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Newspapers Worldwide (Minus U.S.) Oppose Google-Yahoo Deal

By Miguel Helft

In the early hours of Monday morning, the World Association of Newspapers posted a lengthy communique on its Web site calling the Google-Yahoo advertising partnership anti-competitive and urging regulators to block the deal. According to its Web site, the World Association of Newspapers represents 76 national newspaper associations and more than 18,000 publications in five continents. Its communique led to flurry of headlines that essentially said "Newspapers Around World Oppose Yahoo-Google Ad Deal."But hours later, the U.S.-based Newspaper Association of America, a member of the World Association of Newspapers, issued a communique of its own (they called it a press release). In it, John F. Sturm, president of the association said: "While NAA is a member of the World Association of Newspapers (WAN), I would like to clarify that the NAA Board of Directors has taken no position on the proposed advertising partnership between Google and Yahoo." The association represents more than 2000 newspapers in the United States and Canada. Its members account for 90 percent of the daily circulation of newspapers in the United States.

The NAA's views are important here because the Google-Yahoo partnership is limited to the United States and Canada. The views of U.S.-based newspapers are likely to be given special weight by regulators, as they are the publishers who will be most affected by the deal.

That said, there are no guarantees that the probe of the Google-Yahoo deal will be limited to the United States. On Monday, antitrust regulators in Europe said they were conducting a "preliminary investigation" into the partnership. That's not good news for either Google or Yahoo and it comes just days after news that the Justice Department hired a prominent antitrust lawyer to examine, and perhaps challenge, the deal.

Perhaps what was most striking, and what may be most worrisome to Google in the long term, was the harsh tone of the World Association of Newspapers communique, and what it said about the hostility that many in industry feel toward the Internet search giant:

Most publishers are acutely aware that Google's ever-tightening grip on internet traffic, its unbridled use of online content, and its dominance in online advertising poses a very real threat to the continued viability of the independent content generation industry.
[...]
Perhaps never in the history of newspaper publishing has a single, commercial entity threatened to exert this much control over the destiny of the press.
It is particularly worrisome that this consolidation of power is occurring at the same time that Google increasingly takes positions that are adverse to newspapers and other content creators. Google already owns several content sites that directly compete with content developed by newspapers and other creators - often by simply copying others' content without authorization. Usually, Google alone profits from this misappropriation. Take, for example, the case of Google News, which a Google senior executive recently admitted drives $100 million in advertising revenue to Google itself yet provides nothing - not a penny - to the newspaper companies whose works appear on those pages.

While the WAN acknowledges that many of its members are Google customers, those are not the words of happy customers. And regardless of whether regulators do or do not attempt to block the Google-Yahoo deal, as Google's power in online advertising grows, this kind of sentiment could well herald new regulatory headaches for Google down the road.

http://bits.blogs.nytimes.com/2008/09/15/newspapers-worldwide-minus-us-oppose-google-yahoo-deal/?th&emc=th

Oceans are 'too noisy' for whales

By Richard Black
Environment correspondent, BBC News website

Levels of noise in the world's oceans are causing serious problems for whales, dolphins and other marine mammals, a report warns.

The International Fund for Animal Welfare (Ifaw) says undersea noise blocks animals' communication and disrupts feeding.

Naval sonar has been implicated in the mass deaths of some cetaceans.

In some regions, the level of ocean noise is doubling each decade, and Ifaw says protective measures are failing.

"Humanity is literally drowning out marine mammals," said Robbie Marsland, UK director of Ifaw.

"While nobody knows the precise consequences for specific animals, unless the international community takes preventive measures we are likely to discover only too late the terrible damage we're causing."

In its global assessment of cetacean species, released last month, the International Union for the Conservation of Nature (IUCN) concluded that ocean noise posed a significant threat.

Across the spectrum

Whales and dolphins use sound in ways that are clearly important to their survival, though not completely understood.

Baleen whales, such as blue and humpback whales, produce low frequency calls that can travel thousands of kilometres through water.

Dolphins and toothed whales generate higher frequency clicks used to locate prey.

Noise generated by ships' engines and propellers, and by seismic airguns used in oil and gas exploration, produce a range of frequencies that can interfere with both these groups of species, Ifaw concludes.

Its report - Ocean Noise: Turn it down - cites research showing that the effective range of blue whales' calls is only about one-tenth of what it was before the era of engine-driven commercial shipping.

It also notes that high-energy military sonar systems have driven the mass strandings and deaths of beaked whales.

The sonar is thought to disrupt the animals' diving behaviour so much that they suffer a condition rather like "the bends" which human divers can contract if they surface too quickly.

Pressure from conservation groups has led to restrictions on the use of sonar by the US Navy.

In some places, companies involved in oil and gas exploration limit their use of seismic airguns.

But Ifaw argues these restrictions are not enough.

The use of high-energy sonar and seismic airguns should be completely prohibited in sensitive areas, it says. National legislation, such as the UK's Marine Bill, should comprehensively restrict the exposure of cetaceans to noise.

The UK branch of the Whale and Dolphin Conservation Society (WDCS) has sounded alarm bells recently over oil and gas exploration in the Moray Firth, home to a small population of bottlenose dolphins.

The Ifaw report is not the first to raise the threat posed by ocean noise, and it will not be the last.

The problem is that most of the activities causing the problem - commercial shipping, mineral extraction - are part and parcel of the modern, interconnected economy.

A further obstacle to legislation is that much of the noise is generated on the high seas, which are largely unregulated.

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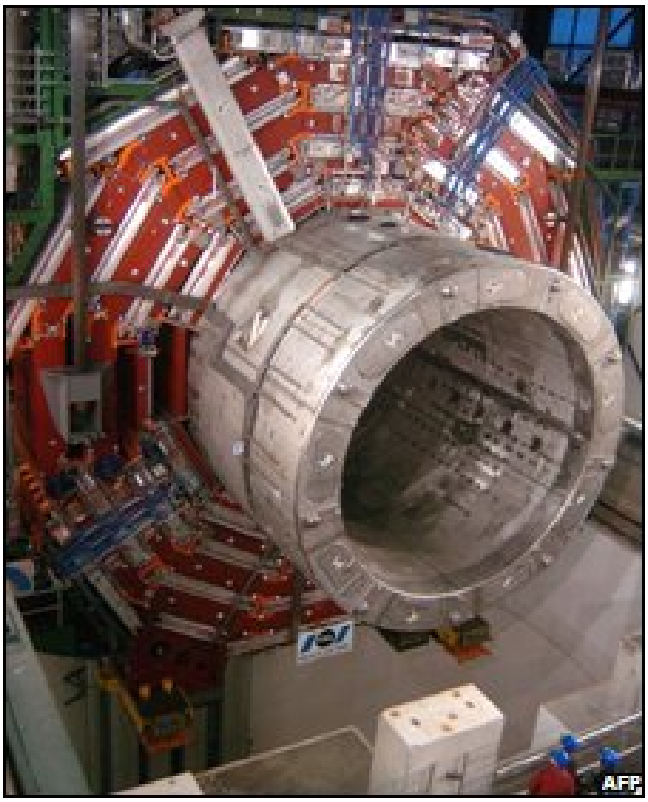
Story from BBC NEWS:
http://news.bbc.co.uk/go/pr/fr/-/2/hi/science/nature/7616283.stm

Published: 2008/09/15 10:51:39 GMT

Warning sounded on web's future

By Pallab Ghosh
Science correspondent, BBC News



The internet needs a way to help people separate rumour from real science, says the creator of the World Wide Web.

Talking to BBC News Sir Tim Berners-Lee said he was increasingly worried about the way the web has been used to spread disinformation.

Sir Tim spoke prior to the unveiling of a Foundation he has co-created that aims to make the web truly worldwide.

It will also look at ways to help people decide if sites are trustworthy and reliable sources of information.

Future proof

Sir Tim talked to the BBC in the week in which Cern, where he did his pioneering work on the web, turned on the Large Hadron Collider for the first time.

The use of the web to spread fears that flicking the switch on the LHC could create a Black Hole that could swallow up the Earth particularly concerned him, he said. In a similar vein was the spread of rumours that the MMR vaccine given to children in Britain was harmful.

Sir Tim told BBC News that there needed to be new systems that would give websites a label for trustworthiness once they had been proved reliable sources.

"On the web the thinking of cults can spread very rapidly and suddenly a cult which was 12 people who had some deep personal issues suddenly find a formula which is very believable," he said. "A sort of conspiracy theory of sorts and which you can imagine spreading to thousands of people and being deeply damaging."

Sir Tim and colleagues at the World Wide Web consortium had looked at simple ways of branding websites - but concluded that a whole variety of different mechanisms was needed.

"I'm not a fan of giving a website a simple number like an IQ rating because like people they can vary in all kinds of different ways," he said. "So I'd be interested in different organisations labelling websites in different ways".

Sir Tim spoke to the BBC to publicise the launch of his World Wide Web Foundation which aims to improve the web's accessibility. Alongside this role it will aim to make it easier for people to get online. Currently only 20% of the world's population have access to the web

"Has it been designed by the West for the West?" asked Sir Tim.

"Has it been designed for the executive and the teenager in the modern city with a smart phone in their pocket? If you are in a rural community do you need a different kind of web with different kinds of facilities?"

Creative medium

The Web Foundation will also explore ways to make the web more mobile-phone friendly. That would increase its use in Africa and other poor parts of the world where there are few computers but plenty of handsets.

The Foundation will also look at how the benefits of the web can be taken to those who cannot read or write.

"We're talking about the evolution of the web," he said. "Perhaps by using gestures or pointing. When something is such a creative medium as the web, the limits to it are our imagination".

The Foundation will also look at concerns that the web has become less democratic, and its use influenced too much by large corporations and vested interests.

"I think that question is very important and may be settled in the next few years," said Sir Tim.

"One of the things I always remain concerned about is that that medium remains neutral," he said.

"It's not just where I go to decide where to buy my shoes which is the commercial incentive - it's where I go to decide who I'm going to trust to vote," he said.

"It's where I go maybe to decide what sort of religion I'm going to belong to or not belong to; it's where I go to decide what is actual scientific truth - what I'm actually going to go along with and what is bunkum".

Story from BBC NEWS:
http://news.bbc.co.uk/go/pr/fr/-/2/hi/technology/7613201.stm

Published: 2008/09/15 13:37:37 GMT

Stroke patients to test sensors

Please turn on JavaScript. Media requires JavaScript to play.

Inside Oxford's gait lab

Motion sensors similar to those developed for video games like Nintendo Wii may help stroke patients relearn simple tasks, researchers say.

A UK team is assessing such technology to see if it can be used to monitor improvements in upper body movements in patients undergoing physiotherapy.

The Oxford University team hope it will allow patients to see their progress and motivate them to keep exercising.

Clinical trials of the equipment are being planned.

It is hoped the motion sensors will also help physiotherapists assess the range of movement a patient has and help them tailor exercises accordingly.

> **People do have problems with motivation to continue with their exercises, so this is exciting stuff and worth exploring**
> Professor Marion Walker

The technology builds on previous work analysing the walking pattern in children affected with cerebral palsy.

It uses the same motion-sensing technology that records the movements of actors for computer-generated films such as Beowulf.

A total of 12 infrared cameras work together to track the movement of reflective markers stuck to a person's wrist, arm and torso in real time.

Research leader Dr Penny Probert Smith said it can be hard to motivate patients who have had a stroke but the early days were vital.

"At first we're using a multi-camera system in the lab which will help us look at before and after the exercises and how much they use particular joints.

"We hope to break down useful movements - anything from handling money to tying shoelaces - into different elements that can be quantified and then assessed against standardised measures based on current clinical tests."

Telemonitoring

Eventually the researchers want to develop a version of the technology allowing the stroke patient to use it at home and be monitored by the therapist or GP remotely and get feedback on how they are doing.

In theory, immediately after a stroke a patient would be assessed in the laboratory, but then move to using the home-based system, which they hope to test within a year.

This is made possible, in part, by the boom in cheap motion-sensing technology for video game consoles such as Nintendo's Wii.

Patients commonly get "physio fatigue" and stop doing their daily exercises because they cannot see the small improvements they are making.

Professor Marion Walker, an expert in stroke rehabilitation at the University of Nottingham, agreed it was a "crucial problem".

"People do have problems with motivation to continue with their exercises so this is exciting stuff and worth exploring.

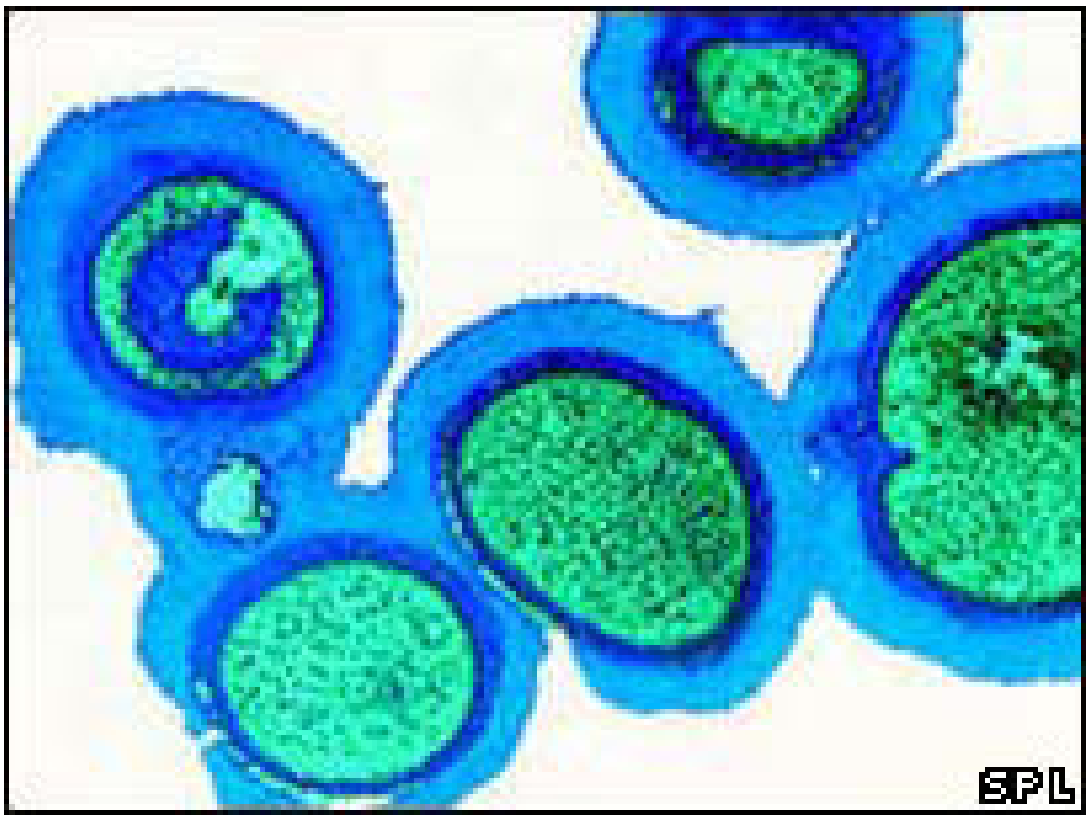
"Patients respond well to technology but the equipment needs to be low cost and easy to use so it's not just a gimmick."

Story from BBC NEWS:
http://news.bbc.co.uk/go/pr/fr/-/2/hi/health/7502665.stm

Published: 2008/09/15 23:18:49 GMT

Fears voiced over new superbugs

A leading microbiologist says he fears a major outbreak of new strains of community superbugs unless public monitoring is given more resources.



