

# Designs for living

Interactions between scientists and artists or designers can be beneficial for both sides and, as **Richard Jones** reports, offer intriguing glimpses of the future.

Tourists passing by one of London's landmarks, the Royal Albert Hall, this summer could have been forgiven for thinking they were seeing double. Next to that familiar feature of the British summer, the ice-cream van, was another ice-cream van. On closer inspection, the visitor would have seen that the second was not decorated with a menu of frozen treats, but with scientific facts and slogans. And although ice cream was on offer, it would be made on the spot from liquid nitrogen and custard, giving the visitor an opening for a frank talk about crystal nuclei and cloud seeding.

In fact, the ice-cream van was an exhibit in the degree show at the nearby Royal College of Art, and it had been devised by students Zoe Papadopoulou and Cat Kramer as a way of opening a discussion about two contentious and controversial aspects of modern technology: the use of nanotechnology in food and the prospect of geo-engineering<sup>1</sup>. Moreover, the ice-cream van was just one of a number of exhibits in the degree show that referred to potentially controversial technologies such as nanotechnology and synthetic biology.

Scientists and technologists are not always fully aware of the wider resonances of their work, but a deeper engagement between nanotechnologists and the art and design community presents real opportunities. These are often people with a real fascination for the possibilities of new technology, but with a very different perspective from most scientists and technologists.

There is, of course, a huge diversity in the different ways artists and designers can relate to technology. At one end, there is the world of industrial product design. Even the most cloistered academic cannot have failed to notice the way that the fortunes of Apple were turned around as much by the design skills of Jonathan Ive as by any purely technical innovation. Product designers are fascinated by the prospect of materials with new properties, and nanotechnologists promise to be able to make entirely new materials with properties and functionality that can be designed from the bottom up.

There is a gap, however, between the focus of the nanotechnologist on precisely defined properties like modulus, toughness



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and strength, and the wider set of criteria that make a material attractive to a designer. Product designers need to understand what is and is not possible but, equally, nanotechnologists need to understand what properties make a product usable and desirable. Often the lines of communication between product designers and materials scientists are impossibly long and tenuous, running through materials producers and manufacturers; short-cutting this would help nanotechnology contribute to a more human-centred design process.

At the other end of the spectrum are art/science projects that are intended to provoke, stimulate and move audiences who might not normally think about science and technology at all<sup>2</sup> (rather than to produce useful artefacts). At their best, these projects can generate wide interest, as well as levels of media coverage that more didactic approaches to science communication can rarely achieve. An example of this was the 'Wonderland' collaboration between Tony Ryan, a polymer scientist at Sheffield University, and Helen Storey, an artist and designer, that used the metaphor of fashion (see photograph) to question the sustainability of the way we use materials like plastics<sup>3</sup>. And some art/science projects

can be genuinely shocking; for example the performance artist Stelarc uses his body to explore issues related to human enhancement and the merger between technology and the human organism, and the bioartist Oron Catts uses the techniques of tissue engineering to make artefacts from living organisms.

There is also an intriguing middle ground between product design and pure art/science projects — this is the idea of 'critical design', championed by Tony Dunne and Fiona Raby of the Royal College of Art<sup>4</sup>. This involves a kind of reverse archaeology, exploring possible futures through imagined artefacts. For example, in their 2007 work 'Technological dreams series: No. 1, Robots'<sup>5</sup>, they explore what kinds of qualities people might want to design into domestic robots — would you want your robot to be independent and unobtrusive, or would it be comforting if its huge computational power was balanced by a certain physical neediness?

One thing should be clear about the most successful interactions between scientists, artists and designers — these are not simply public relations campaigns for science. The reactions of artists and designers to the possibilities of new science and technology are sometimes playful, but sometimes unsettling and disturbing, and one should not expect uncritical enthusiasm. The outcomes of these interactions are not so much visions of the future, as glimpses of possible futures; if they are not utopian visions, neither are they dystopias. Instead, they are ways of beginning conversations about all the complicated and messy ways in which societies might, in the future, interact with technological change. □

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## References

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