

Cheltenham Festival of Science daily news. Sponsored by Institute of Physics Publishing

litmus paper

Issue 5 Sunday 8 June 2003

Edited by Stet Press

TODAY'S HIGHLIGHTS



Peter Atkins and Peter Tallack
The Best Ideas In Science Ever
1.30–2.30 pm/Town Hall

Raj Persaud
2.45–3.45 pm/Town Hall

Mark Lythgoe
The Frozen Path to Immortality
6.15–7.15 pm/Town Hall

Developing Hart's desire

by Adam Horovitz

Adam Hart-Davis, that cheerfully 'technogogic' proponent of the art of making science fun, bounced onto an Everyman stage that was cluttered to Heath Robinson proportions yesterday and proved outright that his personality is not just a televisual creation.

"I love photography," he enthused frothily. "I was given a Box Brownie aged eight or nine and took a photograph of cats sleeping on the bird table!" He then launched into what he claimed were a collection of scientific holiday snaps that are part of his perpetual efforts at "Capturing Time".

He showed off the secrets of his science photography with obvious glee – the sawn-in-half flowerpots that allow him to capture peas in various states of growth, the Meccano dart-dropper that helps him picture half-burst balloons – and



Hart-Davis: in love with the image.

was perfectly willing to point out his mistakes: "I've probably got twenty thousand useless photographs," he informed one member of the audience with a sort of arched pride. Despite this, he showed some extraordinarily beautiful photographs of often very simple things – milk splashing, water exiting a tap, stones in the desert. Hart-Davis is

clearly in love with the aesthetics of science photography; he positively shimmered with excitement at the way he had made sparks fly from a plug and how a balloon that is pierced with a dart actually rips and peels back in on itself.

"I like taking pictures of things that are simple," he said. "I like taking pictures of water leaving a tap because you don't ever really see it like that."

One can imagine Adam Hart-Davis sat in a darkened room swinging tubes to make harmonographs and giggling gently to himself, half in love with the poetry of the process, but he's a get-out-there educator at heart. Best of all, he's one who doesn't insult the intelligence of his rapt audience; he expects them all to keep up and go away quivering with enthusiasm, like ripples from the water droplets he so loves photographing.

And still to come...

by Rebekah Cane

It may be the last day of the Festival, but there is still lots to see, hear and do.

Richard Horton kicks off proceedings by examining the health of our medical institutions, followed by "Prevention or Cure?", an in-depth study of the future of health care. Peter Atkins and Peter Tallack unearth some differences of opinion as they canvass your vote for "The Best Ideas In Science Ever", whilst Gill Samuels and David Derbyshire address the gender balance in the scientific world.

Raj Persaud explores and explains the oddities of the mind, Jack Cohen and Ian Stewart expose the stereotypical flaws associated with those little green men in "Evolving the Alien" and "Pointing from the Grave" looks at the fascinating use of forensics in crime investigation.

The highly controversial genome-

mapping project is the subject of Tim Hubbard's talk; or you can chill out with Mark Lythgoe as he explores the phenomena of cryonics in "The Frozen Path to Immortality".

Sit back and relax as Festival directors Kathy Sykes and Frank Burnet ask "How was it for you?", or discover the truth behind the scaremongering tactics of modern terrorism – dirty bombs and all – in "Under Attack".

Last and not least, the Festival draws to an inevitable conclusion by looking at "The Future of Space Travel" in the wake of the Columbia shuttle catastrophe.

And don't forget to discover the Discover Zone with all its wonderful interactive gizmos and games or take a trip to the Robot Wars tent to visit the likes of Behemoth and friends. Whatever you do, have fun and see you next year!

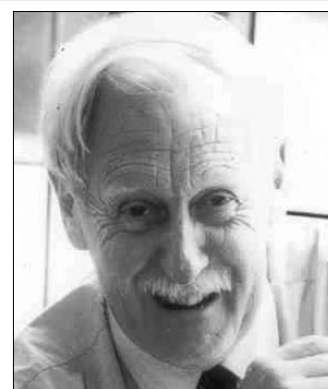
The Baylis High School for Boffins

by Paul Williams

"Only dead fish swim with the tide," said Trevor Baylis, inventor of the clockwork radio, yesterday.

With a pipe and a plethora of gizmos, he took to the stage to talk about the ups and downs of his time as an inventor. "If you can solve a problem," he said, "you're an inventor; just get off your backside and do it."

With his one-liner philosophy and brash grandpa humour, he preached wholeheartedly about the value of intellectual property and the right of everyone to protect their ideas – and after years of dealing with "morons in suits", you can't blame him for being a bit passionate. "Have an ego as big as a truck," he said, "and make plenty of noise about your ideas." With plans to develop the Baylis Breakout Room, he hopes to capture people's



Baylis: wind him up, watch him go.

ideas on film to provide legal protection and stop vulturous companies moving in for the kill.

