

## GM dialogue

**Helen Wallace** objects to influence of commercial interests

With reference to Derek Burke's 'Why can't we make a decision about the genetic modification of foods and crops?' (*People & Science*, December 2010): I resigned from last year's GM dialogue not, as he claims, because I have a 'non-negotiable position', but because the process was corrupted by commercial interests before it even started.

A confidential bid document to win the contract to run the engagement exercise, submitted by the polling company Ipsos MORI, acknowledged the sensitivity of the initiative. The bidding document stated that the company worked on behalf of a 'multinational agro-chemical and seed company' and warned: 'Campaign organisations who may

feel that the "battle" was won in 2003 could decide to try and hijack the process to ensure GM food does not get a chance to be reintroduced into the UK.' What kind of dialogue is that?

Independent weighing of the evidence, as Burke suggests, can shed some light; for example, on GM pest-resistant (Bt) cotton.<sup>1</sup> However, many scientific uncertainties will remain and priorities and values will also differ. Does Burke think people should just eat what he tells them to eat, or should they have a say? Britain did make a choice about GM crops and foods: he just doesn't like that choice.

### Current problems

US farmers planting herbicide tolerant GM crops are now facing expensive seed price hikes and using more and more herbicides and even manual labour as herbicide-tolerant superweeds spread across the US. Poor farmers in the same situation would be locked into a cycle of poverty which could destroy them and their

families. Why have decades of investment been made in a technology that is unsustainable and less effective than non-GM approaches at delivering much-needed complex traits such as drought-tolerance and increased yield?<sup>2</sup>

Far from abandoning debate, I think we need to broaden it to ask: what should we be investing in to obtain a better future?

1 Undying promise: agricultural biotechnology's pro-poor narrative, ten years on. STEPS Centre Working Paper 15. On: [www.steps-centre.org/PDFs/Bt%20Cotton%20web.pdf](http://www.steps-centre.org/PDFs/Bt%20Cotton%20web.pdf)

2 Bioscience for Life? GeneWatch UK Report. April 2010. On: [www.genewatch.org/uploads/f03c6d66a9b354535738483c1c3d49e4/Bioscience\\_for\\_life.pdf](http://www.genewatch.org/uploads/f03c6d66a9b354535738483c1c3d49e4/Bioscience_for_life.pdf)



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## Woman-friendly science

More than mother-friendly, argue **Heather Mendick** and **Marie-Pierre Moreau**

We want to take issue with Elaine Westwick's article in December's *People & Science*, where she discussed how to retain women in scientific careers. She suggested that it should be easier for women to resign from and return to scientific work whenever they feel works for them. Women could then bring their scientific expertise to their mothering and perhaps science too could benefit from the 'wider perspective' these women returners would bring.

We agree that it needs to be made easier for men and women to leave and return to scientific work. However, our research on online representations of women in science, engineering and technology, like that by the Invisible Witnesses team (also included in the December issue), shows that making science woman-friendly goes way beyond making it mother-friendly.

There should be changes to the social organisation of child and elder-care, and particularly, to the assumption, that Elaine partly perpetuates, that care is and should remain primarily women's work. Rather than asking 'can women out of science be good for society?', as Elaine does, we should ask 'what are the barriers that hinder women's full participation in science and men's in care work?' Otherwise, we risk reinforcing the status quo in which women are positioned as nurturers and transmitters and teachers of knowledge, and men as main breadwinners and creators and producers of knowledge.

We found that men dominate online coverage of science and technology. The few images of women scientists tend to the traditional, using women as decoration, marginalising them and/or linking them with family life and, of

course, care. When the web authors we interviewed explained this in terms of women's role in childbirth and childcare, they effectively absolved themselves from having to do anything to change these stereotypical portrayals; they even absolved science from having to change its working practices. We worry that Elaine's article may do the same.



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You can read more about the research at [www.gold.ac.uk/identity-social-justice/ukrc/](http://www.gold.ac.uk/identity-social-justice/ukrc/)

# Encouraging the public to speak

Pippa Goldschmidt listens to planners

CREATIVE  
COMMUNITY  
PLANNING  
TRANSFORMATIVE ENGAGEMENT METHODS  
FOR WORKING AT THE EDGE

Wendy Sarkissian and Dianna Hurford (2010), *Creative Community Planning: Transformative Engagement Methods for Working at the Edge* Earthscan ISBN 9781844077038 (Paperback)

'Science and the public' and 'public understanding of science' are well meaning phrases but imply that the concept of 'science' is inherently opposed to that of the 'public' and perhaps help to maintain the very barriers they seek to bring down. So, it may be worth looking at other disciplines to learn about more innovative and inclusive ways of engaging.

That's where this book could be useful. It describes a variety of methods, developed and used in Australia and Canada, to help local communities become fully involved in planning processes and ensure that their voices are heard amongst those of the experts.

## Encouraging engagement

The fun thing is that the book practises what it preaches. It's immediately accessible in both its visual layout and text. And despite being written by planners and academics, very little is actually written in academic language.

One of the authors, Dianna Hurford, is also a poet and examples of her work are sprinkled throughout the book. Most of the chapters take the form of dialogues between practitioners. Each chapter begins with an invitation to the reader which is written in active verbs – an effective way of making the reader feel like a participant in the text.

