

SCIENCE AND POLITICS:  
THE RISE AND FALL OF THE CZECHOSLOVAK  
ACADEMY OF SCIENCES

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For forty years, from 1952 to 1992, the Czechoslovak Academy of Sciences bestrode research and scholarship in Czechoslovakia like a colossus. Close links with the highest echelons of the Communist Party of Czechoslovakia assured it ample funds and enviable prestige after the style of its archetype, the Soviet Academy of Sciences. The privileges accorded its elite, the "academicians" and their staffs, enabled it to recruit the best and brightest talents. Dubbed the country's "supreme scientific institution" in the laws creating it, the Academy (*Československá akademie věd: ČSAV*) was assigned the mission of providing the scientific know-how to build a socialist society according to goals set by the Communist Party. It was to assist the Party, the State, and their economic and social organs in reaching those goals and to systematically improve "the material and cultural standards of the working people in particular".<sup>1</sup>

Despite its imposing facade, the ČSAV was criticized by persons outside its ranks and even by some of its members as bloated, inefficient, and wasteful, an enclave of hierarchical privilege that violated true socialist ideals. After August 1968 and the onset of "normalization," research workers who refused to endorse the Soviet-led Warsaw Pact invasion were dismissed in widespread purges or emigrated. They were replaced by party hacks and opportunists, or by young scientists to whom employment in their professions was their first priority. When the communist monopoly on power was shattered in November 1989, the ČSAV's budget, personnel, and programs were progressively curtailed under a new government oriented toward a market economy and private property, and away from public subsidies of cultural and educational institutions.

On 1 January 1993, Czechoslovakia was divided into two sovereign states. The ČSAV was dissolved as a formal country-wide organization and the Czech and Slovak Academies became legally independent of each other, as they had been in their operations for many years. One part became the Academy of Sciences of the Czech Republic (AV ČR), encompassing Bohemia, Moravia, and Silesia, the other remained the Slovak Academy of Sciences (SAV) of the Slovak Republic. As will be discussed here, politics created the ČSAV, and politics buried it. The potent influence of politics upon Czech science and scholarship long antedated the founding of the ČSAV, however. Their development since the late nineteenth Century shows this influence in the fabric of their research establishments.

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<sup>1</sup> See Czechoslovak Academy of Sciences 1987: Information Handbook. Prague 1987, 9–10.

*The first Czech Academy of Sciences and Arts*

The first genuinely Czech national scientific institution was the Academy of Sciences of Emperor Franz Josef for the Sciences, Literature and the Arts (*Česká akademie pro vědy, slovesnost a umění císaře Františka Josefa*: ČAVU). It was chartered in 1890 and inaugurated in Prague in May 1891. Founded in an era of rising nationalism, it was overwhelmingly a Czech institution; only a handful of Germans and other non-Czechs were ever elected to it, and then only as foreign members. In granting the Czechs an academy of sciences, the imperial Austrian government played a political card, much as it had done in 1872, when it had chartered the Kraków Academy of Learning to win Galician Polish support in the central parliament in Vienna<sup>2</sup>. In the 1880s, leaders of the moderate, respectable Old Czech Party campaigned for the establishment of an academy of sciences. The government reluctantly agreed that their request would help the party's chances in forthcoming elections to parliament, thereby assuring a negotiated settlement to the Czech-German nationality strife in Bohemia. When the vociferous nationalistic rival Young Czechs defeated the Old Czechs in the elections of March 1891, the government lost its gamble. Negotiations for a Bohemian compromise fizzled out in the face of Young Czech opposition<sup>3</sup>.

The ČAVU was dominated by Old Czechs for several decades, some of them prominent party members like the economist Professor Albín Bráf and the philanthropist and architect Josef Hlávka, the Academy's founding president<sup>4</sup>. These men resisted basic organizational changes such as adding a fifth class of membership for applied scientists, engineers, and technologists<sup>5</sup>. (The four original classes were: I – history, law, social sciences; II – natural sciences, mathematics, medicine; III – philology, literary history and criticism; IV – fine arts, sculpture, music, architecture.) They also rejected proposals that the ČAVU form specialized institutes that would systematize research and widen the network of scientists participating in projects. Acceptance of these proposals would have brought it closer to the concept of a national academy advanced in the 1860s by the eminent Czech physiologist and theoretician Jan Evangelista Purkyně<sup>6</sup>.

The regular of full members of the Academy, its upper stratum, and the associate

<sup>2</sup> Orton, Lawrence D.: The Role of Kraków's Academy of Learning in the Intellectual and National Life of Partitioned Poland. *East Central Europa* 9/1–2 (1982) 110–123.

<sup>3</sup> Kann, Robert A.: Das Nationalitätenproblem der Habsburgermonarchie. Zweite, erweiterte Auflage, Bd.1. Graz-Köln 1964, 193–195. – Urban, Otto: Česká společnost 1848–1918. Praha 1982, 391–400. – Kořálka, Jiří: Tschechen im Habsburgerreich und in Europa 1815–1914. München 1991, 152–157.

<sup>4</sup> Beran, Jiří: Vznik České akademie věd a umění v dokumentech. *Práce z dějin československé akademie věd*, Seria 2B. Praha 1989, 1–83, here 44–57. After Hlávka, only one of the six presidents of the ČAVU was a natural scientist (Karel Vrba, a mineralogist).

<sup>5</sup> Levora, Josef: Snahy o založení technické akademie. *Archivní zprávy ČSAV* 7/7 (1975) 24–40; 8/8 (1976) 31–41. For an overview, see Winters, Stanley B.: Josef Hlávka, Zdeněk Nejedlý, and the Czech Academy of Sciences and Arts, 1891–1952. *Minerva* 32/1 (1994) 53–78.

<sup>6</sup> Purkyně, Jan E.: Sebrané spisy. Vol. 9: Věda, výchova, společnost. Studie a úvahy. Ed. Vladislav Krůta and Zdeněk Hornof. Praha 1965, 88–89. On the context of Purkyně's proposal, see Janko, Jan/Štrbáňová, Soňa: Věda Purkyňovy doby. Praha 1988.

members below them, were imbued with the nineteenth-century Central European tradition that exalted the male gymnasium and university professoriate as authority figures, especially in the natural sciences, law, and government<sup>7</sup>. Numerous professors served as expert advisors to government bodies or high civil servants, or as deputies in crown land diets and parliament. But the Academy's members denied comparable status to specialists in the applied sciences and technology, who put existing knowledge into practice but published little and did no theoretical research. The first woman elected, and as a foreign member, was Mme. Marie Curie in 1908. Until the Academy's demise, only eight other women were elected out of 870 members altogether. The Academy's original By-Laws did not exclude women, but not until 1923 was their co-eligibility with men specified.

### *Between the Wars*

The new Czechoslovak state faced daunting economic, social, and technical problems. Neither the Academy (renamed the Czech Academy of Sciences and Arts: ČAVU) nor the universities had the resources or structures to deal with them fully. It rested with the government to create specialized institutes in fields such as forestry, hydrology, meteorology, public health, geophysics, and even Slavistics. These institutions were staffed by experts whose appointments sometimes had to be approved by leading politicians in the governing coalition of the moment. Few members of the Academy were associated with these new institutes. In January 1920, the National Assembly established the Masaryk Academy of Work (*Masarykova akademie práce*) as an independent, self-governing institution in Prague authorized to "organize technological work" for the public benefit<sup>8</sup>.

The Masaryk Academy of Work soon became the largest and most important agency of engineers and applied scientists in the country. Ironically, the man after whom it was named, and who endowed it with a gift of 1-million crowns, Tomáš G. Masaryk, who had been a professor of philosophy since 1882 at the Czech University in Prague, was twice denied election to the ČAVU before 1914. This probably was due to his unconventional social and political activism and strong criticism of Habsburg Austrian domestic and foreign policy. Four days before Masaryk was sworn as Czechoslovakia's first president on 14 November 1918, the Academy elected him an honorary member.

The Czech Academy of Sciences and Arts remained as it had begun: an honorific learned society that recognized distinguished achievement, provided a forum for

<sup>7</sup> Havránek, Jan: Nineteenth Century Universities in Central Europe: Their Dominant Position in the Sciences and Humanities. In: *Bildungswesen und Sozialstruktur in Mitteleuropa im 19. und 20. Jahrhundert*. Ed. V. Karady and W. Mitter. Köln-Wien 1990, 9–26.  
– Mc Clelland, Charles E.: To Live for Science: Ideals and Realities at the University of Berlin. In: *The University and the City: From Medieval Origins to the Present*. Ed. Thomas Bender. New York 1988, 181–197.

<sup>8</sup> Zpráva o činnosti Masarykovy akademie práce podaná k oslavě X. výročí trvání Československé republiky. Ed. Emil Ženatý. Praha 1929, 31. – Paďourěk, Jan: Snahy o organizování praxe československých inženýrů v USA (20. a 30. léta 20. století). *Dějiny věd a techniky* 25/3 (1992) 129–139.

members in traditional disciplines, and helped disseminate the results of their research. It never made the transition to the modern research-oriented academy of sciences that Purkyně had envisioned. It lacked laboratories and similar facilities; it maintained only the rudiments of a library and office until 1936, when its library merged with the National Library and the University Library in the Klementinum<sup>9</sup>. The geographic outreach of the ČAVU was limited because its regular and associate members were required to live in Prague or nearby, else they could only be corresponding members. The Academy's income from the government's budget and its endowments was reduced during the economic depression of the 1930s<sup>10</sup>. Few of its members served in governmental or elective office between the wars, when professional politicians ruled the parties with an iron hand. One exception was Bohumil Němec, professor of plant physiology at Charles University, a regular member of the Academy since 1908. He served as a senator from the party of National Democracy, headed the National Research Council, and was active as a representative of Czech science on international scientific bodies<sup>11</sup>. In 1935, after Masaryk's abdication, he became a candidate to succeed him against Foreign Minister Edvard Beneš<sup>12</sup>. Most politically conscious members of the ČAVU belonged, like Němec, to conservative or centre-rightist parties. Not surprisingly, the ČAVU was attacked as an aristocratic remnant from Habsburg times by left-wing critics in the Social Democratic and Czechoslovak National Socialist parties.

#### *Representation from Moravia and Slovakia*

Scientists and scholars from Moravia and Slovakia were barely represented in the ČAVU before 1918. They could only hold corresponding memberships unless they moved to Prague, and this held true after 1918 also. The Academy under the new state therefore perpetuated the original concept of the Habsburg Austrian government, that the ČAVU would be regional, not national, in scope. Before 1918, Moravia had a technical institute but lacked a university. Most of the 29 Moravian members before 1918 had been educated and held jobs in Prague. Between the wars, 54 others from Moravia were elected, but many of them remained in Moravia to work at the new Masaryk University in Brno.

Obstacles to Academy membership for Slovak scholars were substantial. Pre-1918 Hungarian cultural policy had isolated the thin layer of Slovak intellectuals and professionals from their fellow Slavs, and especially from the Czechs. There was no university of a modern type in Slovakia until 1919, when the Comenius (Komenský) University was founded in Bratislava. For higher education, most Slovaks studied in Budapest. The sole Slovak elected to the ČAVU before 1918 was the noted literary

<sup>9</sup> Podaný, Václav: Knihovny ČAVU a KČSN od r. 1918 do vzniku ČSAV. In: *Práce z dějin české akademie věd*, Seria 4/A. Ed. Magdalena Pokorná. Praha 1992, 25.

<sup>10</sup> Beran, Jiří/Levora, Josef: Několik poznámek k postavení KČSN a ČAVU ve vědě po r. 1918. In: *Věda v Československu: 1918–1952*. Praha 1979, 409.

<sup>11</sup> Míšková, Alena: Czechoslovak Representation in the International Council of Scientific Unions. *Práce z dějin české akademie věd*, Seria 2/C. Ed. Alena Míšková. Praha 1993, 3–34.

<sup>12</sup> Winters, Stanley B.: Science and Nationalism: The Career of Bohumil Němec. *Czechoslovak and Central European Journal* 10/2 (1991) 68–83.

scholar Jaroslav Vlček. He became a professor at the Czech University and after the First World War served as administrator of the *Matica slovenská* in Martin. Until 1938, only six persons of Slovak birth had become Academy members. Five of them belonged to Class IV (the arts).

