Science communication in the economic doldrums

It's not all bad, says **Bobby Cerini**

As global financial turmoil continues to spread, we can anticipate a tough year ahead for the science communication sector. But will the news be all bad? No. Hard though the year ahead may be, it will almost certainly bring gains that make the sector leaner, more innovative and more effective in the long run.

Booming profession

Since its emergence in the 1970s, science communication as professional practice has boomed. Since the early 1980s, hundreds of new science communication institutions and initiatives have been created worldwide, with the Association of Science and Technology Centres, the world's top body for science centres and museums, reporting a thirty-fold increase in its membership base since 1974.

In the UK, Millennium Commission and grant funding has enabled new science centres, visitor attractions and science festivals to blossom in almost every major city.

Such expansion in the sector has stimulated local economies, with the creation of many new jobs and business opportunities. Networks of science communication professionals have increased in size since the early 1990s, with more people independently make a living from science communication than ever before.

While ongoing operational funding is almost impossible to secure, grant opportunities for new initiatives and cross-sector collaborations have flourished. Servicing this demand, an array of independent, small-to-medium sized enterprises (SMEs) have sprung up, providing every conceivable service – from video production, exhibition and web design, and live performance, to science writing, training and administration services.

Vulnerabilities

One downside is that those working in the sector generally have poor job security, making them vulnerable when global, national or local economies contract. Until now this hasn't been a problem, with the shift from industrial to creative economies providing ample opportunities for bright young graduates. While decent science research jobs have been hard to find, and harder still to keep, interesting careers in science communication are relatively easy to establish, and have often also been better paid.

But in a major economic downturn, governments are unlikely to bail out SMEs, and many of those without good cash buffers will almost certainly fail. With the value of investments savaged, funding agencies and corporate backers have far less cash to spend, and those dependent on grant money or corporate philanthropy for their survival will be competing for a much smaller pot of money.

For those dependent on ticket sales, including festivals and visitor attractions, declining consumer spending will reduce revenue flows. And those who commission products and services will spend less, reducing the cash flow to SMEs. Layoffs and redundancies are unavoidable, with other skilled workers flooding job markets and increasing competition for jobs and contracts within the sector.

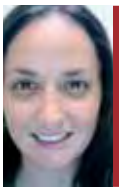
Robust survivors

But the downturn doesn't have to be all bad news. In a survival-of-the fittest scenario, we can expect to see weaker, less effective organisations and businesses fail, while stronger, leaner ones emerge.

For those who survive, better ways of doing things, for less, will be the new priority – and those who are genuinely innovative with good business practices will be well placed to survive and set new trends. In short, the quality and impact of what's available should improve – and that's a good thing, according to science communicators themselves.

Nobody knows for certain what the future of science communication looks like, but if the Organisation for Economic Cooperation and Development is correct, then global-scale issues will call for enhanced international cooperation in science and technology, and that means better cooperation when it comes to science communication too.

I think we can expect the sector in the 21st century to be an exciting, demanding place to be. But almost certainly, it will be a more streamlined and robust one, as well.



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A new vision for science and society

Martin Taylor hopes it's up to scratch

The government's *Vision for science and society*, to be released in its final form as *People & Science* goes to press, has received more public criticism than public praise. At the Royal Society we are more optimistic, but were concerned about the consultation version of the document.

The Society supports the sentiment of the government's *Vision* and shares a commitment to achieving it – but it did not go far enough. In common with others, we feel that it did not fully reflect more nuanced arguments in favour of public engagement. The *Vision* rightly called for excitement, but left little room for reflective and critical forms of public engagement with science. This would be an even more serious omission in the current economic climate.

Science and recession

The *Vision* was conceived before the economy spiralled into recession. The new situation demands we continue to embed public dialogue into science policy. We need to keep the public value of science in focus, and promote a sense of ownership over the fruits of taxpayers' investment in research.

The Human Fertilization and Embryology Act, which passed into law recently, is a good example where the public, faced with clear arguments on both sides, came down in favour of allowing stem cell research. The Royal Society is proud of the role it played in encouraging this dialogue, which worked because a wide coalition of the scientific community had the vision to think ambitiously about what could be achieved.

Tightening budgets will lead to a re-examination of priorities in science. Public dialogue can and should be part of this process, to keep our minds trained on the value of science - in tackling major issues that affect our everyday lives and inspiring us to look beyond our own narrow experience.

Need for integration

In our response to the consultation, the Royal Society asked the government to explain how its *Vision* will be aligned and integrated with its broader frameworks for science policy. For example, the Technology Strategy Board is an important initiative, tasked with driving public and private sector innovation, but we have been given no indication as to how its work will support the government's vision.

When the government published its 10-year *Science and innovation investment framework* in 2004, science and society debates merited an entire chapter of discussion. Yet in the recent *Innovation Nation* white paper, they were only addressed in the briefest of terms, rather than an issue of fundamental importance that should be located at the centre of science and innovation policy.

Understanding public views

At the Royal Society we are still learning how to embed public dialogue and analysis of science's wider implications into policy. But the big topics we are considering - such as geo-engineering and synthetic biology – will need to be addressed in the context of their societal effects, and we are heartened by the results of experiments that we and others have undertaken to understand public views.

A notable example comes from the EPSRC's Societal Issues Panel, on which I sit, which recently commissioned public engagement work on potential applications of nanotechnology to healthcare. Public thinking was integrated into EPSRC's subsequent prioritisation process. The DIUS-funded Sciencewise Expert Resource Centre for Public Dialogue in Science and Innovation is another important step toward embedding public engagement into science policy.

The Vision strategy offers an opportunity to stimulate some genuine change in culture and practice in the way the public is engaged with science. It must not be ignored in the rest of the government's scientific landscape, or in its ongoing campaigns to promote science and innovation.

> The Vision was conceived before the economy spiralled into recession

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