

We are still saving British science from Margaret Thatcher

The battle to justify research funding is as important now as it was 30 years ago, says Denis Noble.

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It was not an auspicious start. Galvanized by the seriously diminishing value of the science budget, we recruited British Nobel prizewinners, more than 100 fellows of the Royal Society and nearly 1,500 scientists, each of whom paid £20 (US\$30) for a half-page advertisement in *The Times* to launch Save British Science on 13 January 1986. Full of confidence, I and a few of my colleagues travelled to London for a press conference, which was attended by the national media and politicians of all stripes. We were sure we would be front-page news the next day. Nothing like it had ever been seen from the United Kingdom's normally quiet and cautious scientific community. But we didn't make the front page. Michael Heseltine did. He had very publicly resigned from his post as UK defence secretary a few days earlier, after a bitter disagreement with then-prime-minister Margaret Thatcher over the future of a struggling UK aerospace firm called Westland Helicopters, and the dispute was still hot news.

Somehow, though, Heseltine's shock resignation characterized the problem. The Thatcher government did not reach out, even to many of its natural sympathizers. Save British Science, for example, included people of different political persuasions, but we all shared a deep sense of despair at the decline of the UK economy and the threat to its extraordinarily successful scientific tradition. Even Andrew Huxley, the notoriously cautious president of the Royal Society, described the situation as "alarming" in his 1984 anniversary address; a few days later, James Gowans, secretary of the UK Medical Research Council, described a 25% cut to project grants as "draconian". The government's failure to engage with researchers was all the more puzzling given that Margaret Thatcher was not only the first woman in the United Kingdom to become prime minister, but also the first scientist.

That campaign, now called the Campaign for Science and Engineering (CaSE), has become a powerful and necessary organization presenting the public case for investment in science and education. Although it was launched out of a sense of despair, the campaign quickly achieved public recognition. Journalists from every corner of the national press relied on the organization for getting basic facts and figures right. More importantly, politicians took it seriously. We achieved regular access to 10 Downing Street and to key ministers, and we built up a reputation with the government-in-waiting, which was to become the government of Tony Blair, who was elected prime minister in 1997. From 1998 to 2006, David Sainsbury served as science minister and did much to repair the damage of the 1980s. Over the period of his office, the science budget roughly doubled: almost exactly the target that the campaign had proposed to Blair before the 1997 election.

Today, nearly three decades later, it is hard to believe that UK science managed for so many years without an organization like CaSE. Perhaps scientists were too accustomed to the assumption, common during the 1960s, that any scientific project worth its salt would almost automatically secure funding. The idea that even the majority of first-class proposals would not do so was unthinkable. By contrast, the 1980s were the years of the 'unfunded alpha', a nice turn of phrase that let someone know that his or her peers had thought their project deserved to be funded but that there just wasn't sufficient money available. In retrospect, it is clear that this was inevitable. With the huge and rapid expansion of higher education, science funding was always going to struggle to keep up with the inventiveness and quality of the UK

science base.

In a roundabout way, the Thatcher government did UK scientists a service. The shock of a threat to the science base was probably necessary to provoke us to take action and to create a permanent organization to present the case for funding science and engineering. But it required a hard decade of rearguard action before any rewards were reaped.

Did we make mistakes? Perhaps the most serious was to accept (as did later governments as well) too much of the Thatcher government's agenda: to make science justify itself by its economic impact. Of course, both basic and applied research have important, and often unexpected, economic impacts. As Thatcher herself admitted in a 1988 speech to the Royal Society, the "value of Faraday's work today must be higher than the capitalization of all the shares on the Stock Exchange!" But the economic impact of research is far from its only value. At Save British Science, we always tried to balance the economic argument with the case for sheer intellectual curiosity and innovative achievement. The latter was often drowned out by the impact of the former, however.

Although the Blair government did much to restore funding levels, it nevertheless continued some of the Thatcher government's demand for economic impact. UK scientists now live with the baleful consequences: reductive scrutiny in the form of the Research Assessment Exercise and its successor, the Research Excellence Framework (REF).

The distinguished list of those who would probably never have made it through a REF exercise includes Gottlob Frege (his logic was too abstruse and inapplicable — until the modern computer came along), Charles Darwin (too slow), Albert Einstein (couldn't get an academic job) — and so on. For the most part, it is not possible to identify the seed corn of future value. Directing funding on the assumption that one can is, in large part, misdirected. 'Saving' British science requires eternal vigilance.

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