With encouragement from the ČAVU, the Šafárik Learned Society (*Učená spoločnosť Šafárikova*) was organized in 1926 at the Comenius University. After Slovakia's declaration of independence under Nazi auspices in March 1939, the Šafárik Learned Society was dissolved as a threat to the new state and renamed the Slovak Learned Society. This was converted into the Slovak Academy of Sciences and Arts (*Slovenská akadémia vied a umení*: SAVU) in July 1942. The nationalistic Slovak politicians and scholars were reacting against Prague much as the Poles in the Kraków Academy of Learning had against Vienna's dominance under the Habsburgs and then similarly against Warsaw in the interwar Polish Republic. The SAVU had three classes: I – spiritual sciences including theology and philosophy, and the history and geography of Slovakia and its law; II – the natural sciences plus technology and medicine; III – the fine and plastic arts, literature, drama, and music. The indigenous Slovak academic intelligentsia was small. In 1938, of 72 professors at the Comenius University, only 14 were Slovaks, and of 11 university officials, only one was Slovak<sup>13</sup>.

#### *Postwar shocks: 1945 to 1948*

After the Second World War, the Czech Academy faced an uncertain future. Its president since January 1939, the distinguished historian Josef Šusta, who kept Czech culture and the ČAVU flickering during the German occupation, committed suicide three weeks after the liberation of Prague. In ill health, he probably despaired over malicious rumors that denigrated his activities during the war<sup>14</sup>. Most of the centre-rightest and conservative political parties toward which a number of ČAVU members inclined had been outlawed by agreement between the returning, restored president Beneš and the left-wing parties. The communists were riding high on the coattails of the Red Army and propaganda about their service in the wartime resistance movement. The country's Jews had been virtually extinguished in Nazi death camps, and its 2,500,000 Germans were being expelled. Transportation was worn to the bone, housing neglected, and the economy drained from six years of German occupation and looting in 1945 by the liberating Soviet soldiers.

The postwar government and President Beneš issued decrees nationalizing natural resources and major industries, thereby beginning the transition to a "people's democracy" along socialist lines. Every institution was called upon to assist in the effort of

<sup>13</sup> Tibenský, Ján: Dejiny vedy a techniky na Slovensku. Bratislava 1979, 423. – I d e m : Špeciálne podmienky rozvoja vedy na Slovensku v rokoch 1918–1953. Práce z dejín prírodných vied 11 (1979) 23–54. – Havránek, Jan: Česká, polská a slovenská inteligencia v Rakousko-Uhersku (Srovnávací studie). In: Česká akademie věd a umění 1891–1991. Ed. Jiří Pokorný and Jan Novotný. Praha 1993, 29–53.

<sup>14</sup> Odložilík, Otakar: Modern Czechoslovak Historiography. The Slavonic and East European Review 30 (1951–52) 389. – Kutnar, František: Přehledné dějiny českého a slovenského dějepiscetví. Vol. 2. Praha 1977, 110. – Vrbatý, Jaroslav et al.: Dr. Josef Šusta. Průvodce po archivních fondech a sbírkách 3/2. Praha 1990, 209.



reconstruction. The Czech Academy, a hostage to allotments from the state budget, had to bend with the wind. To fill the vacancy created by Professor Šusta's death, its members in July 1945 elected Professor Zdeněk Nejedlý as the Academy's president.

Nejedlý then was 67 years old. A musicologist, historian, and publicist, he had studied at the Czech University at the turn of the century with Jaroslav Goll, Otakar Hostinský, and other founders of modern Czech humanistic scholarship. A prolific scholar, his writings preserved the concept of Czech history expressed by František Palacký, the great historian of the Czech nation and their spokesman on the European stage in the mid-nineteenth century<sup>15</sup>; namely, of the ongoing ethnic polarity between the Czechs and Germans in their close interaction as well as rivalry over the centuries from Hussite times onward. Nejedlý was elected an associate member of the ČAVU in 1907 and a regular member in 1932; since 1919 he was a full professor at Charles University. After the victory of the pro-Moscow left wing of the Communist Party in 1929, he joined the party and became the leading advocate of close contacts between Czech fellow-travelling intellectuals and the cultural propagandists of the Soviet Union<sup>16</sup>.

Nejedlý had spent the Second World War as a professor at Moscow State University and a research worker in the Soviet Academy of Sciences. Upon returning to Czechoslovakia as Minister of Education from April 1945 to February 1946, he arranged for the transfer to the Soviet Union of the holdings of the Russian Cultural Historical Museum, which was founded, financed, and maintained by post-1917 Russian émigrés in Czechoslovakia<sup>17</sup>. Not for nothing was he called "*rudý dědek*" or "ugly old red"<sup>18</sup>.

<sup>15</sup> Hauner, Milan: Recasting Czech History. *Survey* 24/3 (1979) 214–225.

<sup>16</sup> Die demokratisch-parlamentarische Struktur der Ersten Tschechoslowakischen Republik. Ed. Karl Bosl. München-Wien 1975, 168, 198. For his services to Czech-Soviet friendship, Nejedlý was awarded the Order of Lenin and elected to the Soviet Academy of Sciences. There is little on him in languages other than Czech, and until recently most was laudatory. See Jonášová, Stanislava et al.: Bibliografie díla Zdeňka Nejedlého. Praha 1959. – Na paměť Zdeňka Nejedlého. Ed. Václav Pekárek and Jaroslav Kubát. Praha 1966. – Červinka, František: Zdeněk Nejedlý: Studie s dokumentárními přílohami. Praha 1969. Nejedlý's pro-Soviet activities in the 1930s are described in Eisnerová, Věra/Nový, Luboš: The Communist Party and the Advancement of Science in Independent Czechoslovakia. *Historica* 18 (1973) 181–258, here 191–193. – Also Zdeňku Nejedlému Československá akademie věd. Sborník práce sedmdesátým pátým narozeninám. Ed. Václav Husa et al. Praha 1953, 15–18, 101–114. – See the guide to archival holdings on Nejedlý in Hanzal, Josef et al.: Průvodce po archivu Zdeňka Nejedlého. Praha 1976. The centenary of Nejedlý's birth was observed with essays on his roles as a Slavist and promoter of Czech-Soviet cultural relations in Slovanský přehled 2 (1978). For a mordant description of Nejedlý as not a true Marxist, see Kolman, Arnošt: Die verirrte Generation: So hatten wir nicht leben sollen. Eine Autobiographie. Ed. Hanswillhelm Haefs and František Janouch. Wiesbaden 1982, 164–165. Kolman was long a staunch advocate of Stalinist orthodoxy.

<sup>17</sup> Vacek, Jiří: Knihy, knihovny, archívy a muzea ruské emigrace v Praze. *Slovanský přehled* 1 (1993) 72.

<sup>18</sup> Taborsky, Edward: Communism in Czechoslovakia, 1948–1960. Princeton, N.J. 1961, 112. Taborsky has translated the Czech phrase more kindly as the "Red Grandpa". The death of Nejedlý's son Vít at age 33 on 1 January 1945, while fighting at the battle of Dukla, brought him much sympathy. Czechoslovak President Edvard Beneš eulogized Nejedlý on his seventieth birthday and cited his service "to building our new state as a foremost member

As the president of the Academy, Nejedlý projected an optimistic future. He foresaw new opportunities for its members through the formation of specialized research institutes within it and expansion of its operations. His vision seemed to bridge the gaps between the natural and the social sciences (which included the humanities) and to appreciate the importance of the natural and technical sciences as no previous Minister of Education had done in the interwar republic. This accorded with the materialist interpretation of history accepted as dogma not only by the Communist Party of Czechoslovakia but also by many anti-fascist and left-wing intellectuals.

The Academy's members endorsed Nejedlý's perspective. From the viewpoint of age and profession, their composition was basically unchanged from before the war. In 1939, for example, their average age was 64.4 years; in 1947 it was 62.3 years. Class III (philology, literary studies) with 42 members was still the largest; Class I (the sciences) had 38, Class II (history, social science) had 33<sup>19</sup>. Many members occupied multiple positions in an intellectual network of great importance in science and research. For instance, of the 159 regular and associate members in 1945, 104 also were members of the venerable Royal Bohemian Society of Sciences (*Královská česká společnost nauk*) and 89 were members of the National Research Council (*Národní rada badatelská*), which encouraged research and foreign connections. Ninety-nine were full or associate professors at Charles University and 19 at the Masaryk University in Brno. Their positions enabled them philosophically to challenge Marxism and shape the career paths of university students, if they were so inclined.

The needs of the public sector drew some members of the ČAVU, particularly the natural scientists, into close relations with the government. Some scientists were asked to advise the municipal administration of Prague and to serve on regional bodies concerned with natural resources. In June 1946, a State Research Council (*Státní výzkumná rada*) was established with responsibility for coordinating the activities of the State Planning Office, the Masaryk Academy of Work, and similar agencies of a technical nature. Two members of Class II of the ČAVU were named to a new State Planning Commission. The left-wing parties supported such appointments as fulfilling their technocratic faith in centralized government planning and research<sup>20</sup>. Scientists who might not have known each other professionally before their appointments were now cooperating because of the post-war trend toward social planning and nationalization.

A clear portent of what lay ahead appeared in March 1946, at the Seventh Congress of the Communist Party, which asserted the party's goal of creating a new academy of sciences that would be amenable to the needs of the state. The ČAVU meanwhile was establishing several new research institutes as Nejedlý had advocated; for instance, in

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of our republican parliament and government [... which] by the side of the great Soviet Union under Stalin's leadership together with the other allies crushed the power of fascist reaction." Beneš to Nejedlý 10 February 1948: Archiv Zdenka Nejedlého.

<sup>19</sup> Pokorná, Magdalena: Společenské uplatnění členů Česká akademie věd a umění v období od května 1945 do února 1948. *Dějiny věd a techniky* 23/2 (1990) 65–76.

<sup>20</sup> *Ibid.* 75–76. For a similar technocratic faith and the "implicit compromise" of the technical intelligentsia with the Bolshevik regime, see Graham, Loren B.: *Science in Russia and the Soviet Union: A Short History*. Cambridge 1993, 159–164.

Class III the Institute of the Czech Language in 1946, and the Institute of Czech Literature founded in 1948. An Institute of Atomic Physics was proposed by Professor Viktor Trkal, Dean of the Faculty of Natural Sciences at Charles University and a specialist in theoretical physics and quantum mechanics<sup>21</sup>. These developments were occurring while the institutions of higher education in Prague were being sharply criticized for their obsolete facilities. Professors oriented toward Western Europe and Anglo-America, and scientists who envisioned Prague as a future neutral center for East-West cooperation in research, suggested that new institutions be founded to solve these problems. They proposed a new academy of sciences, an international university for advanced study, and a new university campus for architecture and the natural sciences away from downtown Prague<sup>21</sup>. The latter two proposals foundered when hoped-for funding from abroad failed to materialize and opposition arose from the faculties of philosophy and law of Charles University and from the political parties. There remained the choice between a slow-changing status quo and a completely new academy of sciences, whose strongest advocate was the Communist Party. The communists charged that "bourgeois society" under the interwar republic had undervalued its natural scientists. They recruited scientists who agreed with them into party commissions to formulate plans for an academy. They also argued consistently for the unification of all scientific research as essential to meet the needs of a centrally planned socialist economy<sup>22</sup>.

Even before the communists gained absolute power in 1948, they profoundly influenced the course of the ČAVU. Professor Trkal, as secretary-general of the ČAVU from 1942 to 1952, had helped bring Nejedlý in as its president. His proposal for an Institute of Atomic Physics was highly controversial because the Soviet Union had placed a lid of secrecy upon nuclear research, and it relied on uranium extracted from mines at Jáchymov in northwestern Bohemia. Prime Minister Klement Gottwald (February 1946–June 1948), who also headed the Communist Party, sought to dampen nuclear research by non-communists like Trkal and his colleagues, who had contact with scientists in Western Europe. Alarmed at Trkal's initiative, Gottwald asked Nejedlý in the spring of 1947 to resolve the situation as follows:

Now we are informed that the Czech Academy of Sciences and Arts has constituted a preparatory committee of the institute for atomic physics within the Czech Academy of Sciences and Arts and summoned various specialists to it. Comrade Gottwald does not know whether you are aware of this reality and asks that you immediately investigate this matter and, eventually, respected comrade, as chairman, act against such uncontrolled activity, inasmuch as it concerns a very sensitive economic and political matter. It is definitely impossible to decide about the institute for atomic physics without this matter being decided according to the party line directly with Comrade Gottwald, and until that time every constituting of this institute or of a preparatory committee is undesirable<sup>23</sup>.

