

Newsletter Issue No 5

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Ian Pearson, Minister for Science and Innovation

From ‘intelligent’ fridges to climate change – people have been airing their views in the first national public discussion about the future of science and technology in the UK. The results of the Sciencewise-funded *sciencehorizons* project were unveiled on 12 September at the BA Festival of Science in York.

Among the many issues thrown up during the discussions was one of privacy – how far are we prepared to go in developing technologies that let others know about the details of our everyday lives? The project found that many people would not mind strangers knowing what was in their fridge, if it meant that supermarkets could help them plan meals and automatically restock it to make grocery shopping a thing of the past.

While light-hearted issues such as the future of fridges were on the table for discussion, more serious subjects such as climate change, health, genetics and the loss of the ‘human’ touch in an increasingly technological world were debated.

BRITAIN LOOKS TO THE FUTURE WITH SCIENCEHORIZONS

Participants were broadly excited about the future for science and technology, particularly its capacity to help improve our health, environment and lifestyle.

However, this was tempered by concerns about over-dependence on technology, and potential risks and worries that some technology might not be distributed equally to benefit ordinary people.

Minister for Science and Innovation, Ian Pearson, said:

“I spend a lot of time thinking about what the world will be like in 2025 and how we will live our everyday lives. It helps with thinking about how policy needs to move forward.

“For instance, I can’t believe most homes won’t have smart meters and energy management systems by then - and probably intelligent fridges too.

“This public discussion represents a new, different way of talking with the public about science and technology -

finding out people’s hopes, fears and ideas on a range of topics.

“It’s also a test model for evaluating how effectively different styles of public engagement might work. This will help us to further develop our method of public dialogue and consultations for Government policy or legislation.”

sciencehorizons, funded by the Department for Innovation, Universities and Skills under the Sciencewise Programme, is part of the Government’s ongoing work to gauge the public’s views about particular issues well in advance of policy decisions.

The project was delivered by a consortium led by Dialogue by Design and including Graphic Science, BBC Worldwide Interactive Learning, Shared Practice, and Think-lab.

The project’s final report and further details can be found at:
www.sciencehorizons.org.uk
www.sciencewise.org.uk
www.dius.gov.uk

Participants broadly like

Technologies that enhance:

- Harm prevention e.g. disease, crime
- Independence (e.g. for the elderly)
- Convenience
- Environmental gain
- Quality of life

Participants broadly dislike

Technologies that:

- Pose a safety risk
- Lead to loss of privacy
- Create over dependence on ICT and robotics
- Threaten jobs and skills
- Lack human interaction
- Lead to social division

SCIENCEHORIZONS - THE PROCESS



sciencehorizons involved a deliberative panel of 31 members of the public who met twice over two months for extended discussions and presentations from expert speakers on a range of topics including climate change, cyber-security and genetic testing.

Two further strands of the programme focussed on facilitated public meetings in science centres and community spaces, and self-managed group discussions run by community and other organisations including schools, Women’s Institutes and faith groups.

The discussions used a specially designed pack showing how life in 2025 could differ from today. The pack was based on a series of papers called Horizon Scans, written by expert scientists mapping out potential future technological developments. All the participants in the three strands used the same set of scenarios and filled in the same feedback questionnaires so that different methods of public dialogue could also be compared.

Along with the pack, an interactive web site was developed to stimulate discussion and debate. Visitors to

www.sciencehorizons.org.uk can see the *sciencehorizons* stories that were used to stimulate discussions, and view the results of all three strands of the project.

“As project leader I was always intrigued to find out the extent to which the findings differed depending on the engagement tools we used. It has been extremely interesting to discover how common the views were across the three strands. One concern I have always had is that very deliberative processes take people on a journey and guide them through a thought process that cannot be replicated on a large scale in an unmanaged or less managed environment. For *sciencehorizons* at least this has not proved to be the case.”

Pippa Hyam, Project Leader and Director, Dialogue by Design

Table 1. *sciencehorizons* themes. Roy, Cynthia, Rajpal, Emily, Malcolm, Katie, Jennifer, Henry and Paul experienced new technologies in 2025 in the following themes, including:

Theme	Description
Mind and Body	Tracking micro chips in clothes, “lab-on-a-chip” diagnostic software, genetic tests, stem cells
Home and Community	Internet “date” matching, artificial intelligence, radio monitoring tags, behaviour imaging software
Work and Leisure	Hi-tech cosmetics, genetic diagnostic test kits, cybercars, and computers in clothes
People and Planet	“Smart” housework robots, DNA vaccines, solar power, wind turbines and hydrogen fuel cells

CHIEF SCIENTIFIC ADVISER WELCOMES SCIENCEHORIZONS RESULTS



The Government Chief Scientific Adviser, Sir David King, who appeared at the BA Festival of Science to discuss his Universal Ethical Code for Scientists, welcomed the results of the *sciencehorizons* project, which he said had made a significant

contribution to the debate over the direction of science and technology in the future.