Professor Hugh Pennington told the BBC the Health Protection Agency lacked the staff for the greater surveillance of such virulent and mutating bacteria.

"If we do neglect these bugs, we neglect them at our peril," he said.

The government's leading infection adviser said he was assured its monitors could cope with the workload.

Concerns are growing among microbiologists about PVL (Panton-Valentine leukocidin), produced by some bacteria from the family Staphylococcus and which destroys white blood cells.

Find out more
Listen to File On 4, Radio 4 Tuesday 16 September 2008 2000 BST, repeated Sunday 21 September 1700 BST
Or catch up at Radio 4's **Listen Again** site

Unlike hospital-acquired MRSA, which mainly affects older people and those who are vulnerable, it strikes children and people under 40 who are otherwise fit and healthy.

Transmitted by close contact, at its worst it can lead to blood poisoning, necrotising (flesh-eating) infections and a severe type of pneumonia, which is often fatal.

Animal strain

But PVL-MRSA is not the only strain worrying doctors as earlier this year Scotland had its first case of community MRSA which was transmitted from animals to humans.

Three patients in Glasgow were found to be carrying the animal strain which has become widespread in other parts of Europe.

Senior microbiologists say greater monitoring is needed to ensure that these new strains do not get a foothold in the general population.

The Health Protection Agency is charged with co-ordinating health protection across the UK, with its English-based centre for infections liaising closely with its equivalent in Scotland, Wales and Northern Ireland.

Yet microbiologists such as Prof Pennington fear these experts need more resources.

He told BBC Radio 4's File On 4: "The scandal here is that we know what to do, the technology's there to spot these things as they're appearing and we know how to react to them.

'**Priority infections**'

"It would be quite wrong if we allow these things to develop."

However, Professor Brian Duerdan, the government's inspector of infection control in England and Wales, told the BBC these infections were getting priority attention.

"There is an urgency for people to recognise this is occurring in the community," he said.

"We do know that it spreads in the community amongst close contacts, families, people who share the same sporting events."

He added that clinicians were always concerned "have we got enough capacity" to monitor these kind of infections.

Story from BBC NEWS:
http://news.bbc.co.uk/go/pr/fr/-/2/hi/health/7617470.stm

Published: 2008/09/16 05:00:32 GMT

Clean living 'slows cell ageing'

Taking more exercise and eating the right foods may help increase levels of an enzyme vital for guarding against age-related cell damage, work suggests.

Among 24 men asked to adopt healthy lifestyle changes for a US study in The Lancet Oncology, levels of telomerase increased by 29% on average.

Telomerase repairs and lengthens telomeres, which cap and protect the ends of chromosomes housing DNA.

As people age, telomeres shorten and cells become more susceptible to dying.

It is the damage and death of cells that causes ageing and disease in people.

Several factors such as smoking, obesity and a sedentary lifestyle are associated with shorter-than-average telomeres.

> **This might be a powerful motivator for many people to beneficially change their diet and lifestyle**
> The study authors

Professor Dean Ornish, from the Preventive Medicine Research Institute in California, and his team wanted to find out if improvements in diet and lifestyle might have the opposite effect.

They asked 30 men, all with low-risk prostate cancers, to take part in a three-month trial of comprehensive lifestyle changes.

These consisted of a diet high in fruit and vegetables, supplements of vitamins and fish oils, an exercise regimen and classes in stress management, relaxation techniques and breathing exercises.

Telomerase activity was measured at the beginning of the trial and again at the end.

Among the 24 men who had sufficient data for analysis, blood levels of telomerase increased by 29% on average.

Increases in telomerase activity were linked with decreases in "bad" LDL cholesterol and decreases in one measure of stress - intrusive thoughts.

The researchers say it is too early to tell if the boost in telomerase levels will translate to a change in telomere length.

But there is evidence to suggest that telomere shortness and low telomerase activity might be important risk factors for cancer and cardiovascular disease.

"This might be a powerful motivator for many people to beneficially change their diet and lifestyle," they told The Lancet Oncology.

Professor Tim Spector, from King's College London, who has been researching ageing and telomeres, said: "This work builds on what we already know.

"Lifestyle can affect your telomeres. It would be interesting to find out whether it is diet, stress or both that is important."

Story from BBC NEWS:
http://news.bbc.co.uk/go/pr/fr/-/2/hi/health/7616660.stm

Published: 2008/09/15 22:59:57 GMT

An Ambitious Approach to Overseas Expansion

Duke University's Fuqua School of Business announced ambitious plans Monday to develop a network of deep partnerships and branch campuses — what the dean calls a "physical presence of real scope and scale" – in Dubai, London, New Delhi, Shanghai and St. Petersburg.

"It started with the intellectual question," said Blair Sheppard, the business school's dean. "You have to take a step back and say, 'If you wanted to be truly global, where must you be?'"

At each of the five locations, Duke plans to offer M.B.A. programs, run at least two research centers, provide open enrollment executive education and customized corporate education, and coordinate service learning with local needs.

"It's not enough to be there. You have to really, really be there. You have to have M.B.A. program activity. You have to have research activity, you have to have joint faculty activity that will be meeting service needs, and you have to bring the rest of the university with you," Sheppard said at an elaborate announcement event featuring music and dance from the countries involved, including Chinese dancers doing acrobatics with barrels and a Beatles cover band.

"If you want to do this correctly, you have to be both embedded in each local economy so you come to understand it well, and you have to connect across the economies," said Sheppard.

Duke will reveal further details about country-specific arrangements in a series of separate announcements over the next few months, but began Monday by announcing its partnership with the Graduate School of Management in St. Petersburg. In a phone interview, Sheppard said the structure of the initiative will vary by host country. "In some cases, the best solution is to partner extremely deeply with another university, which is what we're doing in St. Petersburg," he said. "In other cases, the answer is to build your own campus."

"At least in several of the cases, there will be a brand-new campus built, of real scale, involving more than just Fuqua," the dean said Monday – meaning involving other Duke University schools or programs, in addition to the business school.

The university will also be reconfiguring and launching an expanded Cross Continent MBA program in August 2009, involving study at the five different locations, plus Durham, North Carolina.

Asked about whether there's any concern about over-extension, Sheppard said yes, but that, "the answer is to sort of build it over time, essentially do the things we really know how to do well now, do them in multiple places, and then over time, localize significantly what we're doing."

And, he asked, "What would you have us leave out? We're going to be the world's first global business school but we didn't mean China?"

The language used in describing the expansion plans is provocative — Duke administrators are billing Fuqua as "the first *legitimately* global business school." An expert on business education said Monday that there's no single formula for the internationalization of business schools — but that Fuqua's model is unique, and will likely be watched.

"I think it is truly ambitious, and broad in its scope, especially since we're talking about in some sense, an all-at-once type of venture," said Dan LeClair, vice president and chief knowledge officer at the Association to Advance Collegiate Schools of Business (AACSB) International. "They're tackling five very different places almost all at once."

Duke's not alone in establishing a branch campus or partnerships with universities abroad — far from it. But, in speaking of the uniqueness of what Duke has proposed, "The obvious [aspect] is the number of localities and the scale at which they plan to develop these campuses or deep partnerships. The scale has to do with multiple [degree] programs and research and nondegree executive programs. Usually it's one

or two. They really are talking about not only multiple locations but multiple programs at each location," said LeClair.

He also cited as noteworthy the Fuqua School's commitment to programs that reflect their local environments, and plans to involve other programs, beyond business, at Duke.

Fuqua faculty leaders say the proposal has been vetted and voted upon — and that there's strong support among professors for Duke's multinational initiative. "They're very excited and very positive," said Julie Edell Britton, an associate professor who represents the business school on the university-wide Academic Council. "You know, there certainly are risk elements of this new strategy. But anytime you try something that's new and different, there's some risk associated with it. So different people concentrate more on the opportunity side of things, and other people are a little more cautious."

"But all in all, I think our faculty is very excited about the opportunity it presents to really think about our courses and our teaching from a much wider global perspective, as well as opportunities that it presents to really do much more global research," said Britton.

"One of the real strengths of Duke, including the business school, has been our willingness to take on new projects and new issues," said Richard M. Burton, a Fuqua professor who also sits on the Academic Council.

— Elizabeth Redden

The original story and user comments can be viewed online at http://insidehighered.com/news/2008/09/16/duke.

Getting Students in the Zone

INSTITUTE OF HEARTMATH
An individual demonstrates the use of HeartMath-developed biofeedback software.

Don't worry, be happy. It's just a math class.

Some colleges are making use of new biofeedback technology to help students physically and mentally prepare themselves for the stresses of the classroom. One of the methods being taught to students, pioneered by the Institute of HeartMath, emphasizes the reduction of stress by bringing one's heartbeat to a more harmonious pattern through a set of breathing and psychological exercises. Instructors and students of the technique say that it brings the mind and body into a more synchronous state, reducing the stress that often impedes productivity and performance in and outside of the classroom. Programs advocating biofeedback technology — using one's mind to improve one's health – are gaining popularity, particularly in conjunction with test preparation and for courses in which many students suffer stress, such as math.

"The heart sends more information to the brain than any other part of the body," said Robert Rees, director of education and humanities at the Institute of HeartMath, noting that adjusting one's heartbeat to an ordered rhythm can help focus the mind.

The Institute of HeartMath is a non-profit education and research organization that emphasizes "heart-based living," a method of utilizing biofeedback. Educational institutions can buy equipment and receive training from the organization to instruct students on how to make this most of this technology. The cost for the college or university varies depending on the institution's needs, said Gabriella Boehmer, institute spokeswoman. For example, one unit at a counseling center costs $299; a site license for a computer lab costs $3,375.

Institutions investing in biofeedback technology hope to teach students how to shift their heartbeats. Initially, students use computer software to view their heart rate and see how different emotions, such as stress and anxiety, affect it. The software, which gathers pulse data from either the fingertip or the ear, then shows students how to shift to a positive emotional state and alter their heart rate to effect certain physiological responses.

"The 'ah-hah' moment comes for most people when they see a physiological shift," Rees said. "When we are in a positive emotional state, we like that better than when we are in a stressed emotional state. When we're stressed we got out and do something to get in a better state, like eating ice cream or getting

a few beers or something like that. If you can do that without all of those other things, it's an empowering feeling."

San José State University includes the HearthMath technology in a credit course that teaches students how to decrease stress.The University of San Francisco offers a one-day seminar entitled "The Power to Change Performance" making use of a similar curriculum.While some institutions have only used the program in a personal counseling capacity, other institutions are implementing experimental programs explicitly tied to the classroom and coursework. Berkshire Community College, in Pittsfield, Mass., for example, initially piloted a biofeedback-based program in an elementary algebra course. Instructors wanted to help students alleviate their math anxiety and improve their test scores and performance as a result.

After familiarizing herself with the technology, Lisa Mattila, a personal counselor at the college, introduced it to students in the developmental math class selected for the pilot program. She noted that prior studies of the subject indicate that 30 percent of its students at the college experience math anxiety. As an incentive, extra credit was given to the developmental math students who utilized the biofeedback technology. Of a class of 23, 12 students initially made use of the method. Five other students also used the program in some capacity. In this pilot program, a third of the students who passed the course used HeartMath-developed software in some capacity to reduce their anxiety and improve their test-taking performance with some success.

heartmathchart"On my first exam, I had a grade below 70, but when I took my second exam, I had above a 70," wrote one student in a review of the college's pilot program. "I am not sure if the HeartMath had anything to do with it, but I realized I was able to stay focused on my exam the whole time. I also realized I had little test anxiety compared to before. The thing is, indirectly, I was using what I had learned from the [software]. I was calm, relaxed and spent as much as was allowed for the exam. I know I can concentrate and focus a little longer than I used to."

Mattila said many instructors want to see independent research of the biofeedback system and try the related software for themselves before allowing its use in their classrooms.Louise Hurwitz, the college's director of developmental and transition programs, stated in an e-mail that math faculty have expressed concern about their lack of familiarity with the HeartMath software.

"It seemed a little 'new-age' to them," Hurwitz stated. "This might make it difficult for them to refer to students. Some wanted more hard data as to its effectiveness. In general, there was skepticism, but a willingness to refer students as the faculty realize the need for ways to help students with math anxiety."

Even if the technology only helps a few students and does not succeed across the board, Mattila said she thinks it is worth the investment. The community college is planning to expand the program to other math and non-math courses in the future and run statistical research to see if this technology and technique can be justified with quantitative data.

Rees said he experienced a similar resistance from some academics when introducing HeartMath's biofeedback software for use in the classroom.

"People are suspicious of things that are simple," Rees said, adding that the openness of academics to the method varies depending on the crowd he is addressing. "There are some simple things that work, and there are some simple things that don't. This has a strong scientific grounding and a lot of medical and physiological practitioners love what we're doing because they say it works. In higher education and with professionals, there's a high skepticism of something that isn't theirs. I really enjoy working with the skeptical and think, if they suspend their disbelief for a bit, they'll understand what I'm talking about."

— David Moltz

The original story and user comments can be viewed online at http://insidehighered.com/news/2008/09/16/heartmath.

Websites shed light on how humans value fresh ideas

- 18:15 11 September 2008
- NewScientist.com news service
- Colin Barras

Analysing the rise and fall of websites is the perfect way to shed light on the old debate over whether talent or experience matters most, say mathematicians.

The question crops up everywhere, from job interviews to presidential races, says Vwani Roychowdhury, but it's hard to examine the problem using hard figures.

However, the same way of thinking can be applied to websites, which also succeed or fail based on many millions of human decisions. In fact, the web may be one of the few places it is possible to quantify the balance between the two, say the researchers.

Talent vs experience

Roychowdhury and his colleagues Joseph Kong at the University of California in Los Angeles and Nima Sarshar from the University of Regina, Canada, used "web crawlers" to visit some 22 million web pages once a month for a year. Each time they visited a page they recorded the number of other pages that link to it: its "in-degree".

After the year was up, the team found that the pages they deemed "winners" – those with an in-degree value more than 1000 – were not all old, well-established pages that started the year with a high in-degree and high traffic, as they had expected.

Web pages that hadn't existed when the year began accounted for just under half of the winners – displacing an equal number of older, more established pages in the process. That proportion held even when the bar for success was raised, suggesting there is a general tendency for young websites to out-compete established websites half the time.

Roychowdhury says the new pages could only pull themselves up from nowhere because of the quality of their content. They were pages with "talent", able to compete against those with more "experience".

Political parallel

"Talent versus experience is difficult to document in a society," Roychowdhury told **New Scientist**. "But what we show is that on the web it can be documented in terms of page popularity – and newborn pages become more popular than older established pages on a regular basis."

He adds that the web's success may be down to the roughly 50:50 balance between experience and talent that allows constant renewal without anarchy. Roychowdhury even sees similarities in US politics. "The fact that Obama got the nomination over Clinton is a testimony to the way a society rarely but consistently gives a thumbs up to talent over experience."

More practically, the new style of analysis could help search engines improve results, says Roychowdhury. Since Google introduced the idea, many engines use the page in-degree, also known as "page rank", to order search results.

But using in-degree alone ignores the importance of new emerging websites. Ranking pages by the rate of in-degree growth might better reflect the ever-changing web, he suggests.

Journal reference: *Proceedings of the National Academy of Sciences, DOI: 10.1073/pnas.0805921105*

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Endpaper: Publishing's back-room alchemists

Last Updated: 12:01am BST 13/09/2008

Internet or not, writers will always be grateful for an astute editor says Alex Clarke

The death of the editor Robert Giroux, whose distinguished career at the leading American publishers Harcourt and Farrar, Straus & Giroux led to the first appearance in print of writers such as Jack Kerouac, Flannery O'Connor, Susan Sontag and Robert Lowell, provides an opportunity to reflect on the pivotal importance of publishing's back-room alchemists.