<sup>21</sup> Pokorná, Magdalena: Tři pokusy o reorganizaci vědeckých institucí v letech 1945–1948. In: *Práce z dějin Československé akademie věd*, Seria 4/A. Praha 1992, 84–103.

<sup>22</sup> Beran, Jiří: Předúnorová vědní politika Komunistické strany Československa a otázka zřízení Československé akademie věd. *ČsČH* 33/2 (1985) 212–241, here 219–225.

<sup>23</sup> Beran, Jiří/Těšínská, Emilie: Z předúnorových zápasů o vybudování Ústavu pro nukleární fyziku při České akademii věd a umění. *Práce z dějin Československé akademie věd*, Seria 4/A, 31–83, here 80–81. This is a letter of Ing. Milan Reiman, Head of the



Nejedlý thereupon informed Trkal that the formation of his institute was impossible pending the outcome of negotiations for the reorganization of the Academy on "a new basis for research and the state." He warned Trkal that "our Academy will not be associated in any sort of form" with a preparatory committee that had the goal of establishing such an institute and might make negotiations over the ČAVU more difficult<sup>24</sup>. Trkal and his supporters did not surrender easily; eventually, with Nejedlý mediating, they succeeded in getting a small institute operating on the outskirts of Prague. When the ČSAV was founded, it was renamed the Laboratory for Nuclear Physics, and in 1954 it was merged into a new Institute of Physics (*Fyzikální ústav*) of the ČSAV, whereupon a new Institute of Nuclear Research (*Ústav jaderného výzkumu ČSAV*) was formed near Prague. Trkal's experience showed that the ČAVU, despite its charter of autonomy, was falling subject to the wishes of the government and the dictates of the Communist Party<sup>25</sup>.

### *Preparing the ground for the future Academy*

After the Communist Party took control of the government in February 1948, the movement for a new academy of sciences gathered momentum. Its proponents set up new research agencies under government auspices and co-opted well-known and budding scientists to staff them under attractive working conditions. Many of them joined the party. The founding of the Center for Scientific Research (*Ústředí vědeckého výzkumu*) in 1949 by a group of party scientists was the embryonic beginnings of the new academy, which enjoyed the pending name of Czechoslovak Academy of Sciences. The center was expanded in 1950 to comprise seven main institutes: astronomy, biology, chemistry, geology, mathematics, polarography, and physics. They began to draw left-leaning non-communists into employment. By generating jobs for recent graduates of the universities and technical schools, the party was able to exploit the wave of ideological fervor and hope for a better future society that animated idealistic youths in the late 1940s.

Zdeněk Nejedlý, along with the literary critic and Marxist theoretician Ladislav Štoll and the veteran communist functionary Václav Kopecký, favored the centralization of Czechoslovak education, culture, and research. Their keynote speeches at the Congress of National Culture (*Sjezd národní kultury*) held on 10–11 April 1948 posited significant structural changes and reorganizations in existing scientific and cultural institutions. During Nejedlý's tenure as Minister of Education in 1945–46 and 1948–53, he visualized the new academy serving society as "a scientific instrument of the state" and "organic component of developing the state."<sup>26</sup> He proposed that it add new categories of membership in the academy for specialists in agriculture and

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Office of the Prime Minister, to Zdeněk Nejedlý, President of the ČAVU, dated 12 May 1947.

<sup>24</sup> Ibid. 81–82. Letter of Nejedlý to Trkal, 17 June 1947.

<sup>25</sup> Ibid. 61–62. Beran, Jiří: Sto let od slavnostního zahájení činnosti České akademie věd a umění. In: Československé akademie věd. Sto let České akademie věd a umění. Praha 1991, 23.

<sup>26</sup> Ibid. 22.

technology. His credentials for advancing these concepts rested on his academic and literary achievements. He was the first Czech to hold a chair in musicology at the Czech university in Prague. A longtime colleague and intellectual combatant on the faculty, he was respected for his numerous publications in aesthetics, musicology, and history, not to mention his editorship and polemical writings for *Var* and other periodicals<sup>27</sup>. Hence, he could justify retaining the humanistic and social science elements of the ČAVU in the future academy as contributing ideologically to the construction of socialism.

On this issue, however, Nejedlý differed with party hardliners Štoll and Kopecký. Štoll had translated the works of Marx and Engels while in Moscow in the 1930s. From 1946 he was a professor and then rector of the communist University of Politics and Social Sciences in Prague. He held various government positions including those of Minister of Education, succeeding Nejedlý, and Minister of Culture from 1954 to 1960. Kopecký, a communist since 1921, was editor-in-chief of the party's main organ *Rudé právo* and since 1931 a member of its Central Committee. He enforced doctrinal orthodoxy as Minister of Information from 1945 to 1953 and as vice premier from 1949 to 1962. Both Štoll and Kopecký owed their high positions to their subservience to Moscow and the party line. For example, Štoll dismissed the ČAVU as "a scientific institution of a representative type, answerable to bourgeois individualistic consciousness, in which the main thing was not science but the personality of the scholar."<sup>28</sup>

The disagreement between the three men about the character of the ČSAV assumed both symbolic and concrete forms. Nejedlý wanted a written acknowledgment of the contributions to Czechoslovak science of the foredoomed traditional institutions so that traces of their legacy would remain in the public consciousness. He was aware of the antipathy toward Marxism and communism of many senior scientists and scholars and the importance of winning them to the new academy. Štoll and Kopecký wanted to reject the "bourgeois" national past and build "socialist science" on new foundations. Nejedlý's view prevailed. The preamble to the Law on the Czechoslovak Academy of Sciences (Law No. 52 of 29 October 1952) and its later revisions through 1991 acknowledged the ČAVU and the Royal Bohemian Society of Sciences as forerunners and that the ČSAV was "bound up with the progressive traditions" of the country's science<sup>29</sup>. The social sciences, broadly defined to include humanities, were accorded

<sup>27</sup> On Nejedlý's academic career, see Král, Václav: Zdeněk Nejedlý a Gollova škola. Praha 1986. – Korespondence Zdeňka Nejedlého s historiky Gollovy školy. Ed. Petr Čornej et al. Praha 1989. For the regard of artists for him, see the postcard sent during an illness and signed by Ladislav Šaloun, Jan Štenc, Max Švabinský and others on 19 November 1933; also the letter of Max Švabinský to Nejedlý of 14 February 1938 on the latter's sixtieth birthday: *Archiv Zdeňka Nejedlého*.

<sup>28</sup> Štoll, Ladislav: K historii Vládní komise pro zřízení ČSAV. In: *Vývoj moderních vědeckých organizací v Československu*. Ed. Luboš Nový. Praha 1973, 190. Also Štoll's report with recommendations in *Věstník ČSAV* 62 (1953) 16–23.

<sup>29</sup> Kuhn, Heinrich: *Handbuch der Tschechoslowakei*. München 1966, 308. – *Československá akademie věd: Slovenská akademie věd*. Praha 1967, 9. For the symbolic expression of the continuity of the country's scientific traditions at the dedication of the ČSAV, see Pokorná, Magdalena et al: *Sto let České akademie věd a umění*. In: *Bulletin ČSAV* 11 (1991) 4.

status as separate institutes. When the Slovak Academy of Sciences was inaugurated and formally made "an organic part" of the ČSAV on 26 June 1953, the preamble was modified to mention the dissolved Slovak Academy of Sciences and Arts and the century-old *Matica slovenská*, which, however, survived as an independent national educational and cultural institution<sup>30</sup>.

### *Launching the ČSAV*

The concrete aspect of Nejedlý's disagreement with Štoll and Kopecký was the question of nominees for membership as "academics" in the new Academy. Here, too, Nejedlý largely triumphed. Members of the fading scientific institutions were jaded by the lengthy discussions and rumors that characterized negotiations over the ČSAV, while those who had worked on the reorganization of the many bodies involved were no doubt eager for recognition<sup>31</sup>. A few in the circle of Professor Josef Král, a sociologist and leading positivist philosopher, resisted the penetration of Marxism into scientific disciplines. Král was forced out as chairman of Class I of the ČAVU by Nejedlý in February 1952. In screening the initial candidates for membership, Nejedlý held the upper hand. He eliminated as unqualified some who were nominated by the secretariat of the Communist Party and others against whom he held personal grudges. Štoll himself was elected a corresponding member only in 1956 and a regular member in 1960. Bohumil Němec, who exceeded Nejedlý in seniority and academic distinction, became a regular member only in the second round of elections in 1953, and then after the intervention of a Russian scientist who questioned his absence<sup>32</sup>. The dogmatic viewpoint expressed by Štoll and Kopecký, however, played a pernicious role in enforcing the teachings of "Soviet official philosophies" of genetics, physics, chemistry, and biology in the Czech universities of the early 1950s and it blighted the relationships among scientists in those fields because of their differing opinions as to the validity of the Soviet doctrines<sup>33</sup>.

Scientists elected to membership in the ČSAV benefited from privileges that flowed from their high positions. These included stipends and honoraria beyond their university salaries, especially for directors of institutes; priorities in securing apartments and automobiles, funds to travel to conferences elsewhere in Eastern Europe, and a good measure of deference from others. The specialist in the chemistry of gels, Dr. Otto Wichterle, was offered much more than he was paid as a professor when he was named head of the Laboratory of Macromolecular Chemistry in 1958<sup>34</sup>. Nejedlý insisted that

<sup>30</sup> B o k e š, František: *Snahy o organizovanie slovenskej vedy od konca 18. storočia do vzniku SAV*. Bratislava 1967, 112–116. – M a r č e k o v á, Alexandra: 50 rokov akadémie. K výročiu založenia Slovenskej akadémie vied a umení. In: *Správy slovenskej akadémie vied* 18/7 (1992) 1, 5.

<sup>31</sup> J a n d e r o v á, Helena: Pokus o reorganizaci vědeckých společností v roce 1951. In: *Práce z dějin Československé akademie věd, Seria 4/A*, 84. – S c h w i p p e l, Jindřich: Materiály o činnosti komisí ČSAV (1952–1961). In: *Ibid.* 122–200.

<sup>32</sup> P a z o u r e k, Jaroslav: Vědec, akademik, pedagog, prezidentský kandidát. In: *Nedělní Lidové noviny* 20 March 1993, 7.

<sup>33</sup> W i c h t e r l e, Otto: *Vzpomínky*. Praha 1992, 120–123.

<sup>34</sup> *Ibid.* 132. At first Wichterle refused to accept the increase in pay.

membership in the ČSAV should be a lifetime honor that could not be revoked except for good cause. This paralleled the security of membership in the Soviet Academy of Sciences, where scientists as diverse in their beliefs as agronomist Trofim D. Lysenko and physicist Andrei D. Sakharov could maintain their positions despite their controversial views<sup>35</sup>. Under the law creating the ČSAV and its By-Laws, a member could be deprived of membership by the Academy's General Assembly of Members, which had elected him. The reasons for expulsion included proven charges of nonperformance of duties, betraying the homeland on matters of peace and socialism, and receiving a judicial sentence of loss of honorary titles and distinctions<sup>36</sup>.

On 29 October 1952, the Czechoslovak National Assembly approved legislation that dissolved the ČAVU, the Royal Bohemian Society of Sciences, and other autonomous scientific and technical organizations and provided for the ČSAV officially to commence operations on 1 January 1953. The General Assembly of the nascent academy consisted of fifty-two regular members (academicians) approved by Klement Gottwald, President of Czechoslovakia. Meeting on 17–18 November, the General Assembly elected its corresponding members and set the ČSAV's basic objectives. A large assemblage met in Prague's National Theater on 17 November for the dedication of the academy. The occasion was the thirteenth anniversary of the date since the Nazis had closed the Czech colleges and universities during clashes that resulted in the deaths of nine students and the imprisonment of some 1,200 others.

In his dedicatory speech, President Gottwald emphasized the basic relationship between the ČSAV and the state in phrases resembling those previously uttered by Nejedlý:

The Academy will be a creative, working institution and not only a representative institution. [...] It will have its place not somewhere on the periphery of our lives but at the very center. With this [...] there arises the obligation for it genuinely to become a focus for all our scientific research, a focus for economic, technological, and cultural progress<sup>37</sup>.

By a combination of sticks and carrots, coercion and persuasion, the regime had generated the impetus to coordinate Czech and Slovak science along Marxist-Leninist lines.