“Scientists earn their mandate to operate from the public,” he said. “We want our new developments, treatments and technologies to be trusted and used. That’s why I have championed a universal ethical code for scientists to help us to further build an environment where science and scientists are recognised as a valued part of society.

“Public engagement like *sciencehorizons* offers a key way for us to find out people’s views to feed into the way we shape new scientific developments.”

The results of all the *sciencehorizons* activities will be used to inform policy setting the direction of research and regulation of science and technology. The project ran alongside the Government’s Wider Implications of Science and Technology (WIST) process, www.foresight.gov.uk/HORIZON_SCANNING_CENTRE/WIST

This co-ordinated programme of engagement and dialogue between the public, experts and stakeholders is designed to explore the wider implications of new and emerging areas of science and technology. Through this process, the Horizon Scanning Centre aims to identify at the earliest possible stage, areas where potential safety, health, environmental, ethical, regulatory and social (SHEERS), issues may arise, and advise on how these might be addressed.

sciencehorizons acted as the “public-facing” part of the WIST process and its results will be incorporated into an overall report by Sir David King.

AN INTEGRATED APPROACH

sciencehorizons used information gathered from two Horizon Scans, the Delta and Sigma Scans.

The **Delta Scan** is an overview of future science and technology issues and trends, with contributions by science and technology experts from Government, business, academia and communication. It was produced by the Institute for the Future (ITF).

The **Sigma Scan** is a quality assured synthesis of some of the best Horizon Scanning sources. It covers future issues and trends across the full public policy agenda. It was produced for the Horizon Scanning Centre by Outsights - Ipsos MORI.

sciencehorizons used eight emerging clusters of scientific issues from these scans on which to base the scenarios for public discussion. Further information on the Horizon Scans can be found at:

www.foresight.gov.uk/HORIZON_SCANNING_CENTRE/Strategic_Horizon_Scans/Strategic_Horizon_Scans.html or www.sigmascan.org and www.deltascan.org

“It is vital that people feel confidence in scientific decision-making, and have an avenue to air their views on how science and technology should progress.”

Government Chief Scientific Adviser, Sir David King.

The Universal Ethical Code for Scientists, “Rigour, Respect, Responsibility” has been published in leaflet form for the public. It aims to foster ethical research, encourage active reflection among scientists on the impact of their work, and support communication between scientists and the public on complex and challenging issues. It can be found at:

www.berr.gov.uk/science/science-and-society/public_engagement/code/page28029.html

NEW FOCUS ON PUBLIC ENGAGEMENT FOR POLICY MAKING



“The Government’s goal is for the UK public to be confident about the governance, regulation and use of science and technology - by both Government and business - and to be actively engaged in scientific debate.”

Prime Minister, Gordon Brown

The Prime Minister, Gordon Brown, promised “a new type of politics” as he announced plans to broaden consultation in Government decisions.

In a speech to the National Council of Voluntary Organisations on Monday 3 September 2007, the Prime Minister said the challenges being faced in Britain today could only be solved by “a politics built on engaging with the people” and not with old-style top-down solutions which simply said that “the man in Whitehall knows best”.

Announcing a series of Citizens’ Juries, which he called an “enrichment of democracy”, the Prime Minister said his aim was to find new ways of engaging with people in an on-going process of reaching out and doing the business of government differently.

He said “I am determined that the wisdom and experience that resides within the British people will be put to better use in future. Now we need new ways and means to bring together citizens to discuss both specific challenges that need addressing and concrete proposals that we can discuss for change”.

The Prime Minister went on: “It is increasingly the culture in which we live our lives that matters, our beliefs and aspirations, the values and norms that shape our goals and the boundaries that we set and are prepared to set for the way we behave in our families and in our communities”.

The Prime Minister’s comments follow a speech to Parliament on 3 July www.pm.gov.uk/output/Page12274.asp in which he called for constitutional reform that “entrusts more power to Parliament and the British people”.

Public dialogue in science and technology is already leading the way in giving people more say in policy decisions.

In December 2006, in his last pre-Budget Report as Chancellor, Gordon Brown announced the Government’s intention to set up an Expert Resource Centre for Public Dialogue on Science and Innovation (ERC), building on the progress already made by the Sciencewise Programme

www.hm-treasury.gov.uk/pre_budget_report/prebud_pbr06_index.cfm

SCIENCEWISE CASE STUDIES

As part of the learning resource for the ERC, Sciencewise is preparing a series of case studies on completed projects.