Obituaries may have reported Giroux's most celebrated near misses - Kerouac's On The Road, which caused consternation when it was delivered on a 120-foot scroll, and The Catcher in the Rye, by J D Salinger - but, of course, his successful commissions vastly outweighed such momentary mishaps (and, to be fair, most editors would raise their eyebrows at a writer who, like Kerouac, insisted that their novel had been dictated by the Holy Ghost and was thus beyond editorial suggestion).

Giroux's lasting contribution, though, beyond the nurturing of any one writer or book, was perhaps to personify the joys of a life spent with a red pen in one hand and a stack of promising, but unpolished, manuscripts under the other. Unlike his more outgoing partner, Roger Straus, Giroux was keener on sticking closer to the sentences on the page.

At a recent party in London to launch a Random House imprint, Square Peg, its publisher likened the business of getting books into print with that of appearing on the television programme Dragons' Den - complete with rather amusing parallels between various publishing industry high-ups and the hard-nosed characters from the business world who make or break the desperate entrepreneurs paraded before them.

There were probably few editors in the room who didn't experience a pang of recognition - the commercial demands and the ferocity of publishing houses' sales and marketing departments are commonplace nowadays.

The books business, of course, couldn't thrive without both its creative and more financially minded talents - there's no point in perfecting the metaphors if there's not enough money to pay the printer.

But there is something special about the peculiar skill of editing - which requires the patience to pore over a succession of drafts and redrafts until no further improvement seems possible, plus the tact integral to encouraging and containing writers (rumoured, occasionally, to be highly strung creatures) and, finally, the self-effacement to bring to fruition someone else's work without much public recognition.

Much is made, in the age of online democracy, about the probable demise of the editor - about letting the work speak for itself without mediation or hindrance. Whether the unexpurgated internet can ever produce a Kerouac or a Lowell won't, one suspects, be known for a long time yet; and maybe editors and cyberspace aren't incompatible.

But if the life of a dedicated and sensitive editor shows us anything, it must be that even books by the most brilliant of writers are far more collaborative than we allow. As Giroux recollected saying to the not entirely easy-going writer Djuna Barnes, "You have to trust someone, Miss Barnes. Why not trust me?"

It's not often that one feels compelled to soothe the egos of bestselling writers, but I do have a crumb of

comfort for the likes of Piers Morgan, Russell Brand, Katie Price and Ian McEwan, all of whose books topped a survey to find those titles most frequently abandoned, like so many used cotton buds, in the nation's hotel rooms.

(McEwan, it should be noted, might have the most content-related justification: On Chesil Beach, after all, opens in a hotel and swiftly develops into a painful portrait of erotic disappointment and marital disarray. Hardly the ideal reading matter to set the scene for riotous mini-break carnality.)

But there may be another explanation. On holiday earlier this summer, I found myself positioning issues of the magazine that I edit on the beachside villa's coffee table just before I headed home. I even turned down the corners to indicate those articles most likely to tickle the imagination. The curiosity of subsequent visitors, I reckoned, might yield a few subscriptions and even promote a few coveted word-of-mouth recommendations.

All of which makes us opportunistic marketers quail at the thought of the spread of the Sony Reader. It may save on excess baggage charges, but abandoning £199 of gadgetry on the off chance of currying favour with a passing vacationer is a freebie too far.

Alex Clark is editor of 'Granta'

http://www.telegraph.co.uk/arts/main.jhtml?xml=/arts/2008/09/13/boend113.xml

Books special: Can intelligent literature survive in the digital age?

Is the paper-and-ink book heading the way of the papyrus scroll? Can serious literature survive in the brave new world of web downloads, e-books and ever-shortening attention spans? John Walsh introduces our special section

Sunday, 14 September 2008

Look at this chap sitting outside the Caffè Uno at Paddington station. He is reading For Whom the Bell Tolls with slightly exaggerated attention. He has a Uniball pen close to hand, for making shrewd marginal comments. He holds the book up before his face, and his chin juts slightly, as if the fall of Hemingway's lapidary prose were giving him some caffeine boost of vicarious heroism. Behold, his whole posture seems to say, at least someone around here has a brain.

Check out the woman on the Tube reading Sadie Jones's 1940s-set The Outcast. She sits quite still and unself-conscious, lost in the narrative, her spine upright as a schoolmarm's, her head bowed, her hands cradling the book on her lap, unintentionally mirroring the famous 1955 picture of Marilyn Monroe reading Ulysses. And she is reading the hardback version of Ms Jones's novel. That puts her in a minuscule percentage of British people prepared to shell out £17.99 for a new cloth-bound book, rather than wait for the paperback. But can it be that all these readers – the coffee-shop man, the Tube schoolmarm, Marilyn Monroe – represent a doomed species? Has the actual business of reading a book, of digesting a whole text of 70,000 words or more, become too much for the human race?

A transatlantic debate is currently raging about whether a decade of staring at computer screens, sending emails and text messages, and having our research needs serviced instantly by Google and Wikipedia, has taken a terrible toll on our attention, until our brains have been reconfigurated and can no longer adjust the tempo of our mental word-processing to let us read a book all the way through.

An important contribution to the debate was Nicholas Carr's Atlantic Monthly article "Is Google Making us Stupid?", in which he reports that he can no longer connect with long articles or books the way he used to; the intensity of focus and concentration that used to see him "immersed" in connecting sentences has dissipated. And the villain to whom blame can be attributed is the internet.

"As the media theorist Marshall McLuhan pointed out in the 1960s," writes Carr, "media are not just passive channels of information. They supply the stuff of thought, but they also shape the process of thought. And what the Net seems to be doing is chipping away my capacity for concentration and contemplation. My mind now expects to take in information the way the Net distributes it: in a swiftly moving stream of particles. Once I was a scuba diver in the sea of words. Now I zip along the surface like a guy on a Jet Ski."

Carr quotes a research programme that monitored the behaviour of researchers visiting information sources. Most of the researchers, it found, hopped incontinently from site to site, never staying longer than a few paragraphs, apparently unable to sustain interest in one text. The report's authors coined a splendid phrase: "...there are signs that new forms of 'reading' are emerging, as users 'power browse' horizontally through titles, contents pages and abstracts, going for quick wins. It almost seems that they go online to avoid reading in the traditional sense."

Power browsing! But what if our loss of focus in sustained reading is more than mere impatience with accessing information? It seems that we may be losing the capacity of "settling into" a book, of immersing ourselves in a plot or – more importantly – in the stream of somebody else's thoughts, in a way that readers (and writers) once took for granted.

In the days of the Enlightenment, when few books were published and people read for amusement in their leisure hours, the speed of thought, as expressed in books, could afford to be slow, proceeding from point to point in Augustanly balanced steps. Victorian prose substituted orotundity for harmony: readers would settle in for long evenings letting Barchester Towers or Our Mutual Friend wash over them. This was the period when, say, William Gladstone could tell friends, with every expectation of empathy, that he had stayed up all night to read The Woman in White.

In this century, 150 years later, it seems that our attention span has shortened alarmingly. The average-length novel is too much of a stretch for the time-challenged, multi-tasking, BlackBerry-prodding "entertainment consumer" to contemplate reading, let alone the 700-page biography of VS Naipaul or Edith Wharton. Not because of the size of books, but because of the thought processes they contain.

In 1994, an American academic called Sven Birkerts published a seminal study, "The Gutenberg Elegies: the Fate of Reading in an Electronic Age". Before plunging into the page vs screen debate, he recalled his experience of teaching a course on "the American short story" to a class of undergraduates. They tackled Henry James's story "Brooksmith", and hated it. Was it, asked Birkerts, the language, the style, the syntax? All of those, said the students. It turned out they were defeated by everything that James was trying to communicate. The narrative river of thoughts wasn't one on which they could sail. The subtle moral distinctions between characters, the importance of their choices in the society through which they moved – it wasn't just that the students found such things old-fashioned; they couldn't grasp them at all.

Birkerts found that, as watchers of TV and videos, "they had difficulty slowing down enough to concentrate on prose of any density; they had problems with what they thought of as archaic diction, with allusions, with vocabulary that seemed 'pretentious'; they were especially uncomfortable with indirect or interior passages, indeed with any deviations from straight plot; and they were put off by an ironic tone, because it flaunted superiority and made them feel they were missing something." It dawned on Birkerts that a whole generation of young American readers were becoming gradually decoupled from the whole culture of the written word.

Are we similarly affected, in Britain, in the early 21st century? It seems we are. We haven't enough time to read as we used to. We have less and less inclination to tackle the kind of "classics" (Don Quixote, Bleak House, Moby Dick, In Search of Lost Time) that teenage readers once confidently approached. We'd love to be au courant with the modern novel, but we feel suspicious of the extravagant claims made by reviewers and prize judges: does Joseph O'Neill's Netherland really "deserve to be ranked with the best of Updike and Fitzgerald" (The Observer)? Was Stef Penney's first novel, The Tenderness of Wolves, which won the Costa Book of the Year, really the finest book in any category to be published in 2006?

And we buy fewer and fewer works of serious fiction. Twenty-five years ago, when the Amis-Barnes-Rushdie generation was getting under way, readers seemed to have no problem ' being steered towards experimental, inward-looking, linguistically challenging fiction. Flaubert's Parrot sold well, despite its metafictional games with biography, as did Amis's Money, despite its torrentially exhausting Amer-English prose style. Graham Swift's Waterland, now on school English syllabuses, flew out of bookshops in its Picador paperback livery, as did One Hundred Years of Solitude and Midnight's Children.

Now, many serious writers complain, challenging fiction doesn't appeal; "difficult" novels don't sell. Adam Mars-Jones's massive, and beautifully-written novel Pilcrow, published earlier this year, sold only a few hundred copies, and there have been several similar casualties. Although, traditionally, every Booker winner invariably becomes a world bestseller, the 2008 winner, Anne Enright's The Gathering, made the briefest appearance in the top 10 before disappearing. It had a narrative of sorts, but was broken-backed in structure and its strength was the narrator's wry, funny, piss-taking tone – exactly the kind of thing that Prof Birkerts' students hated in Henry James.

To sell now, books evidently need to be big on plot and incident, short on interior monologue – the sort of titles that the Richard & Judy Book Club strenuously promotes. "Most literary programmes, which are on late at night and concerned with 'literature', intimidate lots of people," said Judy Finnegan last year. "For some, that a book has been Booker-nominated is actually a turn-off." Can this, then, be the future of reading: an increasing number of low-brow, plot-driven works will flood the market, consigning works of literary merit to a watery grave, while the low-brows vie with each other for the attention of readers so badly affected by the moving stream of internet info-processing, that they can no longer focus their attention for longer than a few pages?

It seems oddly coincidental that the e-book is coming into our reading lives around now. With its hand-tooled leather binding, its don't-be-scared page dimensions (two-thirds the size of a standard paperback), its flexible typeface and typesize formats, and the astounding capacity of its memory (it can store up to 160 standard-size titles), it is user-friendly, glossy, rather pretty in its ingénue novelty. But its callowness makes you weep.

The instructions tell you, "One battery charge is equal to 6,800 page turns (that's enough to read War and Peace five times over on a single charge!)" Yeah, right. But it's not going to happen on the Sony Reader. Nobody is ever going to read Tolstoy on this fatuous device. It's an electronic simulation of a page, but it'll never convince you it's a book, to be read by your sentient eyes and brain. It doesn't have the solidity, the pages, the tactile companionship of a book. You'll never know where you are in the story, or how much of it is left. You won't have the cover artwork, to steal inside your head and become a lifelong reminder of the book it encased.

And you can't turn the pages. I spent half an hour reading Agatha Christie's The Murder of Roger Ackroyd (the first book to be installed) with my fingers itching to turn a page; "turn" one electronically, and the screen goes blank before the next page is displayed. It's a nasty moment, the screen going blank and interrupting your train of thought; but it's a good metaphor for the blankness to which our minds are tending, as we gradually lose the ability to interpret the old world of sequential thoughts in the new blizzard of information retrieval.

What's the word? Eight experts predict the future

The agent : Clare Alexander

"I've been an agent for 10 years and was a publisher for 25 years before that. Digitisation has had both an enormous impact on my job and, at the same time, no impact at all.

"The impact is that I now spend an enormous amount of time in negotiations with publishers getting ready for the digital explosion they perceive is about to happen.

"Print on demand is a new technology which, to my mind, is far more important than the e-book. It means that, effectively a book never goes out of print – and the author never gets their rights back from the publisher, even if the publisher is no longer promoting it. It means there is no opportunity for a new publisher to give a book a new lease of life.

"Another big digital issue is that publishers are now selling themselves to authors by saying that they can police their work, and stop them being ripped off [by pirating]. But nobody wants a publisher who's a policeman – you want a publisher who can market your book.

"Part of this new policing mentality is that publishers are becoming more risk-averse – children's book authors, for example, are being asked to sign contracts agreeing to 'appropriate conduct' in their private lives. There's also censorship: Jacqueline Wilson had the word 'twat' in one of her books changed to 'twit'.

As a result, I'm spending much more time talking to publishers about legal issues and far less time on creativity. There's also the other side of the digital revolution – that original ideas filter through to print from the internet. Yes, occasionally a blog becomes a book – about sex, usually – and the really original ideas percolate through, but most stuff online is crap!

"I don't believe the publishing industry will have an 'iPod moment'. People say that the new generation isn't interested in reading books, but they forget that this is the generation that grew up reading Harry Potter.

Clare Alexander is a literary agent at Aitken Alexander Associates Ltd, whose clients include VS Naipaul, Mark Haddon, Sarah Dunant, Germaine Greer, Colin Thubron and Penny Vincenzi

The new-media lecturer: Sue Thomas

"The aim of my course is to produce 'transliterate' writers – ie, literate across many different kinds of media. When we think 'literacy' we think about print and transliteracy is about shaking off that domination of print which has, in a sense, I think, been a distraction.

"The internet has caused us to rethink what we mean by literacy: the [traditional] idea of literacy implies that before print people were illiterate – but, in fact, people simply were literate in many other things, such as oral and visual culture.

"One of the writers from my course is Alison Norrington, a chick-lit author: she learnt how to take her stories beyond the book on a blog, on Facebook, on Twitter, by making little movies, by sending her heroine into Second Life. Another is Christine Wilkes, who has a filmmaking background and wrote an interactive memoir using design and programming. You don't need to be able to read and write much to tell a story.

"Will books exist in 50 years? Definitely, but they will also be just one of the many ways we experience art. I feel quite cynical about the cloak of preciousness that's been woven around the novel: it's such a recent medium – we've only had it a few hundred years and yet you often hear people say, 'We've always had novels.' No we have not!"

Sue Thomas teaches the world's only MA in creative writing and new media at the Institute of Creative Technology at De Montfort University

The author: Tracy Chevalier

"Digitalisation comes up at every Society of Authors meeting. It's an anxiety-filled discussion: how's it going to affect contracts; what percentage of royalties should be put on downloads; pirating; Google scanning all the books in the world to put them online; Amazon's 'search inside the book'.

"The death knell for the novel has been sounding for years. An American study in 2004 found that only 49 per cent of adults there read even one book that year, so the good thing about the internet is that there's a lot of reading going on online.

"Younger people are more adventurous in the way they take in information and not so emotionally wedded to the book as older people. The music industry has paved the way in terms of expectations of how we receive information and it'snatural that our industry will have its iPod moment.

