

“SCIENCE IN THE AGE OF AUSTERITY” – AN EXAMPLE

It was only a few days ago that I blogged about the threats to science in an age of global austerity. The point I made is that in many countries national budgets are cut, and that as a result science, too, faces inevitable cuts. Of course, this does not mean that I favour such cuts, but if they're coming we're better be prepared! Not every country can afford to increase the science budget by 10 to 20% every year, as China is doing.

And indeed, today we have yet another case in point for the inevitable fallout from such cuts, sadly highlighting the pitfalls of a lack of broader strategy. The case I am describing is limited to the UK, but this example will be interesting for others, too.

As my colleague Richard Van Noorden reported today, budget cuts have been announced across the physical sciences in the UK. The situation at the funding agency, the Engineering and Physical Sciences Research Council (EPSRC), is indeed dramatic. As Richard summarises: “The agency, which has a budget of £830 million (US\$1.3 billion) for 2010–11, faces cuts of some 12–15% in real terms – and a 50% cut in capital funds – over the next four years.”

It is interesting now to see how they're implementing such cuts: future funding decisions will be based on an assessment of the 111 research areas classified by the council. Which area gets favoured, and which will see funding cuts, is all part of a very transparent process based on criteria such as the international standing of a research area and its potential to lead to transformative or disruptive research. One of the areas with reduced funding is synthetic organic chemistry.

The transparency with which EPSRC implements these cuts is laudable, and the right and necessary step. However, I am concerned that there has been no open consultation on this process. As David Delpy, chief executive of the EPSRC, mentioned to Richard, this was by purpose. I've discussed this issue with Richard on twitter today (he can be found at @richvn), and Richard shared more information with me. Apparently, "they [EPSRC] say they are worried that [the] research community will only offer biased opinions, not helpful evidence." The point conveyed to Richard by Delpy is, how can a medical physics department at a university make an assessment of the importance of their work relative to maths or the chemical engineering department?

I find this argumentation odd. Yes, of course, democracy is a messy business and lobbying from different sides is common. But that's exactly the point. To find the right balance you have to weigh up all the different aspects of a decision. I am sure in a broader consultation more arguments can be made and heard.

Yet, that's not even my key concern here. Delpy also made this remarkable comment: ""We're setting out what our priorities are, in the absence of any national strategic plan for science." And that's exactly the key point I tried to make in my earlier blog post – to implement a good strategy for budget cuts a broader national strategy has to come first. Of course, that's an issue far beyond the means of EPSRC, but instead is something for the UK government to decide.

And isn't that the problem in many other countries, too? Budget cuts are implemented, national research bodies have to implement these in the best way they can, but in the absence of a national framework. This is not only a missed opportunity, but I am convinced also to the detriment of science more generally.

A historic note. Richard pointed me to a very interesting and quite opinionated essay by the eminent historian David Edgerton (a tip provided to him by Richard Jones): "The 'Haldane Principle' and other invented traditions in science policy." There, Edgerton describes the history of science funding, and from this it is clear that during the early 20th century there has indeed been a stronger national science strategy in the UK – contrary to the more hands-off 'Haldane Principle' of modern times.

Moreover, Edgerton concludes, there has also been an active national industrial policy at the same time. And whatever you make of this, this argument points to

another area of crucial relevance. You can talk about ‘impact’ of scientific research as much as you like, without a good strategy towards commercialization it’s nothing but words. To quote from a report by the consultancy Cientifica on the funding of nanotechnology, when it comes to the impact of nanotechnology in a global comparison, “the UK and India struggle at the bottom of the league.”

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