#### *Growth from stalinism to reform, 1953–1968*

The formation of the ČSAV was an attempt by the Communist Party to enforce a "science policy" that would give it control over the loosely supervised research institutions that existed before, or had been created after, the Second World War and apply their resources to the needs of the state<sup>38</sup>. A great lesson of that conflict echoed and

<sup>35</sup> Graham, Loren R.: *The Role of the Academy of Sciences*. In: *Survey* 25/1 (1977–78) 117–133, here 122–123.

<sup>36</sup> Československá akademie věd: Slovenská akademie věd 12, 21.

<sup>37</sup> As quoted in Československá akademie věd 1952–1982. Praha 1982, 23. Nejedlý's fullest exposition of the objectives of the future academy appears in his *Vybudujeme Československou akademii věd*. Praha 1952.

<sup>38</sup> The intent of Nejedlý, Štoll, and other proponents of the ČSAV to create a "science policy" that would organize the sciences and technology to state and party purposes is discussed by

magnified a lesson from the First World War: official planning and management of science and technology was vital to the national interest. One consequence of the heightened role of post-1945 governments in financing and guiding research was the involvement of scientists in Western Europe and the United States in political movements around the military uses of nuclear energy and the implications of scientific and technological developments for humanity. In the West, one of the pioneers in the movement was the Irish-born British physicist John D. Bernal, a professor at the University of Cambridge and a founder of the fields of X-ray crystallography and molecular biology<sup>39</sup>. He and associates such as geneticist J. B. S. Haldane and biochemist and historian of science Joseph Needham expounded their version of socialist science in books such as Bernal's *The Social Function of Science* (1939) and in periodicals such as *The Modern Quarterly* and pamphlets published by the University Labour Federation. Socially conscious American scientists published in the journal *Science and Society* and after Hiroshima in *The Bulletin of the Atomic Scientists*.

These men were inspired by the model of the Soviet Academy of Sciences, organized in 1925 as the successor to the Imperial Academy of Sciences and as the country's highest scholarly institution. Until the onset of the great purges in the mid-1930s, Soviet scientists were in fairly close touch with other European colleagues<sup>40</sup>. Among the Czechs of Habsburg Austria, J. E. Purkyně's idea of mobilizing science for service to the nation was later modified by T. G. Masaryk's concept of applying and popularizing science through an academy that would organize its members under "an ingenious and uniform plan [...] for the good of the nation."<sup>41</sup>

The Czechoslovak Academy of Sciences followed, with some exceptions, the example of the Soviet Academy of Sciences, which Nejedlý, Štoll, and other leading communist intellectuals knew first-hand<sup>42</sup>. Western liberal institutions had been

Eisnerová/Nový: The Communist Party and the Advancement of Science in Independent Czechoslovakia 181–256, here 206–215. – For the ČSAV's first two decades, see Stručný přehled vývoje Československé akademie věd 1952–1972, Věstník ČSAV 81/6 (1972) 289–296, a bland survey. – Kuhn: Handbuch der Tschechoslowakei 305–318. – For the ČSAV's structure and brief biographies of leading academicians: The Eastern European Academies of Sciences. Washington, D. C. 1963, 25–54. – Science in Czechoslovakia and the Czechoslovak Academy of Sciences, Prague 1967, lists the members, officers, and institutes of the Academy.

<sup>39</sup> On Bernal see Goldsmith, Maurice: Sage. A Life of J. D. Bernal. London 1980, and the critical review of the book in Times Literary Supplement 23 May 1980, 576.

<sup>40</sup> For example see Science at the Crossroads. Ed. N. I. Bukharin et al. London and Moscow 1931–32, reprinted London 1971. These are the collected papers of the Soviet delegation to the Second International Congress on the History of Science and Technology in 1931. Some of them already show the influence of Stalin's rejection of any validity in Western theories and philosophies of science.

<sup>41</sup> Masaryk, T. G.: Jak zvelebovat naši literaturu naukovou. Athenaeum 2/9 (1885) 270–275; 3/2 (1886) 76–77. – Idem: Česká otázka. Snahy a tužby národního obrození. 2nd ed. Praha 1908, 150–152.

<sup>42</sup> There is a considerable literature in English on the Soviet Academy of Sciences and its predecessors. A valuable introduction is the „Bibliographic Essay” in Graham, Loren R.: Science in Russia and the Soviet Union: A Short History. Cambridge 1993, 293–306. – Idem: The Soviet Academy of Sciences and the Communist Party, 1927–1932. Princeton,



discredited by the failure of France and Great Britain to defend Czechoslovakia at Munich in 1938. In contrast, the Soviet Union enjoyed the popular belief that it was ready to fight over the Munich Agreement and that its communists had led it to victory over the vaunted armed forces of an expansionist Germany. The Czech and Slovak universities could be only junior partners in the reorganized research establishment after the war. Their equipment and facilities were musty and outmoded. Scientific work "tended to be carried out by ill-paid eccentrics in what were, to say the least, modestly equipped university laboratories."<sup>43</sup> Their students, traditionally nationalistic and nonconformist, thirsted to resume their interrupted educations in May 1945. The faculties included many professors imbued with anti-Marxist views from the interwar years, but the communist regime had to move carefully against them. On one hand, the universities had venerable chartered rights that could not be violated without causing an international uproar and threatening the credibility of the regime's claim to be an agent of progress, which it was not yet prepared to do. On the other hand, the ČSAV was a fresh creation of socialist law that would help harness science and learning to the five-year plans. Given the Academy's authoritarian organizational structure, control would remain in the hands of trusted officers at the top, whose power was insured through the By-Laws<sup>44</sup>. Employeess at lower levels would be cowed through fear of dismissal and of endangering their children's chances for higher education. In addition, many true believers in socialism saw opportunities for advancement in scientific careers that had been relatively scarce in the pre-war republic.

The ČSAV grew rapidly. In fact, the scientific and technical research establishment as a whole flowered. For instance, in 1925 an estimated 79 research institutions operated in the republic; in 1930, 148; in 1935, during the economic depression, 120. About half of the country's research workers in 1938 lived in Prague, 23 per cent in Brno, 5.8 per cent in Slovakia. The ČSAV began with 7 institutes and 1,100 workers. Soon 18 new scientific "work places" (*pracoviště*) were added<sup>45</sup>. Seventeen institutions and agencies were allied with it (e.g., a publishing house and a patent office). One shining light was the award of the Nobel Prize for chemistry in 1959 to Academician Jaroslav Heyrovský, a professor at Charles University, for developing polarographic analysis, the first Czech to be so honored. An institute of physical chemistry and electro-

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N. J. 1967. — Bailes, Kendall E.: *Technology and Society under Lenin and Stalin: Origins of the Soviet Technical Intelligentsia, 1917–1941*. Princeton, N. J. 1978. — Ruble, Blair A.: *The Expansion of Soviet Science*. Washington, D. C., c. 1980 (Occasional Paper No. 79, Wilson Center).

<sup>43</sup> Janouch, František: *Science Under Siege in Czechoslovakia*. *Bulletin of the Atomic Scientists* 32/4 (1976) 6–12, here 7.

<sup>44</sup> Law No. 52 of the National Assembly, 24 October 1952. For legislation and decrees on science, research, technology, and higher education since 1950, see *Science policy and the organization of scientific research in the Czechoslovak Socialist Republic*. Paris 1965, 87–88 (*Science policy studies and documents* No. 2, UNESCO). See also later legislation: Law No. 26 of the Federal Assembly 19 March 1970 and Law No. 91 of 15 December 1977 in the *Collection of Laws on the ČSAV*.

<sup>45</sup> Mišková, Alena: *Jak se vyvíjela Akademie věd? Český dialog* 8 (1993), reprinted in *Zprávy SVU* 35/4 (1993) 33–35.

chemistry named after him operates today in Prague as a unit of the Czech Academy of Sciences.

By the end of 1969, the ČSAV had 138 research centers (111 were centralized institutes and laboratories on the Soviet model) and 13,436 employees, of whom more than 4,000, not including assistants, were listed as research staff. Forty learned societies with 18,000 members were affiliated with the Academy in joint ventures<sup>46</sup>. Its 57 regular "academicians" and 148 corresponding members received monthly income beyond their everyday salaries. From 1960 to 1964, the ČSAV's budget averaged 579-million Czechoslovak crowns (Kčs) annually. This comprised one-fifth of the total state expenditure listed as "scientific research." Larger allotments and higher yearly increases appeared, however, under other budget categories with cryptic headings such as "Tasks of a national and sectoral character" and "Centralized funds for technical development administered by central organs."<sup>47</sup> Despite such relatively large sums in a state budget of Kčs 130.4-billions in 1964, Czechoslovak science was hampered by its slavish emulation of Soviet science and its lack of foreign exchange to purchase publications and modern equipment in Western Europe, a common ailment of countries in the Soviet bloc.

### *The structure of power in the ČSAV*

The lines of command in the ČSAV's sprawling structure were without precedent in the country's scientific institutions. They followed a pyramidal table of organization with an assigned place and role for every institute, commission, and function. Decision-making was rigorously apportioned, with units at each level responsible to the one above them and so on, culminating in the Academy's "supreme organ," the General Assembly of Members. This body was responsible for deciding the basic questions of the ČSAV's duties and programs, and it elected the Presidium and new members of the Academy. The General Assembly consisted of the regular and corresponding members of the ČSAV. (The rank of associate member as in the old ČAVU was dropped.) It met at least once a year and theoretically was the final, representative seat of authority. In practice, as is often the case in bodies with authoritarian power structures, it exercised only limited jurisdiction because of its unwieldy size and infrequent meetings. Real power therefore was concentrated in the Presidium, which set the General Assembly's agenda. A democratic decision-making process within the Academy was never fully realized<sup>48</sup>. Formal issues dominated the General Assembly's

<sup>46</sup> Payne, Peter: Four Years of 'Normalisation': The Academic Purge in Czechoslovakia. INDEX on Censorship 1/2 (1972) 33-48, here 40. The 111 institutes included 40 belonging to the SAV.

<sup>47</sup> Science policy and the organization of research 33.

<sup>48</sup> Šmídák, Miroslav: Valné shromáždění Československé akademie věd 1952-1972: Poznámky k právnímu a organizačnímu vývoji. Práce z dějin Československé akademie věd, Seria A/3. Ed. Luboš Nový. Praha 1988, 5-40. For similar bureaucratic trends in the Soviet Academy of Sciences and the deleterious consequences of centralization of de facto operational and decision-making power, see Greengberg, Linda Lubrano: Policy-making in the USSR Academy of Sciences. Journal of Contemporary History 8/4 (1973) 67-80.

agenda, and discussions dealt often dealt with minor points or proposals whose approval was decreed by the Presidium. Despite some improvements over time, and an aborted effort at reform in 1968, the General Assembly remained subordinate to the Presidium<sup>49</sup>.

The Presidium was described in the By-Laws as "the permanent central control organ." Its members served four-years terms. They included the Academy's president and two vice presidents, its chief scientific secretary, and other academicians for a total of twelve or more. In 1966 the Presidium had 15 members of whom 11 were natural and technical scientists and 4 from social science and law. Four members came from the Slovak Academy of Sciences, and a Slovak was always one of the two vice presidents, an arrangement that was not reciprocated on the Presidium of the SAV. The Secretariat was the Presidium's standing executive arm. It had day to day responsibility for finances, economic matters, public relations, organizational and legislative affairs, and cultural and editorial activities. It was divided into seven units, each with its own head, secretary, and other functionaries. Through their ample staffs and aura of omnipotence, these bodies maintained liaison with the responsible ministries of the government and shaped the ČSAV's operational course. Only regular members of the ČSAV were eligible to serve on the Presidium. The president of the ČSAV, beginning with Nejedlý, always was a member of the Communist Party, and after his death in 1962 all were natural scientists.

One of the most sensitive and formidable programs undertaken by the Academy was graduate education for scholars in the natural and social sciences. It was designed to insure a steady flow of personnel trained according to the Academy's standards and needs. Inevitably it diverted many promising researchers from pursuing similar advanced degrees at the universities<sup>50</sup>. The program was introduced in July 1953 by Ladislav Štoll, when he was Minister of Education. Štoll was enamored of the system used by the Soviet Academy of Sciences to prepare promising university graduates for the higher degree of Candidate of Sciences (CSc.)<sup>51</sup>. In the ČSAV, the graduate student ("scientific aspirant") worked closely with an academician in his chosen field, which he selected from many available<sup>52</sup>. The road was often arduous. The degree of CSc. was somewhat comparable to a Ph. D. from an American university. It required original research that produced new facts and demonstrated mastery of the methodology of the field. A second, higher degree was that of Doctor of Science (DrSc.). It was limited to scholars who held the CSc., produced an original work,

<sup>49</sup> Wichterle: *Vzpomínky* 162–164.