"I don't know whether [new technology] will change how I write a book. Some authors will, some I know are appalled at the idea. I think it's more a matter of broadening out the types of books that are written – seeing these new forms as another genre. We've got the literary novel, crime, romance, westerns, chick lit, and I think the e-novel will become just another genre and it'll bring the younger generation in."

Tracy Chevalier is the author of novels including 'The Girl With the Pearl Earring'. She chairs the Society of Authors

The Google guy: Santiago de la Mora

"There are two strands to Google Book Search. One is a collaboration with publishers to showcase their books online, though it is important to explain that users cannot see a whole book on screen (however they can do keyword searches on the full text).

"The other strand is a collaboration with libraries, where we scan and upload their books – the out-of-copyright ones. These books can then be viewed in their entirety online.

"Does Google Book Search symbolise the death of the [printed] book? On the contrary, it gives books more visibility and makes it easier for people to buy them, or to know they exist in libraries. Now they can be read by anyone, anywhere. I'm originally from Columbia: I know what I grew up with and that the biggest barrier in life is no access to information. So from a personal viewpoint, it's a beautiful project."

Santiago de la Mora heads Google Book Search's European partnerships

The librarian: Richard Ovenden

"The Bodleian is one of the oldest libraries in the UK – over 400 years old – but we were the first to start doing serious digitisation, in 1994, and the first UK library to partner with Google Book Search, four years ago.

"Hundreds of thousands of cultural objects from our rich collection can now be viewed, free of charge, online – from medieval manuscripts to 19th-century industrial catalogues. These are really important tools for scholars and having them online not only makes access easier but also helps reduce wear and tear.

"Our reading rooms are still as busy as ever: the most high-quality digitisation does not replace the power of seeing the original artefact. However, people are now more aware of what we've got: a recent report identified a generation that felt that if something wasn't online it didn't exist. So if you digitise things, it does exist to that generation.

"As for reading for pleasure on screen... when you want to read a good book on the bus, in bed or at work, it's a lot easier with a book made of paper and tucked under your arm.

"I took my nine-year-old daughter to see A Winter's Tale at the Globe recently and as soon as we got home she said 'Can we read the play, Dad?' There are dozens of versions online but I just went to the shelf, pulled out a copy, and we sat on the sofa and read it together."

Richard Ovenden is Keeper of Special Collections at the University of Oxford's Bodleian Library

The publisher: Jeremy Ettinghausen

"Penguin is the publisher that invented the paperback: innovation is in our DNA. We were early bloggers, the first publisher with a podcast; our Blog a Penguin Classic project won us an award. We have 5,000 friends on Facebook, we're on Twitter, and were the first to go into Second Life, where we took William Gibson, the writer who invented the word 'cyberspace'.

"We don't believe books will disappear – 99 per cent of our revenue still comes from ink on paper - but the way people read will change.

"People have shorter attention spans – a website has about three seconds to capture their attention. As a result we are spending time learning from what Nike, Sony, Xbox, YouTube do – we're competing for people's entertainment time, particularly with a young audience. One of our most successful new projects is Spinebreakers, our website for teenagers. In the past it's been hard to talk to teens – so we gave them a platform where they could talk to each other about books.

"People no longer want to be passive – they want to interact and share. Another project was our 'wiki novel', A Million Penguins, written by the public. It got 11,000 edits in five weeks, though it was more interesting as a social experiment than a valid work of fiction.

"With 'Telling Stories', we teamed authors up with video-game designers to tell stories. There was a Google Map story, where you could follow the character's story around the UK. Another story, by Nicci French, was written live so viewers could see the words appear as they were typed.

"Our job is to get the work of our authors into as many people's hands as possible – format is less important."

Jeremy Ettinghausen is digital publisher at Penguin, the only publisher to be nominated for awards at this year's New Media Age Effectiveness Awards

The digital convert: Chris Meade

"I used to be director of Booktrust [which promotes books and reading] and the Poetry Society, so I've spent my life promoting books and reading. Yet there was a huge reaction to my move [to a charity investigating the potential of new media]: people felt I was deserting literature and books – but I think it depends how you define a book. If a book is a container of culture or knowledge, then our culture has been moving from the printed word to the moving screen for a long time.

"When I started my career it was all about the printed word, but I see these changes as exciting and a new creative opportunity for writers – and given that we've spent so long asking how can new voices be heard, it's great that now everyone can put their work out there rather than letting it gather dust under the bed. It is also an opportunity for writers to take control and manage their affairs themselves.

"As for readers – reading has always been a creative activity, but online the reader plays an even more creative role in interaction.

"Could you compare a blog or a story told via Twitter to Dickens? Well, Dickens wrote in soap opera-like episodes. It's always easier to decide where the cultural action has been, but hard to spot it at the time. These things are happening and we need to adjust."

Chris Meads is director of if:book, a charity exploring the creative potential of new media for writers and readers that is part of the organisation The Future of the Book

The teacher: Andrew Cowan

"Is the world of books changing? I honestly have no sense of that at all. As a student 20 years ago, I did the MA that I now teach in prose fiction and I see no change in the approach and ambitions of my own students to that of me and my peers back then.

"The touchstone authors my students, mainly in their twenties, are referencing are still the traditional ones. It's Nabakov, Joyce, Austen.

"Their interest is in the books reviewed in the broadsheets and the ones that win the Booker. Their ambition is to be on sale in high-street bookshops and published in book form by a mainstream publisher. That is, to them, a badge, because it measures the value of their writing against the writing they admire.

"Ahead of this interview, I talked to them about digitisation and not one of them had heard of Twitter, and they were all hostile to the idea of e-books.

"They're not immersed in digital fiction, either – some have been published online, but feel it's second-best; they're concerned about the lack of editorial control on the Net and only pursue it because there is a dearth of [print] outlets for short stories.

"None of them keeps a blog, though one admitted sheepishly that she'd started one, and the others were all smirking about it. This is the new generation of writers."

Andrew Cowan is an author and senior lecturer in creative writing at UEA. His novels include, 'Pig', 'What I Know' and 'Common Ground'

Interviews by Kate Burt

http://www.independent.co.uk/arts-entertainment/books/features/books-special-can-intelligent-literature-survive-in-the-digital-age-926545.html

Why architecture must shed its exclusive image

Architects from more diverse backgrounds are desperately needed to break down the boys' club atmosphere and help design places where all kinds of people will want to live and work, says Peter Morrison

The Stephen Lawrence Centre, London, established in memory of the murdered teenager who hoped to be an architect. Photograph: Peter Macdiarmid/ Getty Images

I head up RMJM, one of the world's biggest architecture firms. I'm not an architect, but I sure do look like one. I'm a white man approaching middle age and I've had a comfortable upbringing. Our industry, sadly, does not accurately reflect society in Britain today. It's not deliberate, but the profession is not inclusive - to be perfectly blunt, it's reminiscent of an exclusive old boys' club.

RMJM employs more than 1,200 architects. We keep close tabs on talent coming through and I have to say there's a lot of sameness about the place. The built environment is at risk of becoming a very boring place where one design is much like another because one architect is much like another.

Let me say from the outset we are not talking about the profession being inherently racist. That's not the case. The fact is it's relatively expensive to study architecture, making it more likely that students will come from professional family backgrounds. This, in turn means, there are a lack of non-white role models coming through the system.

People tend to get an aspirational boost when they see someone else from their background who has already made it, so to speak. There are, of course, other society factors too that all amount to what is essentially a poverty of opportunity. There are other professions that are probably in the same situation, but that's not an excuse to not do something about it.

We need to change: involve people in the design process through community consultation; encourage young people from across the spectrum to take an interest in architecture and possibly make a career of it; educate qualified architects about the world they live in and broaden their horizons at every opportunity.

In practice at RMJM, this translates to five-day volunteering programmes for all our architects to head out into communities to assist in projects and spread the word about the profession.

We have employed a dedicated project manager to work with the Stephen Lawrence Trust and we will be hosting a series of workshops in Britain's inner cities designed to attract young people and encourage them to explore their creativity. We'll also be partnering local colleges and community groups to maximise impact.

And we will identify six talented young people to attend an eight-week introductory course at the prestigious Harvard University graduate school of design in the US, and then work with them as mentors through their university studies and employment as architects.

It's not going to change things overnight, but it's a start. One, mind you, that has been industry-led and for a very good reason. The startling truth is we're facing a very real shortage of designers and, although there is a downturn in the construction industry in the UK at the moment, there are huge opportunities around the world and those aren't going to go away.

A report from the OECD last year said infrastructure spending needed to be £53,0000bn worldwide between now and 2030 as governments in developed countries perform much-needed upgrades to transport systems, and emerging markets industrialise.

Our industry is in trouble. The supply chain for our most important resource - people - is in poor health. There are not enough people coming through, and what's coming through is mostly the same. It's not a good position to be in, 22 years out from 2030.

We need to reach out today to kids from all backgrounds interested in becoming architects. We need new faces, new ideas, and new ways of looking at the world. The same old, same old is boring and come 2030, if not already, boring design will not close the deals on big projects.

It takes seven years to train an architect - waiting another 10 years to take action is not an option. That's the business case for diversity. There are, of course, more compelling reasons for change.

Architecture is often considered to be a social science, it has to do with people. If sections of society are excluded from architecture then we cannot hope to address their needs. One of the most basic human needs is shelter and without that people cannot possibly flourish and achieve their best. This underpins the importance of the built environment in supporting individuals and society.

We need to incorporate a range of different perspectives and experiences in our masterplans and designs. How can people who've never lived in a troubled inner city area hope to regenerate it? It's easy, you employ architects who grew up in that environment, but the problem is there are hardly any. We need to break this paradigm of exclusion.

· Peter Morrison is the chief executive of UK-based RMJM Architects, one of the world's biggest design firms. The firm is working with the Stephen Lawrence Centre to promote architecture as a realistic career goal for young people from black and ethnic minority backgrounds. RMJM-funded initiatives worth more than £1m will be officially announced at the annual Stephen Lawrence Memorial Lecture to be delivered by designer Wayne Hemingway in London tonight

http://www.guardian.co.uk/society/joepublic/2008/sep/11/communities

From the Los Angeles Times

CINEMA TECH

Remember movies before the cellphone?

For screenwriters, the sheer ubiquitousness of the cellphone can be a nagging detail to account for -- or a handy device on which to hang a plot point.
By Zachary Pincus-Roth
Special to The Times

September 14, 2008

THE LITTLE girl steals it. That's why Carrie doesn't have her cellphone. And that's why Big can't reach her to say he's backing out of the wedding in the "Sex and the City" movie.

A clever technique for creating drama? Or a contrived way to keep the pair from speaking, in an age in which everyone has a cell handy?

Either way, the episode shows how our pesky pocket devices have become crucial to storytelling. The U.S. had 255 million cellphone subscribers (83% of the population) in 2007, according to the International Telecommunications Union, meaning that audiences expect almost all present-day characters to carry one. For dramatic writers in many media, cellphones' ubiquity -- and the particular way they condense time and space -- creates both opportunities and obstacles.

"You would normally do scenes where people would come together face to face," says Josh Schwartz, executive producer of the network TV shows "Gossip Girl" and "Chuck." But now, "Why would they come to the door? They would just call."

Could "24" exist without cellphones? Jack Bauer would spend 20 minutes every episode searching for a phone booth. The "Gossip Girl" characters would die of boredom without their stream of salacious electronic chitchat.

While cellphones appear to help storytellers, since they allow anyone to talk to anyone at any time, "that seeming freedom only makes it all the more difficult," says Robert McKee, the screenwriting guru and author of "Story." "It takes away a possible source of conflict -- the difficulty of communicating, the difficulty of calling for help."

McKee compares the situation to the loosening of rules about depicting sexuality -- writers have more options, but they lose the tension created when they're forced to be implicit rather than explicit. Still, he doesn't see the development as negative. "All it means is that the writer has to be even more ingenious in building the conflicts and the tensions in a credible way," he says.

Writers imagined a cellphone world even before the device existed. James Bond had a car phone, "Get Smart" (1965-70) had a shoe phone and Tony Roberts' character in "Play It Again, Sam" (1972) tells his office the phone numbers for everywhere he's going to be. When cellphones first became available, on screen they were shorthand for excess. Gordon Gekko uses one on the beach in "Wall Street" as do the spoiled teens roaming the school halls in "Clueless."

Sure, law enforcement always had radios and walkie-talkies. But it's the device you don't see -- the phone in everyone's pocket -- that really makes an impact.

That implied phone creates the potential for audiences to think, "Why doesn't he just call?" For instance, in "Superbad," after Fogell (Christopher Mintz-Plasse) appears to be getting arrested after buying alcohol with a fake ID, why doesn't he call his friends to tell them he's just partying with the cops?

The typical solution is simple: Kill the cellphone. It can be lost ("Sex and the City"), out of range ("Damages," when Ted Danson is trying to re-call a hit man) or out of battery (Jamie Foxx at the end of "Collateral"). The cellphone death has become the 21st century version of the car not starting when a killer is after you.

Katherine Heigl and James Marsden's car gets stuck with no cellphone service in "27 Dresses," forcing them to seek help at a countryside bar, where sparks fly during a drunken dance to "Bennie and the Jets." The screenwriter, Aline Brosh McKenna, says the scene isn't a cliché, it's relatable, and that audiences laugh when the two characters hold their phones through the car windows and wave them.

"Doesn't it happen to you all the time?" she asks. "Maybe as cellphone service improves, writers will have to think up better excuses." McKenna is trying to find a way to ditch a phone in her adaptation of Sophie Kinsella's novel "The Undomestic Goddess," in which a corporate attorney gets stuck in the countryside.

One solution is to get rid of the phone before it becomes an obvious burden, preferably in a way that reveals character, humor or suspense. McKee likes how it was done in last year's Tim Roth-Naomi Watts film "Funny Games." When two seemingly nice young men talk their way into a family's house, one of them, in an apparent accident, breaks the family's cellphone by nudging it into a sink of water, planting the seed for their terrorizing of the family.

"Harold & Kumar Go to White Castle" uses a comic beat. Kumar gets halfway down the hall and realizes he left his phone in his apartment, but in his drug-induced stupor, he decides, "We've gone too far," thus allowing for the night's misadventures.

More downsides

MOBILE technology affects each genre differently. "The cellphone has created more problems than benefits for horror screenwriters, because so many horror films involve so many people stuck outside civilization, who are being hunted and have no recourse," says Scott Kosar, the screenwriter of "The Texas Chainsaw Massacre" remake and others.

"People thought it would be the death of the sitcom," says Carter Bays, executive producer of "How I Met Your Mother." With a few exceptions, "Cellphones have totally eliminated the existence of the 'drop by.'

In some cases, cellphones create problems while opening up new possibilities at the same time. For instance, they lead to a larger number of phone scenes -- which, as every director knows, can be deadly to watch. But they make those scenes more dynamic, allowing the characters to be outside and on the go.

Schwartz defends the cell-heavy "Gossip Girl," saying that phone conversations are "less dramatic, but they are becoming so accepted because the other version" -- conversing in person -- "is seeming so alien."

Because cellphones are more private than land lines, the scene in which a lover calls the house and accidentally talks to the cuckolded spouse will rarely happen again. But a wife receiving a racy text from her lover while surrounded by her family can be just as dramatic, as proven in the 2006 film "Notes on a Scandal."

"The Departed" was particularly creative in using cellphones to find new spins on old scenes. During a transaction between two gangs, the competing double agents played by Leonardo DiCaprio and Matt Damon exchange info with their bosses via text. After Martin Sheen's character dies, DiCaprio gets spooked when he gets a call coming from Sheen's phone. A surprise ring on DiCaprio's cell as he pursues Damon almost gets him killed.

