

litmus paper

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TODAY'S HIGHLIGHTS



Charles Jencks
Gardening the Universe
4.30–5.30 pm/Town Hall

Frank Close
Particle Odyssey
6–7 pm/Town Hall

Steven Rose and
Robert Winston
Medicating Children
8.30–9.30 pm/Town Hall

Harry Witchel, Graeme Jones
and Mark Lewney
Sex, Drugs and Rock & Roll
9–10 pm/Town Hall

Too late to save the Earth?

by Adam Horovitz

It was a strange experience watching two men as avuncular-seeming as James Lovelock and Sir Crispin Tickell discussing the climactic climate changes to planet Earth that human beings appear to be causing.

They presented a gloomy and unsettling picture of the world's future: from uncontrollable human population growth to "melting glaciers... and rain forests", and from the urgent need for power, however unpalatable the ways of getting it, to the possibility of synthesising food to free up farmland that could keep the Earth breathing.

We must "re-commission old nuclear power stations", said Lovelock. "I'm not a nuclear fanatic," he added, before launching into a long list of reasons why Britain and the world needed it.

"London, denied electricity for one week, would decline into a refugee camp," he said. "It would be monstrous to allow nuclear power stations to close."

He also advocated any renewable



James Lovelock: still hoping for a jolly green Gaia.

energy source that was viable, but in the face of questions about the 20th anniversary of Chernobyl, he became quite bullish, calling the "disinformation" that has been disseminated "monstrous". The notion that millions will die as a result is "sheer rubbish", he said. Such scare-mongering was simply "a product of the cold war".

Among other contentious issues raised was climate migration. "We [the British] live in a very fortunate bit of the planet," said Lovelock,

suggesting that even if we lost the Gulf Stream, which keeps us temperate even though Hudson Bay, on the same latitude, is an icy wasteland, the climate change would keep us pretty much as we are. "Our big problem may be how to persuade people not to move here."

Both Tickell and Lovelock were insistent that things could be done; despite the gloomy, apocalyptic facts, they were both full of hope. Tickell praised the new Chinese approach to capitalism, called Socialist Market Economy. "We had a system very like that during World War II," quipped Lovelock. "The worst thing we could do [in the face of climate change] is despair. We must do something, if only to keep our spirits up. We [humanity] will survive whatever happens and so will the Earth. It's civilization that is fragile."

Lovelock's closing call was for the world to simply "Cheer up". A worthy request, but difficult given the terrifying litany of hurdles catalogued yesterday.

To sleep, perchance to dream?

by Charlotte Bathe

How did you sleep on Tuesday night? If you were a member of the audience at Jim Horne's "Sleep-faring" talk, then I hope you slept well. According to Jim, sleep deprivation affects the brain and in particular our ability to deal with new information, and for this talk, you needed your brain in full working order. Jim delivered fact after interesting fact, and only the most alert brain could keep pace.

If you were working late on Tuesday setting up for the Festival, then you were probably suffering from mild sleep deprivation the next day. Thankfully, Jim reassured us that we can go a whole week without sleep before we show signs of physical strain. Lifting heavy boxes early on Wednesday morning should have

been no problem.

It is a myth to say that we sleep to rest and repair our bodies. We sleep to let our brains recover, to allow the frontal cortex a break from a busy day of thinking.

For those of you who didn't sleep well last night, some words of wisdom: have a cup of coffee in the afternoon, then a snooze while you're waiting for the caffeine to kick in. A quick nap can be as effective as an extra 90 minutes of sleep at night.

Yesterday's audience seemed particularly interested in dreaming. Jim believes that dreams keep a bored brain occupied and prevent it from waking. We don't actually need to dream and some common drugs used to treat depression actually inhibit dreams with no ill effect.

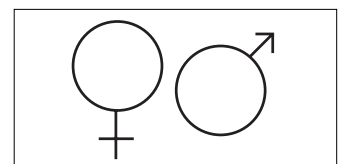
Babble of the sexes

By Jon Andriessen

For the first of the Festival's free daily "Science Café" debates the agenda – not at all hidden – was gender. It was not so much a celebration of difference but an acutely partisan mental sparring match which left little to show for all its bravado and sensualism.

In the blue corner sat Mark Lythgoe, neurophysiologist and variety performer, insisting that men were quite simply superior. It's a question of the male "systematic" brain function, making them more than a match for the "empathising" females.

In the pink corner, more than taking it on the chin, was Vivienne Parry, former *Tomorrow's World* presenter and honorary avenging She-Ra for the evening. Empathy



makes "women better team leaders," she explained, "because they can also make coffee and cakes."

And so the "debate" went on, tit-for-tat, ad-infinitum: my brain's got more cells than your brain; my urethra's shorter than yours. I started dreaming of some middle-sex, somewhere outside the never-ending battle of the sexes; a suburban, androgynous utopia where we could all sit happily watching the football while knitting scarves to our hearts' content. And everyone took turns making tea.

