

***Scientific writing and graphics* Winter 2019**
ESS/ATMS 519, Ocean 518

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Schedule:

- January 8 *Basic writing skills*
Gopen & Swan (1990); Orwell (1946); McPhee (2013)
- January 15 *What's wrong with how scientists write*
Maddox (1986, 1990); Gregory (1992); Avery (1996); Camba (2000);
Knight (2003); Powell (2012);
Montgomery, Chapter 1; Greene, Chapter 1.
Stylistic disagreements (editorials from *The Economist*)
- January 22 *How the mind reads.* McIntyre (1997)
Assignment for next week – write abstract for a conference or journal
article and exchange with a partner.
- January 29 (1) *Student critiques* of each other's abstracts
(2) *Principles of scientific writing*
Booth, Chapter 1; McDonnell (2017)
- February 5 *Principles of scientific writing*
Greene, Chapters 2-11; Montgomery, Chapters 2-5
Assignment for next week – make a story-board for a paper and share with
a partner.
- February 12 *Student discussion* of each other's paper story-board
- February 19 *Graphs.* Cleveland, Chapters 1-2; Cleveland & McGill (1985).
Borland & Taylor (2007) on color.
Assignment for next week – make one or more figures for a journal article,
and one or more figures for a powerpoint presentation, and share
both with a class partner.
- February 26 *Graphs. Student critiques* of each other's journal figures
- March 5 *Graphs. Student critiques* of each other's powerpoint slides
- March 12 *Authorship and acknowledgement, and other ethical matters*
Several letters and editorials from *Nature*
- March 21 (Thursday, final exam period). *Proposals.* Book by Chapin (2004)

Books:

General writing

Pinker, S., 2014: *The Sense of Style*. Viking, 359 pp.

Strunk, W., Jr., and E.B. White, 1959: *The Elements of Style*. Macmillan, 92 pp.

Scientific writing

Greene, A.E., 2013: *Writing Science in Plain English*. Univ. Chicago Press, 124 pp.

Montgomery, S.L., 2003: *The Chicago Guide to Communicating Science*, Univ. Chicago Press, 228 pp. Second edition 2017, 336 pp.

Booth, V., 1993: *Communicating in Science*. Second Edition, Cambridge Univ. Press, 78 pp.

Alley, M., 1996: *The Craft of Scientific Writing*. Third Edition, Springer, 292 pp.

Schultz, D.M., 2009: *Eloquent Science*. American Meteorological Society, 412 pp.

Graphs

Cleveland, W.S., 1994: *The Elements of Graphing Data*. Revised Edition, AT&T, 297 pp.

Tufte, E.R., 1983: *The Visual Display of Quantitative Information*. Graphics Press, 197 pp.

Proposals

Chapin, P.G., 2004: *Research Projects and Research Proposals*. Cambridge Univ. Press.

Grammar and usage

Pinker, S., 2014: *Telling right from wrong*. Chapter 6 of *The Sense of Style*.

Fowler, H.W., 1965: *Modern English Usage*. Oxford Univ. Press., 725 pp.

Cochrane, J., 2004: *Between You and I: A little book of bad English*. Sourcebooks Pub.

Short articles assigned:

for Week 1, October 3

Gopen, G.D., and J.A. Swan, 1990: The science of scientific writing. *American Scientist*, 78, 550-558.

Orwell, G., 1946: Politics and the English language. *Horizon*, April 1946.

McPhee, J., 2013: Draft No. 4. *New Yorker*, 29 April 2013, 32-38.

for Week 2, October 10

Maddox, J., 1986: What is the scientific literature? *Nature*, 322, 681.

Maddox, J., 1990: Does the literature deserve the name? *Nature*, 348, 191.

Gregory, M.W., 1992: The infectiousness of pompous prose. *Nature*, 360, 11-12.

Avery, L., 1996: Write to reply. *Nature*, 379, 293.

Camba, R., 2000: Start making sense. *Nature*, 406, 461

Knight, 2003: Clear as mud. *Nature*, 423, 376-378.

Powell, K., 2012: Foreign tongues. *Nature*, 487, 129-131.

Radford, T., 2011: Of course scientists can communicate. *Nature*, 469, 445.

Greene, R.L., 2017 (alias *Johnson*): Everybody has their opinion. [Singular ‘they’] *Economist*, 1 April, p. 78.

Greene, R.L., 2017: Don’t go mad. [Hyphens] *Economist*, 10 June, p. 83.

for Week 3, October 17

McIntyre, M.E., 1997: Lucidity and science, I: Writing skills and the pattern perception hypothesis. *Interdisciplinary Science Reviews*, 22, 199-216.

Additional articles (not assigned for class discussion).

[Most are from the “Careers” section at the back of *Nature* every week.]

Writing

Kearns, H, and M. Gardiner, 2011: Waiting for the motivation fairy. *Nature*, 472, 127.

Gardiner, M., and H. Kearns, 2011: Turbocharge your writing today. *Nature*, 475, 129-130.

Powell, K., 2010: Publish like a pro. *Nature*, 467, 873-875.

Reviewing

Gewin, V., 2011: Rookie review. *Nature*, 478, 275-277.

Nicholas, K.A., and W.S. Gordon, 2011: A quick guide to writing a solid peer review. *EOS*, 92, 233-234.

Marcus, A., and I. Oransky, 2011: The paper is not sacred. *Nature*, 480, 449-450.

Proposal writing

Kaplan, K., 2012: Got to get a grant. *Nature*, 482, 429-431.

Job search

Feibelman, P.J., 2011: Courting connections. *Nature*, 476, 479.

McCook, A., 2011: On the right path. *Nature*, 474, 667-669.

Nilsson, L., 2014: Ph.D.s, come out of the closet! *Science*, 345, 706.

Living

Overbaugh, J., 2011: A healthy work-life balance can enhance research. *Nature*, 477, 27-28.

Sohn, E., 2016: A taste for travel. *Nature*, 535, 313-315.