

Soňa ŠTRBÁŇOVÁ

Centre for the History of Sciences and Humanities

the Institute for Contemporary History

the Czech Academy of Sciences, Prague, Czech Republic

[sonast2@gmail.com](mailto:sonast2@gmail.com)

## INTERNATIONAL COLLABORATION IN THE HISTORY OF SCIENCE OF CENTRAL EUROPE<sup>1</sup>

### Abstract

In the last ten years, approximately, we could witness an evolution in informal international collaboration focusing on shared and interconnected history of science in the Habsburg Monarchy and in Central Europe in general. This effort, which includes mainly historians of science from Austria, Czech Republic, Hungary and Poland, has already produced a number of important results and contributed to the thematization of some timeless topics of history of sciences such as, for instance, nationalization and internationalization of science. In the context of this cooperation, the seminar of Jan Surman, a historian of science of Polish descent, held at the Institute of Contemporary History of the Czech Academy of Sciences in Prague in May 2015, concentrated on the formation of national scientific terminologies. It also underlined the necessity and usefulness of international collaboration in achieving a deeper understanding of the “national” histories of science, which cannot be separated from the “international” history.

**Keywords:** History of science; history of science in the Habsburg Monarchy; cooperation in the history of science; national and international history of science; formation of scientific terminology

The history of science in Austria, Hungary, Bohemia, Slovakia, Poland and other countries which used to be part of the Habsburg Monarchy has been systematically studied for a long time, whereas the shared and interconnected history of science in the Habsburg Monarchy as a whole became – with a few exceptions – subject of systematic research only in, approximately, the last decade. The impulse for collaboration between the historians

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<sup>1</sup> This article is a slightly modified English translation of the article by Soňa Štrbáňová (2015). It is published with the kind permission of the editors.



of science from the countries of the former Habsburg Monarchy came mainly from two and to some degree personally linked initiatives.

The first one is deeply rooted in history. The Ignaz Lieben Prize, the oldest and perhaps most prestigious honour awarded by the Austrian Academy of Sciences, known also as the “Austrian Nobel Prize”, was instituted in 1862. Originally, it was subsidized from the bequest of the Austrian entrepreneur and philanthropist Ignaz L. Lieben (1805–1862). At the instigation of his son, the chemist Adolf Lieben, who was in 1871–1875 Professor at the Prague University and later the head of the 2nd Institute of Chemistry of the University of Vienna, the prize was annually awarded for outstanding achievements in natural sciences. After the *Anschluss* between Austria and Nazi Germany in 1938, the prize was terminated by the National Socialists due to the Jewish origin of the founding family and re-established only in 2004 thanks to the inventiveness of the Austrian chemist Dr. Robert Rosner and generous financial support of Drs. Isabel and Alfred Bader. Alfred Bader (b. 1924), a Canadian chemist, entrepreneur and benefactor, as a child had to flee from Nazi Austria but remained proud of his Austrian and Czech roots.<sup>2</sup> The rebirth of the Lieben Prize has also been linked with the foundation of the Ignaz Lieben Society (Ignaz-Lieben-Gesellschaft), whose aim is to support research into the history of natural sciences in Austria and other successor states of the Habsburg Monarchy. The award ceremony is accompanied by Ignaz-Lieben-Symposia, which focus on subjects related to the history of science and technology in the Habsburg Monarchy and its successor states.<sup>3</sup> The Czech historians from the Centre for the History of Sciences and Humanities of the Institute for Contemporary History of the Czech Academy of Sciences and other Czech institutions are regularly present among the invited speakers at these meetings.

Another significant impulse came at about the same time from the History Department (Institut für Geschichte) of the University of Vienna, namely from Professor Mitchell Ash, Austrian-American historian of science and the First Vice-President of the Ignaz Lieben Society. His efforts have helped bringing together historians of science from several countries who have been meeting not only at the abovementioned Lieben Symposia since 2005, but also at the conferences of the European Society for the History of Science (ESHS, founded in 2004) and at the world congresses of the International Union of History of Philosophy of Science/Division of History of Science and Technology (IUHPS/

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<sup>2</sup> In the Czech Republic, the Baders have established the Alfred Bader Prize in organic and bioorganic chemistry, awarded annually to young chemists, as well as the Bader Fellowships: for doctoral studies in chemistry at renowned American and British universities, and for study of art history at museums and galleries. They also established the Josef Loschmidt Chair of Chemistry at the Faculty of Science, Masaryk University. For more on Bader's relation to the Czech chemistry, see, e.g. Drašar [2012](#).

