

Max Jakob: A Scientist Expelled from Germany

Max Jakob (1879–1955) was one of the greatest men in his field. He is considered a "pioneer in experimental thermodynamics" (thanks here to the Deutsches Museum in Munich). His life was typical of a German scholar of the Jewish faith: he fought for his country in World War I, gained scientific acclaim, and was ultimately denied any further career prospects by the Nazi race laws. Max Jakob was far luckier than many of his colleagues: thanks to his scientific reputation he managed to emigrate in good time to the USA. The Deutsches Museum in Munich is preserving his extensive estate, including 16 diaries and numerous letters. Reading them, one is struck by the way they not only illuminate his official biography but also vividly convey the existential leap of a successful scientist from one existence to another.

Born in Ludwigshafen on July 20, 1879, Max Jakob ended his military service in 1899 and went on to study electrotechnology at the Technical University in Munich, gaining his diploma and engineering doctorate in 1905. From 1910 onwards he worked at the Imperial Physical-Technical University in Berlin-Charlottenburg, interrupting his work there to fight for his country in the war. It was in Berlin that he began his career as an expert in thermodynamics and heat transfer. A comprehensive list of publications on the subjects of steam and air under high-pressure conditions, measuring methods for heat conduction and also condensation technologies made him internationally famous. However, the Jewish scientist's career was abruptly ruined by Nazi legislation: the laws governing the "Recreation of the Professional Civil Service" in 1933 and the Nuremberg Race Laws of 1935. Like his colleague Victor Klemperer the novelist, famed for his diaries, Max Jakob was casually informed of his dismissal. His diary entry for October 15, 1935 reads: "Informed today by Director Henning that according to a ministerial decree, all Jewish civil servants (those who apparently have more than 25 percent Jewish blood) are to be suspended from duty immediately. Apparently a passage is to be added to the Reich Citizenship Law that these civil servants are to be pensioned off..." His tone is far less sober in a letter to his daughter Elisabeth on October 16, 1935: "...My little world has now collapsed. I was summarily dismissed yesterday, and spent only a few hours at my place of work today collecting my books and ordering papers. I remained calm, but I must say I felt awful and still do. Having to leave a place of work I have known for 25 years is no easy thing..."

Unlike many of his colleagues, Max Jakob received an offer to give a series of lectures in the USA. Naturally this was also fraught with difficulties. In a letter of application to the president of the Imperial Physical-Technical University dated November 14, 1935, Max Jakob wrote: "Although I was a civil servant before the war, served in the war itself, was wounded for my country and served the cause of Germany at all times.... I was suspended from my duties on the 15th of last month by ministerial decree. This has now deprived me of

any opportunity to continue with my experiments of the past three decades or any other useful work, and I am condemned to inactivity. I need to work so as not to collapse completely, however, and I believe the guest lecture offer provides such work – albeit on a temporary basis..."

It is especially tragic that Max Jakob hoped his mention of wartime service and state of mind would prompt the authorities to look upon him kindly. Neither they nor his employer made any response to this letter. It was while he was reading a newspaper that he discovered he had been forcibly retired. His diary entry for November 16, 1935 reads: "Today the statutes of implementation for the Nuremberg Laws were finally published in the evening paper. According to the article, I went into retirement on December 31..." Feeling he was now no longer tied to his former employer in any way, Max Jakob correctly surmised that a lecture tour of the USA would be a good idea. Unlike many emigrants, he had a normal journey and arrival, if a letter to his daughter on April 2, 1936 is to be believed: "The trip was wonderful... To cut a long story short, I arrived in New York fat, healthy and suntanned. A New York Times reporter was already there to ask me all sorts of questions..." Since he became famous immediately with his lectures, Jakob was very busy indeed at first. His letters during the following weeks convey his astonishment at the sheer size of the country he was travelling through, and its impressive landscapes and cities. At this point he was still contemplating a return home, however. In San Francisco he received a letter from the Physical-Technical University in Berlin in which his application to travel was turned down. Jakob replied on April 14, 1936 that he had no longer expected to receive such a letter: he had been pensioned off, after all, and was thus no longer dependent on his employer. He went on to emphasize that he was planning to return, adding: "In my many years of service to Germany in war and peace... I have, as far as I am aware, never been guilty of behaving less than correctly. I assume that the Herr President and the Herr Minister will infer from the above that this also applies to the case in hand."

Max Jakob's experiences in the USA, and doubtless the realization that his work was respected and appreciated there, prompted him to stay on. After his year-long lecture tour, financed by the American Society of Mechanical Engineers, he became a research professor at the Illinois Institute of Technology, and continued producing numerous publications. Several impressive documents survive from the last few years of his life, including a testamentary letter to his family. In Chicago on May 25, 1952, for instance, he wrote: "Could my mother ever have guessed that her eldest son would find happiness and end his days in Chicago? Whither will life take you, my dear children?" He expressed his high regard for the cultural values of his former native land in a letter dated January 30, 1953: "I have found edification and pure joy in certain branches of the arts and sciences, and most of all in philosophy and in music." His translations into English of Goethe's "Faust" also reveal this

deep sympathy with German culture. Max Jakob died in 1955, but his memory is kept alive in the USA with the "Max Jakob Memorial Award" (founded 1961) for outstanding services in the field of heat conduction research.

Peter Wolf

Literature

Jakob, Max: Technical-Physical Examinations of Aluminium Electrolyte Cells (Diss. Ing.), Stuttgart 1906; Wehler, Hans-Ulrich: German Social History, Vol. 4, Munich 2003, pp. 653–661; copies of the estate of Max Jacob from the Archive of the Deutsches Museum, Munich; press release of the Deutsches Museum in December 1997 about the estate of Max Jakob (<http://www.deutschemuseum.de/bib/archiv/news.htm>); <http://www.me.utexas.edu/~me339/Bios/jakob.html>.