The Academy of Sciences – the development of an Austrian research institution

The edifice originally built by Maria Theresa for the university has been home to the Austrian Academy of Sciences since 1857.

In comparison with other academies in Europe and, in particular, in other German-speaking countries, the history of the Austrian Academy of Sciences is rather short. It was founded as the Imperial Academy of Sciences in 1847. However, plans for such an Imperial Academy are actually documented from the beginning of the 18th century. Gottfried Wilhelm Leibniz (1646–1716), who had founded an academy in Berlin in 1700, strongly advocated a similar undertaking in Vienna, where he stayed from 1712 to 1714. Although he obtained the necessary Imperial approval, the realisation of his project failed. The famous philosopher strove to arouse the interest and active participation of influential people in his plans for a "society" for the sciences. The Emperor received him in audience in early 1713 and promised to appoint him Director of a future academy. Even after his departure from Vienna, Leibniz made great efforts to implement his ambitious plan and corresponded with various official and scholarly personalities, amongst them – up to his death – with Prince Eugene of Savoy.

When Leibniz died, a group of Austrian scholars headed by the Imperial historiographer and dramatist Apostolo Zeno (1688–1750) sought, apparently with the support of Emperor Charles VI, to pursue the idea of establishing an academy. A similar proposal came from abroad: In 1749 Professor Johann Christoph Gottsched, of Leipzig, advocated the establishment of a "German society", and in the same year the Austrian Freiherr Joseph von Petrasch, who had caught the attention of the academic world in 1746 by founding the "Societas eruditorum incognitorum in terris Austriacis" at Olmütz (Olomouc), also submitted a petition for the foundation of an "Akademie der Wissenschaften, Künste und angenehmen Kenntnisse". Neither proposal survived the preliminary stage, since they did not fit into Maria Theresa's more practice-oriented plans. The same can be said about a project discussed in the 1870's among members of the Imperial Studienhofkommission to found an academy in the broader context of a general reorganisation of Austria's system of education, which also met with the Empress's displeasure.

Maria Theresa's successor, Emperor Joseph II, who ruled from 1780 to 1790, concentrated even more than his mother on practical and utilitarian reforms, so that the establishment of an Academy by authority of the state was hardly feasible. This situation persisted in the

early years of the rule of Emperor Franz II (Franz I of Austria) (from 1792 to 1835), who faced the overwhelming problems of a state budget completely out of control and had to finance the war against Napoleon. In the Vormärz (Pre-March) era, efforts to establish an institution devoted to scientific research were renewed, and in 1810 the renowned historian Joseph Freiherr von Hormayr von Hortenburg (1781[?]–1848) took up the idea of an Academy that was to encompass the whole of the Empire. With a petition addressed to the Imperial Court and signed by twelve scholars led by the orientalist and historian, Joseph Freiherr von Hammer-Purgstall (1774–1856), efforts to found an Academy took more concrete shape in 1837. By that time institutions of a similar nature had long existed in other parts of the Empire: there was the Royal Bohemian Society for the Sciences in Prague, founded as early as 1776, the Hungarian Academy in Budapest (1825) and, from 1836 onwards, the South Slavic Academy of Sciences at Agram (Zagreb).

It was Hammer-Purgstall who proposed that a petition to be addressed to Emperor Ferdinand I should be formulated. It was ultimately submitted to Archduke Ludwig on 20 March 1837. Although many experts favoured the ambitious project, it was not implemented, but State Chancellor Metternich still kept it in mind. Ten years later, in 1847, the Academy was established at long last. This was due to Metternich's positive attitude and the great strides scientific knowledge – in particular in the natural sciences and medicine – had made in Austria in the ten years from 1837 to 1847. The proliferation and wide dissemination of liberal writings had brought about a marked change in Austria's intellectual climate, and from 1846 onwards Metternich himself repeatedly pleaded for the creation of an Imperial Royal Academy of Sciences – most emphatically in a submission to the Emperor dated 13 January 1846, in which he stated, amongst other things: "[...] I submit a proposal for the establishment of an Imperial Royal Academy of Sciences to be erected at Your Majesty's capital of the realm. [...] Truths are and remain the same at all ages! Time merely has an influence on their recognition and the greater or lesser value attached to their realisation. What I am taking the liberty of proposing today I first suggested already many years ago, when conditions were different from what they are now. [...]". The date of the Imperial approval of these petitions submitted by the State Chancellor, 14 May 1847, is considered the "founding date" of the Academy. Initially, 40 ordinary members (17 of the mathematical and natural-sciences section and 23 of the historical-philological section, subsequently redesignated philosophic-historical section), among them representatives from Lombardy and Venetia as well as Bohemia and Hungary. In addition to the ordinary members there were also 72 corresponding members, 36 from the Monarchy and 36 from abroad, as well as 24 honorary members, 8 from the Monarchy and 16 foreign ones. On 27 June