The case studies look at the topic addressed by the project and describe the dialogue activities that took place. They also cover the processes involved and the impact of the project on participants and policy making.

The first four are:

- Trustguide (Internet security)
- Nanodialogues (attitudes to the applications of nanotechnology)
- Nanodialogues Experiment One: Environment Agency (use of nanoparticles in land remediation)
- Democs (a card game to engage young people in exploring new technologies)

These case studies can be found on the Sciencewise website: www.sciencewise.org.uk or can be obtained from Jo Stevens on: **0870 190 6322**

HUMAN – ANIMAL HYBRID RESEARCH GETS THE GO AHEAD

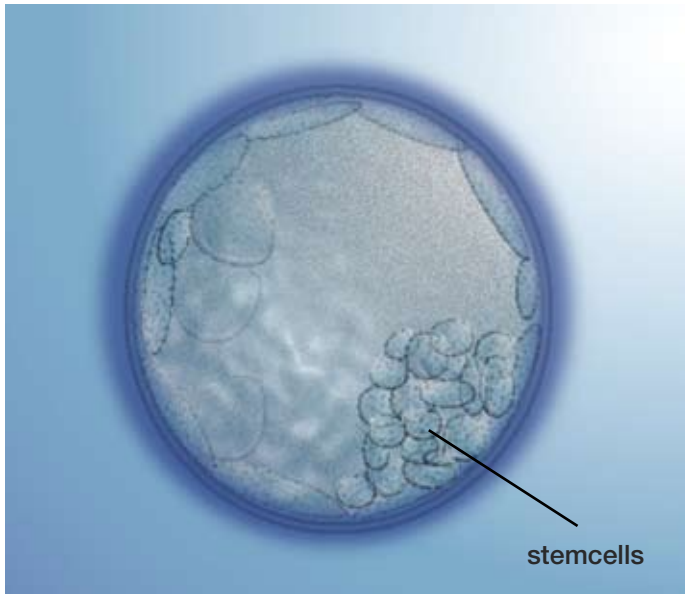


Fig 1. Embryo at day 6

The Human Fertilisation and Embryology Authority has decided in principle to allow scientists to create human-animal hybrid embryos for research. The decision, at a meeting of the Authority on 5 September, follows a stakeholder and public consultation on the ethical issues of such research, which was partly funded by the Sciencewise Programme.

The Authority said that having looked at all the evidence, it had decided there was no fundamental reason to prevent cytoplasmic hybrid research.

However, it said “public opinion is very finely divided with people generally opposed to this research unless it is tightly regulated and it is likely to lead to scientific or medical advancements”. It added that its decision was not a total “green light” but a recognition that this sort of research could, with caution and careful scrutiny, be permitted.

An HFEA licence committee will now look at the details of two specific research applications that were submitted earlier this year by scientists at Kings College, London and Newcastle University. It hopes to make a decision on both applications in November.

A key part of the HFEA’s consultation was public dialogue, undertaken this summer to explore and understand various public perceptions, motivations and attitudes to creating human-animal embryos. The first stage of this work involved deliberative groups, where participants were introduced to the different types of human-animal embryos and the science behind them. The second stage involved a full day workshop, where expert speakers illustrated the different issues and arguments raised through the consultation. Participant’s views were tracked throughout both activities to explore how different information affects opinions. Other consultation activities included a public meeting, an opinion poll and an online questionnaire.

The consultation highlighted the public’s desire to learn more about scientific research involving embryos, illustrating a need for increased communication with the public in this area. In particular, participants wanted to understand the science, alongside the potential benefits and risks, before forming an opinion.

The potential benefits had a significant affect on the degree of support for this research. Many expressed a desire to see a clear rationale for any research, which is permitted. There was also a demand for research of this kind to be tightly regulated.

A summary of the Authority’s decision can be found on the HFEA website: www.hfea.gov.uk.

“There is a clear demand from people to know more about what researchers are doing and their plans for future work, highlighting a need for better communication about science and research from both the scientific community and ourselves as regulator. In the coming months we will be looking to see how this can be delivered.”

HFEA Statement 5 September 2007

PUBLIC AIRS VIEWS ON FUTURE DRUG USE AND CULTURE



Findings from the Academy of Medical Sciences' (AMS) drugsfutures public engagement programme are now being considered by the Academy following the end of the project, which was funded by Sciencewise.

The results of the engagement activities, which were designed to explore people's hopes and concerns around future drug use and drug culture, will now inform the recommendations made within a forthcoming Academy report on 'Brain science, addiction and drugs'. The report is due for release in December 2007.

