



## Scottish science is ready to go it alone

Scientists in restless territories such as Scotland, Quebec and Catalonia should embrace change, Colin Macilwain suggests.

Referendums are all the rage right now, with British Prime Minister David Cameron pledging that a future Conservative government will hold one on whether the United Kingdom should stay in the European Union. And as Scotland gears up for its own autumn 2014 vote on independence from the United Kingdom, researchers — like everyone else — are starting to contemplate what such a step would mean for their own livelihoods.

Many scientists in Scotland are apprehensive at the prospect of constitutional change. Hugh Pennington, a prominent bacteriologist at the University of Aberdeen, has said that Scotland's researchers should reject independence in the referendum, lest they lose their right to compete for grants from the UK research councils.

I share the opposing view of Stephen Salter, the wave-power pioneer at the University of Edinburgh, who faced Pennington at a recent Royal Society of Chemistry debate on the independence question. Salter says that an independent Scotland would continue to strongly support research, and likens the 'no' argument to the old adage: "Always keep a-hold of nurse, for fear of finding something worse."

Seen from afar, fights for secession can seem parochial and unnecessary. The view from outside is often drenched in superficial sentiment: Canada has its mounted police and low crime; Spain its sunshine and tapas. What on Earth people ask, do those Quebecers and Catalonians have to complain about?

At least in Scotland's case, outsiders — from continental Europeans tiring of London's endless tantrums over the European Union, to US President Barack Obama, whose grandfather learned all about the British Empire in a detention camp in Kenya in the 1950s — have some inkling of what might be awry in Scotland's 300-year-old union with England.

The university system, together with the armed forces, is one of the few institutions still binding the United Kingdom together. But even at the universities, change is under way. Under the Scotland Act, which restored the Scottish Parliament in 1998, research was one of a handful of powers that were 'reserved' in London, whereas 'the universities' were devolved. In practice, that means that half of the universities' research money now comes through the Scottish government in Edinburgh rather than direct from London — through the university block-grant body, the Scottish Funding Council.

Scotland's higher-education policy has subsequently diverged sharply from its English counterpart: a university education in Scotland remains free, compared with annual tuition fees of up to £9,000 (US\$14,000) south of the border.

The UK research councils still operate on a UK-wide basis, however, and it is their loss, in the event of Scottish independence, that

Pennington deploras. The seven councils are competently run, but their autonomy — from each other, as well as from Whitehall — has been eroded. Each is chaired by a 'business leader' rather than a scientist, and they routinely irritate researchers with 1980s business-school clap-trap. Unlike whisky, agencies that dispense peer-reviewed grants do not always improve with age: rather, their biases become ingrained. It is feasible to begin afresh: Science Foundation Ireland was started from nothing in 2000 and the European Research Council (ERC) has established a formidable reputation in just six years.

Mike Russell, the Scottish education minister, is investigating possible approaches for organizing research in an independent Scotland. The options could include contributing to and drawing from the existing research councils. Or Scotland could set up agencies of its own:

perhaps one for biomedical research inside the health department and a second for other scientific disciplines. The latter path could better align Scottish university research with Scottish priorities, such as public health, forestry and fisheries, and renewable and offshore energy.

Similar issues arise in other corners of the globe. In Catalonia — which is contemplating its own independence referendum — researchers increasingly look to Brussels, rather than Madrid, for support. The sense that they could go it alone is reinforced by strong performance in Europe-wide competitive peer review: researchers in the province win about three times as many ERC grants per head of population as those in the rest of Spain.

The provincial government in Quebec has steadily assumed greater responsibility for science, although the outlays of its own agency, Research Quebec, are small. Neuroscientist Rémi Quirion was appointed as the province's first chief scientist in 2011.

Last autumn, I asked Ernst Winnacker, former head of both of the German research foundation and the ERC, about the slow speed of university reform in Germany. He spoke wistfully of the strength of the smaller Swiss and Austrian systems. Such sentiments echo those of a housewife in the Scottish town of Kilmarnock, who once told a passing politician that she backed independence because "it's harder to clean a big house than a small house".

The decision on Scotland's future will ride not on blood and thunder, but on such prosaic questions as how best to run science and the universities. Pennington and Salter both happen to be English. But in 2014 they will vote, primarily, on whether the British state or a new creation is better equipped to navigate Scotland through the uncharted waters of the twenty-first century. ■

Colin Macilwain writes about science policy from Edinburgh, UK.  
e-mail: cfmworldview@gmail.com

AN INDEPENDENT  
**SCOTLAND**  
WOULD CONTINUE  
TO STRONGLY  
SUPPORT  
**RESEARCH.**

➔ [NATURE.COM](http://NATURE.COM)  
Discuss this article  
online at:  
[go.nature.com/hnubax](http://go.nature.com/hnubax)