Hammer.Purgstall was elected first President of the Academy. Its statutes were approved by Emperor Ferdinand on 23 November 1847.

The rededication of the University building to the Academy of Sciences

Initially the Academy had to make do with temporary accommodation in the rooms of the Polytechnical Institute, today the Vienna University of Technology. Ceremonial meetings were held in the Great Hall of Niederösterreichisches Landhaus (Herrengasse 13). Not only did the Academy lack sufficient rooms for scientific activities, it also had no facilities for festive occasions. It has to be mentioned at this point that the university was one of the centres of the dramatic events of the 1848 revolution: On 12 May 1848 students gathered at the university and demanded a radical reorganisation of the political system. This event has been recorded in a painting by Franz Schams (1823–1883), showing the students' guardroom in the aula of the University of Vienna (**Fig. 51**). On 25 May the government decreed that the university be closed.

In the search for proper accommodation for the Academy interest began to focus on the university building. On the basis of a note of 30 July 1855 to the Minister of Finance, Freiherr Karl Ludwig von Bruck, the Academy finally moved into the former university building in 1857, 10 years after its foundation, and has stayed there ever since. The Minister of Education, Leo Graf Thun, at that time referred to the plans for the establishment of an academy during the reign of Maria Theresa, which had never been implemented. He wrote:: "[...] If the building in question, originally dedicated to the arts and sciences (Artibus et Scientiis), is now assigned to be used by the Academy of Sciences, this use seems to be even more appropriate as Maria Theresa had already committed herself to the establishment of an Academy of Sciences and had, indeed, even taken a decision to that effect. [...]". He thus underlined that the two most ambitious projects, the construction of a new university and the plans to establish an Imperial Academy of Sciences, have their roots in Maria Theresa's era.

At the end of 1856 the military administration that had occupied the building in the wake of the revolution finally moved out and the building was handed over to the Academy on 3 January 1857. The substantial restoration and adaptation costs were borne by the government, and from 1859 onwards the Academy received an annual budget for its maintenance. At the official transfer ceremony on 29 October 1857 the Minister of the Interior Alexander Freiherr von Bach proudly stated: "[...] The Imperial Academy of Sciences, an association of gentlemen entrusted with the great and beneficial task to promote the sciences through independent research as well as by supporting and encouraging others to do so in the interest of human society and our beloved fatherland, is now moving into the halls of this magnificent building and making it its permanent home.

F. SCHAMS, "STUDENTS', AULA OF THE UNIVERSITY OF VIENNA", 1848, WIEN MUSEUM, INV.-NO. 43.939 (FIG. 51)

[...] In fact, the legacy of our immortal Empress could not have received a better dedication than being assigned to the Academy. [...]".

The first scientific activities of the Academy

In the first stage, after the dramatic situation of the 1848 revolution had calmed down, the scientific activities in the field of humanities concentrated on source editions (medieval documents and works of the church fathers), research into the Romance languages, philosophy and jurisprudence. In the natural sciences the institution initially focused mainly on meteorology and geology as well as on research in the fields of botany, medicine and zoology. In the years 1879 to 1897, when it was headed by the prominent historian Alfred Ritter von Arneth (1819–1897), the Academy developed into a universal research institution, and between 1897 and 1914 its position was further strengthened and enhanced by the cooperation with similar institutions on an international level. During the First World War the Academy did its best to continue its activities, the war, however, affected in particular its expeditions to the Near East.

