

litmus paper

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TODAY'S HIGHLIGHTS



Mark Lythgoe
and Quentin Cooper
Science of Love
6-7.15 pm/Town Hall

Sarah Angliss
The Cyborg Experiment
6-7 pm/Town Hall

Sara-Jane Arbury
and Marcus Moore
Slam the Atom
8.45 pm - late/Town Hall

All in the mind: can you tell what we're thinking?

by Emily Koch

Perhaps unsurprisingly in last night's event about extrasensory perception (ESP), the majority of the audience were believers. Biologist Rupert Sheldrake had the easy task of confirming their views, while psychologist Chris French conducted a conversion course. By the end, just one audience member crossed into scepticism, but this was certainly not because French's arguments were unconvincing.

The debate was good-natured, possibly because French did not flatly deny paranormal experiences. He toyed with the audience, asking us to think of two different digits and then whether that number was 37. Cue astonished gasps from the audience. Surely, as (almost) everyone was thinking of the same number, ESP had been proved?



Rupert Sheldrake: *I'm a believer.*

French went on to explain that there are many events that may seem to be paranormal experiences, and some may indeed be so, but most have non-paranormal explanations. As Sheldrake said, French is a very open-minded sceptic: he may not believe in ESP himself, but he insists that we cannot lose out by investigating these events seriously. How-

ever, he does not feel that anecdotal evidence can prove anything, and anecdotes are the basis of Sheldrake's studies – including many stories about people knowing who is on the phone before they pick it up.

In reply to French, Sheldrake said: "For me, the plural of anecdote is data." This data has led Sheldrake to believe that telepathy is a biological and natural process. To accept this belief into science, Sheldrake claimed, would be to constructively expand science's frontiers: "It does lead to a different paradigm, but it doesn't mean science as we know it will crumble into dust."

The event was surprisingly down-to-earth, considering its paranormal subject matter, but are we any closer to proving the existence of ESP? I must end here as you're about to call and enlighten me with your view.

Why science and art will never marry

by Chris Cundy

Neuroscientist Mark Lythgoe flew into debate with characteristic enthusiasm by gleefully declaring the sci-art love affair "out of the closet".

First to talk was scientist Mark Miodownik, from the Smart Materials department at Kings College. He opened with a view of the ordinary world – the mundane – a pretty unremarkable photo of the street outside his north London studio.

Miodownik insisted we take a more inspired look at the many complex and amazing materials that make up our everyday reality. We can all, at times, be dazzled by an amazing sunset, but seldom do we pause at a lamp-post to contemplate its metaphorical connection to man's harnessing of the mysterious properties of our universe.

Next was fine artist Jane Prophet. She creates imaginary trees from

computer-generated algorithms, then constructs them in a laboratory using rapid prototyping machines, which use laser beams to solidify liquid compounds.

Prophet described her work as an act of reverse engineering, and there is something genuinely paradoxical about it. Life-forms appear brittle and static, as if the mind has cut away at everything banal to finally reveal an unconquered mystery. Is this what beauty is? A speculative question for the artist, but could it be a secret desire that compels the scientist to seek the truth?

The sci-art love affair remained awkward, and sheer curiosity maintained conversation. At one point, Prophet admitted to being driven to collaborate with science by a sick kind of personality disorder. But Lythgoe remained, predictably, more rational on his side of the bed.

Einstein: a life of brain

by Hannah Jewkes

Can the secret of genius be found in Einstein's brain? Mark Lythgoe, Jim Al-Khalili and a red Cadillac took a road trip to solve the riddle of the great man's grey matter.

The Riddle of Einstein's Brain took us through the fascinating story of what happened to one of the world's greatest scientist's cerebra, and revealed how its mathematical region was unusually well developed.

Einstein's brain was removed when he died, as was standard practice at the time. However, pathologist Dr Thomas Harvey failed to put it back, and despite losing his job and being offered a cumulative \$240 million for the pieces, he held on to it for 50 years.

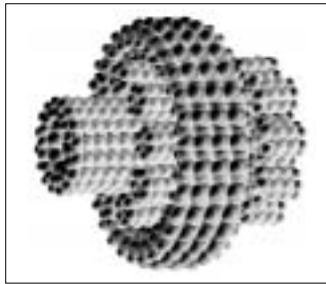
Einstein's brain was pickled 30 minutes after it was removed and



has been perfectly preserved in 240 pieces in jars at Princeton University ever since. Lythgoe and Al-Khalili were able to gain access to it, finding the mathematical area had more glial cells – the structural components of the brain.

So is this the secret to Einstein's genius? Was it genetic, or did it develop? It seems this brain poses more riddles than it solves.

Nano nantoech



by **Olaf Bayer and Claire Fauset**

Nanotechnology, working at the scale of atoms and molecules, is hyped as the next industrial revolution, and attracts billions of pounds of investment each year.

Yesterday's discussion about the ethical implications of this new technology was hosted by Small Talk – an organisation running a series of events to canvas public opinion on the subject.