"Cellphones added to the characters' generalized anxiety, the same way cellphones add to our anxieties in everyday life," William Monahan, who won an Oscar for the screenplay, wrote in an e-mail. "In the film, the phone can be a tool for deception, or it can expose you."

Some recent suspense movies have been conceived around cellphones, exploiting society's paranoia surrounding the device. In the 2004 film "Cellular," a kidnapped Kim Basinger finds a land line, reaches a random beach bum on his cell and persuades him to save her. In Stephen King's novel "Cell" -- set to be a film directed by Eli Roth -- everyone using a cellphone becomes a zombie.

"Eagle Eye," opening Sept. 26, is about two regular people (Shia LaBeouf and Michelle Monaghan) forced to follow dangerous instructions via phone from a mysterious voice. "Whenever their cellphones ring they look at each other and go, '. . . something's going down,' " says director DJ Caruso. "One of our mantras was that at the end of this movie, we want you to fear your BlackBerry."

Making it work

OTHER stories find the lighter side of telecommunications. On "Entourage," Ari Gold and his cellphone are like a high-intensity comedy duo. On "How I Met Your Mother," one drunken night, Ted's butt keeps accidentally calling -- a.k.a. "pocket dialing" -- his friend Marshall, and he later relives the evening by listening to all 17 voice mails. In Sarah Ruhl's play "Dead Man's Cell Phone," which begins at South Coast Repertory on Sept. 21, a woman realizes that the man at a nearby cafe table is dead and answers his cell when it rings. She takes it with her and uses it to enter his life.

"It's a more interesting device in movies because you can talk anywhere on it -- you can be on a beach, you can be in a car -- whereas onstage it becomes proxy for a soliloquy," Ruhl acknowledges. "I kind of find them pathetic, theatrically. Putting a cellphone at the center of the play is a way of having some irony about that."

Bruce Wagner satirizes Los Angeles in his "cellphone trilogy" of novels: "I'm Losing You," "I'll Let You Go," and "Still Holding." Perhaps the most apt medium for the device is a video game, as in "Grand Theft Auto IV," in which the player's character can call friends or receive photos of people to kill.

One mini-trend is the climactic cellphone throwaway. Three emblematic city girls have done it: Andy in "The Devil Wears Prada" (into a fountain), Carrie in "Sex and the City" (the ocean), and Serena in

"Gossip Girl" (a trash can). The gesture demonstrates that the character has rid her life of whatever the cellphone represents.

A powerful sign of cellphones' impact is the number of famous stories of the past that wouldn't work in the post-Verizon era. For instance, how would they affect the end of "The Graduate," when Benjamin Braddock sprints through Santa Barbara to find Elaine before she gets married?

"I would imagine a lot of calls being made by a lot of people, suddenly," says Buck Henry, who co-wrote the screenplay. "If he calls her and the parents know that he called her, then they've got to call somebody, then they've got to call somebody else -- the battle of the cellphones taking up five minutes."

To some audience members, cellphones signify so many of society's ills -- the reliance on technology, the faster pace of life, the disconnect among fellow human beings -- that the device is distasteful no matter how it's used. Henry, who uses his only for emergencies, says that any time he sees one on screen, he inwardly (or outwardly) groans.

"It's an instant cliché," he says. And, even worse, "It reminds the audience -- or a large percentage of it -- that they might have a message in their pocket."

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http://www.latimes.com/entertainment/news/movies/la-ca-cellfones14-2008sep14,0,2167470.story?track=rss

How Many Web Services Can One Person Use?

By Claire Cain Miller

How many more new social networking or micro-blogging or video-sharing site can one person use? Most of us don't have time to respond to voice mail and e-mail every day, let alone check our Twitter updates and Facebook accounts and Flickr friends. And even if we have the time, do we need another site that helps us share and connect and network?

This problem is just under the surface at the Web 2.0 Expo in New York this week. Just a few years ago, it was easy for start-ups that provide Web services to attract early adopters — the tech geeks who are the first to use new technologies. The challenge was attracting mainstream users. But now, even the early adopters are stretched thin.

"The biggest chasm is no longer between early adopters and mainstream users. It is about finding and retaining the early adopters to begin with," said Fraser Kelton, director of business development at AdaptiveBlue, who talked about the problem at a conference presentation called "The Real, Long-lasting (and Negative) Impact of Web 2.0 on Technology Adoption."

It is no wonder. The conference was filled with these early adopters. Despite being at an event specifically held for in-person networking, they were interacting virtually, meeting one another via CrowdVine, following one another on Twitter and uploading videos of the conference — while they were still there! — to Tumblr.

Brad Burnham, a partner at Union Square Ventures, which invests solely in these Web services, has been thinking about the problem too. Unlike a few years ago, he said, to get someone to use a Web service now you have to get them to replace something else in their life.

"Now, in order to even get the attention of the core group, you have to ask them to replace time or a behavior," he said.

The future, they said, is in Web services that do not require users to change their behavior by, say, adopting a new service or transferring all their friends' contacts from one service to another.

One example, said Mr. Kelton, is FriendFeed. It sucks in stuff your friends post on 43 sites, including Flickr, Picasa, Twitter, Digg and YouTube.

One of Mr. Burnham's firm's portfolio companies, the online game site Zynga, has a bar on the top of the site showing you which of your Facebook friends are playing games on the network, so you can join them.

Mr. Burnham is optimistic. Though usage might be flattening, he said, that will change as the young people who grew up using Web services become the mainstream and as older people grow more comfortable online.

http://bits.blogs.nytimes.com/2008/09/18/how-many-web-services-can-one-person-use/?th&emc=th

Kids, Can You Say 'Cultural Diversity'?

By EDWARD ROTHSTEIN

Now that nearly every museum is also a children's museum — now that nearly every museum has programs that strive to lure the young — what do we seek from a museum that really is a children's museum? And not just any children's museum, but the venerable Brooklyn Children's Museum, reopening this weekend after spending nearly $70 million on reconstruction, rethinking and redesign?

I got an inkling of what might be sought when I entered the curved blazing-yellow frame of the expanded building, which, next to the stately buildings across the street, looks as sedate as a beach ball at a black-tie dinner party. I turned past the well-stocked shelves of the requisite gift shop, and entered Totally Tots, an entirely new realm where children under 5 are being inducted into museumland. And I laughed.

I laughed because in Water Wonders, the first gallery of this exhibition space — O.K., the first amusement area of this colorful indoor playground — water was spraying against whirligigs mounted on a blue wall, spinning them before coursing down into a plastic pond. Dams could be lifted, letting the water cascade in mini-waterfalls as bright plastic toys bobbed on the surface. I imagined a score of young visitors reaching, spraying, screeching with pleasure at the unceasing motion, the bold colors and rush of liquid sensations. On transparent walls through which the dry hallway could be seen, more aesthetically minded toddlers could paint or draw, before their masterpieces were washed away with the turn of a faucet.

I laughed because this was clever and daring; the water machinery would have lured even a jaded adult to join in child's play, had he been in appropriate company. Nothing else in Totally Tots rose to this level, though the sandbox with its brilliant blue granules, and its wall dividers decorated with geodes and fossils from the museum's collection, might come close. The reading nook and puppet theater were also thoroughly inviting.

So here was something potentially different. Admittedly, the cranky critic in me worried that there was no identification of the objects on display in Totally Tots: the dolls behind glass cases adjacent to others more readily played with, the extraordinary masks that could not be handled along with others that could.

Who knows what conversations might arise with a child if a few well-chosen facts were provided? Knowledge too can be a form of play.

But exuberance could be felt here. So could surprise. And if this spirit were combined with a playful approach to knowledge, what else might be possible? Many museums, serving far less troubled neighborhoods than this one does (Crown Heights) are coming to think of themselves as community centers and alternative schools. How much more effective might they be if play and information were intertwined, with children's museums leading the way?

Perhaps because of this potential, the Brooklyn Children's Museum's fund-raising was immensely successful, with more than $80 million coming from public and private sources. And the museum spared little expense in its redesign. In its 104,000-square-foot reconstructed building it has almost doubled its exhibition space, to 20,000 square feet from 12,500, and added another 10,000 square feet on the rooftop, where bleachers frame an outdoor theater. It expects to increase annual visitors to 400,000 from 250,000. Its architect, Rafael Viñoly, has created a new second floor that is light and clean and functional. The building is green, with waterless urinals, token solar panels and geothermal heating and cooling. Many of its exhibitions will undoubtedly amuse and teach. There is much to appreciate here.

But after a while the visitor is left stranded in appreciation. There is not much that is daring, and too much that is dutiful. Even the playground waterfall is a bit of a feint, an allusion to the old "learning environment" designed by Edwin Schlossberg when the museum was last reconceived in the 1970s. One piece of that past remains: a giant walk-through tube that cuts through the main exhibition space, within which neon lights circle around a trench of flowing water that children can manipulate with sluices and locks and obstacles.

The approach is different this time around. In a quest for neighborhood connections the museum has embraced Brooklyn in its two main exhibitions: its nature display is an array of Brooklyn habitats, and its cultural exhibition a streetscape of storefronts reflecting multicultural communities. But the institutional mission has shifted in other directions too.

It has distanced itself from what Mr. Schlossberg described as a playful "research laboratory" in which children could experiment and explore. It has distanced itself too from its heritage as an offshoot of the Brooklyn Museum. Founded in 1899, the Brooklyn Children's Museum — it claims to be the first of its kind — is one of the only children's museums with a collection of objects, almost 30,000.

Many come from 19th-century collections: antiquities, items from non-Western cultures, zoological models, minerals and shells. In its early years they made the museum a kind of exotic educational supplement: children would visit its old Victorian building as collectors in training. In the evolutionary symbolism of the period, these premodern or natural objects also were well suited to the explorations of children pursuing their own evolutionary course toward adulthood.

By the 1970s, though, the collection came to seem a burden; pieces were incorporated into displays but not highlighted. Now in a rotating exhibition, "Collections Central," the objects are more plentiful but stripped of original meanings. They fill several display cases not to illustrate something about cultures or time periods, but to show how miscellaneously interesting such things can be: a piece of prehistoric amber, a 20th-century Nigerian mask, a 2,500-year-old Egyptian amulet. Cases are organized by type rather than origin, like masks or belts or buckles.

Still, of the museum's shows, I liked the promise of this modest one the most. It does not presume that there is an interest in the child; it presumes that an interest might be developed. And so the museum has created a "curiosity cabinet," invoking the places collectors once kept their eccentric collections (including, here, an eight-foot-high Asian elephant skeleton). I am wary of the desire to fragment the past and its cultures in this way — turning the museum back into a cabinet rather than turning the cabinet into a museum — and much depends on the guides who will allow children to handle some objects while

learning how to create projects based upon them. More information is promised online (brooklynkids.org/emuseum). But this show has the potential to reveal a museum's possibilities to a child.

The problems are in the two main exhibitions. In the 5,000 square feet of Neighborhood Nature, Brooklyn's natural habitats are on display: in a "freshwater pond" stuffed creatures from the museum's taxidermy collection can be found; a "saltwater beach" offers the sound of gulls and the opportunity to touch horseshoe crabs; a "community garden" provides simulated soil and planting tools. There are activities: piece together a bug, identify animal tracks, listen to duck sounds. In a Science Inquiry Center there are a handful of live animals (including a 200-pound, 20-foot-long albino Burmese python), and more exotic taxidermy. It is quite nice, but not terribly imaginative. The lessons about environmental concerns and the display of natural habitats have become formulaic in contemporary science museums; even the concept seems a little dated.

The multicultural cityscape of World Brooklyn also has a slightly antiquated flavor. Specific stores from various ethnic neighborhoods are reproduced, within which a culture's ways of life are partly shown. In the World Journal bookstore of Sunset Park the rudiments of Chinese writing are displayed; in the Owa Afrikan Market of Clinton Hill, African textile patterns can be created using magnetic stamps; in L&B Spumoni Gardens in Bensonhurst, children can pretend to sell pizza. There are also Mexican and Caribbean stores, and younger children can play store at an International Grocery. Each display mixes objects from the museum's collections with commercial products.

There are many peculiarities here: the reference to real stores is oddly promotional; the cultural knowledge provided is pretty thin; and the museum's collection is diminished, not strengthened by such displays. It is also strange, given the museum's neighborhood orientation, that no storefront offers a hint of nearby Lubavitch Jews (or features any other Brooklyn Jewish community). Finally it was difficult to see how this exhibition, despite its video clips and interactive displays, would create a powerful experience for children.

In fact, children seem somewhat secondary here. In 1902 the museum's curator stressed the importance of the child, who must feel "always a welcome visitor, never an intruder." In 1950 the museum's director said the goal should be "to understand and satisfy the child's mind, to be in tune with his thinking and capacity." In the 1970s version the child was all: the purpose of the museum, Mr. Schlossberg said, was to allow children to begin to see themselves as "workings of art." Now, in the Brooklyn exhibition, and to a certain extent, even in the nature show, the focus is less on the child than on the multicultural themes that donors, both public and private, cherish and the museum wants to promote.

Does the museum still provide something valuable? Yes. And a visiting exhibition about an astronaut's daily life, part of a series being shared by a consortium of children's museums, is worth seeing just to find out about the all-important issue of potty use in outer space. But thinking of the disappointed hopes raised by Water Wonders, I wistfully sought something else: the thrill of unexpected play.

http://www.nytimes.com/2008/09/19/arts/design/19chil.html?_r=1&th&emc=th&oref=slogin

Nocturnal van Gogh, Illuminating the Darkness

By ROBERTA SMITH

Devoting an exhibition to Vincent van Gogh, among the world's most beloved artists, may not seem like much of a reach for the Museum of Modern Art. On paper, at least, "Van Gogh and the Colors of the Night" reads like an obvious play for big box office and increased membership.

But this exhibition largely dodges such charges. Small and quirky, it is an anti-blockbuster. Instead of the usual are-we-done-yet marathon followed with ordeal by gift shop, it quietly displays 23 paintings, 9 drawings and several letters by van Gogh in six intimate galleries. The final gallery features a dense display of books that he read, most open to poems about the night.

Organized with the Van Gogh Museum in Amsterdam, this show has been overseen by Joachim Pissarro, adjunct curator in the Modern's department of painting and sculpture and a professor of art history at Hunter College; Sjraar van Heugten, head of collections at the Van Gogh Museum; and Jennifer Field, curatorial assistant in painting and sculpture at the Modern.

Van Gogh discovered new colors everywhere, especially at night. Peripatetically, briefly yet fulsomely, this show explores his special relationship with darkness. It provides a view of the tenderness, urgency and brilliance at the core of his art, as well as the openness to nature that set it aflame.

Van Gogh accepted the night as a distorting condition, almost the way later modernists like Marcel Duchamp and Jean Arp would use chance to experiment and to break habits. Unable to see clearly, he painted what he saw, ultimately pitting his colors against one another as if they were antagonists in a visual drama. He egged on their clashes with exaggerated daubs of paint, bringing backgrounds forward and giving each inch of canvas its own sense of life. In Western art before him, only the semi-Western mosaics of Ravenna achieved such complete articulation.

Also decidedly unblockbusterish is the show's almost complete inattention to van Gogh's mental instability, his disastrous friendship with Paul Gauguin or his shorn ear. What we see here is an artist with no time to lose, who gained crucial inspiration and information from the dusk, the twilight hours and the night with their constantly changing moons and relatively stable stars followed by the dawn's first glimmers. They challenged his visual perception, stirred his imagination, expanded his palette and kept him close to nature's cycles and mysteries. The night also brought relief to the daily labors of peasants, whom van Gogh admired for their closeness to the earth and often painted. And it harbored some of his other subjects: urban dwellers relaxing in dance halls and lost souls drinking and drowsing in cafes.