The Academy in the First Republic

After the end of the First World War the statutes of the Academy had to be adapted to the new situation. It was renamed "Academy of Sciences in Vienna". Studies now concentrated on philology and history and the mathematical-natural sciences section was particular successful in areas such as the geomagnetism and ethnography, morphology and anthropology. One of the members of the mathematical-natural sciences section, the famous physicist Erwin Schrödinger, was even awarded the Nobel Prize for his contribution to quantum mechanics in 1933. In 1934 the Academy started to hold public lectures and thus opened the door to the sciences for the general public. This tradition has been continued to this day. At the same time efforts were made to establish international contacts and to intensify the networking of research projects.

The Academy during the "Third Reich"

The "Anschluss", the annexation of Austria to the Third Reich, in March 1938 severely affected the Academy, which had now become member of the "Association of German Academies of the Reich". A major shake-up took place in the leading positions and the historian Heinrich (Ritter von) Srbik

(1878–1951), a major exponent of a Pan-German conception of history, was appointed President. All the Jewish members and many others were expelled from the Academy. Even though the name "Austria" was deleted from the map by the regime, the Academy continued to work on its traditional publications "Archives for Austrian History" and "Fontes rerum Austriacarum" under their old names. The position of the Academy between 1938 and 1945 might be described as somewhere between adaptation and resistance: In many areas it conformed with the wishes of the new regime, while it offered considerable resistance to any restriction of its scope of action. Among other things it succeeded in retaining its right to have potential new members nominated by the ordinary members – against proposals made by the regime or the Reichsdozentenführung. In 1941 Srbik achieved the release of the famous Dutch historian Johan Huizinga, a corresponding member of the Academy, from a detention camp.

The Academy after 1945

After the end of the war and the collapse of the National Socialist regime in 1945 the Federal Law governing the standing and activities of the Academy of 14 October 1921 (as amended in 1925) was reinstated. The "interim statutes" passed in 1938 were rescinded and the functions of the Presidium declared to have come to an end. On 18 May 1945 thirteen Academy members then present in Vienna gathered at the building of the Vienna University to hold a first "General Meeting". As the Academy building had been damaged in the war, further General Meetings of the Academy took place, until October 1945, at the Seminar of Philology of the University of Vienna. On 31 October 1945 a solemn meeting was held in the "Auditorium maximum" of Vienna University. Ernst Späth was elected interim head of the Academy and Richard Meister (1881–1964) became his deputy. Ordinary and corresponding members of the Academy resident in Austria who were identified as members of National Socialist institutions (both those who had joined NS institutions at the time when the NS party was illegal. i.e. before 1938, and those who had joined during the NS regime) were professionally disqualified and relegated from the Academy in line with Austrian anti-Nazi legislation.

A decision of major importance was the change of the name of the institution: The "Academy of Sciences in Vienna", as it had been called since 1921, was renamed "Austrian Academy of Sciences" in order to emphasise its significance for the whole of Austria, which is reflected, amongst other things, by the fact that research institutions of the Academy are currently found in seven of the nine Austrian provinces.

After the first lean years of the post-war period, the years from 1947 to 1966 saw the Academy not only develop along traditional lines but also break new ground in both domestic and international research activities, preparing the soil for the inclusion of new

areas of research and the founding of many new institutions in response to recent developments in the world of the arts and sciences.

Milestones in mathematical and scientific research were the establishment of the Institute of Molecular Biology on 1 January 1966 and the Institute of High-Energy Physics on 1 April of the same year, which helped the Academy to catch up with leading European centres. In the same year, the Academy took over the Wilhelminenberg Research Station (today the Konrad Lorenz Institute for Comparative Ethology). In 1971, it founded the Erich Schmid Institute of Solid State Physics (today the Erich Schmid Institute of Materials Science) at Leoben, in 1972 the Institutes of Information Processing (Vienna), Limnology (Mondsee) and Space Research (Graz). These were followed in 1974 by the Institute of Biophysics and X-Ray Structure Research in Graz (today the Institute of Biophysics and Nanosystems Research) and in 1987 by the Institute of Medium Energy Physics (today the Stefan Meyer Institute of Subatomic Physics) in Vienna. The first Academy research institution to be founded in the western part of Austria was the Institute of Biomedical Aging Research established at Innsbruck in 1991. In 1994 this was followed by the founding of the Institute for Technology Assessment in Vienna.

