

Deborah R. Coen, *Vienna in the Age of Uncertainty. Science, Liberalism and Private Life*, The University of Chicago Press, Chicago and London, 2007, xi + 380 pp., ISBN-13: 978-0-226-11172-8, ISBN-10: 0-226-11172-5

Coen's book tells the story of the Exner family and of their contributions to the Viennese political, scientific and artistic life over three generations, beginning from the philosopher Franz Exner (1802-53) and ending with the dispersion and different fates of members of the family with the rise of fascism, and then of Nazism, in Austria.

As the book's title suggests, this story is only a means to reflect on much more general issues, both politico-historical and related to the history of ideas and of science. With respect to the former, Coen focuses in particular on the fate of Austrian liberalism and on the origins of modernism: she intends to challenge the widespread thesis (originally due to Schorske) which relates the political failure of Viennese liberalism at the turn of the 20th century to the bourgeoisies' giving up their ideal of objective (rational, scientific) knowledge and their political commitment in favour of subjectivity and the retirement in the private sphere.

In rethinking the dichotomies reason/uncertainty and public/private, Coen deals with the history of science and of ideas as well. With regard to the first dichotomy, Coen's main tenet is that probabilistic reasoning, since it admits uncertainty and at the same time "tames" it through mathematical means, played a central role in the Austrian liberal's attempts to refuse dogmatism without giving way to relativism. With regard to the second dichotomy, Coen aims to show how a *continuity* between the private and public sphere was characteristic of the Exners' way of life, and how such a continuity characterized both the ideals of Austrian liberals on education and the way Austrian science was performed.

Coen devotes particular attention to the bourgeoisie's custom of family retirement in the *Sommerfrische* (summer resort): a second home far away from the city and immersed in nature, where the children could learn to be autonomous (according to the liberal ideals on education) and where observation and scientific experiments could be performed in an unconstrained environment. The tradition of the *Sommerfrische* is indeed a pivot in Coen's effort to characterize a 'typically Austrian' way of pursuing science, exhibiting an empirical approach to scientific inquiry, a favourable disposition to deal with uncertainty without dismissing it as due to human ignorance or "error", and the custom to work in a family or a family-like group in which a subjective point of view could be progressively 'objectified' through communication.

In general, it could be argued that Coen identifies and analyses some 'third ways' and tries to relate them with each other: family, as a 'third way' between individualism and conformity;

probabilistic reasoning, as a ‘third way’ between uncertainty and determinism; liberalism, as a ‘third way’ between conservative dogmatism and what she calls (p. 349) “revolutionary relativism”. In this ‘third space’, and with the fundamental contributions of the Exners, Austrian science and arts could flourish and give rise to the *fin-de-siècle* Viennese “Golden Age” and to Viennese modernism.

To keep together all these themes and dimensions is indeed a hard task. Sometimes the reader may have the impression of an ‘underdetermination’ of the author’s theses by the historical evidence given to support them, as if some supplementary deal of interpretation or a particular perspective were needed in order to bring back all single pieces into the global picture. Of course, this is to some extent implied in the historians’ work (unless we want them to be determinist!). Still, the possibility of keeping all pieces of the story together seems sometimes to rely – for example - on a conflation of the concepts uncertainty / scepticism / probability / induction / chance (not always sufficient evidence is given, that this conflation is an historical matter of fact, rather than the result of an *a posteriori* reconstruction), or, with respect to politics, of relativism / particularism (when Coen talks about “revolutionary relativism”, she refers in fact to those allegedly *particularistic* ideologies, nationalism and socialism, against which the liberals presented themselves transcending nations or class divisions. However, to define nationalism or socialism either relativistic or particularistic ideologies seems a quite disputable choice).

These kinds of problems seem to be a by-product of the challenge at the core of the book: to move beyond the Exners’ story either to *generalize* or to *typify* some features of the Exners’ work and thought (it is significant that the Exners are not even mentioned in the book’s title). These moves not always succeed straightforwardly. With respect to generalization, Coen shows very well how *relevant* were the Exners within Austrian liberalism, Austrian science and within Austrian academic life, but sometimes the question remains open about their being *representative*.

With respect to typification, Coen joins some recent efforts to identify ‘typical Austrian’ traits in Austrian epistemology, science, art and culture in general, with particular attention to distinguish them from German ones. Very interesting indeed is her attempt to develop Stöltzner’s concept of “Vienna indeterminism” by linking it to Austrian liberalism in the (specifically) Austrian political situation between the 19th and the 20th century. But, of course, to support theses about national characters and differences a lot of evidence is needed (and beyond the inquiries on ‘famous’ personalities), including counterfactual evidence (the tradition of the *Sommerfrische*, for example, was common in Germany and in Switzerland too: why should it not have given rise to the same ‘Austrian’ traits there?).

From a historical point of view, Coen's book has the unquestionable merit of collecting, achieving and organizing into a coherent, sometimes illuminating story a huge amount of knowledge about the Exners, their scientific work and their fundamental role in Viennese life. Coen's patient and passionate reconstruction relies on a great deal of primary sources, which includes both Exners' scientific publications in a wide range of scientific fields and autobiographical writings by the Exners themselves as well as some of their correspondence. In 19th-20th century Austria the Exners played a really key role in the public sphere as well as in scientific life: several of them had a very high institutional position (membership of the Parliament, rectorship of the University, collaboration with Ministries), ten of them (within three generations) were university professors, and among Exners' students or friends were scientific personalities like Loschmidt, Freud, Boltzmann, Schrödinger, Brahms, Smoluchowski, to mention just some. Furthermore, over the course of three generations the Exners produced very relevant scientific achievements in a wide range of disciplines, from law to physics, from biology to meteorology, to physiology, and they participated (in particular some women of the family) in the flourishing artistic and cultural life of the Vienna *fin-de-siècle*. Not only provides Coen accurate insights in the very different fields of the Exners' work, but she also allows us to see some illuminating continuities between these fields, continuities which can emerge only in considering family and scientific life as intertwined. Furthermore, following the Exners over three generations, Coen comes to deal with very significant issues in the history of science, shining light on many neglected ones or providing new perspectives on 'classical' ones (most interesting is, for example, her view on Schrödinger's work).

In this book Coen provides a great deal of new important knowledge in the history of science and of ideas thanks to her original way to approach different themes and relate them to each other, although some of her most 'audacious' theses are still in need to be supported by new evidence.