<sup>50</sup> *Socialism and Science*. Ed. S. R. Mikulinski and R. Richta. Prague 1983, 263–264. On some of the ČSAV's problems of management and relations with the universities, see Jan k o, Jan: *K vývoji organizace a řízení Československé akademie věd*. In: *Ideová východiska vědní a vědeckotechnické politiky v Československu*. Praha 1990, 47–55.

<sup>51</sup> G r a h a m : *The Role of the Academy of Sciences* 124–125, 129–130.

<sup>52</sup> The fields of "the sciences" as broadly defined in Czech Marxist parlance were: agricultural, biological, chemical, economic, forestry, geographical, geological, historical, legal, mathematical, medical, mineralogical, military, pedagogical, pharmaceutical, philological, philosophical, physical, technical, and veterinary. Science in Czechoslovakia and the Czechoslovak Academy of Sciences 44.

displayed "a mature personality in scientific pursuits," and wrote a dissertation of outstanding importance based on international standards. That, at least, was the professed ideal, and some candidates fulfilled it. The caveat was that they also had to be of the "correct" background, express admiration for the Soviet Union, be competent in Marxism-Leninism, and show commitment to the communist regime<sup>53</sup>.

This admiration for the Soviet example among Czech scientists may be explained, apart from its obvious political expediency, by the stature of the Soviet Academy of Sciences as "the most important single scientific institution in the world."<sup>54</sup> Then came the revelations by First Secretary Nikita Khrushchev in 1956 about the deformations and crimes of the Stalin era. The Czechoslovak Communist Party was slow to react and maintained its stalinist course. Research workers in the ČSAV joined a rising chorus of criticism of the country's economic and scientific stagnation under Antonín Novotný, First Secretary of the party's Central Committee and president of Czechoslovakia from 1957 to 1968. Perhaps nowhere in the country's learned estate was there deeper ferment among rank and file employees than in the ČSAV, or more severe measures against the critics. Hence it would be onesided to see only the servile and acquiescent response by the top officers of the ČSAV to the hardliners' measures against dissent. Indeed, by the mid-1960s plans were afoot to reorganize the Academy into coequal Czech and Slovak units under a Federal Learned Society with joint representation. This would have meshed the ČSAV's structure with that of the federalization of the country then being negotiated. Scholars resented bureaucratic interference with their research. Staff scientists and some academicians demanded open agendas and full discussion of issues at meetings of the General Assembly of Members. They wanted recognition of a trade union of scientific personnel to insure internal democracy<sup>55</sup>. These proposals were advanced in the heady atmosphere created in the first half of 1968 by the relaxation of censorship, new leadership in the Communist Party, and wide public debate about the need for systemic reforms.

### *The immediate impact of 21 August 1968*

The balloon of hope for progressive change in the ČSAV was deflated by the Soviet-led Warsaw Pact armed intervention of 21 August 1968. That calamity and its aftermath have been richly described elsewhere<sup>56</sup>. Here we may cite as emblematic the

<sup>53</sup> Kratochvíl, Antonín: Die kommunistische Hochschulpolitik in der Tschechoslowakei. München 1969, 57.

<sup>54</sup> Graham: The Role of the Academy of Sciences 117. While paying high tribute to the Soviet Academy, Graham does not bestow this accolade from the 1970s on it in his most recent work (supra n. 20).

<sup>55</sup> Wichterle: Vzpomínky 162–192. – Skilling, H. Gordon: Czechoslovakia's Interrupted Revolution. Princeton, N.J. 1976, 574–579.

<sup>56</sup> The most comprehensive account, based on published sources, is Skilling, Czechoslovakia's Interrupted Revolution. Indispensable is Sedm pražských dnů 21.–27. 1968. Dokumentace. Praha 1968. Reprinted with a supplementary essay by Vilém Prečan, Praha 1990. For a biting retrospective on 1968 see Hauner, Milan: The Prague Spring – Twenty Years After. In: Czechoslovakia: Crossroads and Crises 1918–88. Ed. Norman Stone and Eduard Štrouhal. London 1989, 207–230.



career of Academician Josef Macek, DrSc., director of the Historical Institute (*Historický ústav*) of the ČSAV and a prolific historian of early modern Europe and the Hussite movement. His fate exemplifies that of many scholars whose outlooks were transformed by the intervention from acceptance or muted questioning of the Soviet model, and of Marxism-Leninism as its ideological justification, into doubt and then open dissent.

Josef Macek began as an enthusiastic young Marxist who rose swiftly after graduating from Charles University in the class of 1947–48 at age 24. His adoption of Nejedlý's ideas of the social revolutionary nature of the Hussite movement, his expertise, the backing of his academic mentors, and his membership in the Communist Party enabled him to become the founding director of the Historical Institute in 1952<sup>57</sup>. While publishing an array of books and articles, he steered the institute through numerous ideological and historiographical controversies. Where possible, he sought compromise rather than confrontation. Despite his party loyalty, he displayed a human concern for colleagues; for instance, in 1965 he arranged for Professor Otakar Odložilík, a hitherto banned émigré historian and Reformation specialist, to attend a conference in Prague commemorating the 550th anniversary of the death of Jan Hus<sup>58</sup>.

At the Fourth Congress of Czechoslovak Historians in September 1966, Macek went beyond his formulaic opening remarks to attack "dogmatism" and schemata in historical writing. He called for a reinvigorated profession with new topics and new methods of research, thereby adopting some of the ideas advocated by historians critical of orthodox Marxism<sup>59</sup>. At that time, Macek had been a member of the Central Committee of the Communist Party for six years. As an elected member of parliament, he voted with the majority of deputies to condemn the invasion of 21 August as an unwarranted and hostile act. And he supported the publication of *The Seven Prague Days* (*Sedm pražských dnů*) in September 1968, dubbed *The Black Book*, which was compiled and edited by a team from the Historical Institute and Charles University. It appeared under the imprint of the Institute, and its documents described the terrible events in precise detail<sup>60</sup>.

Subsequently, Macek was dropped from the Central Committee and his post as director. His writings were suppressed, he was expelled from the Communist Party, and he was stripped of his honors and awards. In poor health, he worked at lesser jobs through the 1970s and 1980s at other ČSAV institutes, but he was not deprived of his membership in the Academy. Thereafter, he wrote occasionally for publications

<sup>57</sup> On Macek see Šmahel, František: Josef Macek (8. 4. 1922–10. 12. 1991). ČČH 90/1 (1992) 143–146. – Rejchrtová, Noemi: Vzpomínáme Akademika Josefa Macka, zakladatele a prvního ředitele Historického ústavu ČSAV. In: Bulletin Historického ústavu ČAV 2/6 (1991) 14–15, and Válka, Josef: Zemřel Josef Macek (1922–1991). ČMM 111/1 (1992) 187–189.

<sup>58</sup> Odložilík was one of about a dozen American, German, and other Western scholars who participated in the Symposium Hussianum Pragense 18–20 August 1965, held in Prague's Old Town Hall. See his itinerary, "Rozvrh pobytu v Československu" and correspondence in Odložilík Papers, University of Pennsylvania Archives, UPT 50 Od 22, Carton 2.

<sup>59</sup> Macek, Josef: Stav a úkoly historické vědy. ČsČH 15/1 (1967) 1–34. For a favorable recollection of the Historical Institute when Macek was its director, see O dějepisectví a lidech okolo něj. Tucet otázek pro Josefa Janáčka. Dějiny a současnost 15/2 (1993) 45–48.

<sup>60</sup> *Sedm pražských dnů* 21.–27. srpen 1968.



abroad or for "the drawer." Macek's fall was steep because he had scaled the commanding heights yet voiced what he believed was right. Many others also paid dearly because they refused to accept the armed intervention as necessary to the cause of socialism or their country's welfare.

*Reprisals, "normalization," drift*

In the days following the Soviet-led invasion, the Presidium of the ČSAV rejected any justification for the action and affirmed the primacy of the Academy's quest for truth in its present and future work. In April 1969, Alexander Dubček was replaced as First Secretary of the Communist Party by Gustav Husák and retribution against the Academy began. Its president František Šorm, who had succeeded Nejedlý, was dismissed from his post along with ten other members of the Presidium. The next president, Jaroslav Kožešník, a specialist in automation technology and a party loyalist, faithfully transmitted to the General Assembly of Members the government's demand for the "normalization" of science and scientists<sup>61</sup>. Emergency measures against dissenting scientists were formalized in a law of 19 March 1970, which amended previous legislation to assure the government's supremacy over the Academy. Paragraph 14 of the law stipulated that the president of the Academy "shall be appointed or revoked upon the proposal of the Government by the President of the Czechoslovak Republic". Similarly, the government exercised authority over the appointment and recall of members of the Presidium and members of the Academy "as a rule" by the decision of the General Assembly upon the proposal of the Presidium.

The By-Laws (or Articles) of the ČSAV were similarly modified. Under their Article 12, for example, titled "Loss of Membership in the Academy," such cases were to be decided by the government in accordance with Paragraph 12 of the law, which stipulated that

A member of the Academy shall forfeit his (or her) membership on the strength of a decision of the Government's own accord or based on a proposal submitted by the General Assembly of Members of the Academy, if he proved disloyal to science, the State, the cause of peace and socialism, or has been sentenced to the loss of the honorary titles and distinctions, or if he fails, consistently and without adequate reason, to fulfill his duties following from his membership in the Academy<sup>62</sup>.

As for the duties of academicians and corresponding members, they were

creatively to work in the fields of the sciences, help to implement the results attained in scientific research, partake of the Academy's pursuits, fulfill the tasks imposed upon them by the Academy, and conscientiously to discharge the functions entrusted to them<sup>63</sup>.

It would have been impossible for any member who had emigrated "to fulfill" all these duties. Seven who emigrated were deprived of membership in late 1971<sup>64</sup>. To fill the

<sup>61</sup> Wichterle: *Vzpomínky* 193–194. – Janouch: *Science Under Siege* 8.

<sup>62</sup> Czechoslovak Academy of Sciences 1987, 13. On the negative impact of the law of 1970, see Janko, Jan: *K vývoji organizace a řízení* 51–52.

<sup>63</sup> Czechoslovak Academy of Sciences 1987, 13.

<sup>64</sup> Janouch: *Science Under Siege* 9.

gap and guarantee loyalty, the government nominated 20 new regular and corresponding members. The General Assembly in turn voted to increase the number of foreign members by electing 7 Soviet scholars and 7 from other communist countries, perhaps as a token of gratitude to their liberators.

All directors of the ČSAV's institutes were dismissed by June 1970 and replaced by opportunists and party hacks. The new director of the Institute of Nuclear Physics is quoted as having said, "I would throw out even Einstein if his political views were not quite in order!"<sup>65</sup> In the early 1970s, everyone from regular academicians to journeymen scientists was placed on a renewable contract for employment. This could range from a few months to three years depending on an assessment of their loyalty by screening committees. Long-term contracts of four years at first were reserved only for the most devout party members, but by the 1980s they had become standard for almost all employees. Outstanding scientists such as microbiologist Ivan Málek, sinologist Jaroslav Průšek, and biochemist Šorm were among those humiliated by the short-term contract system. Dismissed employees were prohibited from publishing or translating; they were cut off from foreign books and learned journals. Scholars in the ČSAV and the Czech universities who lost their jobs included at least 145 historians and perhaps twice as many others in law, art, and the social sciences<sup>66</sup>. In the Slovak Academy, four-fifths of the chairmen of its scientific councils (*vedecké kolégia*) and most directors of its specialized institutes, including all those in the social sciences, and a large majority of directors of major research institutes were replaced<sup>67</sup>. The Slovak purge generally was less severe than that in the ČSAV as a whole, however.

