

Science in an occupied country

SIR — Latvia is an independent country on the eastern shores of the Baltic Sea that was occupied by the Soviet Union in 1940. On 16 June that year, the president of Latvia received an ultimatum to change the government and to permit the Red Army to cross the Latvian borders. The next day, Soviet tanks filled the streets of towns and villages of Latvia. The government retreated. The invaders appointed a new one.

The attitude of the Soviet occupiers towards Latvian intellectuals is typified by the fate of Professor Jūlijs Auškāps, the minister of education from 1938 to 1940, who had formerly been rector of the university. Auškāps had been active in the organization of science. Immediately following the occupation he was dismissed, forbidden to teach at the university and even to live in the capital, Riga. In June 1941 he was deported and imprisoned, and in August 1942 he was executed in Sverdlovsk. His 'crime' was being a Latvian patriot. The next minister of education in Latvia, Jūlijs Lācis, a popular novelist, although appointed by the occupiers, was arrested in January 1941 and died in prison in Astrakhan in December that year. His successor was an insignificant man from Moscow.

Science in independent Latvia in the 1920s and 1930s was concentrated in the newly founded Latvian University in Riga where professors had good links with colleagues in other European universities. On the day of the occupation, the Iron Curtain fell, and direct communication with the West, as well as the flow of chemicals and equipment, stopped. The activities of the university were restricted and the faculties of theology and philosophy were closed. The deans of six faculties lost their posts on 14 June 1941 when 15,000 Latvian citizens were deported overnight to Siberia in locked cattle-wagons¹. Among those deported were ten professors and more than a hundred students of the Latvian University.

In July 1941, the Soviet occupation of Latvia was succeeded by German occupation. The Latvian University was not restored and there was only limited activity at the "University in Riga". All Jewish professors and students were arrested, imprisoned in the Riga ghetto and executed. Many students were conscripted into the German army. When that army retreated in 1944 and a second Soviet occupation became inevitable, most of the remaining professors fled into exile in Germany and Sweden. They were afraid of deportation by the Soviets and other forms of genocide against Latvians.

In March 1949 there was another mass-deportation of Latvians to Siberia. This time the locked cattle-wagons carried 42,000 people. Hundreds of talented students and scientists of the new Academy of

Sciences were lost. They were allowed to return to Latvia only after 1956, but many died from cold and hunger in the inhumane conditions of Siberian exile.

The invention of the atomic bomb at the end of the Second World War increased the prestige of science. That was one of the main reasons why, at the end of the 1940s, by command from Moscow, academies of sciences were founded in all the Soviet republics. The Latvian academy was founded in 1946; in 1990, it included 20 separate institutes employing 4,668 people, of whom 1,059 held at least a doctorate. During that period we made some successful investigations especially in physics and chemistry. But some of those entering science did not have high intellectual abilities or were not sufficiently interested in science — and much of the laboratory equipment was outdated. Restrictions were imposed on us. All investigations about marshlands, even botanical, were secret. The Soviet governors believed that marshlands were primarily an obstacle to enemy armies and should be kept secret. Facts about industrial pollution of land and water were not published. Similarly, all data about epidemic diseases were secret.

After restoration of the independence of the Republic of Latvia (Parliamentary Declaration of Independence on 4 May 1990) there began a period of transition of the economic system from "socialism" to a "free market". But the government of Latvia can afford to spend only 0.35 per cent of gross national product on science. In these conditions, there is a fast deterioration of science that can be characterized by the number of investigators with a doctorate working in the institutes of the Latvian Academy of Sciences: 1,059 in 1990, 854 in 1992 and 696 in 1995. The salary of an assistant is about US\$80 a month and that of a professor US\$180.

The remaining scientists are trying to keep up their work in the hope of better times. In Latvia, as well as in Lithuania and in Estonia, we receive aid from some foreign foundations, notably the Soros Foundation. Some of our young scientists are able to study at universities and to work in laboratories in Western Europe and in the United States. Meanwhile, we are seeking a new platform for the science of the formerly occupied Latvia — incorporation into European science².

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1. *These Names Accuse: Nominal list of Latvians deported to Soviet Russia in 1940-41*, 2nd edn (Latvian National Foundation, Stockholm, 1982).
2. Dickson, D., Abbott, A. & Levitin, C. *Nature* **372**, 591-610 (1994).

Restoring good manners

@SIR — Simon Wolff (*Nature* **377**,192;1995) attacks peer review as practised by journals and funding agencies. We cannot speak for journals, but can comment from the perspective of a major British medical research charity that has always taken peer review very seriously and continually reviews its procedures. We have also recently contributed to reviews of the UK peer review process with both the Association of Medical Research Charities and the Royal Society.

Wolff says that there is "total collapse of peer review within journals and by grant-making organizations". This misrepresents the system, exaggerates the difficulties and unnecessarily questions the integrity of organizations that are an essential part of the scientific community and, in our view, strive to serve it well. We are constantly amazed and humbled by the trouble reviewers take on behalf of the community in general and the Wellcome Trust in particular: rarely are their efforts given recognition or thanks. Reviewers devote long hours to reading the proposals, supporting documents and often the relevant literature, both extant and as pre-prints. Their reports are frequently long and not infrequently as detailed as the application; they are rarely other than honourable in intent and objectively critical in content. We do not recognize the "bad-tempered nature of science", at least as it concerns our activities.

The Wellcome Trust, for its part, goes to considerable lengths to consult a large body of reviewers, both from the United Kingdom and overseas, using both the personal knowledge of our expert staff and advisers and electronic databases and retrieval systems. In the grant year 1994-95, the Wellcome Trust used more than 3,600 reviewers on more than 2,100 grants, of whom 34 per cent were based overseas. We ensure that reviewers are not over-used by checking in our database precisely how frequently individuals are asked to review for us. We do not believe that the process is generally regarded, or ever should be regarded, as nothing more than a marketing exercise. It is, warts and all, generally accepted as the best method to evaluate scientific research.

Neither the peer-review process nor the Wellcome Trust or other grant-funding agencies are perfect: they do not however deserve to be traduced.

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■ Sadly, Simon Wolff died on 25 November. □