What journalists want

Valerie Jamieson
ITER Communications meeting
Barcelona 26 May 2009
What do journalists want?

- What New Scientist is
- Why the time is right for ITER
- What the media wants
A bit about me

- Features editor at *New Scientist* for 6 years
- Previously at *Physics World* magazine
- Ex-particle physicist
New Scientist

- Only popular weekly science and technology magazine
- Circulation 178,000
- Readership 1,000,000
- Published in UK, USA, Australia
THE
NEW
SCIENTIST

22 NOVEMBER 1956

Scientist and sergeant-major
Where next from Calder Hall?
Our neighbour Mars
How bacteria work
Physiology and the athlete
Sir Edward Appleton
The Science-Arts barrier
Survival in plants and fruits

Walter Elliot, M.P.
T. A. Margerison
Professor Zdenek Kopal
Sir Cyril Hinshelwood
Dr. Otto Edholm
a Profile
A. D. C. Peterson
Sir Edward Salisbury

ONE SHILLING WEEKLY
New Scientist History

• 1956 New Scientist launched for:

• “All those men and women who are interested in scientific discovery and in its industrial, commercial and social consequences”
New Scientist today

• “All those men and women who are interested in scientific discovery and in its industrial, commercial and social consequences”
Amphiphilic
Isomeric
Mesoporous

Centimorgan
Cladogram
Heterokaryon

Bosons
Entanglement
Paramagnetism
LETTERS
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Signature of magnetic monopole and Dirac string dynamics in spin ice

L. D. C. Jaubert* and P. C. W. Holdsworth

Magnetic monopoles have eluded experimental detection since their prediction nearly a century ago by Dirac1. It was recently shown that classical analogues of these enigmatic particles can occur as excitations out of the topological ground state of a model magnetic system, dipolar spin ice2. These quasiparticle excitations do not require a modification of Maxwell’s equations, but they do interact through Coulomb’s law and are of magnetic origin. Here, we present an experimentally measurable signature of monopole dynamics. In particular, we show that previous magnetic relaxation measurements in the spin-ice material Dy2Ti2O7 (ref. 3) can be interpreted entirely in terms of the diffusive motion of monopoles and two out of each tetrahedron (2 in–2 out), as shown in Fig. 1a. Flipping one spin breaks the constraint leaving neighbouring tetrahedra with 3 in–1 out and with 3 out–1 in, which constitute a pair of topological defects. Within the nearest-neighbour model, creation of the defect pair costs energy $J_\text{eff}$, whereas further spin flips can move the defects at zero energy cost. It has recently been shown2 that including the full dipolar Hamiltonian of equation (1) leads to an effective Coulombic interaction between the topological defects separated by distance $r$, $\mu_0 q_i q_j / 4\pi r$, where $\mu_0$ is the permeability of free space, $q_i = \pm q = \pm 2m/a$, and $a$ is the distance between two vertices of the diamond lattice (see Fig. 1); that is, to a Coulomb gas of magnetic monopoles. Standard electromagnetic theory does allow for such excitations, which correspond to...
They were magical magnets, every kid’s first toy. But what does it mean to talk about magnetic poles—that one north and one south? How do they work? Where do they come from? And why are they so fundamental to our understanding of the universe?

For centuries, magnets have been a source of wonder. They attract and repel objects, and their properties have been used in everything from medical equipment to household appliances. But the nature of these magnetic poles—whether they are real or just an illusion—has long been a mystery.

The idea of magnetic poles is based on the concept of a magnetic field, which is a region of space in which a magnetic force acts on magnetic materials. A magnetic field is created by the movement of electrically charged particles, such as those found in the sun or in the magnetic field of the Earth. The poles of a magnetic field are the points where the field is strongest, and they are typically labeled as the north and south poles.

But magnetic poles are not just a matter of scientific interest. They have practical applications as well. Magnetic fields are used in a variety of technologies, including medical imaging, GPS navigation, andMRI scanners.

In the end, magnetic poles are a fundamental part of our understanding of the universe. They are a reminder of the power of science to unlock the mysteries of the natural world.
This week Vanishing deltas

Hurricane Katrina, which ravaged New Orleans and displaced more than half a million people, underscores how dangerous living in a coastal delta can be. For over two years, researchers have studied the effects of sea level rise, sinking land and storms. According to the U.S. Department of Conservation and Recreation, hurricane-ravaged areas have become identified as “At risk” deltas that are under threat of permanent flooding. In less than a year, the delta itself in the Mississippi River delta has seen significant flooding, and the delta in the Mississippi River delta has seen significant flooding. In less than a year, the delta itself in the Mississippi River delta has seen significant flooding.

