

The Twilight of the Scientific Age by Martín López Corredoira. Boca Raton (FL, USA): Brown Walker Press, 2013. 208 pp. \$25.95, paper. ISBN-13 978-1-61233-634-3.

“Was man made for science or science made for man?”, quoted more than once, constitutes the central theme in this book.

Corredoira’s answer is that science may once have been to the benefit of humanity but that it no longer is: too many outside vested interests, too much “scientific” activity coopted and driven by interests other than truth-seeking (commercial and official powers), in the larger context of an overall intellectual mediocrity of contemporary society including all too many scientists.

Many pundits would readily agree with these and related points. Unfortunately, the book does little to add supporting value to its assertions. It’s an expanded version of an essay of the same title (Corredoira 2103) and doesn’t work so well in book form. Perhaps the essay works better than the book because essays are quite properly subjective pieces whereas books (other than autobiographies or memoirs, of course) are expected to deal more objectively with their topic. The book is full of forcefully expressed but unsupported opinions, including rants against capitalism, the power of money, and the ugliness that comes with “progress”. For instance, Corredoira regrets the homogenization of national cultures because “The character of people is not the same everywhere” (p. 167) (which is doubtfully relevant to the question of whether the scientific age is in its twilight). Corredoira approves the view that it would be a pity for “India, for instance” to produce “western-style science” — but Sir C. V. Rahman, Jayant Narlikar, and other eminent Indian scientists could justifiably disagree; “it is as shocking that some countries try to produce science as it would be to see a Japanese man playing flamenco music” (p. 169) — yet Japanese and Indians among other Asians have excelled at classical Western music. As for twilight, “Since the goal of science as an institution is mostly socioeconomic — keeping a structure which creates employment for myriad members of the guild, and allowing some people to acquire some power — the evolution of scientific knowledge will not directly affect its existence. The problem for scientific institutions will come when its influence over society is reduced and when the resources that science consumes begin to diminish” (p. 143).

In some part, the book’s troubles rest with poor editing. Despite a stated acknowledgment to a professional English-language editor, there is much faulty syntax and idiom, much repetition, many typos. The book doesn’t focus on its stated theme, and there is too much generalization without specifics or examples. It is also unfortunate that towards the beginning, in section 1.1, “Who has written this book and in which circumstances?”, the author hypes his own credentials in both philosophy and science; leaving aside the lack of false modesty, in general one should let a text speak for itself, to convince through data and argument and not just because the author is an expert.

I would also quarrel with a few of the book’s opinions. For one, I don’t agree that the philosophical reflections of active scientists are the best guide to science or nature (p. 149), I think scholars of science & technology studies (STS) are the best guides (as war is too important to be left to the generals, so science policy is too important to be left to scientists). The denigration as engineering of the development of instruments (p. 145) ignores that major advances in pure science have depended on and followed the invention of instruments and the subsequent gathering of novel data — consider the whole field of radio astronomy, for example. I’m not sure that the modern philosophers favored by Corredoira really are the ones most worth attending to: Nietzsche, Spengler, Unamuno. Seeking to generalize from the case of Perelman (p. 140 ff.), a mathematical genius who refused to accept major prizes, seems like basing generalizations on the idiosyncratic behavior of chess genius Bobby Fischer. The suggestions for improving science seem impractical, to say the least: holding evaluators accountable for decisions that later turned out to be flawed and thereupon punishing them, even by dismissal or through fines (even posthumously, charging estates or heirs). That older scientists should retire in favor of younger ones is too sweeping a generalization. And Wikipedia should not be relied on as an authoritative source even for relatively uncontroversial matters of history; for that matter, much of the historical material doesn’t seem relevant to the main theme of the book.

Corredoira connects the twilight of science with the state of contemporary affairs overall: “People forget that a scientist is or should be an intellectual, not merely a technician, and our society is moving quickly towards a devaluation of the intellectual and ‘culture for the sake of culture’, which are being replaced by utilitarianism, light culture for the masses, and culture as business or a fun fair for tourists. Hence, people will see the career of the scientist as a big effort for small rewards, and they will prefer

other options. These problems are similar to those of the Catholic church, suffering from a lack of vocation in Europe. Possibly, like the church, science can recruit people from developing countries, but the success of this recruitment will depend on how much money science is able to offer as salary, because the major goal of most highly educated individuals from poor countries is to move out themselves and their families out poverty. Of course, there will be a few young people everywhere with the true vocation of scientists, who will only want to do research in science, but the amount of manpower necessary to keep the present-day machinery of science going will be significantly reduced and the structures will be very much affected” (p. 146). Science will go the way of philosophy, “frustrated isolation” irrelevant to the workings of society.

Despite all these caveats, I do recommend emphatically that everyone read Corredoira’s (2013) essay. The main points raised in both essay and book are sound and important and worth pondering:

- The crisis in science because of the end of growth (predicted by one of the founders of STS, Derek Price [1986]).
- The lack of separation between pure and applied science, and the resulting change in the ethos of science, (discussed comprehensively by Ziman [1994]).
- The general “twilight” of Western culture (treated magisterially by Barzun [2000] in his last book, *From Dawn to Decadence*. An earlier discussion of the significance of science for humankind is also by Barzun, *Science: The Glorious Entertainment* [1964]).

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