

**Letters to a Young Scientist.** Edward O. Wilson. New York and London: Liveright Publishing Corporation, A Division of W. W. Norton & Company, 2013. 245 pp. \$21.95 cloth (ISBN 978-0-87140-377-3)

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There have been several books written by famous scientists, often because they have won a Nobel Prize, giving career advice to young scientists. Among the most popular of these, four stand out. *Reglas y consejos sobre investigación científica* (originally published in 1898) by the Spanish Nobel Prize winner (1906) Santiago Ramón y Cajal<sup>1</sup> has a contemporary English translation entitled *Advice for Young Investigators* (MIT Press, 1999). This is advice ranging from the purely professional to the personal with special emphasis on self-discipline. Peter B. Medawar<sup>2</sup>, another Nobel Prize winner (1960), wrote *Advice to a Young Scientist* (Basic Books, 1979) which is another good set of advices in different areas. Nobel Prize winner (1989) J. Michael Bishop<sup>3</sup> wrote *How to Win the Nobel Prize: An Unexpected Life in Science* (Harvard University Press, 2004) that is largely an autobiography. Peter C. Doherty,<sup>4</sup> who won a Nobel Prize in 1996, wrote *The Beginner's Guide to Winning the Nobel Prize: Advice for Young Scientists* (Columbia University Press, 2006). It is also primarily an autobiographical opus.

Now Edward O. Wilson<sup>5</sup> has published another advice book for young scientists. Although he has not won a Nobel Prize, Wilson is a well-known biologist both within his field and beyond for his work on sociobiology and his many popular books, which have been awarded two Pulitzer Prizes.

This book's chapters are organized in the form of "letters." From time to time, and particularly at the beginning, Wilson concludes some of these "letters" with "principles" aimed at summarizing his advice, but these summaries disappear as the book progresses, hence lacking consistency.

Wilson's *Letters to a Young Scientist* is, like Bishop's and Doherty's books, largely autobiographical and concentrated around his own area of research of organismal biology, so scientists outside that field will find little connection between his professional experiences and their own aspirations. Despite this, the whole book is penned in a way that is easily understood by all audiences, although many times it seems to be written more for high school students than for graduate students or recent graduates in the sciences. This is not surprising given that Wilson is an enthusiastic supporter of the Alabama School of Mathematics and Science,<sup>6</sup> located in his hometown of Mobile. In fact, Wilson's pleasant narrative style seems to go along with his Southern upbringing.

This book does not provide much specific advice since the more it progresses the more autobiographical (and less advisory) it becomes. Some may dispute assertions such as that mathematics are not much needed for biologists in many cases; after all any college student in biology has to take at least a statistics course and certainly use them for most of their research. Further, anyone who reads the recent issues of *Evolution*, the prime journal in evolutionary biology, will see how mathematics has become increasingly pervasive in organismal biology research.

This book has some good advice such as "use but don't love technology" aimed a reminding young scientists that technology is a tool, not an end in itself. Chapter 20 contains some good general advice regarding ethics, scientific integrity, and how to deal with failure. I wish the book had dealt with issues that increasingly confront scientists these days and of which Wilson has had first-hand experience, such as how to deal with the media. Also missing is any reference to the use of social media that are common

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<sup>1</sup> b. Petilla de Aragón, Navarra, Spain, 1 May 1852; d. Madrid, Spain, 18 October 1934.

<sup>2</sup> b. Petrópolis, Brazil, 28 February 1915; d. London, United Kingdom, 2 October 1987.

<sup>3</sup> b. York, Pennsylvania, USA, 22 February 1936.

<sup>4</sup> b. Brisbane, Queensland, Australia, 15 October 1940.

<sup>5</sup> b. Birmingham, Alabama, USA, 10 June 1929.

<sup>6</sup> This residential high school provides students from across Alabama with scholarships and a college campus-like atmosphere.

communications tools among young people these days. In addition to the lack of advice on training in science communications (of which Wilson is a great practitioner), no mention is given of such important topics as funding, specifics about academic careers, and academia as a political arena. The lack of a subject index at the end is another shortcoming. However, despite these limitations, Wilson's book is pleasant to read and many, particularly field biologists, will find it entertaining.