While van Gogh's journey through the night could have been traced with many other paintings, the collaborating museums have an advantage. His trajectory begins, in terms of masterpieces, with the dark interior of the Van Gogh Museum's "Potato Eaters," which is being shown in New York for the first time in 50 years. It is the culmination of van Gogh's early work, which began in 1880, when, at 27, he committed to being a painter after working in an uncle's art gallery in London and then trying to make it as a missionary. It ends with the Modern's even more famous "Starry Night" (1889), under the spinning skies of Southern France, where van Gogh's love of painting and his exultant religiosity fused. The southern sun ignited his sense of color, but he found just as much chromatic life after it set, outdoors or in.

In the opening gallery he is still in the Netherlands painting country life in the southern Brabant region, where he was born. The first works, from 1883-85, are conventional if competent landscapes that have the feeling of someone who has finally found his natural place. They imbue the humble farmhouses of the Dutch masters with the atmospherics of the French Barbizon School and George Inness.

Their surfaces are smooth, their shapes tentative. Light is scarce, but already van Gogh grasps the power of undiluted pigment in the dark. In the most prescient pieces, touches of lurid orange signal the sun's last rays among shadowy greens and blacks.

With the raw-faced peasant family in the many shades of gray and grime of "The Potato Eaters," van Gogh makes his sympathy with the harshness of rural life and his awareness of a fully articulated painting surface equally clear. Both sharpen in the following gallery, where van Gogh is working in the South of France; three of five works are based on Jean-François Millet's "Sower." The fourth is "Night (After Millet)," his 1889 copy of one of Millet's wood engravings from the series "The Four Hours of the Day." It depicts a couple in their cottage bathed in a bleached-out excess of heavenly light. These works have always seemed strained, like a belated, unnecessary apprenticeship. The fifth painting, "Landscape With Wheat Sheaves and Rising Moon," has van Gogh on his own with a work whose shifting colors and textures telegraph nature's underlying rhythms more than the actual landscape. A sign of van Gogh's indifference to specificity: in a nearly identical painting that is not in the exhibition (it is at the Kröller-Müller Museum in the Netherlands), of the same scene with a similar yellow orb, the time is identified as sunrise.

Next, the show turns to urban subjects. In the 1888 "Stevedores in Arles" — one of its least-known paintings, and one of its best — the orange-green-black palette of his early landscapes achieves an incandescent flare: that town's lights illuminate black silhouettes of workers like a giant bonfire.

"The Dance Hall in Arles" is a sea of heads illuminated by sunlike lanterns; its artificial light turns demonic in the adjacent "Night Cafe," the haunting interior that is the show's third masterpiece. Its

jaundiced reds and greens center on a coffinlike pool table and man in a startling white suit who seems to await some terrible event, whether as witness, ringmaster or sacrificial victim.

Van Gogh painted “Night Cafe” over three sleepless nights. He was conscious that it both had the “ambience of a hellish furnace,” as he wrote to his brother, Theo, and that it used “six or seven reds from blood-red to delicate pink, contrasting with the same number of pale or dark greens,” as he wrote to his sister Wil, both on Sept. 9, 1888. In “The Starry Night Over the Rhône” the stars bunch up in the sky like a chorus line in rehearsal while the lights of the town below extend their celestial glow into watery reflections. This work was made toward the beginning of the 12-night stretch of painting outdoors that culminated in the hallucinatory fireworks of “Starry Night,” wheeling freely, splintering the velvety blue.

It is joined in the final gallery by three very different paintings. Van Gogh’s portrait “Eugène Boch (the Poet)” shows a thoughtful young man, rendered mostly in yellow ochres, seen against a more restrained, but deeply blue night sky. “The Garden of Saint Paul’s Hospital” depicts dusk turning the shade of trees into darker ochres.

Finally, with the powerful personality that is “Gauguin’s Chair,” van Gogh is back where he began in “The Potato Eaters,” indoors, at close quarters, painting by candlelight. But the world he creates here is a rich assortment of browns, greens and blues, pierced by light. One candle rests on the chair’s caned seat and is identified in the wall label as a stand-in for van Gogh’s absent friend. Does this mean that the second candle, keeping a safe distance in a sconce on the wall, is Vincent?

“Van Gogh and the Colors of the Night” continues through Jan. 5 at the Museum of Modern Art, 11 West 53rd Street, Manhattan, (212) 708-9400, moma.org. (Except for members and their guests, timed entry is required, with tickets available at the entrance at no extra charge.)

http://www.nytimes.com/2008/09/19/arts/design/19gogh.html?th&emc=th

Google and General Electric Team Up on Energy Initiatives

By Miguel Helft

Google and General Electric said on Wednesday that they would work together on technology and policy initiatives to promote the development of additional capacity in the electricity grid and of "smart grid" technologies to enable plug-in hybrids and to manage energy more efficiently. The companies said their goal was to make renewable energy more accessible and useful.

Google's chief executive, Eric E. Schmidt, and G.E.'s chief executive, Jeffrey R. Immelt, alluded briefly to the partnership in a joint appearance at Google's Zeitgeist conference, which is taking place at the company's headquarters in Mountain View, Calif.

The two executives gave few details of their planned collaboration. In an interview after their presentation, Dan Reicher, director of climate change and energy initiatives at Google.org, an operating unit of Google, said the effort was in its planning stages and did not have a set budget.

"All this talk about renewable energy will not be realized if we do not build substantial additional transmission capacity," Mr. Reicher said.

Without additional capacity, Mr. Reicher said, it would not be possible, for example, to get power from a solar plant in the Mojave Desert to Los Angeles, or from a wind farm in the Dakotas to Chicago. Mr. Reicher said that environmental standards, overlapping state and federal regulations and other policy issues were among the biggest impediments to building additional transmission capacity.

Google and G.E. are also discussing how to combine their respective software and hardware expertise to enable technologies like plug-in hybrids on a large scale and to accelerate the development of geothermal energy.

For Google, the partnership with G.E. is part of larger set of energy initiatives, including direct investments in green technology to help develop renewable energy that is cheaper to produce than coal-generated power. For its part, G.E. has made a large bet on green energy technologies, an initiative the company calls Ecomagination.

http://bits.blogs.nytimes.com/2008/09/17/google-and-general-electric-team-up-on-energy-initiatives/?th&emc=th

A Vision of Old Boston in All Its Angry Power

By JANET MASLIN

THE GIVEN DAY

By Dennis Lehane

704 pages. William Morrow. $27.95.

In "The Given Day" Dennis Lehane uses "fierce-terrible" as a two-fisted Irish modifier, an archaic way of signifying tremendous angry power. He not only links the term to comically quaint Irish brogues but also demonstrates, through the gut-wrenching force of this stunning historical novel, exactly what it means.

No more thinking of Mr. Lehane as an author of detective novels that make good movies ("Gone, Baby, Gone") and tell devastatingly bleak Boston stories ("Mystic River"). He has written a majestic, fiery epic that moves him far beyond the confines of the crime genre.

Shades of Doctorow and Dreiser surround Mr. Lehane's choice of 1919 as the time for this expansive story. It is not simply the relatively unexplored eventfulness of that year that makes "The Given Day" so far reaching; it's the relentless fierce-terrible nature of the turmoil on parade.

In 1919, as Mr. Lehane illustrates with such sweep and agility, World War I was ending, sending home soldiers who would reshape the labor market; the Spanish Influenza plague still raged; Bolsheviks and anarchists were branded the terrorists of their time; the Volstead Act was about to inaugurate Prohibition, creating whole new dimensions of caste and crime; and baseball players talking to game-fixers were laying the groundwork for the Black Sox scandal at the World Series. As for Boston, it was beset by an apocalyptic, groundbreaking police strike. Not content with that broad swath of material, and looking back to the East St. Louis Riot of 1917, Mr. Lehane also makes racial tensions a major part of his book's enthralling drama.

Babe Ruth, who turns up throughout "The Given Day," is Mr. Lehane's unlikely fulcrum. The book begins in September 1918 with Ruth on a train, en route from Chicago to Boston in the midst of the World Series. The train breaks down in Ohio, leaving the white ballplayers with time to kill. Babe happens onto a group of black players and decides to engage them in some harmless, sporting fun.

The segregated black and white teams get along fine — until the blacks start winning. One particularly gifted black player, Luther Laurence, who will become one of this novel's central characters, is good enough to get Babe's goat. When Luther walks away from an easy catch and throws the game to avoid an ugly showdown, he creates the highly charged atmosphere in which "The Given Day" will unfold. In this one episode Mr. Lehane signals the questions of fairness, conscience, fame, power and tactical maneuvering that shape his panoramic story.

The book moves to Boston to meet the Coughlins, the lace-curtain Irish family of a proud police captain. The Coughlins would be straight out of central casting if Mr. Lehane, cementing his reputation as the bard of Irish Boston, did not draw them with such insight and intimate familiarity. The patriarch, Thomas Coughlin, casts a long shadow over all three of his sons, particularly Danny, the headstrong eldest. Danny has followed his father onto the police force but will develop an idea of lawfulness very different from his old man's.

Early in the novel Danny is caught in the terrorist bombing of a station house. He finds out what it's like to look up from the basement and see the sky. Deeply swayed by this experience, he is talked into spying on dissidents suspected of spreading radical ideas among Boston's immigrants. And he is promised a promotion if he penetrates their ranks. "You don't cotton to radicals, do you, Mr. Coughlin?" asks the vaguely menacing Justice Department lawyer John Hoover, who is soon to be known as J. Edgar Hoover and is one of the book's occasional celebrity walk-ons. Though a drunken "Gene" O'Neill calls Babe Ruth "the Emperor Jones" here and gets slugged by Ruth for his trouble, most of the cameos do nothing to overshadow the book's main action.

"The Given Day"— with a title that uses "given" to signify both specificity and gift — moves relatively mildly at first. It tethers Luther to a marriage in Tulsa, only to rupture that bond and send him fleeing to the supposed safety of Boston; it puts Luther in the Coughlins' employ and creates an affectionate link between him and Nora, the former waif who winds up bewitching two Coughlin sons. It even introduces Luther to the burgeoning N.A.A.C.P., as the book's characters create new families to replace their given ones. During all of this relative calm it's almost possible to forget what Mr. Lehane can ignite when tempers mount, storms gather, and unimaginably savage violence ruptures any veneer of civilized society. Not for nothing are bomb-throwing anarchists at the heart of this rich, intricate story.

Once the cauldron boils over, "The Given Day" becomes a wrenchingly suspenseful book. It triggers grim certainty that Mr. Lehane's tenderly drawn players will not survive the events that envelop them. Luther is goaded viciously by the bullying, rogue Lieutenant Eddie McKenna of the police, one of Mr. Lehane's most ferocious creations and a terrifying villain in this story. The political landscape, in what becomes a deeply felt novel of political cowardice and corruption, is also filled with visions of indelible evil.

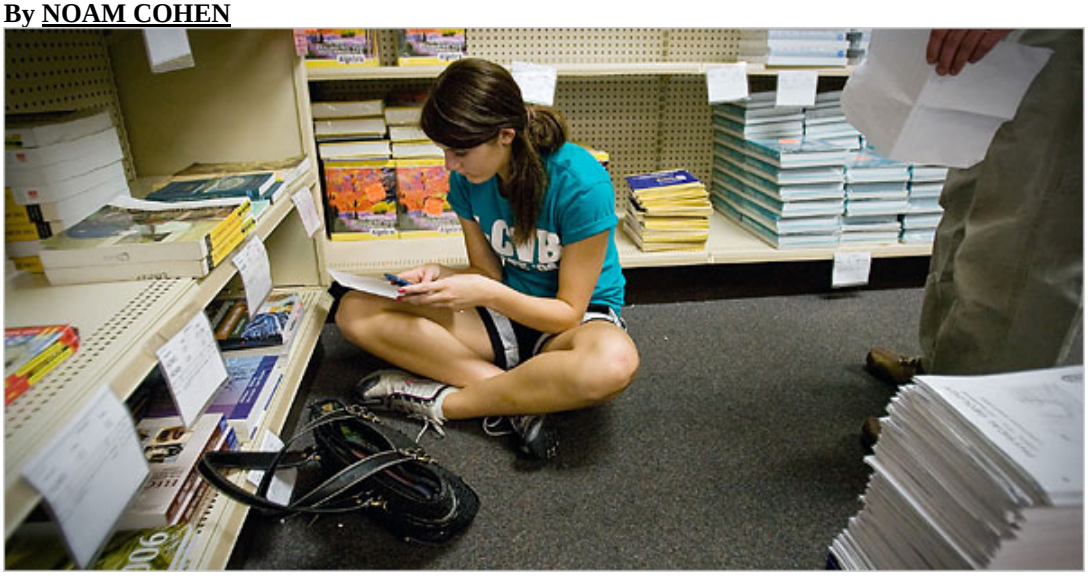
"The Given Day" creates a particularly chilling portrait of Boston's police commissioner, Edwin Upton Curtis, as a dangerous has-been with no regard for the safety, dignity or vulnerability of his cops. When the strike erupts, turning Boston into "an uncaged zoo," Mr. Lehane renders it with staggering fury.

The searing precision with which the book describes this devastation is one of its great strengths. ("Blackened storefronts. Overturned carts and overturned cars, all burnt. Two halves of one skirt in the gutter, wet and covered in soot.") But that quiet horror, reminiscent as it is of the best of "Mystic River," is by no means this book's sole source of strength. "The Given Day" is a huge, impassioned, intensively researched book that brings history alive by grounding the present in the lessons of the past. When Mr. Lehane writes of "a man who wore his power like a white suit on a coal black night," he could be writing about a distant time — or writing about his own.

http://www.nytimes.com/2008/09/18/books/18masl.html?th&emc=th

Don't Buy That Textbook, Download It Free

By NOAM COHEN



SQUINT hard, and textbook publishers can look a lot like drug makers. They both make money from doing obvious good — healing, educating — and they both have customers who may be willing to sacrifice their last pennies to buy what these companies are selling.

It is that fact that can suddenly turn the good guys into bad guys, especially when the prices they charge are compared with generic drugs or ordinary books. A final similarity, in the words of R. Preston McAfee, an economics professor at Cal Tech, is that both textbook publishers and drug makers benefit from the problem of "moral hazards" — that is, the doctor who prescribes medication and the professor who requires a textbook don't have to bear the cost and thus usually don't think twice about it.

"The person who pays for the book, the parent or the student, doesn't choose it," he said. "There is this sort of creep. It's always O.K. to add $5."

In protest of what he says are textbooks' intolerably high prices — and the dumbing down of their content to appeal to the widest possible market — Professor McAfee has put his introductory economics textbook online free. He says he most likely could have earned a $100,000 advance on the book had he gone the traditional publishing route, and it would have had a list price approaching $200.

"This market is not working very well — except for the shareholders in the textbook publishers," he said. "We have lots of knowledge, but we are not getting it out."

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While still on the periphery of the academic world, his volume, "Introduction to Economic Analysis," is being used at some colleges, including Harvard and Claremont-McKenna, a private liberal arts college in Claremont, Calif..

And that, in a nutshell, is a big difference between textbook publishers and the drug makers. Sure, there have been scientists with Professor McAfee's attitude — Jonas Salk was asked who owned the patent to the polio vaccine and scoffed: "Could you patent the sun?"

