



Resilient British science will withstand Brexit

UK scientists have had to fight to stay international before, and they must not stop now, says Ehsan Masood.

There was no British delegate at the first meeting of the council to establish CERN, Europe's particle-physics lab, in May 1952.

At the time, and in the earlier years when the project was being planned and launched, Britain's official position was that European cooperation offered little benefit to British physics, and the country preferred to go it alone.

Sound familiar? One month on from the 23 June vote for the United Kingdom to leave the European Union, the shock of a result that few in the research world expected shows no sign of easing.

The prevailing climate is uncertainty. Universities report panic among their staff. Despite reassurances from both the British government and the European Commission, the mere prospect of Brexit has already had a chilling effect on existing and future EU collaborations. One senior manager at a leading university told me how a long-standing professor from an EU country had asked about the risk of deportation.

We must not despair: in some respects, we have been here before. British centre-right governments have a tendency to view international cooperation as less important than competitiveness. Not only did one reject CERN, but a later Conservative government, led by Edward Heath, opposed the creation of the UN Environment Programme on the grounds that Britain already had the world's finest environment policies and that further action could harm industry. And, although it was a founding member of the UN Educational, Scientific and Cultural Organization, the United Kingdom pulled out in 1985 under the government of Margaret Thatcher. (It later rejoined.)

Throughout those years, Britain's scientists were no less outward-looking, no less collegial and no less innovative than ever. They just had to fight hard to retain their international links, as their successors and future generations will have to do.

This will take preparation and political engagement. Despite uncertainty, science must assume that the decision will be carried out. "Brexit means Brexit", Britain's incoming Prime Minister Theresa May has said repeatedly. And she has put key members of the campaign for Britain to leave the EU in ministerial positions where they will be negotiating exit.

Some in Britain's scientific community believe that there could be an exemption so that EU colleagues can continue to travel, live and work freely in the United Kingdom, but that is unlikely. The Brexit campaigners won on the basis of a promise that net migration to the United Kingdom, currently around 1 million every 3 years, will be cut to tens of thousands annually. That means that UK universities and scientists must prepare for movement within Europe to become more difficult.

Scientists are correct to warn about the loss of EU partnerships — one pro-vice-chancellor for research said that the greatest loss would

be relationships, rather than money — but that will cut little ice with the government's Brexit-negotiating team. The entire argument to leave was built on the idea that the United Kingdom is too involved with Europe, and must therefore cut ties. In Parliament on 19 July, one of the leaders of the Brexit campaign, Michael Gove, said that British universities need not fear Brexit: they did not become among the best in the world by being part of any bureaucratic system.

It is crucial that science has a voice in the Brexit negotiations. The community must work through those of its researchers already in responsible roles in government departments, who can communicate with the new political leadership. If they don't, then the fringe voices of climate-change deniers and others still popular with many on the extremes of the Conservative Party will gain influence.

The UK Royal Society's approach must also evolve. Over the past two decades, the post of the society's foreign secretary has been a plum appointment. From a distance, it looked a bit like a colonial-era governorship, with nothing more onerous expected than to travel the world giving nice speeches and doing good. Now, the post's holder needs to start doing more to represent the interests of UK science at home and abroad, ready for when Brexit negotiations begin. The CERN example is pertinent: despite official opposition, observers from the Royal Society attended subsequent council meetings. This helped to smooth admission when the national mood changed.

Although UK researchers fear the loss of EU funds, including grants from the Horizon 2020 research-funding programme, ministers will

probably agree on some kind of compensation: perhaps a global fund made open to scientists around the world, with grants for excellence and a spread of international partners. Big philanthropic funders, notably the Wellcome Trust, could also step in with funds, as the trust did with its contribution of a few hundred million pounds to the Joint Infrastructure Fund during the late 1990s, a previous time of austerity.

As important as it is to worry about loss of funds and free movement, the scientific community must take a more fundamental concern from the Brexit decision. The vote has exposed fears and divisions in British society, and a sizeable section of the political class exploited them. Scientists, universities and funders must do more to understand what caused these divisions, and at the same time help in the urgent task that is to heal them. ■

Ehsan Masood is editor of Research Fortnight. His latest book is *The Great Invention: The Story of GDP and the Making and Unmaking of the Modern World*.
e-mail: ehsan.masood@researchresearch.com

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