

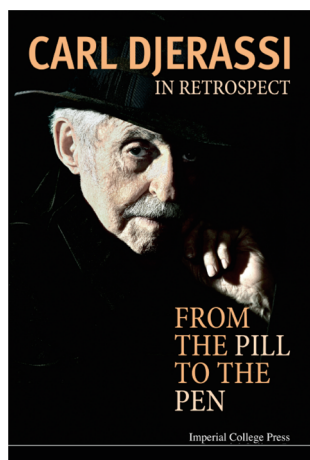
Review of *In Retrospect: From the Pill to the Pen*

Robert E. Buntrock*

Buntrock Associates, Orono, Maine 04473, United States

In Retrospect: From the Pill to the Pen, by Carl Djerassi. Imperial College Press: London, 2015. 388 pp + ix. ISBN: 978-1783265329 (softcover). \$29.00.

This book, the fourth autobiography by this remarkable author, is strange and unique in many respects, admittedly written in reverse chronological order. The author, Carl Djerassi, is a 91-year-old chemist, teacher, novelist, playwright, patron of the arts, and a philosopher; an exemplary polymath.¹ In addition to hundreds of scientific publications and three autobiographies, he has written six novels, nine plays, two books of poetry, and seven scientific monographs. Quotations of passages from many of these works are included in relevant chapters throughout the book.



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Ten chapters constitute *In Retrospect: From the Pill to the Pen*, which has also been reviewed elsewhere.^{2,3} The first is titled “Caveat Lector” (“reader beware”), which acts both as a warning and a preparation for the reader of what is to come. The second chapter is “Suicide”, inspired by his continuing mourning of his daughter’s suicide decades ago and includes fictional accounts of his own suicide on his hundredth birthday in 2023.

The third chapter, “The Bitter-Sweet Pill”, especially of interest to chemists, recounts for a more general audience Djerassi’s involvement with the invention and development of the first synthetic birth control pill at Syntex in Mexico. For this development, he has been widely called “the Father of the Pill”. He demurs and says “Mother of the Pill” would be more appropriate. For more details his previous autobiographies should be consulted, especially *Steroids Made It Possible*.⁴ However, he describes the societal effects of “the Pill” and the varied controversies surrounding it and birth control in general, bittersweet indeed. Some have condemned the Pill as “anti-baby”, although the author describes it as “pro-baby”. A discussion ensues on the future of birth control medicinals,

including those for men (not likely), and his advocacy for in vitro fertilization (IVF) as well as intracytoplasmic sperm injection (ICSI; more effective than IVF) for both shrinking geriatric societies: First World societies with aging and shrinking populations, and pediatric societies, typical Third World societies with growing populations. Djerassi’s extensive scientific research publication, more than 900 articles, has been summarized and catalogued.⁵

The fourth chapter is titled “*Heimat(losigkeit)*”, which, loosely yet incompletely translated means “Homeland-(lessness)” or “rootlessness”, but can also mean finding a place that one is comfortable with and “feels at home”. In Djerassi’s case, this is complicated because as a Viennese Jew, he was expelled as a teenager in 1938. Having lived in many places throughout his life, he has returned to Vienna as one of his residences and is redeveloping his sense of *Heimat*. The next chapter is “Jew” where what it means to be (or considered to be) a Jew is discussed at length, with liberal inclusion of passages from previous works.

The sixth chapter, “Professor of Professional Deformation”, describes the history and evolution of his professional activities, from lab chemist to corporate executive to research professor to teacher to writer, which are expanded in other chapters. Because a good deal of pedagogy is described, this chapter is of special interest to readers of this *Journal*. In answer to “What kind of chemist are you?”, the author describes his evolution from synthesis of chemicals from or related to natural products (steroids) to structure analysis and development of analytical techniques—ORD (optical rotatory dispersion), CD (circular dichroism)—yielding hundreds of research papers. The often-difficult transition from chemical and pharmaceutical industries to academia is described. After teaching advanced courses at Wayne State University, he began to introduce innovations in pedagogy later at Stanford. His course on organic chemical synthesis (especially steroids), required of graduate students, was taught by assigning each of the 16 students a chapter to write. They did such a good job that he and the class organized them into a book,⁶ the royalties from which produced the funding for a small seminar building, the “Chemistry Gazebo” on the Stanford campus. Take-home and open-book exams were typical. In subsequent courses, class members were assigned to submit questions for the mid-term exam that were distributed to the other classmates, discussed, and graded. For the final exam, the submitted questions were handed back to the author for discussion and grading. As artificial intelligence began making an impact in chemical structure determination, Djerassi began teaching undergraduate courses and had students use the software to evaluate the validity of structure assignments in the current literature. He used the results to

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communicate with the authors of the articles with the findings with varied results.

