AN AGENDA FOR THE FUTURE

By Jon Turney

Let's agree that public engagement with science and technology is here to stay. It probably isn't coherent enough to call it a movement, but the whole set of activities that this book documents has built up a real momentum over the last ten years or so.

Public engagement work, under various guises from science communication to education, outreach and consultation (with, as the form now has it, stakeholders), crops up in more and more places. It is embedded in research institutes, Government departments, research councils and funding trusts, learned societies, universities and at least some sectors of industry. It is routinely on the agenda of the high committees of science policy, written into mission statements, corporate plans and white papers, and continues to spawn weighty reports and reviews and, to a lesser extent, research. Add the contributions of the proliferating media, formal education and dedicated institutions such as science centres and museums, and public engagement with science begins to amount to a minor industry.

As these pages also document, not all of this is new, but I think it is a fair claim that its prominence is. And that seems likely to continue, too. On the one hand, Government concern to foster a receptive climate for innovation, as a source of economic strength and social improvement, is continually renewed. On the other, as poll results show, there are raised expectations that 'the public' will have some meaningful role in decisions about new science and technology. Somewhere in between, the sheer pleasure to be had from getting acquainted with the astonishing outpouring of new science is getting across to new audiences, in new ways.

So where is all this likely to take public engagement over the next five to ten years? If you have read this far, we hope you have enough to go on to have your own view. But without trying to summarise all the pieces collected here, it is worth highlighting some things that may shape future efforts at delivering science for all. My own suggestions are based on a reading of these pieces, together with a recent involvement with the Wellcome Trust's Engaging Science conference in Manchester in March 2006.[1]

One is that things have been learned over these last ten years that we can build on. Let's try out some generalisations. First, dialogue is doable, but difficult. But it brings benefits that are worth the struggle to find the right format, enough money and the mix of skills to do it properly. There is virtue in scientists just being seen to be willing to give time to genuine discussion with lay people, and this itself helps build trust in the good intentions of scientists in general. What's more, there are encouraging signs that taking a robust line when a position is worth defending pays dividends in the end. The current state of the always-heated debate over animal experiments is a good case in point. The message here is that if researchers are prepared to have the argument, enough people will recognise when they have a good case. Perhaps this applies in other areas, too.

Moving to where passions run less hot, there is a strong impression that engaging with the public is rewarding for researchers. It is not for everyone, but those who do it enjoy it. A real gain of these last years is surely that putting time into thinking of ways of conveying scientific ideas to new audiences, or discussing science with diverse groups, is no longer seen as a lack of commitment to the serious business of doing research. And the great range of formats in which public engagement can now happen means that anyone can probably find a style that will suit them.

That variety also gives reason to be optimistic about the scope for weaving discussion of science into everyday life. Not to say that people will do it every day. But as public engagement activities large and small – from full-scale science festivals to Cafés Scientifiques – become part of the social fabric, they contribute to a sense that science and technology are just another part of the culture. OK, they may never be as popular as football, but then (whisper it) plenty of people care nothing for football, either.

Add in other positive developments – such as the imminent national introduction of the Twenty First Century Science GCSE – and the general idea that science is an important, interesting, even intriguing endeavour can only spread more widely. This is not necessarily going to deliver scientific literacy, or make it any easier to handle controversial issues when they arise. But it at least contributes to the feeling that science is something worth conversing about, and that scientists can contribute to the conversation without closing it down.

If those are some things to build on, how best to do it? It would be foolhardy to pretend there's a clear prescription here. The essays commissioned for this book were intended to be evidenced-based, but we still do not know enough about what works for whom, when. There is no algorithm for public engagement, and perhaps there shouldn't be. Alan Irwin's argument here about public consultation may apply more generally: asking for the best recipe for how to do it next time may be missing the point.

So instead of an answer, let me offer another question. Or rather a set of questions – ones that any future efforts in this area ought to consider. They will not be comprehensive, but if they are set out as a series of alternative positions, or polarities, they may begin to map the space in which public engagement has to be located. What follows is a first set of six such pairs – each cast as possible reactions to a suggested statement of fact – with brief versions of the arguments on either side.

1. **There are many different agendas embodied in science engagement work.**
   A) Perhaps it will be best to resist the urge to define the aims of public engagement with science too closely. This will maintain a broad church, and license lots of activities that all contribute to the desirable trends outlined above.