For the textbook makers, however, it is a different story. Professor McAfee allows anyone to download a Word file or PDF of his book, while also taking advantage of the growing marketplace for print on demand.

In true economist fashion, he has allowed two companies, Lulu and Flat World Knowledge, to sell print versions of his textbook, with Lulu charging $11 and Flat World anywhere from $19.95 to $59.95. As he said on his Web site, he is keeping the multiple options to "further constrain their ability to engage in monopoly pricing."

A broader effort to publish free textbooks is called Connexions, which was the brainchild of Richard G. Baraniuk, an engineering professor at Rice University, which has received $6 million from the William and Flora Hewlett Foundation. In addition to being a repository for textbooks covering a wide range of subjects and educational levels, its ethic is taken from the digital music world, he said — rip, burn and mash.

Unlike other projects that share course materials, notably OpenCourseWare at M.I.T., Connexions uses broader Creative Commons license allowing students and teachers to rewrite and edit material as long as the originator is credited. Teachers put up material, called "modules," and then mix and match their work with others' to create a collection of material for students. "We are changing textbook publishing from a pipeline to an ecosystem," he said.

Like Professor McAfee, Professor Baraniuk says he decided to share his material while writing a textbook.

"If I had finished my own book, I would have finished a couple years ago," he said. "It would have taken five years. It would have spent five years in print and sold 2,000 copies." Instead, he said, he posted it on the Web site and there have been 2.8 million page views of his textbook, "Signals and Systems," including a translation into Spanish.

Connexions is strongest in statistics and electrical engineering — areas with technologically advanced students and a greater need to update material than, say, works on medieval history. He said there were 850,000 unique users a month, with more than 50 percent of the traffic originating from outside the United States.

"It's anyone's guess as to when we will break through," he said.

One of the most popular Connexions contributors is Sunil Kumar Singh, a production engineer from New Delhi who works for the Oil and Natural Gas Corporation of India. He explains physics for precollege students, using the feedback from readers who e-mail from all over the world.

"It is a two-way process," he wrote in an e-mail message. "I, for one, have experienced difficulty during my formal study years with the best of textbooks around." He said the new system "gives me opportunity to respond to the editing needs all the time."

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While these open-source projects slowly grow, the textbook publishers have entered the online publishing field with CourseSmart, a service owned by five publishers. In service for only a year, CourseSmart allows students to subscribe to a textbook and read it online, with the option of highlighting and printing out portions of it at a time.

The price is generally half of what a print book costs, a sum that can still appear staggering — an introductory economics textbook costs around $90 online. (This semester, a student has the option of downloading a book as well — but it is an either-or choice: read online or download to a computer.)

Frank Lyman, executive vice president at CourseSmart, said that the company was created in response to changing times. “There wasn’t a lot of content and it was in a bunch of formats,” he said of past efforts by publishers. “There never was any momentum.”

There are 4,000 textbooks currently available — about a third of the market — but the goal is to cover “50 percent of the backpack.” Without being specific, he said that tens of thousands of textbooks have been read online and that 1,240 separate institutions have a student who has made at least one e-textbook purchase.

While conceding that open-source textbooks would take hold in a few subject areas, Mr. Lyman stressed that the current system would still prevail and that collaborative works online would have a hard time winning an audience.

“Of all the things that are changing, one thing is consistent — the authorship model,” he said.

“What doesn’t worry me is that leading experts will say I will write my own damn book and people will read it.”

http://www.nytimes.com/2008/09/15/technology/15link.html?th&emc=th

Exuberant Riffs on a Land Run Amok

By MICHIKO KAKUTANI

David Foster Wallace used his prodigious gifts as a writer — his manic, exuberant prose, his ferocious powers of observation, his ability to fuse avant-garde techniques with old-fashioned moral seriousness — to create a series of strobe-lit portraits of a millennial America overdosing on the drugs of entertainment and self-gratification, and to capture, in the words of the musician Robert Plant, the myriad "deep and meaningless" facets of contemporary life. A prose magician, Mr. Wallace was capable of writing — in his fiction and nonfiction — about subjects from tennis to politics to lobsters, from the horrors of drug withdrawal to the small terrors of life aboard a luxury cruise ship, with humor and fervor and verve. At his best he could write funny, write sad, write sardonic and write serious. He could map the infinite and infinitesimal, the mythic and mundane. He could conjure up an absurd future — an America in which herds of feral hamsters roam the land — while conveying the inroads the absurd has already made in a country where old television shows are a national touchstone and asinine advertisements wallpaper our lives. He could make the reader see state-fair pigs that are so fat they resemble small Volkswagens; communicate the weirdness of growing up in Tornado Alley, in the mathematically flat Midwest; capture the mood of Senator John McCain's old "straight talk" campaign of 2000.

Mr. Wallace, who died Friday night at his home in Claremont, Calif., at 46, an apparent suicide, belonged to a generation of writers who grew up on the work of Thomas Pynchon, Don DeLillo and Robert Coover, a generation that came of age in the '60s and '70s and took discontinuity for granted. But while his own fiction often showcased his mastery of postmodern pyrotechnics — a cold but glittering arsenal of irony, self-consciousness and clever narrative high jinks — he was also capable of creating profoundly human flesh-and-blood characters with three-dimensional emotional lives. In a kind of aesthetic manifesto, he once wrote that irony and ridicule had become "agents of a great despair and stasis in U.S. culture" and mourned the loss of engagement with deep moral issues that animated the work of the great 19th-century novelists.

For that matter, much of Mr. Wallace's work, from his gargantuan 1996 novel "Infinite Jest" to his excursions into journalism, felt like outtakes from a continuing debate inside his head about the state of the world and the role of the writer in it, and the chasm between idealism and cynicism, aspirations and reality. The reader could not help but feel that Mr. Wallace had inhaled the muchness of contemporary America — a place besieged by too much data, too many video images, too many high-decibel sales pitches and disingenuous political ads — and had so many contradictory thoughts about it that he could only expel them in fat, prolix narratives filled with Möbius strip-like digressions, copious footnotes and looping philosophical asides. If this led to self-indulgent books badly in need of editing — "Infinite Jest" clocked in at an unnecessarily long 1,079 pages — it also resulted in some wonderfully powerful writing.

He could riff ingeniously about jailhouse tattoos, videophonic stress and men's movement meetings. A review of a memoir by the tennis player Tracy Austin became a meditation on art and athletics and the mastery of one's craft. A review of a John Updike novel became an essay on how the "brave new individualism and sexual freedom" of the 1960s had devolved into "the joyless and anomic self-indulgence of the Me Generation." Although his books can be uproariously, laugh-out-loud funny, a dark threnody of sadness and despair also runs through Mr. Wallace's work. He said in one interview that he set out with "Infinite Jest" "to do something sad," and that novel not only paints a blackly comic portrait of an America run amok, but also features a tormented hero, who is reeling from his discovery of his father's bloody suicide — his head found splattered inside a microwave oven. Other books too depict characters grappling with depression, free-floating anxiety and plain old unhappiness. One of the stories in "Oblivion" revolved around a cable TV startup called "the Suffering Channel," which presented "still and moving images of the most intense available moments of human anguish."

Like Mr. DeLillo and Salman Rushdie, and like Dave Eggers, Zadie Smith and other younger authors, Mr. Wallace transcended Philip Rahv's famous division of writers into "palefaces" (like Henry James and T. S. Eliot, who specialized in heady, cultivated works rich in symbolism and allegory) and "redskins" (like Whitman and Dreiser, who embraced an earthier, more emotional naturalism). He also transcended Cyril Connolly's division of writers into "mandarins" (like Proust, who favored ornate, even byzantine prose) and "vernacular" stylists (like Hemingway, who leaned toward more conversational tropes). An ardent magpie, Mr. Wallace tossed together the literary and the colloquial with hyperventilated glee, using an encyclopedia of styles and techniques to try to capture the cacophony of contemporary America. As a result his writing could be both brainy and visceral, fecund with ideas and rich with zeitgeisty buzz.

Over the years he threw off the heavy influence of Mr. Pynchon that was all too apparent in "The Broom of the System" (1987) — which, like "The Crying of Lot 49," used Joycean word games and literary parody to recount the story of a woman's quest for knowledge and identity — to find a more elastic voice of his own in "Infinite Jest." That novel used three story lines — involving a tortured tennis prodigy, a former Demerol addict and Canadian terrorists who want to get their hands on a movie reputed to be so entertaining it causes anyone who sees it to die of pleasure — to depict a depressing, toxic and completely commercialized America. Although that novel suffered from a lack of discipline and a willful repudiation of closure, it showcased Mr. Wallace's virtuosity and announced his arrival as one of his generation's pre-eminent talents.Two later collections of stories — "Brief Interviews With Hideous Men" (1999) and "Oblivion" (2004), which both featured whiny, narcissistic characters — suggested a falling off of ambition and a claustrophobic solipsism of the sort Mr. Wallace himself once decried. But his ventures into nonfiction, "A Supposedly Fun Thing I'll Never Do Again" (1997) and "Consider the Lobster" (2005), grounded his proclivity for meandering, stream-of-consciousness musings in sharp magazine assignments and reportorial subjects, and they evinced the same sort of weird telling details and philosophical depth of field as his most powerful fiction. They reminded the reader of Mr. Wallace's copious gifts as a writer and his keen sense of the metastasizing absurdities of life in America at a precarious hinge moment in time.

http://www.nytimes.com/2008/09/15/books/15kaku.html?th&emc=th

Tapes Offer New Clues to a Master of Mystery

By JULIE BOSMAN

"A complete egoist," Agatha Christie said of Hercule Poirot, her brilliant, diminutive, impeccably dressed Belgian detective.

"Puffy and spinsterish," she quipped of Miss Marple, her other famous sleuth. "The old spinster lady living in a village."

Uttered in the reedy voice of Christie herself, these withering descriptions are contained on a cache of audiotapes, recently discovered in a dusty cardboard box in one of her former houses by her only grandson, Mathew Prichard.

The tapes — 27 reels running a total of more than 13 hours — are filled with Christie's painstaking dictation of her life story, rough material recorded in the early 1960s that eventually made up her autobiography, published posthumously in 1977. It stands as one of only a handful of recordings of Christie, the British mystery writer, who rarely agreed to be interviewed.

Christie's estate is expected to announce its discovery on Monday, the 118th anniversary of her birth, calling the tapes a rare find and a significant addition to the collection of memorabilia related to Christie.

In Britain the appetite for all things Agatha Christie is still fierce. Devoted fans still mark her birthday with a weeklong festival of theater performances, treasure hunts, teas and murder-mystery parties. And

while her books have never been considered high literary art, more than 500,000 copies of them are sold in Britain each year. She has been outsold in volume only by Shakespeare and the Bible.

Taking into account such strong interest, Christie's estate is considering releasing part of the tapes or publishing a new, updated version of her autobiography.

"These are very personal tapes," said Tamsen Harward, a manager at Chorion, the company that controls Christie's literary properties. "There are bits and pieces of the autobiography that could be reviewed, in light of listening to the tapes."

And in a mystery that might have piqued the interest of one of Christie's fictional sleuths, only the final third of her life story can be heard on the recordings.

"We believe that, being a frugal woman, she reused the tapes," Ms. Harward said, adding that Christie "clearly" did not feel the recordings had any historical value.

Her modern-day admirers may disagree. The tapes were dictated on a reel-to-reel recorder that was abandoned in the same box with the 27 reels of tape. With an occasional crackle in the background Christie can be heard talking about writing, about her characters and how she conceived them, with her tone varying from casual and meandering to crisp and professional.

"They're extraordinary," said Laura Thompson, Christie's biographer. "Nobody sounds like that anymore. She's old England. She sounds like an Edwardian, like a gentlewoman, like a lady. It's as though she's suspended in an early-20th-century world where the social order is intact, and murder is only conducted in a socially acceptable arena — arsenic in the crumpets, or something."

In one tape Christie recalls how she conjured the character of Miss Marple, who was originally mentioned in short stories but made her first significant appearance in a novel, "The Murder at the Vicarage."

"I have now no recollection at all of writing 'Murder at the Vicarage,' " Christie said in the recording. "That is to say, I cannot remember where, when, how I wrote it, why I came to write it. And I don't even remember why it was that I selected a new character, Miss Marple, to act as a sleuth in the case. Certainly at the time I had no intention of continuing her for the rest of my natural life."

In another recording she ponders the repeated suggestion that Miss Marple and Poirot, two of her most prominent characters, should be introduced to each other.

"People never stop writing to me nowadays to suggest that Miss Marple and Hercule Poirot should meet," Christie said. "But why should they meet? I'm sure they would not like meeting at all. I shall not let them meet unless I feel a really sudden and unexpected urge to do so."

Her grandson, Mr. Prichard, who is also the chairman of Agatha Christie Limited, said he does not intend to make every minute of the tapes public. "One thing we probably won't do is release in its entirety the discovery we've made," he said. "There are quite extensive parts that are confused and slightly rambling and obviously had to be quite seriously edited for the autobiography."

After all, it is possible that Christie never intended the tapes to be heard. She left them in a storeroom in one of her former houses, in Devon, outside Torquay, among piles of other memorabilia.

When Mr. Prichard discovered them, he had intended to begin cleaning out his grandmother's former house. "There was literally almost a house full of archives, paraphernalia, rubbish, everything," he said.

After discovering the tapes he took them to a friend, who managed, with some difficulty, to operate the recorder and transfer the sound to a digital file.

Among the few other recordings of Christie's voice are a BBC interview from 1955 and a 1974 recording in which she recalled her experience in a World War I medical dispensary, where she gained a working knowledge of poisons.

Agatha Mary Clarissa Miller was born on Sept. 15, 1890, to a wealthy American father and British mother. She married twice and kept a low profile, sometimes refusing to allow publishers to put an author photo on her books.

She wrote 66 detective novels (including "Murder on the Orient Express" and "Death on the Nile"), 163 short stories, 19 plays, 4 nonfiction works (including her self-titled autobiography) and 6 romantic novels under the pseudonym Mary Westmacott.

She killed off Poirot in her 1975 novel, "Curtain," a death reported in a front-page obituary for Poirot in The New York Times on Aug. 6, 1975. The next year Christie died at 85.

Ms. Thompson, her biographer, said that throughout Christie's half-century of writing she remained fiercely protective of her characters.

"She had a very definite sense of their worth," Ms. Thompson said. "I don't think she would have cared to hear people talk about those characters in the way that she did."

http://www.nytimes.com/2008/09/15/books/15agatha.html?th&emc=th

The Poetry of Scissors and Glue

By HOLLAND COTTER

THE artist was, maybe, a little nervous. Who would not be? It was a few days before his first one-man New York gallery show; his first, in fact, anywhere.

What pictures, exactly, will be included, asked a visitor to the artist's Chelsea apartment, which, with its books, Victorian settee and family photographs, suggests a study, not the studio that it is. Well, that's hard to say, because things are still being framed, and we're not sure quite what's where. Will the artist supervise the installation? No, no, the gallery will do everything. They're the experts. He'll just turn up at the opening.

Of the hundreds of openings in the city this fall, this one will be particularly distinctive. Because the artist is the pre-eminent American poet John Ashbery, making his solo debut as professional artist at 81, with a modest but polished exhibition of two dozen small collages.

A couple of them date from his college years in the 1940s. Most are from the 1970s and were recently rediscovered tucked away in a shoebox. "I lost those for a long time," he says. "Quite a few others got thrown out." Several more are hot off his apartment work table.

The show, which is at Tibor de Nagy Gallery on Fifth Avenue near 57th Street, carries a gentle charge of New York history. When the gallery first opened its doors a few blocks away in 1950, Mr. Ashbery, new to New York, was there for the inaugural party.