People in danger of displacement by 2050

Bengal delta, Bangladesh: 13,000,000

The delta has been experiencing intense flooding caused by intense storms. The delta is under threat of permanent flooding, and the delta in the Mississippi River delta has seen significant flooding. In less than a year, the delta itself in the Mississippi River delta has seen significant flooding.

Mekong delta, Vietnam: 8,000,000

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Nile delta, Egypt: 1,000,000

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Yangtze delta, China: 4,000,000

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Mississippi delta, US: 4,000,000

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Ganges delta, India: 450,000

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This week Vanishing deltas

Losing the ground beneath their feet

Eight million people living on six major river deltas stand to lose everything to rising sea levels, sinking land, and storms. Jeff Hecht reports
Ecstasy and loud music are a bad mix

PARTYGOERS who take the recreational drug ecstasy may face a greater risk of long-term brain damage if they bombarded themselves with loud music all night long.

The warning follows experiments in rats that were simultaneously exposed to loud noise and MDMA, also ecstasy. The noise both intensified and prolonged the effects of the drug on the animals’ brains.

Michiellalekarme of Italy’s Institute of Neurological Science in Catanaro and his colleagues gave rats varying doses of MDMA while bombarding them with white noise for 3 hours at the maximum volume permitted in Italian nightclubs.

Those given the highest dose of ecstasy, equivalent to the average amount taken by a partygoer on a night out, experienced a slump in electrical power of the cerebral cortex for up to five days after the noise was switched off. Previous studies suggest that such loss of power is related to brain hyperactivity and can ultimately lead to depression.

Psst, you’ll never guess what he’s done now

WE REMEMBER juicy gossip about our friends and acquaintances far more readily than more mundane details about their lives—which may explain why people become so addicted to gossip media such as social media.

To find out whether gossip spreads through groups of people better than other information about them, US-based researchers Aremint and Andrew Whiten of the University of St Andrews and Robin Dunbar of the University of Liverpool used a method akin to “Chimp Wink”.

They gave 10 people four different passages to read and then asked them to write down what they could remember. Their efforts were pooled to another set of volunteers as passages for them to learn, and the process was repeated four times.

The researchers then tried to tally the original passages with the first results. They found that gossip-like information involving deception and infidelity, and details involving general information about the interactions of third parties, were remembered and transmitted in greater quantity and with greater accuracy than purely descriptive information about individuals or their environment.

"Humans are an intensely social species, and other people are a highly salient aspect of the environment in which we live and grow up," Hessol says. This makes the behaviour of others vitally important, which may explain why people are particularly adept at recalling such social information, he suggests.

The researchers say their findings, to be published in the British Journal of Psychology, will support the idea that human intelligence, especially human intelligence, originally evolved in response to social pressures rather than non-social demands such as finding food or avoiding predators. "If private intelligence originally evolved to solve complex social problems, such as keeping track of shifting coalitions or courting against deception, then it’s possible that present-day human intelligence carries a legacy of this selection history, now expressed as a bias in memory for social information," says Hassel.

Nick Eyer of the University of Surrey in Guildford, UK, suggests the group would have been even more adept at recalling the gossip had the experiment involved information about real people that the participants knew.
**Technology**

**DON’T BE PHOOLED BY THE BEAR**

MOST of us are suckers for a cute image, a story that the squinters behind "phishing" websites are exploiting to rake in some streamlining amounts. A quick details and credit card numbers.

In a phishing attack, an email purporting to come from an online bank or payment service lures a user to an automatic-looking website. To analyze what makes these websites appear legitimate, Rashma Shrejita and colleagues at Harvard Business School volunteered to surf 30 websites, some of which were benign. They found that the site that looked most users was one containing a cute cartoon bear.

Instead, users trust the intention of appealing to an audience that still believes that a bear is harmless. According to a paper Shrejita will present at CIIR 2006, a computer interaction conference in Montreal, Canada, in April: “Some visual deception attacks can trick even the most sophisticated users,” the team reports.

When asked which sites they thought were fake, the subjects guessed wrong 48 per cent of the time, while the best phishing sites fooled 69 per cent of participants. Even after being asked to check the browser’s address bar to see which each domain they were really in, and dismissed pop-up or telemarketing warnings about transaction delays or security certificates, browser designers also need to continue to improve anti-phishing efforts.

