

different from those of the eighteenth century. The possibility that one day scientific insight might be gained into the causes of the disorders called mental diseases is no longer thought to be fundamentally impossible, and it is no longer held to be a sacred duty to restrain one's thirst for knowledge. But a feeling that the scientific achievements of the past do not meet the requirements of psychiatric patients, and a tendency to turn away from the basic medical sciences for practical psychiatric purposes, is widespread among psychiatrists. This feeling has again been voiced quite recently by Prof. M. Bleuler⁴⁵ who for the whole of his life has been a participant, observer and active promoter of scientific progress in psychiatry. Scientific care is still not enough for patients inasmuch as they are psychiatric patients. The young doctor of today who moves on from university to practical psychiatry finds himself in much the same situation as the young doctor described by Sauvages is likely to have experienced with regard to the whole of medicine.

Perhaps for reasons connected with what has been said above, the nosological method has kept its place in psychiatry better than in somatic medicine. 'The method has proved fruitful wherever there was a lack of clear clinical pictures and where pathological anatomy has failed up to now to provide any answers', writes Walther Schönfeld, the historian of dermatology.⁴⁶ Whether it is advisable to speak of the 'fruitfulness' of the method rather than of its simply having survived is another matter. For though it is true that psychiatry has made use of the methods of nosology for longer than somatic medicine and seems by that very fact to distinguish itself from the latter, it seems at least conceivable that this, too, is a transitional phenomenon.

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⁴⁵ Manfred Bleuler, 'Die Entwicklung der Psychiatrie in letzter Zeit und in Zukunft', Vortrag gehalten vor der Gesellschaft der Aerzte in Zürich am 12.6.1969. Paper unpublished as yet.

⁴⁶ Schoenfeld, loc. cit., p. 45, trans. by Ch. Trautvetter.

BICENTENARY OF THE FOUNDATION OF THE MINING ACADEMY OF HUNGARY AT SELMEC

MARIA THERESA, Empress of Austria and Hungary, founded the first Mining Academy of the Empire at Selmech (German: Schemnitz) in 1770. This was the first technical high school in Austria-Hungary, and the second in Europe, the first being at Freiberg, in Saxonia.

The gold, silver and lead mines of Lower Hungary were well known from the seventh and eighth centuries. During the twelfth and thirteenth centuries, gold and silver mining developed rapidly. Selmech (Schemnitz), Besztercebánya (Neusohl), Körmöcbánya (Kremnitz), Urvölgy (Herrengrube) and others grew into rich, well-respected mining towns. During the sixteenth and seventeenth centuries, these mines became very advanced technologically and reached their peak in productivity. This prompted Paracelsus to make several extended visits to the region. In 1669, the Medicis gave Niels Stensen 400 gold ducats for the purpose of spending several months at the mines of Lower Hungary to study their geological situation, mining

technology, and the art of smelting. The well-known and justly esteemed English physician and traveller, Dr. Edward Browne (1644–1708) also studied the mining and smelting industry in Lower Hungary. Thus these mines contributed also to the evolution of medical chemistry.

The training of the technical staff of the mines and smelting works of Lower Hungary, and of the Austro-Hungarian Empire in general, was of a personal character and systematic education was lacking until the eighteenth century. In 1735, the first Mining and Smelting Technical School was founded at Selmeč. After the Seven Years' War (1756–1763), Maria Theresa, following the advice of the genial medical politician and organizer, Gerhard Van Swieten, embarked on a programme of general education. In 1769, a Medical Faculty was established at the University of Nagyszombat (Tyrnau). The entire university was transferred in 1777 to Budapest and later became the Semmelweis Medical University. In 1770, the Mining Academy was founded at Selmeč, after a period of transition from 1763 to 1770 during which the technical and scientific standards of the Mining School were raised to a higher level.

The first professor of the Higher Mining School in the years of transition was a physician of the highest repute, Nicol Joseph Jacquin (1727–1817). Born at Leyden, he studied at Antwerp and Louvain and following an invitation from Van Swieten was appointed as a botanist in Vienna. He later carried out long studies in the Caribbean Islands and in 1763 was appointed the first professor of chemistry and botany at the Selmeč Higher Mining School. Here, on the foundations of the existing laboratories of the smelting works, he established a modern experimental chemical institute where, as a real precursor to Lavoisier, he advanced the researches on oxygen and disproved the phlogiston theory. He wrote the first great book on mining technology after the fundamental work of G. Agricola in 1556. In 1769, Jacquin was appointed professor of chemistry and botany at the Rudolphian University in Vienna.

At that time, the chief physician of the mercury mining and smelting works at Idria (then Kärnten in Austria) and teacher of chemistry and botany at the Mining Technical School at Idria, founded by Maria Theresia in 1763, was Giovanni Antonio Scopoli. Scopoli was the first to give an exact description of the occupational disease among the mercury workers at Idria. On Jacquin's leaving the Higher Technical Mining School in 1769, Scopoli was appointed professor of chemistry and botany at the Mining School at Selmeč, and it was during his time there that the School was elevated to become the Mining and Smelting Academy in 1770. The first professors of the Academy were: Scopoli, physician; N. Poda, mathematician (formerly professor of mathematics at the College of Gratz in Austria); Tr. Delius, mineralogical technician (formerly chief of the South Hungarian Mining Works).

Scopoli the physician carried out researches into the occupational diseases of metal mine workers; Scopoli the chemist and botanist rose to European fame and was nominated Professor at the University of Pavia, where he died in 1788.

Thus the mines and smelting works of Lower Hungary (now Slovakia) had a role of great significance in the birth and development of mining medicine and in laying the foundations of modern experimental chemistry.

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