Later, when Stanford began a program in human biology, Djerassi taught a course on biosocial aspects of birth control, which was seminal to his further writings on these topics, both in fiction and nonfiction. The courses were taught by formation of teams who then reported on their findings, some of which were later published. Funding for these additional efforts came from the Rockefeller Foundation. Djerassi became more interested in ethics discourse. Although the Stanford Department of Chemistry resisted providing an ethics course, one was established within the Medical School using Djerassi's concept of science-in-fiction, a hallmark of much of his later work.

In the seventh chapter, titled "Writer", Djerassi describes his evolution as a writer, including his practice of science-in-fiction, as opposed to more traditional science fiction, in both prose fiction and play scripts. Extensive use of dialogue is employed and a variety of social issues are explored in depth. Djerassi points out that plays can be revised for different venues and audiences, usually impossible to accomplish with novels and films. For this reviewer, his most notable play is *Oxygen* written in collaboration with Roald Hoffmann, which has appeared in both book form⁷ and a video of a performance at the University of Wisconsin.⁸ The topic is the fictional account of the first "retro Nobel Prize", to be awarded to a notable deceased chemist.

The eighth chapter, "Collector", describes Djerassi's collection of art, especially by Paul Klee, and his patronage of the arts in general as well as the development and funding of an art colony in California in honor of his deceased daughter. The ninth chapter, "What If?", pursues this interesting topic of speculation that many of us of a certain age can identify with. He describes what-ifs in his career development and his remorse at not doing more to prevent his daughter's suicide and how this led to the development of the Stanford area art colony.

The last chapter, "Caveat Emptor", involves a discussion of the use and misuse of Google and Wikipedia in regards to one's own persona and work, issues of importance to all who publish or have biographies posted. Both sources are correctly described as easy to use yet often of doubtful veracity and difficult to correct (although this author notes that corrections in Wikipedia are far easier to make). Some hilarious quotes are made of Wikipedia-like biographies of Djerassi, apparently made by back-translating biographies in another language (apparently Bulgarian) via notoriously error-prone machine translation programs.

I think it is fair to indulge the reviewer of a book to briefly recount how this book affected him. I'm in the process of writing up my own memoirs, primarily for my family but also including contributions to books being edited by some high school classmates about growing up and going to school in our part of town. I have also become a fan of "what if", both in history and, like Djerassi, in my own life, having written an essay on how my life would have changed had I not married my wife of 53 years. In addition, this book caused me to consider "what if", instead of going to Princeton for graduate school, I went to Stanford and worked for Djerassi. My wife and I would probably have become Californians with a different family and possibly working for one of Djerassi's spin-off companies like Zoecon, as did both a friend and former classmate and labmate as well as the best student I had when I was a teaching assistant at Princeton.

A bibliography of Djerassi's books, plays, and monographs is included in the book, along with an index. As noted, textual references and even partial quotations to these previous works are included in the text of the book. Unlike his previous books, written primarily for scientists, *In Retrospect: From the Pill to the Pen* may appeal to a broader audience. It should also be of interest to chemists and other scientists, psychologists, as well as those interested or involved in fertility, infertility, human reproduction, cultural and religious views on family and family planning, artists, authors and those interested in creative writing and the creative arts, and others interested in biographical literature. *In Retrospect* is definitely a window into the soul of a great man, scientist, author, and polymath. May he live to be 100.

AUTHOR INFORMATION

Corresponding Author

*E-mail: buntrock16@roadrunner.com.

Notes

The authors declare no competing financial interest.

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■ NOTE ADDED IN PROOF

On Friday, January 30, 2015, the day this review was being submitted for publication, Carl Djerassi died at age 91 in San Francisco, California. Several selected obituaries are included here.^{9–14}