Throughout the spheres of learning and creativity in Czechoslovakia, thousands were frightened into submission, forced into lower level jobs, or cast adrift to fend for themselves. Well over 100,000 persons emigrated. Travel abroad to non-communist countries for scholarly purposes became almost impossible, later to be somewhat relaxed, in certain cases for service to the police. Czech participation in scientific congresses, which had been so vigorous between the World Wars and again in the mid-1960s, became infinitesimal. Besides the Academy and the universities, auxiliary institutions such as libraries, archives, and publishing houses were also purged. The Academy's learned journals were disciplined under new editors and editorial boards. Readers would open the pages of a journal to find, often in italics, a lead editorial affirming the journal's new ideological course. In reality, this was a replay of old themes: Gratitude for the Great October Revolution that made possible the birth of Czechoslovakia in 1918, thanks for the country's liberation from fascist overlords by the Soviet Union in 1945 and for her fraternal help in August 1968, admiration for Soviet scien-

<sup>65</sup> Ibid.

<sup>66</sup> Prečan, Vilém: *Acta Persecutionis*. A Document from Czechoslovakia, presented to the XIVth International Congress of Historical Sciences. San Francisco 1975. Many teachers, archivists, museum employees and others who wrote history could not be listed. Also Prečan, Vilém: *Acta Creationis*. Unabhängige Geschichtsschreibung in der Tschechoslowakei 1969–1980. Hannover 1980, ix–xl.

<sup>67</sup> Kaplan, Karel: *Political Persecution in Czechoslovakia 1948–1972*. München 1983, 35.

tific and technological achievements, and loyalty to the principles of Marxism-Leninism and the leadership of the Communist Party<sup>68</sup>.

The return of the one-sided orientation of Czechoslovakia toward Soviet science that had prevailed in the 1950s left the country further behind developments in Western Europe, the United States, and Japan. The government's effort to punish an institution that had harbored reformers and dissenters was evidenced in the budget allotted to the ČSAV. In 1968, it had been over Kčs 1-billion. This fell in 1969 to Kčs 830-million and in 1970, excluding the allotment to the SAV, to Kčs 110-million<sup>69</sup>.

Despite the repression, surveillance, and demoralization, many who retained their positions in the Academy continued with their projects, and some that had been long underway were completed. In the social sciences, they included the outstanding six-volume *Encyklopédia Slovenska*, a sign of Bratislava's release from dependence on Prague, and the vigilantly edited and "normalized" *Malá československá encyklopedie*, an informative but lesser work<sup>70</sup>. Four massive volumes edited by the Academy's *Kabinet pro studium českého divadla*<sup>71</sup> handsomely depicted the evolution of Czech theater, cabaret, and operetta. The first major English-Czech dictionary in over 70 years, work on which had commenced in 1966 at the *Ústav jazyků a literatury ČSAV*, was completed in the 1980s<sup>72</sup>. A major work that began to appear in the 1980s was *Lexikon české literatury*. It was prepared by the *Ústav pro českou a světovou literaturu*. This agency, founded in 1953, developed from an institute with the same name founded in 1947<sup>73</sup>. The Slovak Academy of Sciences published a useful pedagogical encyclopaedia in cooperation with the Komenský University based on an initiative dating from 1975<sup>74</sup>.

The discipline of history, which suffered perhaps most seriously of all in proportion to the number of its practitioners, had a mixed record in the 1970s and 1980s, but one not without positive results. One breakthrough occurred with the publication, after much internal debate, of František Kutnar's two-volume survey of Czech and Slovak historians and historical writing, but it bore the Ministry of Schools' imprimatur, not the Academy's<sup>74</sup>. The official academic historical journals, after the hysteria of the early 1970s had eased, began to carry articles of lasting value in *Československý časopis historický* and *Historický časopis*, and the more remote in the past their subjects, the less obeisance they openly paid to orthodoxy. The Institute of Czechoslovak and

<sup>68</sup> *Historie a vojenství* 2-3 (1971) 145-160. - ČMM 90/3-4 (1971) 215-216. - ČsČH 18/2-3 (1970) 149-150. - *Historica* 18 (1973) 5-57.

<sup>69</sup> Payne: Four Years of 'Normalisation' 46.

<sup>70</sup> *Encyklopédia Slovenska*. 6 vols. Bratislava 1977-1982. - *Malá československá encyklopedie*. 6 vols. Praha 1984-87.

<sup>71</sup> *Dějiny českého divadla*. Ed. František Černý et al. 4 vols. Praha 1971-83. - *Velký anglicko-český slovník*. Ed. Karel Haas and Břetislav Hodek. 3 vols. Praha 1984-85.

<sup>72</sup> *Lexikon české literatury: Osobnosti, díla, instituce*. Ed. Vladimír Forst et al. Vol. 1: A-G. Praha 1985. After November 1989 publication of further volumes was halted, reportedly because the work had its genesis under communist rule. Vols. 2/1 H-J and 2/2 K-L appeared in 1993.

<sup>73</sup> *Pedagogická encyklopédia Slovenska*. 2 vols. Bratislava 1984-85.

<sup>74</sup> Kutnar, František: *Přehledné dějiny českého a slovenského dějepiscetví*. 2 vols. Praha 1973-77. Kutnar, a student of the eminent Czech historian Josef Pekař, whose works were in disfavor during the communist era, was a docent at Charles University.

World History (*Ústav československých a světových dějin ČSAV*), successor to the purged Historical Institute, nevertheless, merely tantalized scholars with an incomplete survey of Czech and Slovak history<sup>75</sup>. This long awaited synthesis was its chief assignment and was to have appeared in four volumes of two parts each, ranging from antiquity to the present. It seems that personal differences and a struggle for power between its chief editors, and sensitivity over topics in contemporary history, thwarted the completion of its final volumes<sup>76</sup>. The chronological gap was partially filled by a work that treated the "bourgeois" politicians of the nineteenth and early twentieth centuries with sensitivity and respect, including the once maligned T. G. Masaryk. It was published, surprisingly, by Svoboda, the Communist Party's publishing house<sup>77</sup>. Slovak historians made a fresh start on their long planned history of Slovakia with three volumes out of a projected seven that appeared in the 1980s<sup>78</sup>. Slovak contributions to science, technology, and education were vividly depicted in a work by a pioneer historian of those subjects<sup>79</sup>.

In the 1970s, a new type of publication required by the rules governing state-subsidized works began to appear in paperback offset editions of limited quantity. Edited by the ČSAV's institutes, they all contained the admonition, "Only for service needs" (*Jen pro služební potřebu*). Because the items were financed by funds from the state budget, their marketing was prohibited; but it was possible for the sponsoring institutes to exchange them with other institutions at home and abroad, and also with cooperating individuals. This enabled scholars to publish items that for economic reasons were refused by the normal publishing houses. Usually appearing as miscellanies (*sborníky*) under the ČSAV's auspices, they also offered outlets for articles unsuited for the mainstream official journals. Many valuable essays appeared in series such as *Historická geografie*, *Práce k dějinám přírodních věd*, *Práce z dějin Československé akademie věd*, *Hospodářské dějiny*, and *Sborník k dějinám 19. a 20. století* published in the "normalization" era. In addition to the bold, often revisionist *samizdat* historical essays that appeared in the 1970s and 1980s, worthy contributions were to be found in regional journals such as *Jihočeský sborník historický* and *Husitský Tábor*, which offered outlets for "gray zone" scholars banned by the enforcers of conformity in Prague<sup>80</sup>. These publications kept alive a measure of healthy professionalism among social scientists and humanists in difficult times.

<sup>75</sup> Přehled československých dějin. Ed. Jaroslav Purš and Miroslav Kropilák. Vol. I/1–2. Praha 1980–82.

<sup>76</sup> The projected volumes, some of which had already been written but were not published, were: II 1848–1918, III 1918–1945, and IV 1945–present. Portions of them were published in limited paperbound editions after 1989 by the revived Historical Institute.

<sup>77</sup> Urban, Otto: Česká společnost 1848–1918. Praha 1982.

<sup>78</sup> Dějiny Slovenska. Vol. 5 (1918–1945). Ed. Samuel Cambel. Bratislava 1985; vol. 4 (1900–1918) 1986; vol. 6 (1945–60) 1988. Cambel was director of the Historical Institute of SAV and a corresponding member of ČSAV.

<sup>79</sup> Tíbenský: Dějiny věd a techniky na Slovensku (supra n. 13).

<sup>80</sup> Kořalka, Jiří: Historiography of the Countries of Eastern Europe: Czechoslovakia. American Historical Review 97/4 (1992) 1026–1040, here 1034f.

*Science bends to state policy*

Natural scientists and engineers were discontent under the constraints of "normalization." They suffered frustration and anguish from bureaucratic interference with their research and doltish management of laboratories and institutes. They lost time by having to participate in ritualistic lessons on Marxism-Leninism. Academician Ivan Málek, founding director of the Institute of Microbiology and vice president of the Academy from 1961 to 1969, spoke out against the looming danger to the country's science. In a letter of 25 June 1975 addressed to the Presidium, he noted the prevailing mood of undercertainty and fear due to the unqualified people directing institutes, the banishment of experienced scientists, and the politically motivated hiring of new researchers<sup>81</sup>. These observations are exemplified in the tribulations of Professor Otto Wichterle, a pioneer in macromolecular chemistry in Czechoslovakia. In the 1960s, he had belonged to a small group of academicians who actively sought to reform the ČSAV and liberalize public life<sup>82</sup>. After Dubček's fall, he was dismissed as director of the Institute of Macromolecular Chemistry, which he had made world famous by perfecting the hydrogel used in the soft contact lens. His career in the 1970s and even after retirement in the 1980s was impeded by malicious meddling from his superiors in his relations with colleagues abroad and in his efforts to win just compensation from competing firms in the United States that had infringed on his optical patents. Cruel as the system was, Wichterle's memoirs describe the continuing importance of personal relationships in mitigating one's circumstances, as for instance when a former student became director of his institute in 1984<sup>83</sup>.

The leaders of the ČSAV were admonished by the government and the Communist Party to make the Academy economically useful if it was to survive. Science was to become, more than ever, an instrument of politics. It was to

be part of a unified national plan for research [...] to be concentrated on a few selected programs, each concerned with a definite theme to be handled on the basis of a unified working hypothesis or coordinated from the standpoint of a concrete goal<sup>84</sup>.

This approach was applied by Academician Kožešník, President of the ČSAV, when he instructed the General Assembly of Members on 9 March 1972:

The socialist scholar does not waste time or means on developing theories which are not socially useful, nor on writing works which solve nothing and do not occupy a place in the list of social requirements<sup>85</sup>.

<sup>81</sup> Kusin, Vladimír V.: From Dubček to Charter 77. A Study of 'normalization' in Czechoslovakia 1968–1978. New York 1978, 210. Málek was a member of the Communist Party and held the Lenin Prize and Order of the Republic.

<sup>82</sup> See Wichterle's support of reforms, his signing of 2000 Words, election to parliament in 1969, and problems in the Institute of Macromolecular Chemistry-ČSAV in his *Vzpomínky* 162–222. Also a revealing interview with him: *Jak tedy s volbami*. In: *Reportér* 4 (20.2.1969) 7–8.

<sup>83</sup> Wichterle: *Vzpomínky* 248–250. For an evaluation of his memoirs see *Dějiny a současnost* 15/4 (1993) 58–59.

<sup>84</sup> *Rudé právo* 29 July 1970, as quoted in Payne: *Four Years of 'Normalisation'* 46. The changed approach is summarized in *Stručný přehled vývoje československé akademie věd* 294.

<sup>85</sup> Payne: *Four Years of 'Normalisation'* 46.



By May 1972, Kožešník could report that 78 per cent of the Academy's capacity for research had focused on work connected with the state plan for technological development. Having failed to complete the coordination of science and state policy before 1968, the regime was now trying to succeed through the opportunity opened by "normalization." One aspect of the practical application of science to economic needs was the education of scientific workers. This included occupational training and ideological orientation through mandatory rote lessons in Marxism-Leninism that pervaded all enterprises and resulted in ridicule and wasted time. Agreements for the exchange of scientists and technicians were concluded with factories and farms so as to acquaint each sector with the other's needs and resources. Patents obtained by ČSAV and SAV researchers increased from 211 in 1970 to 283 in 1980<sup>86</sup>. The rights to many patents were sold abroad to gain badly needed hard currency. The high quality of some Czech industrial design and textile machinery, developed at research institutes outside the jurisdiction of the Academy, aroused interest from firms as distant as Japan that bought license rights to use Czech technology<sup>87</sup>. According to an American observer, however, the Czechs were not sufficiently aggressive in advertising their techniques on the world market and ceded opportunities to foreign competitors<sup>88</sup>.

