

STUDIES ON THE HISTORY
OF THE CZECHOSLOVAK ACADEMY OF SCIENCES

By Stanley B. Winters

The three books discussed below are part of an ongoing effort by the Central Archives of the Czechoslovak Academy of Sciences (ČSAV) to advertise its holdings and issue scholarly studies related to its mission¹. The two volumes in Series B, for example, anticipated the 1991 centennial celebration of the founding of the ČSAV's remote ancestor, the Czech Academy of Sciences, Literature and Arts of Emperor Francis Joseph, which was succeeded by the Czech Academy of Sciences and Arts (ČAVU) when the Czechoslovak Republic was created and the Academy's name was changed. Then, in 1952, the Czech Academy was dissolved and the ČSAV was founded. Now, with the dissolution of the ČSAV, a new set of acronyms has been devised.

Volume I in Series B, *Česká Akademie věd a umění 1890–1952: Inventář fondu* is divided into three sections: first, a helpful brief history of the ČAVU with an account of collection development and arrangement, a bibliography of relevant literature, and a list of the subject headings in the Inventory; second, the Inventory, consisting of each item's assigned number to a total of 1,404, an abstract of the item's contents and its dates, and the carton number; third, separate indexes for persons, places, organizations, and topics mentioned in the Inventory. While other repositories would need to be searched, one obviously could find many valuable sources in the Central Archives. For example, it holds papers of publishing houses (Orbis, Melantrich), foundations (Masarykova akademie práce, Matice česká), and individuals (historians František Kutnar, Zdeněk Tobolka; architect Bohumil Hübschmann; scientists Aleš Hrdlička, August Seydler). In short, this is an excellent user's guide.

Volume II in Series B, *Vznik České Akademie věd a umění v dokumentech* contains 55 letters, records, and reports in their German and Czech originals, written between 1880 and 1892, pertaining to the negotiations that culminated in the establishment and functioning of the ČAVU. The documents, each annotated by Jiří Beran with detailed notes, begin with the request by the Royal Bohemian Society of Sciences in March

¹ Šlechtová, Alena/Levora, Josef/Beran, Jiří: *Česká akademie věd a umění. Inventář fondu* [The Czech Academy of Sciences and Arts. An Inventory of the Archives]. Ústřední archiv ČSAV, Praha 1989, 265 pp. (Práce z dějin ČSAV 1B). – Beran, Jiří: *Vznik České akademie věd a umění v dokumentech* [The Formation of the Czech Academy of Sciences and Arts. Documents]. Ústřední archiv ČSAV, Praha 1989, 446 pp. (Práce z dějin ČSAV 2B). – Nový, Luboš (ed.): *Studies of Czechoslovak Historians for the 18th International Congress of the History of Science*. Ústřední archiv ČSAV, Praha 1989, 290 pp. (Práce z dějin ČSAV 1C).

1880 to the Emperor that it be converted into an academy of sciences that would promote science and culture better than the century-old Society itself was capable of doing. The government denied the request on the grounds, among others, that an exclusively Czech institution would offend the Germans and would clash with the mission of the Imperial Academy of Sciences in Vienna. The need for a new academy, however, was irrepressible in an era of advancing science and Czech nationalism. The cause was taken up by Josef Hlávka, a wealthy architect and builder who was already supporting the sciences, arts, and education before offering on 15 December 1887 to donate 200,000 gulden toward founding an academy. (Document No. 4) As Beran brings out in his valuable 83-page introduction, the rocky road to success was paved by Hlávka, who was a deputy in Parliament and the Bohemian Diet, through his tactful approaches to government officials and influential Old Czech politicians. Thus it came to pass that on 23 January 1890, the Emperor, acting upon the recommendation of Minister of Public Worship and Education Baron Gautsch, issued a resolution approving the Czech Academy and giving its By-Laws. (Document No. 42) The quality of nominees to the new Academy becomes clear from the list of its initial members, who were distinguished not only by their carefully described achievements (e. g., L. Čelakovský, A. Dvořák, J. Gebauer, A. Jirásek, J. V. Myslbek, A. Seydler) but also by proven loyalty to the values of the established order (e. g., J. Hlávka, H. Jireček, J. Kalousek, J. Kvíčala, W. W. Tomek). The idea of a new type of academy was propagated in the early 1860s by the natural scientist J. E. Purkyně and in the mid-1880s by the sociologist and philosopher T. G. Masaryk. Beran sees its fulfillment as part of a complex process by which science, broadly conceived, became an organic part of modern Czech culture. The book has a list of the charter members of the Academy, a chronological survey of major events, and a biographical index of all persons mentioned in it.

