

roger highfield

# Where to find 6 million minds

Over the decades, a disturbing image has often entered my mind as I have whiled away the hours in meetings about PUS and PES, aka the public understanding of, or engagement with, science. This reverie involves a group of beggars briefly materialising around a campfire to squabble about how to spend a million pounds.

Of course, the question is: how are they going to make all that money in the first place? By the same token, why are researchers assuming that they have oodles of 'science capital' to spend, rather than wondering how they are going to engage with the big audiences that yield such capital in the first place?

Around the PES campfire, many issues burn brightly. The idea of a single public has given way to a heterogeneous mishmash of audiences. Truly successful engagement depends on relevance, salience and impact, and these vary depending on the particular audience.

Precisely how you deliver an idea or a narrative depends on whether you are talking to teens, toddlers or the editor of the *Daily Mail*. This sounds blindingly obvious, but it certainly wasn't to the organisers of one recent government consultation.

Another burning issue is whom to consult. Yes, there are many experts on public understanding in academia. But there are many more who engage with vast numbers of people every day in the multi-billion pound advertising and marketing industries.

You need a platform to reach your target audience. You can launch poster campaigns, use social media and court the press. But don't forget one obvious avenue that remains relatively neglected by both researchers and funders.

The Science Museum Group welcomes 5.7 million visitors in London, Manchester, York, Shildon and Bradford each year. About 600,000 of these visit in educational groups—a higher number than any other museum receives. We reach nearly 1.8 million children and a further half a million 16-to-24-year-olds every year, and we have a strong focus on encouraging people from disadvantaged backgrounds and both girls and boys.

The Science Museum has been firing up young minds for more than a century. It is where, in 1925, the 6-year-old James Lovelock was inspired to pursue a career that made him the most influential independent scientist and inventor of the 20th century. It is where Bill Gates hung out with his son. It is where Stephen Hawking says his fascination with physics was fuelled.

Last year, 3.34 million visitors made their way to the London museum—a record, and up by 8 per cent from

2012-13. The sexes were nearly equally represented. Slightly more than half of the museum's visitors come from family groups, 36 per cent come from adult groups and 13 per cent come from educational groups. In 2013-14, more than half of the schools in London visited the museum; our aim is to make that two-thirds by 2018.

Public engagement is enshrined in the research councils' royal charters—as it should be, because science, through technology, is the greatest force shaping culture today. Paul Nurse's review of the councils will no doubt consider how well they are fulfilling this aspect of their mission and whether they can do even more to use museums to showcase their work.

The good news is that research councils are starting to make more use of the museums. The Medical Research Council, for example, asked us to help celebrate its centenary. We responded by devising an interactive exhibit called *The Life Game*, which showed people how to lead long and healthy lives.

In February 2014, a record-breaking audience of almost 7,000 people, most of them under the age of 35, attended one of our adults-only Lates nights that was run by the Francis Crick Institute, at which they had the chance to mingle with researchers. The Economic and Social Research Council, for its part, is contributing to our *Cravings* exhibition, opening 12 February, which aims to generate new research findings—something we already do through an initiative called *Live Science*.

The Science and Technology Facilities Council supported our award-winning exhibition on the Large Hadron Collider, which was seen by more than 50,000 people in London and 16,000 in Manchester and is now on a three-year tour of Europe, Asia and Australia. And in December we opened *Engineer Your Future* to help inspire the next generation with support from the government, industry and the Royal Academy of Engineering.

All this has been achieved despite a cut in government support of more than 30 per cent in real terms since 2010—as we are funded by the Department for Culture, Media and Sport, we are not formally part of the science base. With a skills shortage looming in the UK, we know that we can still do even more to augment formal education, engage with research in a more critical and questioning way through events and debates, and inspire the next generation of scientists and engineers.

When figuring out how to spend your science capital, don't forget that we can help you to raise it in the first place.

Something to add? Email [comment@ResearchResearch.com](mailto:comment@ResearchResearch.com)

'The Science Museum has been firing up young minds for more than a century.'

*Roger Highfield is the director of external affairs for the Science Museum Group.*