The panel featured nanoscientists George Smith and Terry McMaster, and social scientist Rob Doubleday. They briefly outlined what nanotechnology is, what applications might stem from it (including faster, more powerful computers and "smart" drug delivery systems) and some of the concerns that the technology raises. The common sci-fi fears around self-replicating nanobots were quickly allayed and discussion focused, instead, on the real-world impact.

Both the panel and the audience shared concerns about the toxicity of nanoparticles, nanotechnology's capacity for increasing public surveillance, and the potential it has to exacerbate, rather than eliminate, global technological and economic divides. The debate was useful and, if there had been more time, it would have inevitably come around to the "elephant in the corner" issue of who owns, controls and stands to profit from nanotechnology.

The talk identified the urgent need for nano-regulation, as well as highlighting the UK government's failure to act in this area. The Government has, so far, made an ill-defined commitment to engage in public debate on the subject.

It remains to be seen what weight the outcome of "public engagement exercises" such as today's will be given by interested parties if the government's current priority – to reap the commercial gains generated by nanotechnology – continues.

Visionary fiction

by **Adam Horovitz**

"There are as many different kinds of science fiction as there are writers in the field," said Brian Aldiss at last night's Science Fiction event – a truism borne out by the three authors taking part – "and we all have to march under the same banner."

The lively and interesting talk proved that sci-fi writers may march under the same banner, but they aren't averse to a bit of genteel bickering under it either, especially about things like what makes *Frankenstein* a frightening book.

When on topic, however, this was an enlightening hour. China Mieville's assertion that "science fiction is an heir to visionary, ecstatic writing", citing a passage from HG Wells' *The First Men on the Moon*, was revelatory (if you'll pardon the pun). The genre, Mieville suggested, is a "religious vision ... secularised."

Aldiss agreed, first reading a passage from *The Time Machine* that smacked of *The Book of Revelations*, and then saying, "you must write science fiction – or science – to express something inward about yourself."

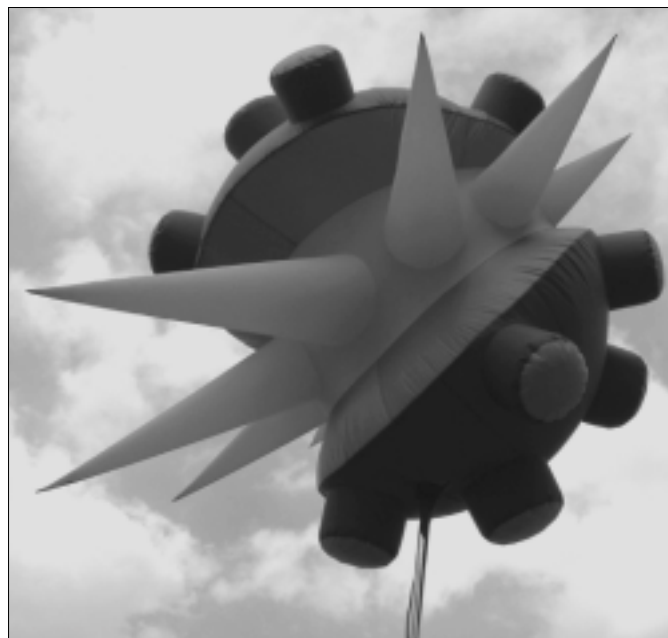
Unlike religion, science fiction appears to be intrinsically pessimistic – from a passage about the



China Mieville: sci-fi guy.

discomforts of train travel read by Rob Grant from his sci-fi satire *Incompetence*, to Wells, Verne and the majority of the sci-fi canon.

Aldiss summed it up best: "Utopian fiction is very hard to write – it's much easier to have a disaster." Long may these three keep dreaming up disasters.



FLYING DISEASES: Floating harmlessly by the book tent is this huge inflatable uncommon cold virus: a representation of what you would see when looking at the virus through a microscope (but don't mistake it for a magic lantern). EK

Blinding science

by **Avril Staple**

The unanswered question in *Is Science Reported Fairly?* yesterday was whether the gulf between science and journalism can be bridged. The media wants sensationalist reporting – littered with clichés – but science is based on accuracy.

Scientists are often unwilling to comment beyond their specific area of expertise, leaving a vacuum of knowledge for non-experts to fill. But Fiona Fox, science, media and cultural spokesperson for the Royal Institute, said that a recent poll found that, "the public demand to know that facts have been checked." She called for scientists to come out of their ivory tower and join the debate; the more outrageous the claim, the more scrutiny needed.

"Impartiality is an impossible position. There's no point in balance if it's only a point of view," said the *Guardian* science correspondent Tim Radford. Journalists have to decide whether a scientist is a visionary or a raving loony, added Steven Pinock of the *Financial Times*.

Fox believes balance is wrongly interpreted: 99.99% of scientists believe MMR is safe, but the media have inferred just 50% do so, which risks an epidemic. All agreed that editors need to change their stance on how science is reported.

THE DROID

There's much to dislike about Star Wars: the Phantom Menace, but it will take a lot to beat China Mieville's verbal assault last night: "...it's just a bunch of theocratic warrior monks who allow slavery on the fringes of their domain ... who only go to war over a trade dispute!"

Would the person who stole our correspondent's thoughts at the ESP lecture yesterday please return them to the usual address...