

IAN DIAMOND

... on making the most of data, and the need
to develop – and celebrate – skills



Professor Sir Ian Diamond is Principal and Vice-Chancellor of the University of Aberdeen. He was Chief Executive of the Economic and Social Research Council, 2003–2010. He was elected a Fellow of the British Academy in 2005, and is the Academy's Lead Fellow for Quantitative Skills.

You studied economics as an undergraduate, then went on to do masters degrees and a doctorate in statistics. Were you always interested in numbers?

I have always been interested in numbers, how they work and how you can have an impact on policy with them.

I was hugely privileged to go to the London School of Economics, which provided a fantastic grounding in statistics, and then to work at St Andrews with Richard Cormack on a problem applying statistics to public policy.

Have there been particular areas of statistics work that have interested you?

My work has been very eclectic. I was enormously lucky in 1980 to get my dream job, to work in the then relatively new Department of Social Statistics at the University of Southampton, because it was *the* place that was doing social statistics. I was able to work with a group of people who were deeply committed to statistics and to the application of statistics in the social sciences. So, although

I started off working on the World Fertility Survey, I also had the opportunity to work around environmental noise, and around social aspects of health – it was just applying statistics in different ways. If there was one focus of my interests, it was definitely demography, which I really enjoyed and where I hope I was able to make some useful contributions around censuses.

I learned very early on – by chance – that the way to maximise the impact of your research is to engage the potential beneficiaries in the work from the start. And I was later much influenced by Andrew Pettigrew's work on what he calls the 'co-production of knowledge'. When you do that properly, you improve the research in every way. You get new research questions, and some of those can lead to really exciting blue skies work.

At a British Academy event in 2010,¹ you said it was your personal philosophy that 'no one should take public money to do research unless you are prepared to use the results of that research, where appropriate, to have an impact on the people who paid for it in the first place'.

I absolutely believe that. There is a very important 'where appropriate' in that quote. We need

1. 'Towards a Better Tomorrow? The Crucial Role of Social Science', a British Academy panel discussion held on 16 March 2010.

to continue to do research simply for the advancement of knowledge, and there will be some research where we will have no idea that it is going to have an impact, but it will do a long time later.

But the last 10–15 years have seen an exponential increase not only in the acceptance that it is appropriate and important to spend public money on research, but also in the expectation that, where there is an opportunity for the research to have an impact, one should maximise that. Universities now reward people on the basis of the impact that they have, as well as on the basis of the research itself. The Higher Education Funding Council for England (HEFCE) and now Research England have done a fantastic job in encouraging that pathway – while recognising that, particularly in the social sciences and the humanities, it is not always a linear pathway. The Research Excellence Framework (REF) has helped, and the things that have come from Lord Stern’s review of the REF have expanded and enhanced the way in which we think about impact in a really positive way. So there is a much greater chance that the brilliant research that is done right across the UK will fundamentally have an impact on many of the people who pay for it.

How important is the use of ‘big data’ in transforming the effectiveness of research?

It has been said that the 21st century will be the century of data. What we can do now on a smartphone is just unbelievable compared with what, at the beginning of my career, used to take three days on a mainframe to do. That means we can manipulate data in a way that we could only have dreamed of just a few years ago. And we have data that are available in a much more accessible way than ever before. And finally, we are able to link those data much more smoothly and effectively than we could even 10 years ago. Put all that together and you have an enormous opportunity to do research that understands social phenomena better and has a greater impact than could ever have been achieved before.

I am hugely keen on the potential of administrative data. We do need, though, to recognise the limitations: administrative data have errors associated with them, the linkages will not always be perfect, and the data were not collected at a fine level of granularity for the purpose of research. But, while understanding those limitations, we should make the most use of them.

The enormous opportunity of big data does not take away the need for carefully constructed social surveys with carefully constructed questionnaires, which are addressing really important social phenomena. And we should always remember that we need to ground our research in theory, and to ask questions that properly address the research problem we are looking at.

Quantitative skills have been a particular concern for the British Academy, and you have been chair of the Academy’s High-Level Strategy Group for Quantitative Skills. What is the issue here?