Many of the methods of engagement presented here rely on creative activities. Children are invited to take photographs of the aspects of their environment that they value. Young people make a video. People are encouraged to be silent together, to visualise their ideal environment before sharing their thoughts. There is a gentle insistence throughout the

book that these unorthodox methods help foster feelings of trust and empathy between participants at planning meetings where local communities, often with good reason, can feel ignored.

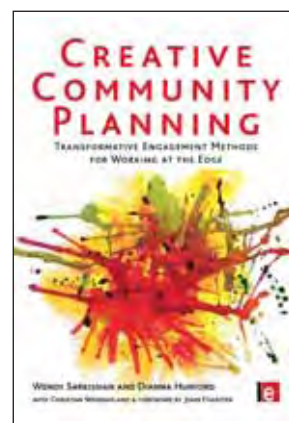
## Science through fiction

And actually, some of the creative activities described in the book aren't totally foreign to science engagement. Ballet Rambert has been devising productions about Darwinian evolution and Einstein. *Dark Matter* is a recent anthology of poetry about astronomy published by the Gulbenkian Foundation, for which poets were paired up with astronomers. But writing poetry isn't just for poets. One chapter in this book provides a whole host of reasons why writing poetry can be a powerful way of helping people to 'notice with intensity' their environment.

During my stint as writer-in-resident at the ESRC Genomics Policy and Research Forum, I've been running creative writing workshops for both academics and students. We've looked at how fiction can explore science through both reading existing texts and writing our own. The initial anxiety that workshop participants feel when asked to write a story or poem always fades away when they realise they can do it, and it's an enjoyable process.

## Exploit the web

But the book has surprisingly little to say on some crucial aspects of engagement. Apart from a brief discussion of the use of websites to collect and display information, the communities described are assumed to be physically co-located and engagement with them is always face-to-face. But our ability to go



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online and create new communities, regardless of their physical location, has transformed the way we see ourselves and our world. Perhaps local planning can get away with just using the internet as the electronic version of the village notice board, but science communication must recognise and exploit its full capability.

So, is the book relevant to science engagement? It should be. Encouraging the public to speak, rather than be spoken to, may smooth out some of the inherent imbalance between the experts and the non-experts that exists in discussions of science and related policy. This book will find a place on my shelf and I'm sure I'll be referring to it in the future.



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# Peer review

The alternative  
is patronage, argues  
**Tracey Brown**

The science blogosphere sprang to life when NASA scientists recently reported that they had found a bacterium which, unlike any other known organism, lived off arsenic. Sceptics twittered and critics blogged. Within weeks, excitement about the possible discovery of alien life forms on Earth had given way to a critique of NASA and to more prosaic explanations for why its researchers had found arsenic apparently incorporated into bacteria's DNA.

It was exactly the kind of lively refutation that we associate with scientific debate at its best. It was a model of post-publication peer review, with microbiologists challenging the research design and probing the NASA scientists' conclusions. More than that, it was an impressive use of academic blogs and online publication to evaluate the results publicly in something close to real time, while the world was still discussing the research at issue. It was not, as some claimed, proof that the peer review system should be abandoned.

## Detractors miss the point

Peer review's detractors are ever watchful for these kinds of stories and they were quick to seize upon this one. I crossed swords with Richard Smith, former Editor of the *British Medical Journal*, recently on this question. Richard thinks we should do away with peer reviewing papers before they are published. He asks why we should persist with it when research has been unable to show that it consistently identifies the significance or quality of research papers.<sup>1</sup>

This confuses the system with the principle. The system covers wildly divergent research fields and produces over a million published papers each year. The principle is that work should be prepared for and subjected to the scrutiny of people who are likely to spot its worth or deficiencies. Peer review doesn't guarantee work being right, but the required

transparency legitimates public questions about whether a research claim has been reviewed.

## Human judgement

Peer review's advocates haven't been particularly good at setting this out. People are fond instead of criticising peer review. It's awful, they say, but better than the alternative. This is lazy. It is not awful, it exhibits all the strengths and the weaknesses of a system of organised human judgement.

A human system is flexible and at least capable of spotting good ideas, even if unevenly. It reflects, in any field, the state of that field. It might be stale, narrow, self referential and sloppy. Or it might be dynamic and exacting. Publishing reflects the normal cycles of research – and practices that help when things are on the up, can become part of the problem when they are ossifying. Just like departments and institutes everywhere, some people are still banging a drum, others march on. That is why people go off and create new fields of enquiry with new journals.

## Patronage

Instead of saying there is no alternative, we should be clear that there is. It is called patronage. Watch out for its modern packaging, which generally contains reference to new media and cool mates. When Richard tells me that he relies on trusted contacts to alert him to work that

Publishing reflects the normal cycles of research – and practices that help when things are on the up, can become part of the problem when they are ossifying

deserves attention, it sounds so hip and flexible, not like that stuffy science publishing. Yet if it became the norm it would, in substance, be little different to being accorded merit through the favours of the Medici family.

Peer review – yes, flawed and with all the unevenness of scholarly endeavour – is built upon an aspiration to objectivity and fairness that the public expects from science. Without peer review, some other marker will select papers for us to read. That will be universities with the best-funded public relations departments and principle investigators with the best clubby contacts.

<sup>1</sup> Bornmann, Mutz & Daniel (2010)  
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