In quest of new talent to replace the old, the ČSAV tried to get middle-school students to further their education for careers in science by having scientists advise textbook publishers and edit popular science journals such as *Lidé a země*, *Příroda*, *Vesmír*, and *Živa*. Because of the tight quotas in the higher schools, the students' need for a "correct" family background, and the limited number of scientific jobs available, such efforts could not bring optimal results. Many gifted youths were shunted onto practical vocational paths. In scholarly publishing, the sales of books by *Academia* in Prague and *Veda* in Bratislava, the ČSAV's official publishing houses, fell sharply after 1968 and were slow to recover. The two firms began to collaborate on Czech- and Slovak-language editions of scientific and technical books and to issue works in German and English for foreign consumption. By the 1980s, they were publishing 49 science-related periodicals and anthologies and 120 learned journals annually. This contrasts with 49 journals in 1953<sup>89</sup>.

Environmental problems such as air and water pollution, acid rain, and hazardous waste from factories and the occupying Soviet forces caught public attention in the 1970s and 1980s. Scientists began to discuss the problems on television and in the press. In response to complaints that the ČSAV had excessively concentrated its facilities in Prague, Brno, and Bratislava, the Academy set up branches in lesser cities. České Budějovice in south Bohemia became an important center for research on

<sup>86</sup> Československé akademie věd 1952–1982, 48; cf. Stručný přehled 295.

<sup>87</sup> Freeze, Karen J.: Technological Innovation in a Central Planned Economy: A Case Study of the Czechoslovak Textile Machine Industry. Draft paper 1986, 5–6. A short version appeared in: Technology and Technical Sciences in History. Proceedings of the ICHOTEC Symposium Dresden 1986. Berlin 1987, 65–68.

<sup>88</sup> Idem: Report on August–September trip to East Germany and Czechoslovakia (Unpublished) 2–4, 7. – Idem: The New Eastern Europe: Reflections on Design in Czechoslovakia. Design Management Journal 1/2 (1990) 42–48.

<sup>89</sup> Československé akademie věd 1952–1982, 51.

landscape ecology, botany, and parasitology; Pardubice in solid state chemistry, Ostrava in industrial landscape ecology and metallurgical theory, and Hrádec Kralové in biopharmacy were others. This regionalization could not alter the basic nature of the research establishment because of the skilled workers, transport, and government offices concentrated in the three major cities. Nor could organized science in a small country imitate the Soviet pattern of geographically distant, affiliated regional academies that began in the 1920s<sup>90</sup>. Slovakia, however, was an exception.

There was a steady growth of an independent scientific and technological base in Slovakia. The Slovak Academy Sciences had 2,556 employees in 1965; this reached 3,663 in 1970 after federalization and 4,622 in 1980<sup>91</sup>. Slovak capital was invested in heavy industry, construction, and armaments. The number of Slovak academicians in the SAV increased, as did Slovak membership in the ČSAV:

*ČSAV and SAV membership 1967–1987*

Year	ČSAV			SAV			Members in ČSAV	Per cent of SAV Men in ČSAV
	Number of Regular Members	Number of Corresponding Members	Total Number of Members	Number of Regular Members	Number of Corresponding Members	Total Number of Members		
1967	57	148	205	25	31	56	19	9.0
1987	72	160	232 <sup>1</sup>	42	56	98 <sup>2</sup>	45	19.0
Percentage increase	26.3	8.1	13.2	68.0	80.6	75.0	136.8	111.1

<sup>1</sup> 176 members or 76 per cent of the total were nominated since 1970.

<sup>2</sup> 78 members or 80 per cent of the total were nominated since 1970.

Sources: *Československá akademie věd. Slovenská akademie věd 1967. Informační příručka. Praha 1967.*

*Czechoslovak Academy of Sciences 1987. Information Handbook. Prague 1987.*

While the number of Czech members in the Academy remained stable at 186 in 1967 and 187 in 1987, membership in the SAV increased 75 per cent and Slovak membership in the ČSAV 136.8 per cent in the same period. The total number of Slovak academicians, however, stayed well below the ratio of 1:2 Slovaks to Czech in the overall population. In actuality, the ČSAV was basically a Czech organization and its Presidium exercised jurisdiction only over its Czech research institutes, not the Slovak ones, a situation legitimized by the federalization of the country in 1968.

Under "normalization" there was a striking increase in the number of ČSAV members from minor vocational and technical institutions and the applied professions. With 80 per cent of the Academy's members elected since 1970, by 1988 it had become

<sup>90</sup> *Ibid.* 36. – Ruble: *The Expansion of Soviet Science* 2–3.

<sup>91</sup> *Československé akademie věd 1952–1982*, 39. There are minor discrepancies in all of these statistics from one source to another; cf. *Encyklopédia Slovenska*, vol. 5 (1981), where a total of 4086 workers is given.

a paragon of the policies of the Husák regime. Clearly, the political and ideological credentials of some new members overshadowed their scholarly achievements<sup>92</sup>.

The decline in authority and stature of the ČSAV in the 1980s was reflected in the rise in importance of the State Commission for Scientific-Technological Development and Investment (*Státní komise pro vědeckotechnický rozvoj a investice*) under the patronage of the veteran communist functionary Jaromír Obzina, who was Minister of the Interior from 1973 to 1983 and chairman of the Commission.

On 17 November 1982, thirty years after the ČSAV was formally inaugurated, a large audience gathered in the Palace of Culture in Prague to observe the anniversary. It was an occasion for celebration and self-congratulation that furnished propaganda for public consumption and reminded the country's hardnosed leaders that the Academy was a faithful servant in their system of rule. A brochure prepared for the event by a Czech historian of science invoked J. E. Purkyně, Gregor Mendel, Zdeněk Nejedlý, Jaroslav Heyrovský, and even Charles IV in hailing "the representative alliance" headed by the ČSAV that provided "a theoretical basis for the solution of complex practical problems" and advanced the cause of world peace<sup>93</sup>. And the influential director of the Institute of Czechoslovak and World History concluded his narrative survey of the thirty years with similar optimism:

Never in the history of our nation has there been such a development of the sciences, their institutions, and their results as in the period in which the ČSAV developed and will further develop its activity. Its level of attainment bears witness to the extraordinary attention paid by socialist society to the progress of science, to the creative conditions for concentrated research work. The socialist integration of science, of the division of labor, and of the scientific front of the socialist lands, above all with the scientists of the Soviet Union, stands as one of the decisive factors not only in the scientific-technological, but also in the economic and social, development of the socialist state [...] The Czechoslovak Academy of Sciences has become a modern socialist scientific institution that, under the protection of the Communist Party of Czechoslovakia, wishes actively to assist in that development<sup>94</sup>.

The downfall of communism in Czechoslovakia seven years later exposed the hollowness of these words and the fragility of the Academy's existence.

### *1989: Weaknesses at the threshold of change*

With the change from a centrally planned bureaucratic economy and one-party state to a pluralistic political system, beginning in November 1989, the ČSAV faced a new and perilous situation. The new regime, committed to an emerging competitive free-

<sup>92</sup> This characterization would seem to apply to regular and corresponding members elected in the late 1970s and 1980s such as: Zdeněk Češka (civil law), Jiří Dvořák (political economy), František Havlíček (history), Ladislav Hrzal (historical materialism), Miloslav Jirges (political economy), Ivan Krempa (history), Milan Matouš (communist theory), Viliam Plevza (history), Zdeněk Snítal (history), and Vladimír Ruml (philosophy).

<sup>93</sup> Nový, Luboš: *Tschechoslowakische Akademie der Wissenschaft. Geschichte und Gegenwart*. Prag 1982, 46.

<sup>94</sup> *Československé akademie věd 1952–1982*, 116. The writer was Jaroslav Purš, a specialist in economic history and the history of technology, elected a corresponding member in 1972 and a regular academician in 1981.

market economy, represented an adversary, to whom the Academy was a burden on the state budget and a haven for old-time communists and superfluous functionaries. The ČSAV, along with museums, orchestras, universities, and the arts, became the target of a series of incremental reductions in public funding that forced serious retrenchments. The government believed that subsidizing such institutions retarded society's transition to a free enterprise system. Furthermore, the premises occupied by the Academy's 69 institutes, 9 joint establishments, and 43 affiliated societies were subject to return to their previous private, corporate, or church-related owners, pending court approval of their claims to restitution<sup>95</sup>. Suddenly, jobs, offices, and laboratories that people thought were lifetime in tenure began to melt away.

The ČSAV was particularly vulnerable to these distressing changes because of its internal weaknesses. Its claim to be Czechoslovakia's "supreme scientific institution" clashed with the reality of its mediocrity in the past two decades. Its authoritarian structure was incompatible with the country's new freedoms to speak, assembly, and publish<sup>96</sup>. Discussions at meetings of the General Assembly of Members were usually dull and inconsequential. The staffs of its social science institutes (economics, history, philosophy, prognostics, sociology) wanted freedom in research and contacts with the West. They resented lower per capita funding than that allotted to the physical and technical scientists, a feature, to be sure, also common to foreign academies of science, but that was no consolation. While Western scholars had xerography and advanced computers, ČSAV copying machines were carefully rationed, and the first personal computer was not installed at the Historical Institute until 1988. The physical scientists had to cope with outmoded equipment and restrictions on international travel. All worked under the scrutiny of Argus-eyed party zealots and security agents, whose negative reports could affect one's career.

There were other irritants. The classification system called *nomenklatura* assigned each individual a defined duty that had been approved, not only by his supervisors in the laboratory or institute, but above all by the relevant committee of the Communist Party. The system, which took shape in the 1970s, knit every employee and work place to a formal mode of reporting, review, and decision-making. In Prague, the ultimate authority was the central committee of the Communist Party of Prague. This gave the party elite immense power over scientific research and personnel. The ČSAV itself functioned under this prescribed chain of command, which kept control and feedback within the party committee at each administrative level. Difficult or unpleasant decisions would be postponed by faint hearted directors of institutes or passed along to a higher level of authority to be resolved. This further concentrated power in the powerful academicians on the Presidium and in the party committees. The *nomenklatura* was a system adapted to the Academy's authoritarian structure,

<sup>95</sup> E.g., Šmahel, František: *Historia calamitatum ... Bulletin Historického ústavu ČAV* 4/3 (1993) 1. For other sources of information about the ČSAV in its final years, the author thanks Jan Janko, Leoš Jeleček, Alena Míšková, and Zdeněk Šolle. The responsibility for its use in this essay is entirely his own.

<sup>96</sup> On similar phenomena in Polish institutions, see Staniskis, Jadwiga: *The Dynamics of Breakthrough in Eastern Europe. The Polish Experience*. Trans. Chester A. Kisiel. Berkeley CA 1991.

whereby party bureaucrats controlled budgets and jobs, enforced conformity, and subjected research and research workers to politics and dogma<sup>97</sup>.

Disparities in the apportionment of rewards and resources were another source of discontent. At the close of the Husák era, the ČSAV had 78 academicians and 160 corresponding members. Their privileges and those of their staff favorites were resented. Employees lacked a strong trade union that could defend their interests. There was one for specialists in science and education (*Odborový svaz pracovníků školství a vědy*), but it lacked strength and membership was voluntary. Worker grievances were being negotiated in 1968 but this was cut short by the invasion. With free expression blossoming after November 1989, the Academy faced not only the animus of anti-communist government ministers but also reports in the press as an "isolated colossus" and "endangered dinosaur."<sup>98</sup> Scholars in Moravia and Silesia complained of discrimination and neglect<sup>99</sup>. The government prepared measures to reduce the Academy's labor force while boosting its productivity. Scientists worried that budget cuts would force talented colleagues from their institutes<sup>100</sup>.

In the early 1990s, with the government pondering how to refashion the ČSAV and the universities, a struggle for survival ensued in which contending constituencies in these institutions sought to influence the final decisions. The public dissection of the ČSAV in parliamentary hearings and the mass media revealed how differently it had evolved under "normalization" from its exemplar, the Soviet Academy of Sciences. That monumental institution had accumulated immense respect in its sixty years of operation since the 1920s. It pioneered the modern concept of the integrated research institute as the basic organizational form of scientific research<sup>101</sup>. It endowed the director of the institute with great authority, including a high degree of autonomy in distributing his budget among the institute's departments and individual researchers. It developed a system of graduate research within the Academy, but not in so domineering a manner as to engage the universities as antagonists. It endowed the title of "academician" with greater professional prestige than that of any other in the Soviet

<sup>97</sup> Compare the role of the Academy's *nomenklatura* with that in the Czechoslovak medical profession, where "a handful of powerful physicians" in the medical *nomenklatura* controlled health norms and standards. The daily clinical work, however, was largely in the hands of non-party physicians sufficiently skilled to control clinical practice; but no independent medical profession free of party domination was able to develop during communist rule. Heitlinger, Alena: *The Medical Profession in Czechoslovakia: Legacies of State Socialism, Prospects for a Capitalist Future*. In: *The Changing Medical Profession: An International Perspective*. Ed. Frederic W. Hafferty and John B. McKinlay. New York 1993, 172–183, here 180–181.