The position and style of the picture, which tells the user whether or not a page is secure, varies too wildly between competing browsers to be of any general use, the team says.

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**How to keep your site anonymous**

CYBER dissidents relax: a loophole that could have exposed your actions has been found and closed.

Paul Syversen of the Naval Research Laboratory in Wilmington DC and Laser Doveller of the Norwegian Defence Research Establishment in Kjeller set out to hack their “software” of data that are designed to mask IP addresses by sending outting data packets via three randomly chosen routers. The pair added their own server to the pool of routers and repeatedly connected to a protected website using signature that packets were routed through their own server. In a third of cases, the packets came from the same address, suggesting the server was the first in the chain, and allowing them to trace back to the hidden IP address. The developers have now closed this loophole.

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**Half-price missile shield for aircraft**

DEFENDING commercial aircraft from shoulder-launched missiles could be done at half current estimates, a Royal Aeronautical Society counterterrorism meeting heard last week in London. US firms such as Northrop Grumman are developing lasers to fry a missile’s heat source and send it off-target, as an alternative to magnesium decoy flares, which would mean fueling down on residential areas near airports at 2000°C. The lasers come in at $1 million per plane, however.

New Saab Avionics of Sweden has developed a system that costs $500,000. Spokesman Goran Karlslund says that while it still uses explosive missile detectors, it expends a low-cost chemical that ignites on contact with air; burns at around 100°C and turns to gas before it hits the ground. Saab plans to test the system at the jet of a European head of state.

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**“It was a difficult flight. I was lucky to make it to the end”**

Steve Fossett, who on Saturday broke the record for the then longest non-stop flight by flying 42,405 kilometres in his heavily modified 747 jumbo jet, said he was "indebted to everyone" for his achievement.

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**NewScientist**

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The crowded planet...

Veteran naturalist David Attenborough loves humans as much as other wildlife. But when global populations are out of control, he tells Alison George

"I'M NOT doing anything exciting right now, like wrestling with gorillas. I'm working on radio scripts," says David Attenborough, a bit apologetically, while his home in the leafy London suburb of Richmondia is in danger from the noisy, nosy, noisier thought to be keeping the family owl from its nest, "I've got a nest in the kitchen."

The latest visitor for this stream of wildlife documentaries is an environmental one. "We're doing a show on rising sea levels. He has become a voice of the conservation. Trust, which is built on population growth and environmental with a scary wishbone showing significant population at an annual rate. Over the past 30 years, I've never seen 

"There are nearly 3,000 people on this planet. It's difficult to make television programmes in this space. It's difficult to make programmes about population. But we are not doing anything exciting right now, like wrestling with gorillas. I'm working on radio scripts."

"What about the animals? We're doing a show on rising sea levels."

"It's having things to do that have in them - that's what it is."

Since you asked...

We invited NewScientist.com users and Twitter followers to tell us the questions they would like to put to David Attenborough. Do you worry about people who are in places of need, or taking good care of them? Do you worry about the impact of human activities on the environment? Do you worry about the ways in which we use our resources? Do you worry about the impact of our actions on the future? Do you worry about the ways in which we use our resources? Do you worry about the impact of our actions on the future?

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Hail to the intellectual

Barack Obama has banished the knee-jerk anti-intellectualism of the Bush years. Now he needs to make the change permanent, argues Chris Mooney

It’s 7:30 AM and George W. Bush is up. It wasn’t because of his brain, Bush was, rather interestingly, the president of quick decisions, few regrets and long vacations. He was the person you wanted to have a beer with, and whom you thought you could relate to because he was just like you. In character, his official portrait, he was the epitome of “toughness” — of existing in a faceless world and being the biggest fish in that sea.

All of that meant that Bush was widely revered by intellectuals as precisely the opposite of what kind of person you want winning the most powerful country in the world. The Bush administration was anathema to many on science (discussed in my book The Republican War on Science, among other places) and his vilification of science as a “favorite philosopher.” Further, he stated that his idea was just not an idea to be respected. And in the realm of politics, the more he was so, the more the more they were doing a faceless world that was best left to the experts.

The将以 of Barack Obama to the presidency, the phrase “we changed hands” was more than true. He is a former academic who doesn’t claim to be familiar with the myriad of academics, but he’s pledged to nurture science by naming it “a noble profession” and making it more engaging to young people.

The power played on last week’s anniversary of the 1943 “intellectuals to the White House” letter, where 100 intellectuals signed to the proposal and it was eventually signed by President Dwight Eisenhower. The letter stated that “intellectuals to the White House” letter was an important step in making science more relevant to the public.