The project, which was delivered on the AMS's behalf by a consortium led by external contractor, the Office for Public Management (OPM), focussed on facilitating deliberative discussion between a broad cross-section of the public and an assortment of 'experts'.

The debate covered issues around three types of psychoactive substances - 'recreational' drugs; medicines for mental health; and cognition enhancers.

The drugsfutures programme was launched in London, with over one hundred people including members of the public, participants from the Academy working group, policymakers, media and other key stakeholders taking part in an interactive discussion event.

Following this, an additional three hundred people took part in 26 face-to face events held in eight different locations across the UK (London, Birmingham, Liverpool, Exeter, Belfast, Glasgow, Merthyr Tydfil and Norwich).

These events included:

- Brainbox - a reconvened deliberative workshop, taking place over 3.5 days in total, with a 1.5 day introductory session at the start of the project and a 2-day session at the end
- Five regional one-day workshops, each of which was organised around a specific theme ('drugs and the law'; 'drugs and young people'; 'drugs and society'; drugs for a smarter brain'; and 'drugs and mental health')
- Smaller 'outreach' groups with participants recruited on the basis of specific knowledge, experience or family situation, for example, mental health service users, parents of children with ADHD and ex-drug users

Academy working group members joined additional knowledge providers (including scientists, police, drug workers and service users) at the various events to listen and engage in a two-way discussion. In addition, over 1500 responses to questions were submitted via an on-line consultation. The Government are committed to responding to the recommendations in the Academy report within 18 months of publication.

Further Information

For further information visit:
www.acmedsci.ac.uk/policy

PROJECTS UPDATE

STAKEHOLDER MEETING HELPS REFINE STEM CELL DIALOGUE PROJECT

A stakeholder meeting was held in July ahead of the start of a national Sciencewise-funded public dialogue project on attitudes to stem cell research, to ensure that all interested parties had the opportunity to give their views on what topics should be covered and to influence the direction and scope of the activities.

The project is being led by the Biotechnology and Biological Sciences Research Council (BBSRC) and the Medical Research Council (MRC) on behalf of the Research Councils UK (RCUK).

The meeting included discussion of a desk study of past and ongoing projects, and events and information about stem cell research that have engaged or communicated with the public. The study was produced by the Office of Public Management, as part of the background for the project.

BBSRC/MRC have now chosen a preferred supplier to deliver the main dialogue activities following a competitive tendering process. The successful contractor is expected to be announced later this month.

Further details about the project can be obtained from Maggie Leggett at BBSRC, e-mail: maggie.leggett@bbsrc.ac.uk
Tel: 01793 413394.

A report on the June stakeholder meeting is available at: www.bbsrc.ac.uk/society/dialogue/attitudes/stemcells/07_07_05_meeting_report.pdf

HGC FORENSIC USE OF DNA

The Human Genetics Commission (HGC) has launched a search for a contractor or consortium to carry out a citizen's inquiry into the forensic use of DNA, focusing in particular on the information, which is held on the National DNA Database.

The year-long project, funded by Sciencewise, will find out people's views on who should be on the database, what sort of information should be held and for how long, and for what purpose it should be used. Further details can be found on the HGC's website: www.hgc.gov.uk

HOUSE OF LORDS CONSIDERS TRUSTGUIDE RESULTS

The House of Lords Select Committee on Science and Technology has made a number of recommendations to the Government on protecting web users following an inquiry into Personal Internet Security.

The recommendations were based on evidence from stakeholders and other interested parties – including public opinions gathered through the Sciencewise-funded Trustguide project.

The Trustguide project was delivered for Sciencewise by Hewlett Packard and British Telecom. It involved a series of workshops over 15 months, each of which focussed on a range of trust issues that arise through the development and deployment of new technologies. The aim of the workshops- attended by around 300 people - was to develop guidelines for those engaged in the research, development and delivery of ICT about how cyber trust might be enhanced.

Announcing its findings last month, (August 2007) the Select Committee highlighted the threat to the future of the Internet posed by e-crime, and said that the Government must do more to protect individual Internet users.

It argued that the "laissez-faire" attitude taken to Internet security by a range of stakeholders including Government, Internet Service Providers, hardware and software manufacturers and others, risks undermining public confidence in the Internet, contributing to a 'wild west' culture where the end user alone is responsible for ensuring they are protected from criminal attacks online.

Details on the House of Lords Inquiry and its recommendations can be found at: www.parliament.uk/hlscience

Further information on the Trustguide project and its final report can be found at: www.trustguide.org.uk/publications.htm or by contacting Stephen Crane at Hewlett Packard on 0117 312 9091. The Trustguide case study can be found on the Sciencewise website: www.sciencewise.org.uk

Further Information

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