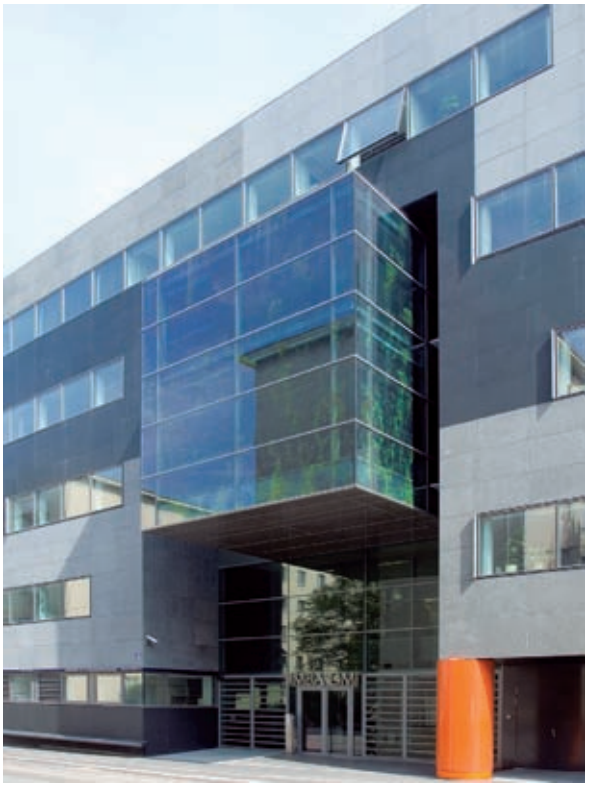
The year 2003 saw the establishment of the Johann Radon Institute for Computational and Applied Mathematics in Linz and the Institute for Quantum Optics and Quantum Information located in Innsbruck and Vienna, 2004 the foundation of the Research Unit for Integrated Sensor Systems at Wiener Neustadt and 2006 the Research Units for Respiratory Gas Analysis at Dornbirn and for Geographic Information Science at Salzburg.

Organisationally, the Academy broke new ground by founding three research units in the form of limited liability companies, the Institute of Molecular Biotechnology GmbH (IMBA), the Gregor Mendel Institute of Molecular Plant Biology GmbH (GMI) and the Research Centre for Molecular Medicine GmbH (CeMM). The former two institutes are accommodated in the "ÖAW – Life Sciences Centre Vienna" (Dr. Bohrgasse, Vienna III.) opened in May 2006 (**Fig. 52**), while the CeMM will have its home in a newly erected building in the AKH (General Hospital) complex. This rounds off the Academy's major building projects, which also included the construction of a research building in Graz in the year 2000.

As regards the programme of the philosophic-historical section, mention should first and foremost be made of the major research projects in the fields of history and philology undertaken by the "Commission for Editing the Corpus of the Latin Church Fathers (CSEL)", the "Historical Commission" (founded as early as 1847) and the "Commission for the Publication of the Diplomata Volume (Vienna Edition)" (founded in 1875) and, along with these activities, of a wealth of research projects and publications on a variety of subjects: medieval writings and printed

publications, archaeology, literary forms, theatre studies, history of art, cultural studies, medieval realia, biographies of Austrian personalities, urban and regional research and demography. Focal points of research were defined by the establishment of a number of new institutes from the mid-1960s onwards. In 1967, the Institute for the Study of Medieval Realia (now Institute for the Study of Realia of the Middle Ages and Early Modern Era) was founded at Krems, followed in 1975 by the Vienna Institute of Demography, in 1992 by the Vienna Institute for the Cultural and Intellectual History of Asia, and in 2002 the Vienna Institute of Iranian Studies, the successor to a long-standing Academy commission devoted to this subject.

With its wide variety of methodologically diverse research projects, the Austrian Academy of Sciences is currently Austria's largest and most important extra-universitarian fundamental research institution.



"ÖAW – LIFE SCIENCES ZENTRUM WIEN" (DR. BOHRGASSE, WIEN III.) (FIG. 52)