If the “message makes its way through the vacuum, dollar-driven media, Obama will have changed America.”

Viewfinder

Opinions from around the world

“We have been warned by Mr. Obama that the astonishing advance of fusion will require that we have invested in our brains. More effort needs to be placed on research and development, and the Administration must ensure that we are not left behind in this technology race.”

— Institute for Science and Public Policy

“Every model has to be compared to the real world and, If you can’t do that, you can’t be the one making the decisions.”

— Joseph Entman

Good week for...

Unbelievers are coming out of the closet, according to a report in The New York Times. In a trend being likened to the emergence of the gay rights movement.

Bad week for...

A half-dozen companies have been named in a lawsuit regarding the hate speech on Facebook, which they fear will lead to time-wasting.

The word

Unexpected links between the obesity epidemic and the global environment, as explored in a book of the same name.

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Spying roboflies to get minicam eyes
Micro air vehicles could use a new lightweight and low-power digital camera on a single chip

Corals upgrade algae to beat the heat
The reef-dwelling animals can swap their symbiotic algae for...
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- 3 million unique users a month
  - Up to 1 million unique users a week
  - Stories read up to 850,000 times
Fossil Ida's name - Darwinius masillae - is now official, thanks to New Scientist! http://tinyurl.com/okj2e9
22 minutes ago from web

H1N1 #swineflu passes WHO rules to be classified as a pandemic - so why haven't they declared it? http://tinyurl.com/p5so6x
about 2 hours ago from web

I don't mind doing without cod, but without OYSTERS? No! http://tinyurl.com/okaqy
about 7 hours ago from web

CSI: Body Burners... forensics of what happens when people catch fire http://tinyurl.com/rck6a
about 7 hours ago from web
Why the time is right for ITER

- At New Scientist we track carefully what sells
- Our most popular covers
• ITER is big physics in everyday sense
• It will inform us about how to deal with climate change
Why the time is right for ITER

- The Large Hadron Collider at CERN
- On 10 September 2008
  - 1 billion people watched on TV
  - 5853 newspaper articles in one day
  - CERN web traffic x 100
Why the time is right for ITER…

• Huge appetite for big physics at the moment

• The Times
  – “the most popular stories on The Times website after Barack Obama were about the LHC” …. Mark Henderson, science correspondent

• The media wants more big physics!
What the media wants

• Same as it has always wanted…
  – Newsworthy stories
  – Stories that make people care
  – Change perceptions
  – Quirky stories

• … with an added twist…
  – Online media needs more, but this means more opportunities for you
Newsworthy story

- A very bad example from interactions.org
  - Group exercise

- Tell me what’s going to happen *before* a meeting, not 3 weeks after
- Make me care
- Don’t be cursed by knowledge; assume I know nothing
Another bad example

• European Space Agency vs NASA
  – ESA’s smaller budget is no excuse
  – Almost impossible to get info from ESA
  – Contact phone number was a pay phone in a station
  – Researchers scared to talk to press
  – Long delays while press releases are translated
Change perceptions

• The old joke you’re fed up hearing
  – Fusion is 40 years away and always will be

• Many journalists think fusion will never work
  – There *are* national successes
  – Tell us about them & other milestones
  – Overturn our perceptions that fusion is rubbish
Quirky stories

• When I visited JET in 2004
  – Control room, tokamak, Chris Llewellyn Smith
    …all a bit boring
  – Remote handling ... awesome!

Dr Octopus in Spiderman 2
So what’s new in 2009?

• Video
  – Traditional advertising has collapsed
  – Advertisers are paying for video adverts
  – More people read articles if there is a video

• Every click counts
  – Galleries of photos = lots of clicks
  – Interactive graphics
Video on the web

- Youtube phenomenon – anyone can produce and post video
- Spontaneous – sharing, embedding, more forgiving of quality, informal presenters
- Potential to tap into what researchers, organisations and users are producing
What makes a good video?

• Striking visuals

Example: spiny anteater video
• Relevance – time or context, never seen before, illustration of article
Example: human ovulation, footage from jet pack flown at air show
• Compelling story
Example: thrill-seeking rides video
Summary

- Know *my* publication and what I want
- Send me timely, relevant, interesting and quirky press releases
- Change my perception of fusion
- Be more like NASA, less like ESA
- Not everything has to be a traditional print story
  - Video and photos are a big, big help
- Everyone wants an exclusive

- Be positive … it’s a good time for fusion!