address shortcomings in the many books that already deal with scientific writing and editing. Although he does cover some material that appears in other books, he also covers points that are not treated or are treated lightly in most other books.

In the section of the book called "Substantive Editing", Stevens urges editors to seek an "editorial gestalt", a comprehension of the work that ranges from examination of meanings of words and sentences to examination of the authors' overall message. To reach this gestalt, Stevens recommends five steps that an editor should follow. The first step is to check that the document is complete. The second is to check spelling. In the third step, the editor should read the document for meaning. Is language precise and concise? Is punctuation correct? In the fourth step, the editor checks for consistency between text and tables or figures. Do figures and tables have the information that the text says they do? Do they contain important features that are not mentioned in the text? In the fifth step, the editor checks for overall meaning. By this stage, Stevens asserts, the editor should have the whole story in mind and should be able to judge every sentence and paragraph as to how clearly and accurately they tell the story. He includes a useful list of points to check.

In practice, the five steps of Stevens's editorial gestalt are often divided among three groups of people: reviewers, scientific editors (the often uncompensated members of editorial boards), and technical editors. At least for journals I have worked with, reviewers are the first people to look closely at a manuscript. Their charge is to judge the quality and novelty of the work rather than the details of how the story is presented. It is difficult to separate the two aspects; most reviewers will offer suggestions to clarify text, tables, and figures, but reviewers are not qualified editors. The next person to look at the manuscript is the scientific editor, who is also charged

with assessing the scientific merit of the work. A technical editor, who handles steps 1 and 2 in Stevens's editorial gestalt, sees the manuscript only after it has been accepted. The editorial goals that Stevens outlines are not always attained, judging by papers I see in print and discussions in journal clubs by faculty and graduate students, but they are nonetheless worthy, and all writers and editors should strive to achieve them.

The bulk of the book contains practical suggestions for editors. Like many other books on scientific writing, this one has a list of common errors. There is also a section on errors of reasoning. A particularly entertaining and informative section is that on "Times Smaller?". Stevens argues persuasively that many statements about "times larger" or "times smaller" are ambiguous at best and sometimes absurdly wrong. An example is the statement, "The fibre is 100 times smaller than the width of a human hair." Steven argues that nothing can be more than 1 times smaller than another. I sent this sentence to several colleagues in my department. One respondent thought the sentence was okay. Five others agreed that such sentences are confusing, but all agreed that if a human hair is about 100  $\mu\text{m}$  in diameter, the fiber would be 1  $\mu\text{m}$  in diameter. Stevens asserts that the fiber is 10,000  $\mu\text{m}$  smaller than 100  $\mu\text{m}$ .

The passive voice is thoroughly entrenched in scientific writing. Numerous books on scientific writing argue that the passive voice makes writing dull and adds unnecessary length. Stevens provides examples of the appropriate use of the passive voice but argues that writers should use the active voice much more in their papers, including the description of materials and methods. A few pages later, Stevens shows how use of the active voice helps to keep the subject and verb closer together and, thus, helps the reader to understand what happened.

The book has a useful section on graphics, with a detailed explanation of why some graphics software packages produce images that are unsuitable for publication. There are links to Web sites of commercial

publishers that give detailed instructions on preparing electronic graphics.

Almost one-fourth of the book is devoted to “tricky or misused terms”. Among these are some that many other books on scientific writing deal with but also several not commonly dealt with, such as *respectively*, *to be*, *watershed*, and *with*. Stevens explains the difference between *sex* (a biologic term) and *gender* (a social or grammatical term). His recommendation for use of numerals in running text follows that in the 7th edition of *Scientific Style and Format*, and he provides a helpful discussion for deciding when to use *one* rather than *1*.

There are excellent sections on parallel construction, use of plain English, and position of adverbs. Stevens points out that we are often careless about placement of adverbs in speech. We can get away with it because voice inflection can convey the correct meaning or because we can backtrack and clarify. However, we cannot inflect or backtrack in writing, so we need to get it right the first time.

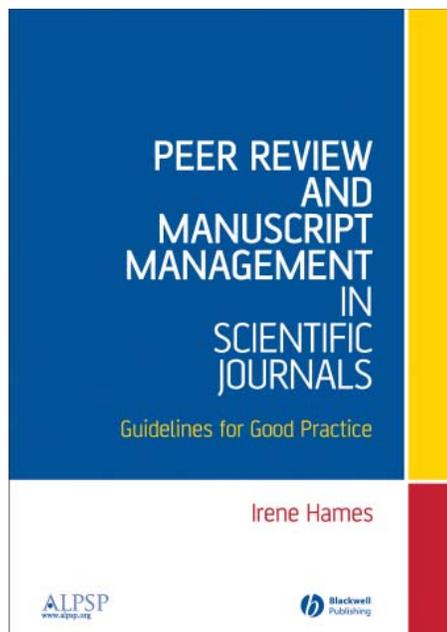
The book describes how to add some stock editorial queries into the AutoCorrect feature of Microsoft Word, which can then be accessed by typing a couple of letters.

Appendix 1 describes building a macro in MS Word to make sure that all references in a document are cited and all citations have a reference. Appendix 2 consists of simple substitutes for wordy phrases, and Appendix 3 is a comparison of British and US spellings of words and word endings. Appendixes 4 and 5 deal with Unicode values and character charts for Mac and Windows operating systems.