The issue is that we do not have the wide range of skills necessary to be able to maximise the use of big data in the social sciences. What we say is that we need a pyramid of skills. At the top, we need to continue the tradition of the UK having world-class social statisticians – such as Chris Skinner and Harvey Goldstein. Below them, we need a group of analysts who can do the most cutting-edge analysis. And then, below them, we need an entire population of data-literate people, able to interpret and make use of the data we have been talking about – whether in terms of charities making applications for lottery funds, or active citizens being able to drive society properly. So it does not stop in academia, it does not stop in industry, it is an entire population of quantitatively literate people, and we should not stop until we get that.

That pyramid image was very much part of the *Count Us In* publication that the British Academy launched in June 2015.² Do you think that the Academy’s quantitative skills initiatives have had some impact?

The Academy should be very proud of its work in this area. It has enabled us to interact with the Nuffield Foundation’s Q-Step programme, which aims to develop the quantitative skills of social science undergraduates.³ And we hope for a similar initiative for quantitative skills in the humanities.

And, critically, we have been able to input very positively into Sir Adrian Smith’s review of mathematics education for 16- to 18-year-olds in England, which came out in July.⁴ That review has made a lot of important points – about how mathematics should not just be maths for maths’ sake, and that it should link into the social sciences in particular.

I am not going to say we are a long way on the journey. But we are making progress: Q-Step,

2. For more on the British Academy’s publication *Count Us In: Quantitative skills for a new generation*, see *British Academy Review*, 26 (Summer 2015), 17–19.

3. ‘Q-Step: A step-change in quantitative social science skills’, funded by the Nuffield Foundation, the ESRC and HEFCE, was launched in 2013. The programme sought to address a skills deficit problem identified in the British Academy’s 2012 position statement ‘Society Counts: Quantitative Skills in the Social Sciences and Humanities’.

4. *Report of Professor Sir Adrian Smith’s review of post-16 mathematics* (July 2017). The British Academy submitted its response to the review in October 2016.



Count Us In and the Smith review seem to me to be really important steps on that journey. But we need to be tireless in driving the agenda. There is an enormous opportunity for the British Academy, working with other partners, to push forward the next stage of creating a quantitatively literate society.

And the Academy also has a project on maths anxiety.

Too often people say, 'I can't do maths'. My experience is that, with support and sympathetic teaching, everybody can get to a reasonable level, and that is what we should be aiming for. We often say 'maths' when what we really should be thinking about is numbers, data and the like. The work that we will be reporting in a few months' time on the reasons for maths anxiety and what you can do about it, work led by the University of Manchester, is going to be really important. And then the Academy will again be able to think how it can have an impact on policy in this area.

We started off talking about your own research. But for many years now, you have been immersed in academic administration and policy. Have you managed to sustain your own research interests?

When I went to the Economic and Social Research Council, it was the crossing of a personal Rubicon in that, in the main, I would no longer do primary research. You don't spend a long time doing research without enjoying it hugely. But you recognise when you can add value – you hope – in a different way. I keep up with the literature as I can, because I love reading about it. But clearly, over the last 15 years or so, my day job has not been to do research, and it is important to recognise that you do your day job properly. And I am proud of what I have achieved.

From the perspective of all the influential positions you have held, what is your view of the state of social science in this country?

My overall observation is that social science is incredibly strong in the UK, and it is peopled by some fantastic researchers doing fantastic work. In particular, we have improved over the last 15 years or so.

And in the UK we have had pretty good stability of long-term funding for a long time. Despite the financial crisis, we have had, particularly recently, major increases from the

government, as successive prime ministers and chancellors have supported funding. And certainly within the research councils, commitments have been made that are of a decent length – five, seven years – for centres and for programmes. I do think we should be proud of what we do in the UK.

