

PUBLIC AFFAIRS AT THE ROYAL SOCIETY



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The President of the Society, Martin Rees, said recently: "Science is integral to our culture. It permeates every aspect of our lives and can profoundly alter our understanding of ourselves and of the world we live in". He was being modest in restricting his focus merely to this world. As one of the planet's foremost astronomers, he has made great strides in understanding the wider universe. But his choice of words was not accidental; science is not just about things that are distant in space or abstract in relevance, but it matters to us all in real ways, every day.

So as the national academy of science, the Royal Society's work is important to the public in all sorts of ways, and our definition of public affairs must necessarily encompass a wide array of activities, subjects and audiences. One of the most important audiences is Parliament.

On the vast majority of issues that come before Parliament where there is a significant scientific dimension, there will inevitably be debate and uncertainty among the science and engineering community. Science is a method of plotting

a route through that uncertainty, and it is essential that in shaping their debates, MPs, MEPs and peers should be able to take account of it. Pressure groups and interested parties will always emphasise the interpretations that suit their cases, and will tend to make the uncertainties seem irreconcilable. But in the end, politicians quite rightly need 'yes' or 'no' answers. For example, in the height of the BSE affair, ministers had to decide whether to ban offal from the food chain or not; they could not pass legislation that dealt in probabilities, confidence limits and caveats.

Parliamentarians need somewhere to turn that provides the best and most up-to-date scientific advice, treating the uncertainties with the respect they deserve, but setting out clear recommendations. Because the Royal Society's work is based in its Fellowship of 1400 of the most outstanding scientists and engineers from around the Commonwealth, it can provide that source of impartial expertise. And because those Fellows cover every scientific and engineering discipline in academia, industry and the public sector, we can maximise the strength of the scientific case by bringing

together diverse interdisciplinary working groups that consider every angle before finalising our reports.

An excellent example is biofuels, on which the Society published a major report in 2008. It involved experts from the university sector and industry in this country and overseas, with expertise in environmental issues, chemistry, climate change, plant biology and other subjects. It cut through the pointless arguing that had hitherto characterised debates about biofuels and showed clearly that they could make an immediate contribution to reducing greenhouse gas emissions. But it also demonstrated that whether a particular fuel is 'good' or 'bad' depends on the type of crop, the way it is grown, the way the fuel is produced from the feedstock, how it is transported, and so on. The Royal Society recommended that Government targets should be reworked specifically to promote those biofuels that are based on sustainable crops used in sustainable ways, and that the timeframe for incentives should be extended to give industry the confidence to invest adequately in making it happen. These

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ideas were picked up by the Environmental Audit Committee and went on to influence the Government's policies.

The Royal Society is in the process of strengthening its policy work by creating a Science Policy Centre under the leadership of a new Director, James Wilsdon, currently running ambitious projects on geoenvironment, innovation in the services industry, biological approaches to food production, and a comparison of the state of science in nations across the globe. With our colleague Alice Raine, James and I are working on maximising the effectiveness with which the Society engages with Parliamentarians so that we can support you in ways that make a difference. As well as our successful scheme for pairing scientists with MPs, we want to harness the unrivalled expertise of our Fellowship in supporting scientific debate in Parliament.

Equally crucial to the Royal Society's role is creating opportunities for members of the public to appreciate science and to be inspired by cutting-edge research. As well as the work of our Press Office, and of course the Society's website (royalsociety.org) and regular magazine, *Inside Science*, we run a highly successful series of public lectures, given by researchers actively engaged in exciting discoveries. As a single recent example, Professor Eleanor Maguire from UCL enthralled a packed lecture hall with her work on how the brain stores memories. One of the most fascinating parts was the revelation that London taxi drivers have different shaped brains from other people, allowing them to memorise the back street short-cuts that baffle the rest of us.

The highlight of the Society's activities to engage the public is

our annual Summer Science Exhibition at which more than 20 scientific research groups from around the UK come to London with eye-catching interactive exhibits that attract everyone from school students to government ministers. Anyone who turns up can interact directly with the scientists who are making the discoveries – the experience is not mediated by a curator, presenter or journalist. My colleague Katherine Jarrett and her team will run the exhibition for longer than ever in 2009, including opening at the weekend to allow as many people as possible to attend. We are proud of the fact that across all of our activities, we strive to make sure participation reflects the community from which participants are drawn; the people who come to the Society are broadly representative of society at large in terms of gender, ethnic mix and so on, and with the help of a number of colleagues, I take responsibility for co-ordinating our programme celebrating equality and diversity within science.

To support the development of the cutting-edge science we want to present to the public, the Royal Society must also promote discussion among the world's research community, so Katherine and her team also run about a dozen international scientific conferences each year, based on the most promising areas of science, with the subjects chosen competitively by an expert committee. In a sense, these Discussion Meetings take us back to the Society's early days, when Robert Hooke would perform experiments showing his colleagues the latest advances in knowledge. These days, experts from around the world showcase their experiments through giving talks and

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presentations, but the principle is the same – stretching the limits of the latest knowledge, expounded by its discoverers, interpreted and refined in discussion with dedicated experts.

The Royal Society does many other things – international relations among the scientific community, directly funding about 600 of the brightest researchers in the country, inspiring schoolchildren through partnerships with research scientists, investing in early stage science-based commercial ventures, running one of the world's premier libraries for the history of science, and a great deal more besides.

This wide and varied remit provides an ideal platform for the Royal Society's plans to commemorate its 350th anniversary with a year-long series of events, exhibitions, publications and associated activities, and we hope this will include a celebration within Parliament itself. These activities are designed not merely as a celebration but as a mechanism for engaging a variety of audiences with science and

with the Society's role. This programme will begin later this year on 30 November (known in the Society as Anniversary Day from the date of its founding) and will run until November 2010, 350 years after the Society was formed. It is intended that the programme will have a legacy in terms of ongoing engagement with the expanded audiences developed during the year. As a theme for its anniversary year, the Society has adopted the phrase "See Further," taken from one of its early Presidents, Sir Isaac Newton, who famously wrote: "If I have seen further, it is by standing on the shoulders of giants". For three and half centuries, Fellows of the Royal Society have been seeing further into the intricacies of life and the universe using a way of thinking called science. The theme offers an invitation to the public to 'see further' with us.

To return to the words of our President, "Our 350th anniversary presents us with a challenge: to energise the relationship between science and society throughout 2010 and beyond."