Volume I in Series C consists of eight essays written by Czech and Slovak scholars for the 18th International Congress of Historical Sciences in Hamburg and Munich in 1989. Alena Míšková leads off with "History of Scientific Cinematography within the Czechoslovak Academy of Sciences" (pp. 9–53), a discussion of the connections between film making and the scientific disciplines from 1911, when the first Czech scientific film is believed to have been made, to the 1970s. Between the wars the leading practitioner was the Brno plant physiologist Vladimír Úlehla (1888–1947). His student, botanist Jan Calábek (born 1903), helped found the Czechoslovak Society for Scientific Cinematography of the ČSAV. Petr Vágner follows with "Social Assertions of Czechoslovak University-Educated Chemists from 1990 till 1939: A Survey of Possibilities and Limits of Historical Analysis of the Problem" (pp. 55–105). This is an ambitious essay with divergent subthemes that somewhat diffuse its impact. Vágner begins with an idealistic affirmation of the mission of science "to penetrate as deep as possible to the essence of mechanisms and principles of the processes of scientific knowledge," and he sees the methodology of the history of science as aiding "not merely to explain past events" but also to "positively influence our deeds and contribute to solving problems . . . of present and future science" (pp. 55–56). But, in the end, this boils down to the instrumental aim of contributing "to the overall ideological preparation of university students" and promoting their "strategic thinking". These foggy abstractions are followed by the results of Vágner's diligent tracking of the

education and career paths ("social assertions") of graduate chemists and chemical engineers of Charles University and the Prague Technical University. He concludes that the job market dictated student concentrations; that the University was more expensive than the Technical School and tended to turn out secondary school teachers, theoretical researchers and pharmacists, while the School produced industrial researchers and managers; but that the University graduates fared better in the economic depression of the 1930s because their professions were more secure, whereas the managers and engineers faced competition from graduates of Brno University and the German Technical University in Prague. In a third sub-theme, Vágner examines the job placement experiences of graduates, a valuable discussion that criticizes the lack of institutional concern over student admissions in excess of professional employment opportunities, the loss of contact with graduates, and the brain drain through their emigration or entry into occupations for which they were not trained. Most of this essay is an instructive contribution to the history of technical education; the opening section is irrelevant.

An essay by Luboš Nový, "Les pays tcheques vus par l'Encyclopédie" (pp. 107–136), examines 107 articles on Bohemia, 21 on Moravia, and 36 on what was later Slovakia in the great French reference work. Nový finds imprecisions and errors of fact in the articles but acknowledges the limitations under which their authors worked. He observes that they laid the basis for later serious study of their subjects. Eduard Wondrák next writes about "Politische Begleiterscheinungen der im Jahre 1746 gegründeten ersten Gelehrtengesellschaft in der österreichischen Monarchie" (pp. 137–152). He holds that Austria lagged behind Western Europe in the founding of academies and learned societies mainly because of Jesuit intervention, the authorities' fear of Freemasonry, and inadequate state support. After a concise review of the development of scientific societies, beginning in early seventeenth-century Italy, he discusses the first private learned society in the Bohemian lands, established in Olomouc in 1746. It broke the ice largely because of the family merits of its founder, Baron Joseph Petrasch (1714–1772). At Count Haugwitz's invitation, he drafted a proposal for new academies, but nothing materialized.

Following Wondrák, Jan Janko appropriately writes on "Science, Public Opinion and an Absolutist State: The Demands of [the] Scientific Community in Bohemia at the Beginning of the 19th Century" (pp. 153–185). After noting the vacuum in scientific leadership resulting from the stagnation of the Royal Bohemian Academy of Sciences, he describes how various initiatives were offered until a new concept was advanced by Filip Maximilian Opiz (1787–1858) and Christian Carl André (1763–1831). They saw science as neither purely theoretical and élitist nor strictly utilitarian and popular. They linked research with instruction, the rational with the practical, as for instance by educating farmers so as to improve agriculture. Such pioneers influenced J. E. Purkyně's conception of the organization of scientific work, including his proposal for an academy as a complex of research institutes. With Purkyně also matured the idea of a self-governing scientific community formed along national lines that would integrate scientific institutions better to serve social functions and to resist cooptation into the Habsburg monarchy's power structure. The net result, Janko concludes, was to postulate a new type of dynamic Academy that would bring Bohemian science closer to advanced similar institutions in Western Europe but

distinctive in its own right. This is a provocative synoptic essay that encapsulates a century of intellectual history in admirable fashion.