   B) It is time we defined the goals, aims, objectives and strategies of public engagement more precisely and with a rigour that has so far been lacking. Start by agreeing what is actually meant by engagement. This is crucial for evaluating what we do. It will also help make it clear what resources would actually be needed to reach a particular goal, and increase the chance of getting them, especially if they need to come from Government.

2. **There are a vast number of initiatives in science engagement, many of them small-scale and local.**
   A) It is apparent that this leads to duplication, waste and reinventing of wheels. It is time there was, at the least, a central repository of information about public engagement activities past and present, including evaluations, or even a national effort to coordinate the work.

   B) The call for coordination is unrealistic. It might be bureaucratically tidy, but would hamper initiative and stifle the creativity that is such an appealing feature of the scene. Allowing people to learn from their own mistakes (rather than other people's) may appear inefficient, but is the best way to harness their enthusiasm, and leads to unexpected results that are often positive.

3. **Public engagement with science in the sense we are now using the term is in many ways still a relatively new thing.**
   A) We need to keep in mind that we do not have all the answers. The thing is to encourage experimentation and new approaches, and these should get priority funding.

   B) The emphasis on novelty carries the danger that we will fail to exploit the useful things we have learned from many past experiments, or to profit from evaluation. Science organisations find it hard to adapt to funding models that are not research-based. But funders must support projects that build on past successes, offer to enlarge the reach of existing initiatives, or simply continue things that are doing good work but where the original sponsor seeks an exit. Time to consolidate, not innovate.

4. **Experience so far has demonstrated how many ways there can be of engaging people with science and technology. We can build on the creative effort and enthusiasm that have been mobilised, and perhaps develop new ambitions.**
   A) While science communication and public engagement have grown, the suspicion remains that they can still often result in preaching to the converted, or at least to already receptive publics. Now is it time to leave the comfort zone and tackle the hard problems of reaching genuinely new audiences – whether defined by race, age, sex, class, education, locality or other criteria.

   B) Science communication and public engagement have grown, but have not kept pace with demand for information about science and technology, and for more consultation about scientific and technical decisions. It makes sense to focus effort on already interested sectors of society, where it will meet with a ready response and be a more effective use of resources. Other audiences should not be neglected, but can be brought in gradually as this work grows.

5. **Science communication and public engagement is going to demand continuing effort from large numbers of people – both the cadre of well-schooled science communicators who are already heavily involved and a steady supply of new voices.**
   A) Science is demanding, so the number of scientists who can commit to public engagement will always be limited. The priority now is to encourage the professionalisation of public engagement that is already taking place: more courses, more jobs, and career paths with recognised routes to advancement.

   B) There is no substitute for having real scientists involved in public engagement. Professionals are mainly helpful as mediators or facilitators, but they cannot deliver authentic access to real scientific practice, or the latest expert findings. We need to train a lot of scientists to do a little, and devise incentives for researchers to dip in and out of public engagement, as their careers permit.

6. **Science engagement is now an established part of science policy – both in terms of policies for how to promote it, and of recognising the need to respond to the results of engagement.**
   A) This has gone as far as it realistically can, in a representative democracy. The public has a voice, but expert knowledge should also weigh heavily with decision makers. And when it comes to actual research funding decisions, we are definitely talking consultation, not participation. Keep the public on tap, but not on top.

   B) Being realistic is seeing that this is one stage in a process that will go on developing. Committing to public engagement seriously means acknowledging that it will fuel desire for more involvement in decision making, including research funding choices, and preparing to deal with that. Trying to call a halt will be counter-productive, and will not protect scientific authority or autonomy. It will engender the mistrust that it is part of the purpose of public engagement to prevent. The future will be one of continual negotiation about the roles different kinds of knowledge, experience, and value should play in decisions about science, technology and innovation.

These six pairs of opposed positions do not all define the same kind of question, and – fortunately – most of the pairs are not mutually exclusive. So in most cases the way forward is likely to feature some mix of both answers. But I suggest anyone involved in public engagement may find it interesting to think where they stand on each one when they are planning their future work.

Dr Jon Turney is course leader for the MSc in Creative Non-fiction in the Science Communication Group, Imperial College London.

Reference

1 A conference report is available at www.wellcome.ac.uk/node5250.html.