I also have to say that I am excited about the opportunities that we have at the moment through the Global Challenges Research Fund. I am passionate about the role that research can bring in driving development in poor nations, and those Global Challenges involve multidisciplinary work, which quite often cuts across international boundaries. I recently chaired a final selection panel for the British Academy’s Early Childhood Development scheme, and the work we funded was all really interesting, all really important in aiding early child development across a wide range of the lesser developed countries.⁵

But I am very clear in my mind that we need to be tireless in continuing to make the case for the social sciences – both for the social sciences in their own right, and for the social sciences as complementary to other sciences in addressing some of these great challenges of our time. Too often we forget that it is social sciences that bring ‘the human’ into the overall research endeavour, and understanding the human element is absolutely critical if we are to address challenges such as climate change, global security, or productivity (and to measure productivity properly). We must always be prepared to make that case, powerfully and sensitively. We are not in the business of saying that social sciences are more important than anything else. Quite simply, we have things that we contribute on our own, and things that we contribute in partnership with other sciences. And when you put the whole research ecosystem together, the whole is very much bigger than the sum of the parts, and I would argue that the social sciences are at the intersection of all those pieces.

Brexit is coming down the track. What has our ability to draw on European Union research schemes made possible for social science that might not have been possible otherwise?

Across the great majority of the social sciences the best research is done in teams these days. What the EU funding schemes have enabled us to do brilliantly is to get teams of researchers, across the

UK and from different countries, working together seamlessly and easily. Previously, if I wanted to work with someone from Belgium and someone from France, three applications would have had to have gone to three different research funding organisations and you would have had to wait around for the metaphorical equivalent of three crowns to come up on the one-arm bandit to get funded. Now you put together one application, and if it is good enough it gets funded. That has been incredibly positive for the European research endeavour. In my opinion, because knowledge knows no nation state boundaries, we need to continue to be able to build those teams.

My own view is that the UK government wishes that to happen, and when I talk to colleagues in European countries, they want that to happen. It seems to me that we ought to be able to get ourselves into a position where we can continue to have teams working across Europe on important research projects. And it would be great to be able to expand some of those links. The Europeans are talking about bringing the Canadians

in. We need to be looking for those opportunities, because the more international opportunities there are for teams to work together the better.

Also, access to international infrastructure is incredibly important. I was privileged to be on one of the very early advisory boards of the European Social Survey and that has been a fantastic pan-European project. Not every country in it is a member of the European Union, but the fact that it exists and that we are able to understand attitudes contemporaneously in a range of European countries, and hence to understand both the similarities and the differences across nations, is a fantastic opportunity. We need to continue to ensure that, where international infrastructure is needed to take forward research, we do that seamlessly and easily.

We have been incredibly influential in helping to shape EU research programmes, and I very much hope that, as we move forward, we will be able to maintain as much influence as is possible. It would be foolish to expect that we could maintain as much influence. But, if we are going to have a bespoke arrangement, then let us sit down and get something that enables us to continue to have some influence. We British are sometimes shy about admitting it, but we are very good at doing and incentivising research.

We have been incredibly influential in shaping EU research programmes, and I very much hope we can maintain as much influence as possible

5. The British Academy’s Early Childhood Development programme is funded by the Global Challenges Research Fund and the Department for International Development (DFID).

BRITISH ACADEMY CELEBRATING SKILLS IN THE ARTS, HUMANITIES AND SOCIAL SCIENCES



How important is it that academics remain able to work freely across the EU?

We are a global magnet for researchers, because we have good facilities, we have a good research environment – people to talk to, people to work with, great data to work on – and it is incredibly important that we continue to be able to attract the very best talent to the UK to work on important research problems.

At the same time, we need to continue to build our own skill base. In quantitative methods in the social sciences there are very many brilliant Europeans working in the UK, and we need to encourage them. But that should not be an excuse for not building a new generation of brilliant, quantitatively literate social scientists from the UK.

However, it is also absolutely essential that we get as early news as possible on what the position is of those European citizens who are here now, because people are rightly nervous, and anxiety and nervousness cannot be good for advancing people's careers.

How optimistic are you about the future?

I am a born optimist and I absolutely believe in the power of rational and careful argument, so I remain optimistic that we can get through this.

In terms of research, my ideal for the future would be a global research council, where you can

simply apply with whoever you were working with and, on the basis of excellence, you get funded.

But it is also important that we have mechanisms for enabling easy entrance to UK higher education for overseas students, and easy entrance to overseas higher education for UK students. Most universities in the UK will say that they have people from over 100 nations on campus. Having those people from different nations and cultures interacting, and feeling comfortable working together, has to be good for the long-term future of our world.