<sup>3</sup> For more on the Ignaz-Lieben-Gesellschaft and Ignaz Lieben Symposien, see Die Ignaz-Lieben-Gesellschaft [2014](#); for further information about Ignaz Lieben Prize, see Rosner, Schlögl, Soukup [2007](#) and also Office of Science and Technology Austria (OSTA), Austrian Embassy in Washington 2014. Dr. Robert Rosner has been *spiritus movens* of the symposia.

DHST) to discuss issues related to the development of science in the Habsburg Monarchy and, more generally, in the Central European space.

Over time, these initiatives have evolved into collaboration between Austrian historians of science (Mitchell Ash, Jan Surman, Marianne Klemun, Felicitas Seebacher, Juliane Mikoletzky, Robert Rosner, Wolfgang Reiter, Hermann Hunger, Werner Soukup, Gerhard Pohl and others), Czech historians of science from the Centre for the History of Sciences and Humanities (e.g. Antonín Kostlán, Soňa Štrbáňová, Emilie Těšínská, Michal Šimůnek, Tomáš Hermann, and Jiří Jindra) and the Institute of History of the Charles University and Archive of the Charles University (Petr Svobodný, Milada Sekyrková), Polish (e.g. Michal Kokowski, Halina Lichocka, Roman Mierzecki) and Hungarian (e.g. Gábor Palló, †Éva Vámos, Tibor Frank) researchers. Numerous successful conferences have been organized, such as the symposia *Universitäre naturwissenschaftliche Forschung in Cisleithanien um 1900: Karrierewege und Mobilität* (Lieben Symposium, Vienna 2005); *Natural Scientists in Habsburg Monarchy 1848–1918* (ESHS, Krakow 2006); *Exploring Science in Central Europe around 1900: Circles – Schools – People* (Lieben Symposium, Vienna 2006); *National(istic) Styles of Science* (ESHS, Vienna 2008); *Science and Political Context* (IUHPS/DHST Congress, Budapest 2009), *Universities in Central Europe – Crossroads of Scholars From All Over the World* (ESHS conference, Prague 2011), and “*Provincial*” *Universities, Science and Scholarship in the Habsburg Monarchy – Regional Education Centres or Periphery of State Education?* (ESHS conference, Lisbon 2014).

Research carried out by this informal international network managed to fill many blank spaces in the history of sciences in the Habsburg Monarchy, its successor states, and Central Europe on the whole. It also contributed to thematisation of some more general timeless topics of history of sciences, such as the nationalization and internationalization of science, the relation between “central” and “provincial” science centres, the mobility of scientists and its relationship to social and political conditions of scientific work, the role of politics in the production and circulation of scientific knowledge, the role of science in the formation of modern nations, the establishment of national and nationalistic cultures of the 19<sup>th</sup> and 20<sup>th</sup> century, and others. In this context, it is necessary to mention two particularly important outcomes of this cooperation, namely the proceedings of the abovementioned 2010 Prague conference<sup>4</sup> and the edited monograph on nationalization of scientific knowledge in the Habsburg Monarchy in 1848–1918<sup>5</sup>, which has received well-deserved international response.

One of the colleagues who have collaborated for several years with the Centre for the History of Sciences and Humanities in Prague is Jan Surman, a historian of science of Polish descent, a former doctoral student and close collaborator of Mitchell Ash.<sup>6</sup> Surman is currently a postdoctoral researcher at the Leibniz Graduate School “History, Knowledge,

<sup>4</sup> Sekyrková, Cajthaml (eds.) 2012.

<sup>5</sup> Ash, J. Surman (eds.) 2012.

<sup>6</sup> The author of this article was the external supervisor of Jan Surman’s PhD thesis – see: Surman 2012.

Media in East Central Europe” at the Herder Institute for Historical Research on East Central Europe – Institute of the Leibniz Association in Marburg, where he participates in a research project focused on the development of scientific languages in Central Europe. For this project Jan Surman studies, among other things, the history and philosophy of the scientific language, especially the creation and use of scientific terminology as a basic expression of a ‘national style.’ It is also in this context that he investigates the changes in the scientific language as a consequence of nationalist and internationalist currents in science. One of the models Surman has been researching for several years is the formation of Czech scientific terminology in the process of the 19th century national revival. The results of his current research Surman presented to the Czech historians of science at a seminar *Searching for a Tongue of Science, the Czech Case*, which was organized by the Centre for the History of Sciences and Humanities on May 21, 2015.<sup>7</sup> The lecture offered a detailed analysis of the development of the Czech scientific nomenclature, especially of its formation prior to 1853, the year when the first authoritative dictionary codifying Czech scientific terminology, was published.<sup>8</sup>



Seminar of Jan Surman *Searching for a Tongue of Science, the Czech Case*, at the Centre for the History of Science and Humanities of the Institute of Contemporary History of the Czech Academy of Sciences in Prague

It is important to realize that the Czech scientific terminology was created in the first half of the nineteenth century literally from scratch, as at the time, the Czech language had almost no terms for chemistry, physics, mathematics, medicine or other fields. Jan Surman presented some new insights into the process of creation of Czech scientific terminology and showed how, after the initial “wild” formation of professional terminology in Czech books and articles on natural sciences and medicine, a strong formal and informal control of the scientific language commenced. This was to guarantee not only

<sup>7</sup> The presentation was based to some degree on the study by Jan Surman (2014).

