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BOOK REVIEW

Life in Prague

Michael D. Gordin: Einstein in Bohemia. Princeton: Princeton University Press, 2020, 343pp, US$29.95 HB

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Metascience is not one of the book-review journals that follow the practice of assigning a star to books that reviewers consider of particularly high quality. If it were, however, I would give a star to Princeton historian Michael D. Gordin's fascinating volume on the undersung importance of the sixteen months Albert Einstein spent in Prague (the capital of Bohemia) as a professor of theoretical physics at the German University there from early April 1911 to late July 1912. I do not know Professor Gordin and have not read his other books, but I do not ever recall before reading through a book and having the sense that it was written with my unusual academic background and my particular set of interests in mind. In its 265 pages it manages not only to cover but also to link together in unexpected ways my work on Marie Curie (who was my entree into the world of history of science and of science biography in particular); my family passion for solar eclipses; my work in the field of Jewish history, including antisemitism and Zionism; my family rare-book collection, including first editions of significant works by Copernicus, Kepler, and Galileo; and even my love of the satirical songs of mathematician Tom Lehrer, whose songs from the late 1950s (including one about the Lobachevskii whom Gordin mentions) I still know by heart.

In the second footnote in a 62-page footnote section, Gordin draws attention to the dismissive references by several Einstein biographers to the young scientist's Prague period as an "interlude," a "sojourn," a "detour," a "way station," and an "intermezzo" (271). But as he asserts from the outset and goes on to justify, "for the four decades that followed his departure…, acquaintances he had made there and ideas he had been exposed to over a handful of months would continue to occupy him" (4). As the description of the book on the inside of the dust cover summarizes; "It was [in Prague] that his marriage unraveled, where he first began thinking seriously about his Jewish identity, and where he embarked on the project of general relativity. Prague was also where he formed lasting friendships with novelist

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Max Brod, Zionist intellectual Hugo Bergmann, physicist Philipp Frank, and other important figures." Over the course of the next paragraphs I will attempt to summarize how in substantiating these claims, Gordin somehow managed to underscore their connection to my miscellany of interests.

I will begin with Marie Curie. Since embarking in 1993 on research for a biography of her for Oxford University Press, I have been aware of many connections between the younger Einstein and Mme Curie, but I was glad to learn more about the relationship not only between them but also between the older woman scientist and Einstein's first wife, whom Gordin, showing his feminist inclinations, insists for good reasons on calling Mileva Einsteinová (96 ff.). Mme Curie enters Gordin's story early, in Chapter 2, because just months after moving to Prague, Einstein was invited to participate in what would become the first Solvay Conference, to be held in late October 1911, on the subject "Radiation and Quanta", on both of which topics Einstein had written important papers during his *annus mirabilis*. That conference was where Curie and Einstein met, and collegial relations between them continued over the decades. Gordin, however, calls our attention to the fact that by the time of the conference, Einstein "had sharply changed his research area" to focus on expanding the special theory of relativity (50). I will return to this attempt in a bit, using Gordin's surprising Curie-related incident to reflect on Einstein's progress in this area while in Prague.

Gordin makes a link that had not occurred to me between the fraying of the marriage between Einstein and Einsteinová in Prague and the famous scandal about Curie and fellow scientist Paul Langevin, who was also a participant at the Solvay Conference. While the meeting was in session, the Paris press released letters attesting to the affair between Curie and Langevin, demonizing her as a Polish destroyer of a French family and leading to threats against her and her daughters on her return. Gordin suggests that one of the reasons for Einstein's decision to end his own marriage was the affair with his newly divorced cousin Elsa Einstein Lowenthal that they initiated on one of his many trips from Prague to Berlin to confer with colleagues there. According to Gordin, the Curie–Langevin affair "gives us a window into Einstein's casual views about marital fidelity" (98), drawing our attention too to the fact that Einstein "did not seem concerned about the impact of these events on Madame Langevin" (99). All the more reason, then, to admire this fact I hadn't known about Mme Curie's relationship with Einsteinová. It is well known that Curie and Einstein hiked together in the Alps, but Gordin is the first to bring to my attention that during World War I, Curie and her daughters took a vacation in Switzerland, where Einsteinová was living in Zurich with the Einsteins' two sons. Curie and Einstein-Marić (as Mileva was then properly known) "went hiking in the Alps together, two Slavic women raising families without their husbands. They got along very well" (104–105).