This book should be a useful addition to any editor's collection of references. Although Stevens wrote this book for editors, it should be equally useful for authors. Except for a few points that are aimed specifically at editors, authors should find most of the book helpful. If authors take the advice offered by Stevens, it will lessen the labor of editors.

**Gregory Shaner**

GREGORY SHANER is a recently retired professor of botany and plant pathology at Purdue University. He has served as editor-in-chief for two journals and as an editor for one of the Annual Reviews. He teaches a course in scientific writing for graduate students.



PEER REVIEW AND MANUSCRIPT MANAGEMENT IN SCIENTIFIC JOURNALS: GUIDELINES FOR GOOD PRACTICE. IRENE HAMES. MALDEN, MA: BLACKWELL PUBLISHING; 2007. 293 PAGES. PAPERBACK \$39.95. ISBN-10: 1-4051-3159-4; ISBN-13: 978-1-4051-3159-9.

In *Peer Review and Manuscript Management in Scientific Journals: Guidelines for Good Practice*, Irene Hames achieves her goal of “providing practical guidance on all aspects of peer review”. This well-crafted book is an excellent and comprehensive resource for today's shepherds of peer review in biomedical publications.

Written for editors and publishers, the book is structured according to the stages of the peer-review process, and it includes an appendix that offers practical examples of checklists, forms, and useful Web sites and other information. The examples are current and well chosen. The ethical issues involved in peer review are discussed, including how to handle conflict of interest and scientific misconduct when they are discovered. Hames boils down the tenets of peer review into 14 “Golden Rules”, which

appear alongside supporting text throughout the book and are then presented as a group in the appendix.

The set of Golden Rules is one example of the use of “informational handles” that Hames integrates for the reader's use throughout the book. The handles synthesize important bits of information for extraction with any reading style—cover to cover, targeted chapters, or searching for a particular topic. The “peer review for dummies” approach to the structure of the book is effective. I admire Hames's operating assumption that all is conquerable through effective organization, which I also believe.

The peer-review process in journal publishing is a subject of periodic debate. Issues of speed, bias, and rigor are important topics that are fully addressed in Hames's book. She does not focus on the occasional spec-

tacular failures of peer review but rather lays out clearly the principles and processes involved in a system of peer review that result in a high-quality system and reliable routine. The derivatives of this routine will provide the documentation and answers needed in instances of peer-review challenges.

If I had the opportunity to expand Hames's book, it would be in the subject of online peer review. She has a short chapter about moving from a paper-based system to an online one. Specific information is given that will be helpful to those contemplating or making this transition, which I believe is inevitable for all. But having worked in peer review both before and after the advent of office computers (never mind fully mature manuscript-trafficking systems), I know that some of the small decisions involved in online peer review do not come up in a paper-based system. Should reviewers be blind copied on decision e-mails? Should a senior reviewer be allowed to delegate access rights to a junior colleague? What is

the best searching method for obtaining a desired reviewer's e-mail address?

The essential collateral of peer review is trust, and that trust is built from a good peer-review system. Hames and the Association of Learned and Professional Society Publishers, which published this book in association with Blackwell Publishing, are commended for providing this reference. Hames offers the advice and guidance needed by editors and publishers engaged in the business of biomedical journal publishing.

I encourage those involved in peer review to get this book. And I encourage the publishers to consider an online version of the book in its next edition.

**Deb Whippen**

DEB WHIPPEN is vice president of Editorial Rx, Inc, which provides publication support (including peer-review management), publishing services, continuing medical education development, and medical writing and editing services.

## Book Note

**BLINK: THE POWER OF THINKING WITHOUT THINKING. MALCOLM GLADWELL. NEW YORK: BACK BAY BOOKS; 2007. 296 PAGES. PAPERBACK \$15.99. ISBN-13: 978-0-316-01066-5.**

*Blink: The Power of Thinking Without Thinking* is a collection of true stories about how humans process information quickly and subconsciously. The examples are taken from the fields of medicine, the military, music, psychology, politics, sports, law enforcement, and human relations. Gladwell calls "thinking without thinking" rapid cognition, not intuition, which he believes has an emotional component. Scientists are trained to analyze large quantities of data before drawing a conclusion, but Gladwell's examples of "thin slicing", "the ability of our unconscious to find patterns in situations and behavior based on very narrow slices of experience", explore how we use small amounts of data to draw conclusions. Too much information is often overwhelming and distracting. But thin slicing and rapid cognition can be sources of prejudice and

discrimination, and rapid cognition can result in biased or even catastrophic decisions. How good our snap decisions are depends on experience, training, and subtle cues from our environment. Gladwell presents situations that, on the surface, appear chaotic or random. In one example, sports analysts attribute the rapid-fire moves made by basketball players during a game to their "court sense". But Gladwell explains that the players operate under a defined set of rules, have specific roles on the court, and practice together for many hours. Their experience and training enable them to react without much conscious thought, with successful results. The stories in *Blink* are entertaining and thought provoking, but don't look to this book for detailed scientific explanations of how the subconscious thought process works. The book left me wanting more information. Extrapolating from Gladwell's lexicon, that might make me a "thick slicer".

**Susan M Shirley**

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