We turn eastward with Pavel Hapák's "The System of Technical Schools in Slovakia in the Second Half of the 19th and Early 20th Century" (S. 187–212). According to Hapák, the need for technical schools was apparent by the mid-1860s and especially by 1900, when the industrial revolution was completed in Hungary "and thus in Slovakia," traditionally Hungary's "most advanced" industrial region (S. 187–190). Encouragement by chambers of commerce and trade and the press helped, but the decisive impetus came from the Hungarian Ministry of Culture and Education and the Ministry of Agriculture, Industry and Commerce, which regulated technical schooling and supported applied research that benefited the economy. At the Košice School of Mechanical Engineering, theoretical courses were linked with practical training by the late 1870s, but it was run on a modest scale, so that only 326 persons had graduated by 1915. Hapák's survey also covers technical schooling in metallurgy, woodworking, weaving, lacemaking, and agriculture. Košice was a major center, with others at Pressburg, Banská Bystrica, and Kežmarok. This is a workmanlike essay that credits the Hungarian state with assisting Slovak technical education, not from altruism but to help farming and crafts; but even while it was doing this, Hapák writes, paradoxically it was quickening rural impoverishment and giving impetus to mass emigration through "one of the most reactionary" tax systems in Europe.

The essay by Roman Holec, "Mechanized Ploughing and the Role of the State in Slovakia (1848–1918)" (pp. 213–241), focuses on the transition from the use of humans and horsepower to steam and petrol powered vehicles, but with attention to the social and national forces that affected technological change in Hungarian farming, and thus in Slovakia. Large farms were best able to utilize the new devices, and state policy favored them even to the point of permitting the flight of capital to import farm machinery, especially from Germany. Occasionally Holec goes into minute detail about agricultural machine technology, but he reminds us of the larger context, for example, by noting that the state supported the quest for new knowledge from advanced foreign countries, but not when Slovaks and Czechs were involved: although both lived in a common empire, Hungarian officials feared "political misuse of economical contacts" by Slovak politicians that might favor Czech-Slovak mutuality (p. 231). Holec asserts that Hungary showed no prejudice toward specific devices or energy sources, at least until World War I, when motor driven machines got preference. The impression of Slovakia one gets from this essay is of a less industrially developed region than that suggested by Hapák.

The final essay, by Magda Juricová, is titled "The Organizational Base of Science in Slovakia" (pp. 243–276). It traces the evolution of scientific institutions there from 1918 to 1953, when the Slovak Academy of Sciences was founded. Acknowledging that she is dealing with a much discussed subject, the author emphasizes selected features of education and learning, including the situation under Hungarian rule, elementary schooling, the Komenský University, the Šafarík Learned Society, *Matica slovenská*, and various museums, research institutes, and technical schools. That old scores have not been resolved by scholars is visible in her reference to "violent Hungarianization attempts" in schooling (p. 245), as contrasted with Géza Jezenský's recent flat denial

of any validity to mention of "ruthless Magyarization", legal discrimination, or political pressure (*A History of Hungary*. Ed. by Peter F. Sugar, Péter Hanák, Tibor Frank. Bloomington 1990, p. 275). Juricová remarks, without elaborating, the negative effect of the idea of "a single Czechoslovak nation as State ideology" on Komenský University, but generously credits its Czech faculty members with having elevated the level of teaching and research in Slovakia through their expertise. The various institutions are presented with attention to their founding, resources, programs, graduates or achievements, and, where significant, their wider impact. Among measures credited to the Slovak state in 1939 and after are the founding of a new Slovak Learned Society, publication of *Slovenská vlastiveda* and scholarly monographs, and the creation in 1942 of the Slovak Academy of Sciences and Arts. The Academy's structure and activities, occupying about one-third the essay, are concretely set forth. It was superseded in 1953 by the Slovak Academy of Sciences, whose founding Juricová hails as a landmark that opened a new stage "in correspondence to the requirements of Socialist society" and to world research trends. This is one of a very few such hortative usages in a collection that is broad in chronological sweep and enlightening in content. An outline of "The Organization of the History of Science and Technology in Czechoslovakia" (p. 277-287), with names and addresses as of January 1989, completes the volume.