THIS WEEK

EDITORIALS

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Time for the social sciences

Governments that want the natural sciences to deliver more for society need to show greater commitment towards the social sciences and humanities.

Physics, chemistry, biology and the environmental sciences can deliver wonderful solutions to some of the challenges facing individuals and societies, but whether those solutions will gain traction depends on factors beyond their discoverers' ken. That is sometimes true even when the researchers are aiming directly at the challenge. If social, economic and/or cultural factors are not included in the framing of the questions, a great deal of creativity can be wasted.

This message is not new. Yet it gets painfully learned over and over again, as funders and researchers hoping to make a difference to humanity watch projects fail to do so. This applies as much to business as to philanthropy (ask manufacturers of innovative crops).

All credit, therefore, to those who establish multidisciplinary projects — for example, towards enhancing access to food and water, in adaptation to climate change, or in tackling illness — and who integrate natural sciences, social sciences and humanities from the outset. The mutual framing of challenges is the surest way to overcome the conceptual diversities and gulfs that can make such collaborations a challenge.

All credit, too, to leading figures in policy who demonstrate their commitment to this multidimensional agenda. And all the more reason for concern when governments show none of the same comprehension.

Such is the case in the United Kingdom. Research-wise, the country is in a state that deserves a bit of attention from others and certainly merits some concern from its own citizens. Its university funders last month announced the results of a unique exercise in nationwide research assessment — the Research Excellence Framework (REF), which will have a major impact on the direction of university funding. Almost simultaneously, its government released a strategy document: 'Our plan for growth: science and innovation'. And in November, its government's chief science adviser published a wide-ranging annual report that reflects the spirit of inclusiveness mentioned above. Unfortunately, the government's strategy does not.

THE IMPORTANCE OF INCLUSIVITY

Whatever the discipline, a sensible research-assessment policy puts a high explicit value both on outstanding discovery and scholarship, and on making a positive impact beyond academia. In that spirit, the REF (www.ref.ac.uk) aggregated three discretely documented aspects of the research of each university department: the quality and importance of the department's academic output, given a 65% weighting in the overall grade; the quality of the research environment (15%); and the reach and significance of its impact beyond academia (20%).

The influences of the data and panel processes that went into the REF results will not be analysed publicly until March. The signs are that the impacts component of assessment has allowed some universities to rise higher up the rankings than they would otherwise. But the full benefits and perverse incentives of the system will take deeper analysis to resolve.

A remarkable and contentious aspect of UK science policy is the extent to which the REF rankings will determine funding. The trend has been for such exercises to concentrate funding sharply towards the upper tiers of the rankings.

Most important in the current context is whether an over-dependence on funding formulae will undermine the nation's abilities to meet its future needs. A preliminary analysis by a policy magazine, *Research Fortnight*, reaches a pessimistic conclusion for those who believe that the social sciences are strategically important: given the REF results, the social sciences will gain a smaller slice of the pie than the size of the community might have suggested. If that reflects underperformance in social science at a national scale, and given the strategic importance of these disciplines, a national ambition in, for example, sociology, anthropology and psychology that reaches beyond the funding formula needs to be energized.

"If you want science to deliver for society, you need to support a capacity to understand that society."

A reader of the government's science and innovation strategy (go.nature.com/u5xbnx) might reach the same conclusion. Its fundamental message is to be welcomed: understandably focusing on enhancing economic growth, it highlights the need for support of fundamental research, open information, strategic technologies and stimuli for business engagement and investment. But there is just one sentence that deals with the social sciences and humanities: a passing mention in the introduction that they are included whenever the word 'science' is used.

Credit to both chief science adviser Mark Walport and his predecessor, John Beddington, for their explicit and proactive engagement with the social sciences. This year's report, 'Innovation: managing risk, not avoiding it' (see go.nature.com/lwf1o7), demonstrates a commitment to inclusivity: it is a compendium of opinion and reflection from experts in psychology, behavioural science, statistics, risk, sociology, law, communication and public engagement, as well as natural sciences.

An example of the report's inclusive merits can be found in the sections on uncertainty, communication, conversations and language, in which heavyweight academics highlight key considerations in dealing with contentious and risk-laden areas of innovation. Case studies relating to nuclear submarines, fracking and flood planning are supplied by professionals and advocates directly involved in the debates. This is complemented by discussions of the human element in estimating risk from the government's behavioural insights team, as well as discussions of how the contexts of risk-laden decisions play a part. Anyone who has a stake in science or technology that is in the slightest bit publicly contentious will find these sections salutary.

The report's key message should be salutary for policy-makers worldwide. If you want science to deliver for society, through commerce, government or philanthropy, you need to support a capacity to understand that society that is as deep as your capacity to understand the science. And your policy statements need to show that you believe in that necessity. ■

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