You have also been chairing the Academy's flagship skills project about 'Celebrating skills in the arts, humanities and social sciences'. People have long been doing degrees in these subjects. Why suddenly now do we have to be making a case for them?

Increasingly in the last few years, we have been aware of the need for skills for the economy. But when people talk about skills, too often they mean 'STEM' (science, technology, engineering, and mathematics) skills. This is not a competition: we *do* need more people with STEM skills. But we need to recognise and celebrate that the arts, humanities and social sciences bring with them special skills that are incredibly important for our economy, for industry, for developing social cohesion, and therefore for developing the kind of society that we wish to have.

People studying history or English, for example, will go into a wide range of occupations on the basis of some absolutely brilliant skills that they have imbued. Some of those skills are to do with critical analysis, and really being able to communicate. Some are to do with creativity, and the much more multidimensional nature of communication that the humanities and social sciences can bring. Some of them are to do with the ability to understand cultural heterogeneity, and the study of a language within its culture: it is so much better to have a cadre of people who have studied French culture *as well as* being able to speak the French language. These things are really important, and we need to demonstrate the advantage that people with those degrees have.

Secondly, in England in particular, we are at a time when people are paying significant amounts of money for a university degree, and sometimes they need to reflect on what they will get from their degree. So it is only right and proper that we are more aware of what skill sets they will get, and that we are good at explaining this. That is not being defensive. We should be on the front foot in saying: 'This is what you get from a degree in the arts, humanities and social sciences, and this is why you will be able to take the next stage of your life

in a more effective way as a result of that studying.’ That is being absolutely proud of what we offer and what we contribute to the wider society.

Thirdly, it is important that we work with employers to assess what skills employers need from their graduates, and are then able to make cases for putting some of the skill sets that are wanted into the study of the humanities. For example, quantitative methods and languages, both of which we have already talked about, are important areas, and we need to be able to say that it is good for people to develop those kinds of skills in their courses.

The final thing I would say is that it seems to me quite likely that people in the arts, humanities and social sciences often study across a much wider breadth, for example through joint honours. In a world in which interdisciplinary work is so important, this is something that the study of our disciplines often brings to the table.

It has been a real pleasure to chair this project. The evidence-gathering has been inspirational. Our subjects are brilliant, but we do not always demonstrate how important they are. I very much hope that the British Academy’s report, which is being launched at the House of Lords on 27 November 2017, will make a contribution to continuing to raise the profile of the humanities and social sciences.

Do we need to make sure that government remains aware of the need for these skills as it considers its industrial strategy?

Absolutely. Industrial strategy is about place: well, how can you really understand place without social sciences? The industrial strategy is sometimes about the development of new technologies: but how can you do that without properly studied design? The industrial strategy is about people, about communities: so you need to bring ‘the human’ into all those dimensions. I am a huge support-

er of the industrial strategy, but I would submit that it cannot be successful without a real contribution from the arts, humanities and the social sciences. We need to articulate very clearly what our contribution can be for each of the ten pillars of the industrial strategy.

Again, this is not about our disciplines versus others. It is about a team working together for the UK.

You suggested that there might be wider social well-being benefits.

Economies can only work properly in societies that are functioning, and societies function because of the effectiveness of civil society, because of the contribution being made by active citizens to that society, and because the public sector, the third sector and the private sector are working together in an effective way. There is a critical role for the social sciences in providing the skills needed to have a socially cohesive society, working effectively together for the well-being and health of everybody, and with a minimal level of inequality.

You recently completed your term of service as chair of the British Academy’s Audit Committee. In what state of health is the Academy?

I think the Academy is in good shape, I really do. As chair of the Audit Committee I have been very impressed by the proportionate approach to risk that has been taken. I chaired the audit through much of the discussion about the refurbishment of the Academy’s premises in Carlton House Terrace: it was great to see that undertaken so professionally and effectively. It has also been a time of expansion – for example through the Global Challenges Research Fund – and again it was very important to me to see the Academy put in place the right processes so that the public can have confidence in the way their money is being spent. ■