However, what dismays him the most is how we still see inventors as "geeks and nerds", an image that he hopes to change, beginning in the classroom. "Why not have inventing as part of the National Curriculum?" he asks. Maybe then in twenty years' time some bright spark will even develop a clockwork pacemaker.

One wise man

by Jon Andriessen

Is there such a thing as luck? Well, in a fast, funny and furious hour, Richard Wiseman concluded, perhaps, there is not.

It's not that some people aren't luckier than others; it's just that luck itself is not the cause. In over ten years of research using at least 1000 case studies, it seems that confidence, outlook, expectation and opportunity "make their own luck". Unlucky people are by definition less persevering, unprepared and generally more negative.

Using "Luck Schools", he found that unlucky people increased their potential to be lucky by an abstract 80%, but don't get overexcited, luck has nothing to do with chance and won't help you win the lottery.

Through a procession of jokes, magic tricks – he was once the youngest member of the *Magic*



What's luck got to do with it?

Circle – and psychological conjuring, Wiseman kidded and cajoled the audience into a positive frenzy, managing to make many of us believe that tomorrow, anything may be possible. So weren't we the lucky ones.

And it takes a Wiseman to do that!

Musings from within

by Ruth Gailey

If you've filled out an evaluation questionnaire, you will have been asked to sum up your Festival experience in three words. I realised how difficult this was when I tried here.

As I wandered around with my clipboard, I noticed that – in addition to sponsored hard science – the Festival has also been providing a theatre for the "flaky" science of consciousness.

Several mind-brain orienteers – Blackmore, Glaser, Witchel and Bass – have been trying in vain to capture the ultimate soundbite to explain consciousness as a fleeting holistic perception. This is in opposition to the idea of science as an objective/reductive absolute.

Scientists look for the truth by different paths. As more women enter science – women account for only 3% of academic staff – perhaps the gender difference will create a

more qualified balance of objectives.

At "Café Scientifique", speakers and spectators have been trying to extract the truth from dialogue. They deduced that non-conventional medicine is complementary instead of alternative, mirroring the current view of the brain that hemispheres complement instead of oppose.

Sam Hallas has been combining creativity and technology to produce evolving art, leading the Festival to debate "is there a difference between art and science?" Both endeavours are cutting edge, competitive, obsessive, creative and require methodology, but ultimately they record. Jim Al-Khalili told us, "a sub-atomic particle is created by its environment, not consciousness," yet the lab apparatus is created by the scientist's mind.

So to sum up my Festival experience in three words? Opposing, evolving dialogue.

Genes for sale

by Kenny Webster

Big Brother knows everything about you, down to your genetic make-up, and is going to sell this to an insurance company so that they can charge you higher premiums.

At least this bizarre notion seems to form the basis of public opinion following the Science Café debate,

"Safeguarding Genes". According to Dr John Newton, medical information will be collected from 500,000 consenting individuals and then used to create a database for studying disease epidemiology.

Mark Littlewood from the human rights organisation Liberty feels that this may be the start of a slippery slope. In their eyes, motor insurance companies that exclusively cover women are already

discriminating in this way.

There is an ever-increasing dialogue between scientists and the public to improve understanding, in the hope that a trust will be formed. Of course the storage of medical and genetic information needs to be tightly controlled – but isn't it already? Suppose the information did get into the wrong hands; it would be meaningless – even if the hands belonged to Big Brother!

Cock-unsure?

by Emily Reeve

"R U a Teenage Health Freak?" Well, are you? Apparently half of British adults claim they still think like teenagers. Probably most teenagers would disagree. In a lively and interactive event, Ann McPherson and Aidan Macfarlane attempted to lessen the communication gap by tackling head-on all the usual teenage growing pains. Some interesting statistics to liven the debate included the average speed of sperm ejaculation. Stumped? It's 27 mph (just shy of the speed limit), although most men in the audience seemed to think it was at least 60 mph.

Another interesting statistic is the number one concern for teenage boys: the size of their penis. For girls, it's their body image. No change in adulthood then.

The conclusion? Communication and establishing common ground is the route to a more harmonious parent/teenager relationship. Good luck. You're going to need it. If you are a teenage health freak, you can find the answers to "pretty much all the stuff you ever wanted to know about" on: www.teenagehealthfreak.org.

THE DROID

Adam Hart-Davis: "We decided to do dead scientists [on TV programme *Local Heroes*] because they don't talk much and they don't sue if you're rude about them."

Trevor Baylis OBE: "I don't mind people looking down on me, as long as they don't expect me to look up." Let's hope the OBE doesn't become a knighthood then Trevor!



EVOLVING ART: Artist Sam Hallas has been spending the Festival persuading people to colour in thousands of pixels for his "Evolving Art" mural in the Discover Zone. "There was some speculation that it might be pornographic to begin with," he informed *Litmus Paper* yesterday, "but now it's more than 50% done I think we can dismiss the 'giant phallus' theory." To help discover what the image is, get down, get involved and get colouring. RC