<sup>98</sup> Holub, Petr: *Ohrožený mastadont*. Respekt 8, –14. 2. 1993.

<sup>99</sup> Podorský, Vladimír: *Jak je to s naší vědou?* Universitas: Revue Masarykovy University v Brně 6 (1991) 56–61. – Pavelčíková, Nina: *Jště o Akademii věd*. Lidové noviny 1 February 1993. On problems in the SAV see Štefaničová, Tatiana: *K problémům vysokých škol a vědeckého výskumu na Slovensku*. Naše snahy 29/2 (1993) 10–12.

<sup>100</sup> On the issues confronting the ČSAV, see the survey of the press by Efmertová, Marcela: *Informace o vývoji ČSAV po listopadu 1989, získané z výstřižkového archivu Tiskového odboru ČSAV (ÚTDV)*. Praha 1992.

<sup>101</sup> Graham: *Science in the Soviet Union* 175.



Union. By the 1930s, the Soviet Academy was the only one of the academies of science founded in the eighteenth century that still intellectually dominated its country's research<sup>102</sup>. It expanded the system of centralized research institutes to include industrial technology alongside fundamental science<sup>103</sup>; but by placing its institutes in the capital cities rather than near the industrial plants, it created serious problems of linkage between science and production. The Academy finally began to tackle this in the 1960's, many years before the ČSAV tried to resolve similar problems.

This capacity for self-reform was a major reason for the durability of the Soviet Academy as the country's largest and most powerful scientific institution. As described by an expert on the Soviet Academy, there were others:

The Academy of Sciences has been fortunate throughout its history during the Soviet period in having a series of leaders of exceptional quality who devoted themselves to advancing its interests [...] not only the president of the Academy, but a host of scholar-administrators at the vice-president, scientific secretary, division and institute levels who have repeatedly demonstrated their ability to solve both administrative and intellectual problems [...]

Against this background, the leaders of the Academy [...] adopted the policy of proving the value of the Academy to the Soviet regime by simply out-performing all its competitors – the universities, the new Communist Academy, the branch and ministerial organizations [...]. The Academy has its critics among scientists [...] but the predominant opinion among Soviet intellectuals seems to be that the differences between the Academy and the rest of the research establishment are important ones that should be preserved [...] and this alliance of establishment and non-establishment sentiment is rare among intellectuals in the Soviet Union and is one of the hidden strengths of the Academy<sup>104</sup>.

These observations were made when the Soviet Academy stood at the high noon of its fame and had forged strong links with the universities in teaching and research. In comparing the Soviet and Czechoslovak institutions, it would be manifestly absurd to substitute "the ČSAV" for mention of the Soviet Academy in the above passage and still preserve any semblance of reality, even for the upbeat 1960s. From 1969 to 1989, the gulf between "establishment and non-establishment sentiment" was a pronounced and permanent feature of Czechoslovakia's learned estate. It was specifically manifest in the struggle for resources and prestige between the universities and the Academy, which was one of the salient weaknesses in the ČSAV's position as it faced dispiriting threats to its survival as a significant research institution.

### *Challenge and response, 1990–1992*

The demise of the communist monopoly on power ushered the ČSAV into the final three years of its existence. It responded to the challenge of a changed regime by altering its administration and procedures, democratizing decision-making, and improving relationships with sister institutions in education and culture. But it could not survive the break-up of the country and with it the end of the rationale for a pro forma joint academy of Czech and Slovak scientists. Well before the break-up, the Czech

<sup>102</sup> Ibid. 178.

<sup>103</sup> Ibid. 179–182.

<sup>104</sup> Graham: *The Role of the Academy of Sciences* 126–127.

government and press spoke out against any large-scale subsidized central organization for research in the post-Communist period. The Academy continued to function, but it was weakened by annual cuts in funding that over the period reduced its budget by over 50 per cent. Inflation, meanwhile, was growing at an average of more than 10 per cent yearly. The fiscal squeeze sent shock waves throughout the Academy.

Despite this crushing burden, the Academy pressed ahead heroically in its effort at self-reform. A number of elder, relatively uncompromised and independent-minded academicians cooperated with younger colleagues to shape the transition from the authoritarian past. A representative assembly – the Chamber of Elected Representatives (*Komora volených zástupců*) – was elected by research workers in the institutes. In soon superseded in decision-making power the ossified General Assembly with its many communist members. The research institutes got new directors elected by their staffs. The ČSAV got a new president in the person of organic chemist Professor Otto Wichterle, and a new Presidium was appointed by the government on 16 July 1990.

In mid-1990, the federal parliament approved revised By-Laws for the ČSAV pending permanent legislation that was eventually passed in May 1992, barely seven months before the country's break-up. The dismissal of 4,000 employees in a work force of over 12,000, the first of such massive reductions to occur, was painful. Some younger scientists, seeing the shape of things to come, left their institutes to enter other professions or business. Other were forced by stagnant salaries amidst rising rents and prices to seek second jobs or more remunerative work. A Grant Agency, authorized by law and separately budgeted and managed, began in the fall of 1990 to solicit proposals from research workers so as to stimulate innovation, competition, and productivity<sup>105</sup>. The Academy's contacts with foreign, especially Western, institutions in the "European house" were renewed after decades of enforced isolation.

It is remarkable how many long-standing lackadaisical work habits were discarded and new methods used, with exceptions, to be sure, that are still apparent to the foreign visitor. The new directors of the ČSAV's institutes were chagrined at not receiving the full autonomy they had been promised, because a new central administrative bureaucracy soon replaced the previous communist officialdom. Applications for senior positions were publicly advertised with specific qualifications for the job, sometimes including "morally irreproachable" (*morální bezúhonnost*). Women for the first time began to enter upper-level positions, in moderate numbers, however. The multifarious learned journals published by the ČSAV were winnowed, their typesetting computerized, and their prices increased to bring them closer to self-sufficiency. The Academy's publishing ventures as a whole received a thorough scrutiny. From top to bottom, prudent management and higher performance standards characterized the institution.

In late 1991 and early 1992, the ČSAV encountered the gravest threat to its existence in forty years. The danger came from the freely elected Czech multi-party government and was aggravated by enemies of the Academy and critics in the media who amplified the faults of the ČSAV discussed above. The Minister of Education, Petr Vopěnka,

<sup>105</sup> Fakta a statistiky o grantovém řízení 1991. Československá akademie věd. Praha 1992, 4–10.

urged that the ČSAV be canceled not only as a slothful communist hangover but also to save money as part of the general campaign by the government against subsidized educational and cultural institutions. The stakes involved the only umbrella organization of scientific research in the country, a reservoir of talent and brains in many disciplines, and real property owned by the ČSAV totalling 4.9-billion Kčs and by the SAV 2.3-billions<sup>106</sup>. The threat was compounded by the increasing probability that the common state of Czechs and Slovaks would split in two by the end of 1992, and with it the division of many institutions common to both partners.

The government's threat galvanized not only the Academy's staff to defend it but also officers and staffs at other institutions menaced by the budget cuts and official denigration of education and culture. This strengthened an incipient reconciliation between the Academy and the universities that had fruitful consequences for cooperative research. The alarmed heads of the endangered institutions met with the leaders of the Prague scientific councils of the ČSAV. They compared negotiations with Minister Vopěnka to Roosevelt's discussion with Stalin: "Unfortunately they fight with people who do not behave rationally [...]"<sup>107</sup>. The objectors fortunately gained important allies in parliament and the government and won a provisional victory. The result was the Law of 6 May 1992, which recognized the Academy of Sciences of the Czech Republic (*Akademie věd České republiky*) as a legal personality, validated its new structures, and opened the way for its continuation after the impending and seemingly inevitable year-end division of the state. Another law passed on the same day provided for state support "for the pursuit of science and technology" in amounts to be set in the annual budget<sup>108</sup>. It was decided that funding for the Slovak Academy of Sciences would come only from the government of that state, and that the ČSAV's property belonging to the SAV would be divided in a rough 2 to 1 proportion between them<sup>109</sup>.

### Conclusion

The experience of the ČSAV in the post-communist years resembled in certain aspects that of the Polish Academy of Sciences and the Academy of Sciences of the former German Democratic Republic. Each had similar problems of funding cuts, jeal-

<sup>106</sup> Kryl, Pavel: ČSAV před zrušením. Rudé právo 25. 8. 1992. – Koryta, Jiří: Akademie věd na rozcestí. Respekt 17. – 26. 4. 1992.

<sup>107</sup> Koubská, Libuše: Propask na akademické laguně. Lidové noviny 22. 2. 1992.

<sup>108</sup> Zákon České národní rady ze dne 6. května o Akademii věd České republiky. – Zákon České národní rady ze dne 6. května 1992 o státní podpoře vědecké činnosti a vývoje technologií.

<sup>109</sup> Sources for ČSAV on the period from November 1989 to December 1992 include the following: Wichterle: Vzpomínky 256–261. – Idem.: Perspektivy svobodné vědy. Reportér 23 (1990) 6–7. – Vlasák, Pavel: Z výroční zprávy ČSAV za rok 1991. Věstník ČSAV 101/1 (1992) 3–6. – Idem.: Hodnocení činnosti ČSAV za období po listopadu 1989. – Ibid. 101/2 (1992) 97–100. – Efmertová: Informance o vývoji ČSAV po listopadu 1989. – Bulletin Československé akademie věd 1991 and 1992. – Správy Slovenskej akadémie vied 26 (1990); 27 (1991); 28 (1992). – Bulletin Historického ústavu ČAV 1–3 (1990–1992).

ousy among institutions, recriminations over the past, and inadequate research facilities at high rentals<sup>110</sup>. From a bird's-eye view, the ČSAV's new leadership managed a difficult transition with skill and moderation. This review of the Academy's history has related, on one hand, the shameful treatment of its skilled scientists and the servility of its leaders before the bullying of the one-party state. It acknowledges those who resisted the complete surrender of their consciences and therefore were ready to respond after the unexpected collapse of their censors and overlords in 1989. On the other hand, it shows the Academy's role in preserving the venerable tradition of scientific organization among the Czech and Slovaks. The ČSAV, after all, nurtured two generations of scholars, some of whom produced important and enduring works in mathematics, the physical and technical sciences, the social sciences, and the humanities.

The Czechoslovak Academy of Sciences has bequeathed to the people of the former Czechoslovakia, and in particular to those of the present Czech Republic, an ambivalent legacy. This ambivalence is pungently expressed by the epitaph on a statue of Professor Zdeněk Nejedlý, the Academy's chief architect and first president. The statue was dedicated on 10 February 1993 in Nejedlý's hometown of Litomyšl. The occasion was the 115th anniversary of his birth. It reads:

Zdeněk Nejedlý, 1878–1962. He has augmented and harmed Czech culture and brought fame and disgrace to his native town, which values his good deeds and disdains his bad ones<sup>111</sup>.

<sup>110</sup> Wnuk-Lipinski, Edmund: Institute of Political Studies. *Politicus* No. 1, reprinted in ICCEES International Newsletter 32 (August 1993) 5–7. – Iggers, George G.: The Academy of Sciences of the GDR. The Forschungsschwerpunkt Zeithistorische Studium in Potsdam. German Studies Association Bulletin No. 1 (January 1994) 1–3.

<sup>111</sup> In Czech the epitaph reads: Zdeněk Nejedlý, 1878–1962. Rozmnožil i poškodil kulturu českou, přinesl poctu i úhonu rodnému městu, jež oceňuje dobré, zavrhuje špatné jeho skutky. Cf. Čorněj, Petr: Podivná cesta "vzhůru." *Lidové noviny* 4.3.1993, text of a lecture delivered at the dedication in Litomyšl. For the inscription see Holub, Petr: Kostlivec ve skříni. Vzpomínkový večer za Zdenka Nejedlého. *Respekt* 22.–28.3.1993.