

About the history of the society of mining professors / *Societät der bergbaukunde*

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Let us start our retrospection on the history of our society, that was founded in Leoben in 1990, with a quotation of article n° 1 of our statutes:

The corporate name of the Society is “The Society of Mining Professors / Societät der Bergbaukunde.”

What does the German term of “Societät” mean? So today, English is the official language of the society and the head office is located in Delft, Netherlands. How can we define the German term of “Bergbaukunde” in our understanding today? An answer to some parts of these questions can be found in article n°1 of the statutes as well:

(The German name, “Societät der Bergbaukunde” makes this Society the successor to the first ever international professional scientific/technical Society, founded in 1786 at Schemnitz (Banska Stiavnica) in what is now Slovakia, with 154 members from 21 countries).

Behind the German addition “Societät der Bergbaukunde” there is obviously more to find than the simple translation of the name for easy understanding for German speaking members. What is the essence of the “Societät”, founded in 1786, which has been the ambitions of that society, how did and do they differ to our society today - and why in fact was the society suspended already in 1791 and it took nearly 200 years until the society was launched again?

Let us have a look into the second half of the 18th century. The sciences developed and specialized already like all different mining industries, so it was hard to keep an overview on all knowledge that was already gathered for single persons. The exchange of knowledge and technology was limited due to missing ways of

communication and the long distances to travel on the one side, on the other side knowledge wasn't handed by to others regarding the fear of losing own advantages. Practical mining experiences were hard to transfer to research in natural science, advantages of new mining experience could hardly be transferred to others. This led to a relatively slow technological development as well as to huge gaps in knowledge between different regions in Europe as all over the world. But what led to the development of SOMP and hence a free dealing and handling with knowledge?

It would be wrong to relate the founding just to one or very few people, but one man sticks out regarding his personality and performance, even far beyond his acting in SOMP, so let us go a little bit into detail on that man:

Ignaz von Born

Von Born was born on December 26th in 1742 in Karlsburg, Transilvania. His interest to mining started while he was still in the cradle through his father's service in the royal Austrian army. Von Born started law studies in Prague, undertook several educational journeys to the Netherlands, to France and Germany, and finally returned back to Prague to study natural science. At this time, he gathered more and more interest to all science related to mining as mineralogy, mining engineering and chemistry.

After being appointed as mining council in Prague in 1770, it was now possible for him to continue educational trips to several mine sites in different regions to connect his theoretical knowledge with all practical experience in the field of mining and metallurgy. It must be that



Figure 1: Ignaz von Born.

time, when von Born gathered his basic opinion, that was supposed to be central part of his work life from that time on: Technical development, not only in the fields of mining, needed to be connected to research more closely on the one side, on the other side natural science could achieve large improvements from the practical experience. A nationwide exchange of knowledge and practice was the basic key for that.

That perception led to the point that von Born was started to found some local academic societies as well as publishing several publications. He was member to several societies, for example in Stockholm and London and was able to connect himself to scientists and academics from all over the world.

Von Born's legacy on the history of science can only be shown up here rudimentary, but are of important role regarding the further development of the "Societät". Starting in 1781, von Born began to work on the process of amalgamation in silver and gold mining. After intense research and investigation, he was finally able to present to the professional world a new, more efficient and more healthy technique in 1786 with a large scale demonstration facility in Glashuette near Schemnitz. Besides local audience, experts came from Great Britain, Scandinavia and even Mexico and Nicaragua.

With the success of his demonstration, the participants decided on that unique day to found an international society with the name of "Societät der Bergbaukunde".

An organization committee of nine men (of whom one was von Born) of the participants at Glashuette started to write down invitation letters and a first statute. That invitation letter was supposed to be an invitation to participate and become member in that new society and was sent to universities and other institutions related to mining all over the world. Aims and purposes of the society were written down in the statute under the first point in its German origin and in English:

Gegenstand. 1.) *Physische Erdbeschreibung.* 2.) *Mineralogie auf Chemie gegründet.* 3.) *Bergbau mit Maschinenwesen, Poch und Waschwesen,* 4.) *Markscheidkunst.* 5.) *Geschichte des Bergbaus.* 6.) *Hüttenwesen und Hüttenfabrigen, a.) durch das Schmelzen, b.) durch das Amalgamiren. Dieses alles vorzüglich praktisch, zur Aufnahme des Bergbaus.*

Subject: 1.) *Physical Earth Sciences* 2.) *Mineralogy based on Chemistry* 3.) *Mining and Machinery, including stamp mills and processing* 4.) *Mine-surveying* 5.) *History of Mining* 6.) *Metallurgy a.) by melting b.) by amal-*

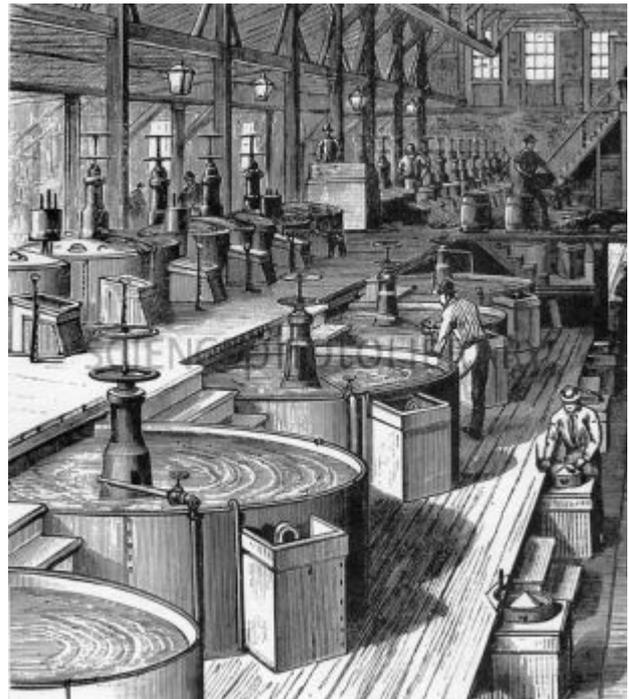


Figure 2: Amalgamation in Gold Processing.

gamation. This is severe useful, to start with mining...

