Book List for Book Review Essay

Thomas Kuhn. *The Structure of Scientific Revolutions*. A seminal work whose influence is everywhere visible today; changed the way we look at scientific discovery, emphasizing the importance of cultural context and introducing the concept of the paradigm into everyday speech.

Rachel Carson. *Silent Spring*. 1962. 378 p. (Several subsequent editions) The book that is often credited with starting the modern ecological movement. Carson was a trained biologist and an eloquent writer.


John McPhee. (Almost) any book (check with me, just to make sure).


-----. *In Defense of Food: An eater's manifesto*. 2008. 244 p. A science-based argument that culture may be a better guide to eating healthily than science; explains how we are at the same time malnourished and overfed.

Evelyn Fox Keller. *The Century of the Gene*. 2000. 186 p. An MIT professor argues that the concept of the gene has shaped research in recent decades and suggests limits of that concept. This book is already a classic—it has been translated into many languages, as Barton shows.


Marcia Bartusiak. *Einstein's Unfinished Symphony: Listening to the Sounds of Space-Time*. 2000 249 p. Won the 2001 American Institute of Physics Science Writing Award. “A new generation of observatories, now being completed worldwide, will give astronomers not just a new window on the cosmos but a whole new sense with which to explore and experience the heavens above us. . . . These vibrations in space-time—or gravity waves--are the last prediction of Einstein's general theory of relativity yet to be observed directly. They are his unfinished symphony, waiting nearly a century to be heard.”


Gleick, James. *Isaac Newton.* 272 p. Well-received biography of the great scientist. (A very good read.—KB)


Brenda Maddox. *Rosalind Franklin: The Dark Lady of DNA.* 2002. 416 p. Franklin was a physical chemist and photographer whose work allowed Watson and Crick to grasp the double-helical structure of DNA. She was virtually unknown before this well-reviewed biography gave her her due.


Marcus Du Satoy. *The Music of the Primes: Searching to Solve the Greatest Mystery in Mathematics.* 2003. 335 p. Recommended by a friend who’s an economist. According to a web review, it’s “a wide-ranging historical survey of a large chunk of mathematics with the Riemann Hypothesis acting as a thread tying everything together.” (Note: Hardcover and p’back have different subtitles)

Oliver Sacks. *Uncle Tungsten: Memories of a chemical boyhood.* 2001. 337 p. Popular and highly readable memoir by one of our most distinctive and prolific researchers in the field of brain disorders.

-----. *Musicophilia: Tales of Music and the Brain.* 2007. 381 p. A popular account that combines the latest brain science with the important role music plays in our lives.

Steven Johnson. *The Ghost Map.* 2006 299 p. An engaging narrative about one cholera epidemic in London in the 1850s, and how it led to the discovery of the way cholera is contracted. A meditation on the nature of the scientific method, modern cities, and public health works. (A good read! KB)


Neil Shubin. *Your Inner Fish: A journey into the 3.5-billion-year history of the human body.* 2008. 229 p. A popular account that combines evolutionary theory and human anatomy. “Compelling. . . . will change forever how you understand what it means to be human.” (Blurb by Oliver Sacks)

Jerry A. Coyne. *Why Evolution is True.* 2009. 282 p. “‘Evolution is far more than a scientific theory,’ argues Coyne; it is a scientific fact.”—well reviewed in *Boston Globe*. 


Atul Gawande. *Complications: a surgeon’s notes on an imperfect science*. 2002. 269 p. Gawande wrote up his experiences and observations as a young surgeon in training in a series of articles, some of which originally appeared in the *New Yorker*. He is especially compelling on the way surgeons respond to and learn from errors.

---. *Better: A surgeon’s notes on performance*. 2007. Some of these essays originally appeared in the *New England Journal of Medicine* or the *New Yorker*. Another best-seller from Gawande, “by turns inspiring and unsettling” according to one reviewer.

Henry Petroski. *Invention by Design: How Engineers Get from Thought to Thing*. 242 p. “Case studies of engineers who, by dint of ingenuity and persistence, have created important new structures or devices. Whether designing something as small as a pencil or as large as the World Trade Center, successful engineers must not only devise new technology but also find a way to situate that technology within the existing economic, social, and ecological order.”

---. *Remaking the World: Adventures in Engineering*. 256 p. A collection of magazine essays covering such topics as the Panama Canal, the Ferris Wheel, and the Hoover Dam.


-----. *Eaarth*. 2010. 253 p. The extra “a” is intentional—to McKibben it signifies that our planet is forever changed. A polemic against man-made climate change and environmental degradation.


**February 2013: Some new additions**


