

604. E. B.: *Albert Einstein and Austria*, *Austria Today* 4/1979, 40.

# ALBERT EINSTEIN AND AUSTRIA

by Engelbert Broda

In 1979, a hundred years after his birth, the greatest scientist of our time, Albert Einstein, has been celebrated in many countries. In Austria it has been recalled that Einstein had many close ties with our country; both on the level of ideas and that of personal relationships.

While Einstein was still an unknown "expert 3rd class" in the Swiss patent office, he was under the spell of two Austrian physicists. They were both alive then, but they had never heard of Einstein. Their thoughts were to accompany him all his life.

One of them was Ernst Mach, of Graz, Prague and Vienna Universities, an experimental physicist who also had an intense interest in sense physiology, in the history of science and in philosophy. Mach's criticism of dogmatic ideas greatly helped Einstein in formulating his trail-blazing Theory of Relativity in 1905, one of the pillars of modern physics. On the other hand, Einstein firmly rejected Mach's astonishing disbelief in the existence of atoms.

The second major influence in Einstein's formative years was the greatest champion of atomistics, Ludwig Boltzmann. Born in Vienna, and for most of his career professor of theoretical physics at the Universities of Graz and Vienna, it was Boltzmann who gave atomistics (not nuclear science!) its final form. Einstein built on Boltzmann's foundations in his work on the ceaseless, spontaneous movement of visible particles ("Brownian movement") and on particles of light (quanta). In later years Einstein also moved from Mach's positivist to Boltzmann's realist philosophy.

On the personal level, we recall that Einstein married a Serb girl from the Austro-Hungarian empire. In 1911, he went to the German University in Prague, then part of Austria, and thus became an Austrian citizen. He even had to acquire a gorgeous ceremonial



*Einstein in Vienna (1931)*

uniform. When his little son, Hans Albert, asked him to go out in the uniform, Einstein replied, "But people will take me for a Brazilian admiral!" Einstein moved in the circle of the writer Max Brod, Franz Kafka's great friend. When in the end Einstein returned to his dear Switzerland, he forgot to tell the Ministry of Education in Vienna. Only years later, on the occasion of one of his many visits to Vienna, did he go to the Ministry to sign the appropriate forms and put them into the hands of the official concerned, who gratefully embraced him. Einstein said that he did not want to see people unhappy.

As Einstein's biographers Philipp Frank and Friedrich Herneck say, he liked the Austrian way of life. Among his great friends were Paul Ehrenfest, a student of Boltzmann and professor in the Netherlands, the colourful and overpowering Felix Ehrenhaft, and the nuclear physicist, Lise Meitner, all Viennese. For decades Einstein corresponded with Erwin Schrödinger of Vienna, one of the founders of quantum mechanics; they shared a distaste for the so-called Copenhagen interpretation of its equations, due to

Zurich, he became friends with his colleague Friedrich Adler, the son of the undisputed leader of the Austrian Social Democrats, Victor Adler. On a visit to Vienna, Einstein marvelled at the enormous respect Adler enjoyed even among his political opponents in the Habsburg Empire. When Einstein was still a little known figure, Friedrich Adler and Einstein were both candidates for the same position in Zurich. Einstein won. To his great honour, Adler then freely admitted that Einstein was the better physicist. Friendship continued, and when in 1916 Friedrich Adler, to protest against the war, shot Count Stürgkh, the Prime Minister of Austria, Einstein offered himself to the courts as a character witness. Incidentally, Adler believed neither in atoms nor in the Theory of Relativity.

Much to the second Mrs. Einstein's sorrow, Albert Einstein liked to go sailing with a blonde lady from Vienna during one of his last summers in Berlin. She was cheerful and always brought along fine home-made vanilla croissants, Vienna style. Unfortunately, we have been unable to unearth her name. ●

Niels Bohr - also one of Einstein's great friends, however. Einstein felt a deep affection for Hans Thirring of Vienna, as a result of the latter's contribution to the Theory of Relativity and also his upright resistance against warmongers and Nazis.

Einstein's relationship with the Adler family was also remarkable. In