As later in point III:

Zweck. Alles was zur Beförderung des Bergbaus im weitesten Verstande dient, aufzusammeln, und zum Besten des Bergbaus allen Mitgliedern mitzuteilen, damit sie es in ihren Gegenden, zum Nutzen der Menschheit und der Staaten, wo es anwendbar ist, benutzen.

“Purpose: To collect everything that leads to improvement of mining and best share to all members for the best in mining, that they may use it at their regions for human and economic improvement.”

At the beginning, three types of membership were common, as there was the regular membership for “Academics and practical miners and metallurgists”, the extraordinary membership for “Theorists, that work on science to apply practical usage” and the honor membership for “Lovers and guardians of Mining”. In 1790, the organization already had 154 members from 15 different nations and regions. If one looks into the membership overview nowadays, it is clearly visible, that the regular members were indeed people that were related very close to mining. More interesting is looking into extraordinary members: Here one can find pharmacists, chemists, medics and professors from very different academic directions. Even more fascinating is looking into the lists of honor members. With many ministers or nobles, the society was close connected to the upper class in politics and society. One honor member was the famous German poet Johann Wolfgang von Goethe, who wrote the famous “Faust” and was mine manager in Ilmenau. Even an iron ore is named after him, the so called Goethit.

Members were supposed to publish their newest developments, failures and studies from their working fields. All gathered knowledge should have been collected at a central archive in Zellerfeld in the Harz mountains time by time. Important publications should have been published for free and all material should have been given to each member on demand. On that basis of publications and reports, “Bergbaukunde”, i.e. “Mining Engineering” 1 and 2, was published, which was supposed to remain the solely publication of the society.

As mentioned already, history of the society was short. Different sources give an overview today, that out of different reasons one of the most respected projects of that time came to an end in 1791. On July 24th in 1791, Ignaz von Born died, the French members died during the French revolution and time was too early afterwards in times of political instability for a young society like that. Nevertheless, even as the society existed just a short time, the fact that a society like that was founded the first time ever in international science can be seen as a unique and special achievement.

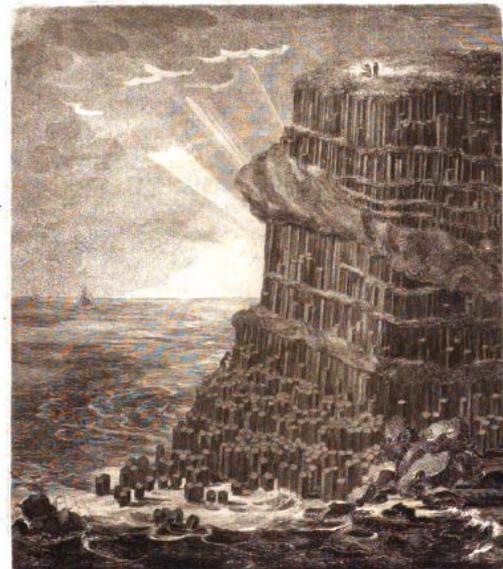
Basically founded on the minds out of the age of the Aufklärung, a fascinating scientific society that was stunningly modern was created. The society was able to tear down walls between nations as well as between former single fields of science and studies or at least to weaken them.

The structure of the society was a very democratic one. Once one national rector out of the 15 member countries retired all the 14 other ones were looking for a new one. All other deci-

BERGBAUKUNDE.

Erster Band.

St. Petersburg



Leipzig
bey Georg Joachim Goethe.
1789.

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Figure 3: "Bergbaukunde" - The cover of the original publication.

sions were supposed to be made by majority of all members.

Now let us go back to the term of “Bergbaukunde” in German or Mining Engineering in English. How the quotation from the statutes shows up, the fields of topics on which each member was working, was spread very wide. Geology in general as well as Mineralogy, the history of mining or metallurgy are just a few disciplines of the society, which may not be core components of mining engineering nowadays. That is easily understood today, as all fields developed massively over the past 200 years which makes it hard to look at all these fields as one today. Furthermore, and as the founding members envisaged in the 18th century, we need to consider that all that is improved or researched is just a part of the whole field of mining but it is of huge importance to know about the process in total.

With our society today, “Society of Mining Professors / Societät der Bergbaukunde“ (SOMP), there is a follow-up organization, that is surprisingly similar to the old one. Even if “Bergbaukunde” or “Mining Engineering” changed in definition all over the years, the addition of “Societät” is still more than justified today, perhaps even as an appraisal to Ignaz von Born’s and his fellow campaigners’ legacy. Their international direction of the society was the key onto international networking that is common today in business and science.