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When the first academies and learned societies were created in the Age of Enlightenment, they became gathering places for those who were actively engaged in the pursuit of knowledge, be it in answer to practical needs or simply knowledge for its own sake. In this they differed from the universities of the 17th and 18th centuries, where theology and religious doctrine still ruled, and disciplines based on reason and empirical observation were treated with severe reservations. As time went on, and universities started not just admitting scientific disciplines in their curricula, but taking research institutes under their wing as well, they came ever closer to the ideal proposed by von Humboldt – communities of scientists and scholars engaged in the creation of knowledge as well as its transmission. Next to such stronger and revitalised universities, academies were then left with a variety of different models for their special mission. One thing, however, remained common to them all, and that was the criterion of excellence and exclusivity. This meant that being an academician brought with it various privileges, sometimes of a material sort but always in terms of conferring prestige – that of belonging to a highly elitist group of people considered to be of exceptional merit.

Because of the brutal series of historical transitions that Latvia as a country has gone through within

living memory, the Latvian Academy of Sciences has had to follow different structural models and serve somewhat different purposes during its early decades under Soviet occupation and the recent decades as the National Academy of a country once again independent. During the Soviet era, being an academician brought with it both research funds and facilities and material compensation in the form of exceptionally high salaries. The downside was the need for strict adherence to communist ideology and unquestioning obedience to the directives deriving from Moscow and transmitted by the local Party Central committee. This was undoubtedly less of a problem for researchers in the physical and biological sciences, but imposed an extremely heavy ideological burden on the humanities. As for the social sciences, many were not even recognised or accepted, their very existence being considered alien to Marxism–Leninism (“who needs such a thing as demography in a socialist system?”). After renewed independence, everything was turned on its head. Research funds and institutes moved over to the universities, salaries for academicians became drastically reduced and the intellectual and ideological freedom gained came at a heavy price in material security. The limitations in state support for science and scholarship as a whole have been a chronic problem for the past three decades.



Photo: Jānis Dzelmešs

Successive governments have paid lip service to it and successive Presidents of the Republic have militated for it, but other priorities have always taken precedence over research funding.

How then is excellence to be achieved in conditions of severe deficiencies in the infrastructures and resources available for research? First of all, through the ingenuity of scientists and scholars and their devotion to their respective quests. These qualities have served them equally well under the yoke of ideological strictures and the scarcity of funds under a democratic regime. Thus, back in the 1980s, I was told by a famous US physicist how much he had been impressed by the work of Latvian physicists in purely theoretical physics at a time when they had neither access to the latest Western scientific publications nor to the experimental facilities available in the Russian SSR. While individual talent and commitment remain the *sine qua non* of excellence to this day, researchers are no longer dependent on state support alone. Membership in the European Union has opened up a broad range of opportunities to engage in common projects with colleagues in other European countries as well as the possibility of applying to various sources of research funding of an international nature. In addition to that, the public-private partnership between business and industry, on the one hand, and academies and

centres of higher learning, on the other, has become a significant source of research support for totally free basic research as well as for applied research of a more targeted nature. An especially happy union has been the long-lasting collaboration between UNESCO and l'Oréal, with its broad programme of special support for women in science. I have had the honour of being the patroness of the Latvian part of this programme, which in recent years has been extended to our neighbouring countries Lithuania and Estonia as well. The Latvian Academy of Sciences became the instrument by which candidates were evaluated and selected for these fellowships, and parallel programmes are now in place in all three Baltic countries.

As in previous years, the 2021 yearbook of the Latvian Academy of Sciences, by presenting a broad overview of the structure and function of research activities in Latvia, becomes a showcase for current and future projects and accomplishments in a variety of disciplines. While the year 2020 will enter history as the *annus horribilis* of the COVID-19 pandemic, let us hope that the world-wide vaccination programmes of 2021 will illustrate the crucial role played by science and research in the very survival of the human race.