<sup>8</sup> *Německo-český slovník vědeckého názvosloví pro gymnasia a reálné školy...* (1853).

the correctness of the new terminology, but also its unity. The process of unification of the new terminology had started, however, long before the publication of the aforementioned dictionary of 1853: via social networks in respective professional communities, especially in the Jungmann circle and around *Časopis Národního muzea* [*Journal of the National Museum*], and also through reference to exemplary terms which appeared in first editions of books and in articles in particular fields. An important role in this process was played by the social need for practical handbooks and textbooks, as well as political and social stimuli, especially provincial patriotism, which encouraged regional studies of nature and the popularization of natural, agricultural, and technical sciences in a language understood by the broader public. A democratic “popular science”, whose language was Czech, thus became established alongside the linguistically German “academic science”. Prior to 1848, Jungmann’s Czech-German Dictionary (1834–1839)<sup>9</sup> was a crucial element of the process of stabilising the scientific nomenclature.

Jan Surman also demonstrated how the new scientific vocabulary was created from Old Czech words and translations from German, and how it also drew on Czech, Moravian, and Slovak dialects and loanwords from related Slavic languages. The creators of consistent Czech terminology had to cope not only with linguistic purism (“traditional Czech purity”) but also with the exacting standards of the emerging international modern science and certain political and cultural influences, especially PanSlavism.

To conclude, J. Surman described in his lecture the beginnings of formation of the Czech scientific terminology as a complex social, cultural, and political process, which did not take place at universities,<sup>10</sup> but rather occurred outside the professional academia, that is in secondary and vocational schools, and in medical, agricultural and other practices, with the Czech Museum guaranteeing professional standards. It is only after 1848 that a new generation of scientists in the academic sphere began to get involved in the creation of modern Czech scientific terminology codified in the already mentioned German-Czech Dictionary of Scientific Terminology (see footnote 8), which also heralded reinternationalization of scientific terminology.

This seminar documents, much like the other mentioned scientific meetings in the last ten years, that we cannot separate “national” and “international” histories of science and that an international collaboration is necessary to achieve a deeper understanding of the national history of science. Alongside the large representative conferences, we should also pay attention to discussions in informal workshops, which facilitate a more detailed focus on particular issues.

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<sup>9</sup> *Slowník česko-německý Josefa Jungmanna* (1835–1839).

<sup>10</sup> There were some exceptions of this rule: for instance, the obstetrician Antonín Jungmann and the zoologist and mineralogist Jan Svatopluk Presl, important contributors to the Czech scientific terminology, were university professors.

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## MIĘDZYNARODOWA WSPÓŁPRACA W ZAKRESIE HISTORII NAUKI W EUROPIE ŚRODKOWEJ

### Streszczenie

W ostatnich dziesięciu latach jesteśmy świadkami rozwoju nieformalnej współpracy międzynarodowej, koncentrującej się na historii nauki w monarchii habsburskiej i, w ogólności, w Europie Środkowej – wspólnej dla krajów tego regionu lub mającej wzajemne powiązania. Kooperacja obejmuje głównie historyków nauki z Austrii, Czech, Węgier i Polski. Do chwili obecnej przyniosła już ważne rezultaty i przyczyniła się do podjęcia pewnych ponadczasowych zagadnień historii nauki, takich jak na przykład nacjonalizacja i umiędzynarodowienie nauki.

W ramach tej współpracy w maju 2015 roku w Instytucie Historii Współczesnej Czeskiej Akademii Nauk w Pradze odbyło się seminarium, podczas którego dr Jan Surman, historyk nauki polskiego pochodzenia, analizował tworzenie krajowych terminologii naukowych. Podkreślił jednocześnie konieczność i przydatność współpracy międzynarodowej w osiągnięciu głębszego zrozumienia „narodowych” historii nauki, które nie mogą być oddzielone od historii „międzynarodowej”.

**Słowa kluczowe:** historia nauki, historia nauki w monarchii habsburskiej, współpraca w historii nauki, krajowa i międzynarodowa historia nauki, powstawanie terminologii naukowej