The first unexpected reference to Curie's story in Gordin's narrative, however, comes in a comment about the outcome of Einstein's struggle to generalize the theory of relativity while in Prague, which he repeats later in the book. "Had Einstein been killed by a runaway horse cart in July of 1912 as he was arranging his affairs to move back to Switzerland, we would not think of him today as the architect of general relativity. (The scenario is not fanciful; Marie Curie's husband Pierre had

died in precisely such a manner on 19 April 1906)" (52). It was hardly foreseeable in 1912 that he would eventually succeed in solving the problem.

Segueing now to my interest in total eclipses (of which I have seen 21), Gordin points out that Einstein's most significant achievement after months of work on relativity in Prague was "a prediction of the bending of starlight around the sun's gravitational field during a solar eclipse" (51). It was the confirmation of Einstein's general theory by Arthur Eddington's eclipse observations in 1919 that made Einstein into the world's most famous scientist.

Eddington, however, was not the first to try to make the test. That honor goes to Erwin Finlay Freundlich, who, it turns out, was introduced to Einstein's idea by one Leo Wenzel Pollak, a colleague of Einstein's at the German University, who had become aware of Einstein's work and contacted Freundlich, his colleague in Berlin, encouraging him to pursue eclipse experiments. I lack room here to discuss Freundlich's work in greater detail, but interested parties can read up on him elsewhere.

From my writings not only about Einstein but also about antisemitism, I have been aware for years about the Nazis condemnation of "Jewish science" and threats to Einstein at public gatherings. I had not known, however, about related activity in Prague, at the German University. In Chapter 4 Gordin covers the warring schools, led respectively by Philipp Frank and Oskar Kraus, whose different assessments of Ernst Mach's philosophy of science and its implications for general relativity led to both "the apotheosis of Einstein" (with Frank as his champion) and his "demonization" (with Kraus as his detractor). I suspect this chapter will appeal greatly to *Metascience* readers who specialize in the philosophy of science.

Most followers of Einstein-related literature will already know that Einstein was for a period active in the burgeoning Zionist movement, agreeing to make a fundraising trip on behalf of the fledgling Hebrew University in Jerusalem in 1923. Although Einstein never claimed to have become a Zionist while in Prague, individuals whom he met there—notably Hugo Bergmann—later influenced him to use his fame to benefit Zionist goals.

I lack the room here to speak in detail about the most surprising connections Gordin unwittingly makes between my interests—specifically my rare books and my appreciation of satirical songs—and his tale of Einstein in Prague. Very briefly, the Prague-born novelist Max Brod (who traveled in the same Prague Jewish intellectual circles as Einstein and who is remembered today, if at all, as the guardian of the Franz Kafka archive), wrote two novels that became associated with Einstein, an association that has been debunked but nonetheless has endured. The depiction of Johannes Kepler in the first novel, Brod's 1916 *Tycho Brahe's Path to God*, was described by Philipp Frank (the aforementioned champion of Einstein's science) in his 1947 biography of Einstein as based on Einstein. Given that neither Brod nor Einstein affirmed this connection, "the persistence of the Einstein–Kepler association is somewhat remarkable" (169). The second book by Max Brod that is based on an astronomer some of whose original works are included in my family's rare-book collection is his post-World War II *Galilei in Captivity*, which he sent to Einstein in Princeton in June 1949. It meant a great deal to Brod to get a response from Einstein the next month. Although stressing that Brod's view of Galileo has no relation to his own, Einstein found something complimentary to say about the literary effort: "It

must take extraordinary energy to form out of sparse information the bustle of people in so lively and convincing a manner" (176).

Let me conclude briefly with a reference to one of the oddest of the many characters with whom Gordin peoples his narrative: Prague-born Marxist philosopher Arnošt Kolman, who in his memoir claimed connections to Einstein that are probably entirely fabricated. I was charmed to read, however, that from his position at the Institute of History of Science in Moscow he wrote a biography of Nikolai Lobachevskii, whose fame endures even among non-mathematicians thanks to Tom Lehrer's 1953 song about him.