Driven by rage

by Emily Koch

Does even a minute behind the wheel turn you into a different person? You're not alone, according to Lisa Dorn, one of yesterday's speakers in the "Psychology of Driving" event. She used to marvel at the change she saw in her father when he drove, which initiated a lifelong interest in driving behaviour.

Dorn talked us through the process of changing the behaviour of the effing and blinding "lunatics" she spent last summer with in a car, while filming the BBC's *Road Rage School*. She uses a system called Driver Coaching – these people don't need to be taught how to drive, just a little behavioural guidance.

She explained that road-rage sufferers put up barriers to justify their behaviour. Their "driving coach" must break down these barriers by encouraging people to reflect on and challenge their actions.

Following on from Dorn was Austin Williams, director of the Future Cities Project. In an AA meeting-style confession he revealed "I'm no psychologist", and accordingly his insight into driving veered away from the psychological and towards his field of knowledge: urban and transport strategy.

He was not afraid to be controversial, asserting that "I do not think that safety should be the main priority when considering transport. A cautionary approach is bad for transport and bad for society." He amusingly went on to bemoan the politicisation of this science with what an audience member appropriately identified as "Swiftian humour". Interestingly, he linked behaviour in cars to the wider societal issue of personal fragmentation, which he in turn claimed is due to the disintegration of institutions.

There's nothing like a bit of a debate, and the two speakers' diverse opinions inspired lots of fiery interaction from the floor. The interest also spilled into a later event – "Maths in the Weirdest Places" – where one audience member requested the formula for the probability of getting road rage. The creative result included factors of traffic density, manners of the other driver, number of children and temperature inside the car. How susceptible are you?

Mad and bad: the egghead myths

by Andy Mountford

In a humorous and visually engaging talk, Christopher Frayling attempted to get to the bottom of the "classic" portrayal of scientists and science within popular culture. Various studies – including surveys of schoolchildren from the 1960s through to recent times – reveal that even at an early age the stereotypical image of the invariably male "mad" scientist with "Einstein hair", "coke-bottle glasses", a white lab coat, and racks upon racks of bubbling glassware, is well cemented. This is despite the fact that their own science teachers are as likely to be female as male, never wear lab coats, and bubbling glassware disappeared along with anything else likely to compromise modern-day health and safety regulations.

So where does the stereotype originate, and what maintains it? Well – surprise, surprise – Hollywood has played a key role and the 1931 version of *Frankenstein* in particular has a lot to answer for. It was an enormously successful film at the time, but the misappropriation of the subtle allegorical messages in the novel by Mary Shelley left a rather simplistic morality tale. This has engendered an enormous legacy of staples covering prosthetic limbs (*Dr No*, *Dr Strangelove*), anti-social "egg heads", and dire consequences, intended or not. Despite thematic cycles – chemistry and medicine in the 1920s, nuclear



"Igor! You were supposed to get me a white lab coat!" "Thorry, mathter."

physics in the 1950s (remember *Them!*?), and genetics today (*Jurassic Park*) – the central message that "knowledge is bad" remains. Themes merely adapt to reflect popular anxieties about things little understood by the wider world. So why? Probably because we like it that way, as anxiety sells, after all. Does it matter? Where horror film rhetoric fills the vacuum in which serious public debate should properly reside – then yes it might.



Discover Zone cartoon by Gemma Hastilow, see www.gemmahastilow.com.

Armageddon out of here, are you?

by Peter Wyton

"Hin the hevent of hay nuclear explosion," my Ground Defence Training instructor used to tell us, "hassume your protective clothing and avoid looking at 'armful blinding lights." There was a good deal more in the same vein, touching on röntgens, dosimeters and the like, but my memory of his lectures has achieved more or less total meltdown.

Faced with Bill McGuire's prognosis, in his lecture entitled "Surviving Armageddon", my military training would have been of little use to me.

Whatever hideous fate awaits humanity, it is in the hands of Mother Nature, a mad old bat on a scale not conceived by any megalomaniac leader so far encountered. Bill describes himself as an optimistic pessimist. His genial stroll through the killing fields to come offered a variety of scenarios: asteroid impact, trans-oceanic tsunamis, Gulf Stream shut down and Greenland break-up.

As to solutions, well, don't bet your shirt on them. They appear to involve nothing more than monitoring, international co-operation and "Doing Something About Global Warming". When you kneel down tonight to say your prayers, don't be a NIMBY, be a NIMLT, as in: Please God, Not In My LifeTime.

THE DROID

James Lovelock has one eye firmly fixed on the future of the Earth and the other on great T-shirt quotes. Asked how evolution had let humanity slip out of the loop and cause so much damage to our environment, he answered: "Evolution is just one long, long list of mistakes!"

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"You never see gay builders," said Mark Lythgoe yesterday. Village People, anyone?