It was the place to be. With its air of new-generation chic, the gallery was one of the few where young artists dodging the shadow of Abstract Expressionism and poets doing strange things with language could meet as collaborators and friends.

The ’50s, of course, were the great New York moment of painter-poet convergence. Tibor de Nagy, which both exhibited art and published poetry, helped shape it. Mr. Ashbery’s first slender volume, “Turandot and Other Poems,” appeared under the gallery’s imprint in 1953.

To Mr. Ashbery the intermingling of artist and writer always made sense, because he was both, though his primary ambition while growing up in rural upstate New York was to be a painter. And not just any kind of painter, but a Surrealist.

That he was a childhood film freak helped form a Surrealist sensibility, though there were also more specific influences. In 1936 he saw a Life magazine spread on a big show called “Fantastic Art, Dada, and Surrealism” at the Museum of Modern Art, and that was the convincer: He was 11. Max Ernst, of the book-long collages, became his lodestar.

Mr. Ashbery’s artistic ambitions stayed high until 1945 when he got to Harvard, where, for practical reasons, they died down. “There was no place to paint, so I stopped,” he says. But by then he was already writing a lot of poetry and starting to do collage. In addition to being the perfect dorm-room art, collage is the ideal writer’s art, not just because it can incorporate words, but because it can be done on a desk. You lay out your paper, glue and scissors, push aside the computer — or the typewriter, which Mr. Ashbery still uses for poetry — and you’re set to go.

The two earliest collages are student pieces. In one, based on an illustration from a German children’s book, Mr. Ashbery transforms schoolboys into Ernstian birds. The second is a horror-film affair with a screaming woman, a cruising shark and an upside-down chandelier.

As is often true in Mr. Ashbery’s poetry, there is a hint of a narrative, though what the story might be is hard to say. And the artist, famously tight-lipped about meaning in his poems, doesn’t offer explications.

“I never had any kind of program or anything. I did the collages for amusement, without thinking anyone else would see them or be interested.”

Around the time he discovered collage at Harvard, he also discovered poets, live ones. Two of them, Kenneth Koch and John O’Hara, were fellow students. They read French Surrealist poets in French; they quoted Marianne Moore and Gertrude Stein; they knew their way around new music and art. New York City was their goal. It became Mr. Ashbery’s too.

His life in the city, and in Paris during the decade he spent there from 1955 to 1965, was itself a collage, a crazy quilt of activities, disparate in pace and character but intermeshed. He continued to write and publish poetry; at the same time he embarked on a high-profile career as an art critic, first at ARTnews, then at New York magazine, finally at Newsweek.

For him the journalistic experience was, from the start, “pretty hairy.”

“I’m not the sort of person who jumps on a plane, comes back the next day and turns in a story,” he says. “I still have nightmares about this.”

But whatever grief reviewing caused him, the results were wonderful. A collection of his criticism, “Reported Sightings: Art Chronicles 1957-1987,” is a fixture in art critics’ libraries. And the necessity of producing for magazine deadlines had an effect on his other work. If he could turn out a high volume of prose on demand, why not do the same with poetry?

This led him to refine a speeded-up compositional method that he was already experimenting with. It involved picking up found phrases and images, putting them next to different phrases and images, inviting both brilliant accident and bruising confusion. (Mr. Ashbery’s fans and detractors are defined by which

they find more of in his poetry.) Later came the hand-editing — splicing, trimming and smoothing — to shape final results.

He was, in other words, making language-collages based on principles learned from paper collages, which were in his hands, based on techniques learned from films.

The bulk of the work in the Tibor show is from the 1970s, when Mr. Ashbery spent parts of summers visiting the artist Joe Brainard (1942-1995) in Vermont. “After dinner we got in the habit of sitting around and cutting up old magazines and making collages,” Mr. Ashbery recalls.

His were straightforward in format. Most have three elements: a postcard (found, vintage, often redolent of the past); one or two cut-and-paste images; and a clever title.

The insouciant Pop-ish sensibility in some pieces owes a debt to Mr. Brainard’s brilliant collage work, as in Mr. Ashbery’s “Diffusion of Knowledge,” with its pair of all-American comic-strip superheroes mounting a spirited defense of the Smithsonian Institution castle in Washington. Other collages are just clever visual word-plays: the image of a big nose in profile looming over a Norwegian fjiord is “Norge.” And a few are minor jokes on art history: In “Notre Dame des Neiges,” a pale-skinned Raphael beauty presides, Madonna-like, over a snowy alpine resort.

“Poisson d’Avril” goes for camp. Here a Little Lord Fauntleroy figure, gender uncertain, laden down with a basket of flowers, appears against a starburst of pleated pink tulle that could be an aura or a splayed-out tutu. The tableau, set against a postcard view of a sequoia forest, is like a unisex version of Hansel and Gretel choreographed by Les Ballets Trockadero.

Some of the elements in recent collages he didn’t find himself, though they are part of his history. “Joe used to send me envelopes filled with old postcards and cutout things he thought I could use,” Mr. Ashbery says. Now that material has found its way into a homage to Brainard completed this year.

That piece is done on a photocopy of an antique gridded game board used for playing Chutes and Ladders, which was popular in Britain but originated in India, where it had metaphysical implications. With each toss of the dice, you either climbed upward toward spiritual bliss or slid down.

The particular game board that Mr. Ashbery used is printed with images of snowy hills with children on sleds. The collage he placed on top of it is a vision of heaven as a kind of school playground at recess time, one filled with surly cartoon monsters and hugging boys, raspberries and pansies, devils and babies, and a big serving of dessert on the side. Innocence and experience, sex and nonsense coexist, overlapping, intertwined.

Mr. Ashbery wrote beautifully about Mr. Brainard in a catalog for a 1997 retrospective at Tibor de Nagy. And as a critic he has often been at his best about artists who are collagist in essence, if not in fact. Joseph Cornell was one. Mr. Ashbery prefaced his review of the 1967 Cornell Guggenheim show with a Rimbaud quotation that applies as much to his own collage-driven poetry as to Cornell’s assemblages:

“I loved stupid paintings, decorated transoms, stage sets, carnival booths, signs, popular engravings; old-fashioned literature, church Latin, erotic books with nonexistent spelling, the novels of our grandmothers, fairy tales, children’s books, old operas, silly refrains, naïve rhythms.”

And he gets at the extremely personal meaning collage can carry in a 1970 article about the New York collagist Anne Ryan (1889-1954), a self-taught, self-supporting artist who began, at around the age of 50, to make abstract collages of great expressive range from fabric and cloth. The way Mr. Ashbery begins the piece takes us right back to his own creative beginnings: “When I was a small child there was a box in the attic containing neatly trimmed scraps of material that had once belonged to dresses, aprons, blouses,

dish towels, and which were apparently intended for a quilt that never got made. I was fascinated by them and used to pour over them with the zeal of an Egyptologist. There was a language there."

Language as collage. Collage as language. As is usually the case, Mr. Ashbery can present a heavyish idea without sounding heavy. One thing he obviously values in collage is its implied anyone-can-do-it modesty, its lack of high-artiness, its resistance to monumentality. His own collages have this character. They're light and slight. They feel more like keepsakes than like art objects, souvenirs of a life and career that gain interest primarily — some might say entirely — within the context of that life and career.

Interestingly, they are being brought to light at a time when Mr. Ashbery and his poetry are being officially declared national monuments. Next month the Library of America will publish "John Ashbery: Collected Poems 1956-1987," a 1,050-page volume encompassing roughly half of his output. He is the first living poet to be included in this canon-constructing literary series.

But for the moment Mr. Ashbery has this opening to think about. Some brand-new collages are spread out on a coffee table. This one isn't quite done. This one might have made the list, but too late now. On the wall behind him an Anne Ryan hangs: a tiny construction of fabric blocks and a red just left of center, like a beating heart.

After talking about the past and worrying about the present, Mr. Ashbery says, as if slightly surprising himself, that making collages "sort of stimulates my writing — there's no fear of having my energy drained away."

A visitor ventures the idea that maybe, in some way, not directly, or definitively, the collages, and his critical writing, and his poetry, are all interrelated, and that the show ties a little knot? Mr. Ashbery considers this. Yes, he says, "I can see how this completes the circle."

http://www.nytimes.com/2008/09/14/arts/design/14cott.html?th&emc=th

On the Ground

By ROBERT STONE

THE FOREVER WAR

By Dexter Filkins

Illustrated. 368 pp. Alfred A. Knopf. $25

Every war has its own culture. Obviously, part of a war's cultural milieu reflects contemporary modes in the countries involved. However, historians like Paul Fussell and Modris Eksteins have demonstrated how engagement in an ongoing military struggle affects the collective consciousness and self-regard of a nation, creating a transactional process between the front lines and the civilian street. Somebody seems to be winning, someone else losing, but often the important consequences of a wartime situation are not the direct results of decisions in the theater of operations. Many people die; families, marriages and cities are destroyed. Things that seem manifest at the time leave people within the next half-century wondering about the delusions and miscalculations that set hordes of men and machines into action, that send so many ardent young people to the grave, along with innocent civilian populations. How necessary it seemed to many to defend what was claimed to be "democracy" in Asia against "totalitarianism." So American tourists in backcountry Vietnam happen on rusting tanks and mortars and buy Zippo lighters with forged inscriptions in the Ho Chi Minh City war museum in a town where socialism is a joke, and which plenty of people don't even call Ho Chi Minh City.

Tendencies and elements in certain societies that seemed marginal before a war turn out to be much more significant. Sometimes causes, strategies and motivations fervently embraced in the heat of battle are seen to be entirely different from what they were declared to be, or even believed to be, by the individuals responsible for them.

The cultural perspective of a war is changed in perception by the passage of time and generations. As Fussell observes in "The Great War and Modern Memory," military slang and usages pass into currency in the vernacular of the home front. Even the formal diction is militarized, literary tropes and all. The war's frustrations and dislocations experienced on the civilian street reveal themselves in the daily speech of men and women on the line. Ironizing was muted, even covert, in the Great War, less so in the Second, rampant during Vietnam as progressively the people of the century lost their innocence, learned more about the realities, believed and did less and less of what they were told. Bitter jokes appeared, flourished, were finally drained of meaning. Today if you want to evoke a wartime ambience from the last hundred years, you turn to the popular music and songs of the time. The cadences, literally, the rhythms of life and death in combat, the fears and concerns in the world at home are reflected so intensely in those songs. Language seems to fade more quickly as a reference point than music. Still, one of the oldest constant contributing elements of a conflict's cultural ambience has been the interpretive prose of correspondents. During the Second World War, Ernie Pyle seemed to convey the perspective of "the little guy," the "common man" in arms, a character much idealized in that struggle of basically nonprofessional soldiers against the hyper-conditioned heroes of two continents. In Vietnam, remembering the Ernie Pyles of the Great Patriotic War, and the loyally supportive reticence of reporters who witnessed the disastrous events of Korea, the upper echelons of the United States military expected to receive correspondents who would be aboard and with the program. But by the '60s America was changing and with it the values of college-trained journalists. The brass encountered a new generation of newspapermen touched by what some among the educated youth saw as a kind of reformed consciousness taking hold on American campuses. The journalist had become a more glamorous figure, driven by idealism, legitimized personal ambition and a new level of skepticism toward the official story. Youthful journalists no longer deferred to military authority, and some were driven to compete with their young contemporaries in the newly minted, increasingly blue-collar junior officer corps. These journalists often saw themselves as serving a higher truth than patriotism but also as performing a greater service to the public and the country than any number of generals. Reporters had been shocked to discover that one important weapon of military public relations is the lie. Some officers are good at it, others aren't. In the climate of the '60s dedicated journalists found collaborators within the military moved by the same impulses and ready to provide information that fueled their criticism. But at the outset, the American command, bless its homicidal innocence, believed it had nothing to hide.

Then, after two years of covering the most savage fighting of the war, Michael Herr assembled his reportage for Esquire in the book "Dispatches," published in 1977. "Dispatches" was what had come to be called "new journalism," but it transcended that form to become both a profound personal journal and the most brilliant exposition of the cultural dimension of an American war ever compiled. It captured and rendered in perfect pitch the frenetic sound and fractured consciousness of the war, the young people who endured it and its time. "Dispatches" set a high standard for reporters, but it set them free. Now, in the tradition of "Dispatches," with the publication of Dexter Filkins's stunning book, "The Forever War," it seems the journals of the brave correspondents assigned to the Middle East will take their place as the pre-eminent record of America's late-imperial adventures, the heart of these heartless exercises in disaster, maybe some consolation to those maimed and bereaved in them.

It is not facetious to speak of work like that of Dexter Filkins as defining the "culture" of a war. The contrast of his eloquence and humanity with the shameless snake-oil salesmanship employed by the American government to get the thing started serves us well. You might call the work of enlightening and guiding a deliberately misguided public during its time of need a cultural necessity. The work Filkins accomplishes in "The Forever War" is one of the most effective antitoxins that the writing profession has produced to counter the administration's fascinating contemporary public relations tactic. The political leadership's method has been the dissemination of facts reversed 180 degrees toward the quadrant of lies, hitherto a magic bullet in their never-ending crusade to accomplish everything from stealing elections to starting ideological wars. Filkins uses the truth as observed firsthand to detail an arid, hopeless policy in an unpromising part of the world. His writing is one of the scant good things to come out of the war.

The old adage holds that every army fights the previous war, learning nothing and forgetting nothing, as someone said of the restored Bourbon dynasty in France. The United States military did learn one strategy

for preventing the public relations disasters of Vietnam, and this was the embedding of correspondents with military units engaged. Michael Herr in Vietnam could not have been more alienated from the United States government's P.R. handouts, but his sharing the fortunes of American troops made his compassion, sometimes his plain love, for them available to thoughtful Americans. It's hard to imagine that Donald Rumsfeld's politically intimidated brass had "Dispatches" in mind when they decided to embed correspondents with American units, but it started out as an effective policy. One of the memorable bites of the early days of the Iraq invasion was the exultant embedded correspondent citing Churchill on camera: "There's nothing more exhilarating than being shot at and missed!" A far cry indeed from being shot at and hit.

All that worked for a while. Filkins opens "The Forever War" with a prologue describing the attack on the Sunni fortress of Falluja by the First Battalion, Eighth Marines. Embedded (and how) with Bravo Company, Filkins shares the deadly risks of street fighting in a hostile city in which the company, commanded by an outstanding officer, takes its objective and also a harrowing number of casualties. The description makes us understand quite vividly how we didn't want to be there and also makes ever so comprehensible the decision by George W. Bush and Dick Cheney to give our last excursion into Asia a pass. ("Bring 'em on!" said the president famously about this one.)

Filkins had been covering the Muslim world for years before the invasion of Iraq, and his book proper opens with a scene beyond the grimmest fiction, a display of Shariah religious justice staged in a soccer stadium in Kabul during the late '90s. Miscreants are variously mutilated and killed before a traumatized audience that includes a hysterical crowd of starveling war orphans whose brutalized, maimed futures in an endlessly war-ravaged country can be imagined.

For the reviewer — perhaps for the selfish reason that it takes place closer to home — the most dreadfully memorable witness that Filkins bears takes place not half a world away but in Lower Manhattan on Sept. 11. Filkins is making his way past Battery Park. "My eyes went to a gray-green thing spread across the puddles and rocks. Elongated, unrolled, sitting there, unnoticed. An intestine. It kind of jumped out at me, presented itself. It's amazing how the eyes do that, go right to the human flesh, spot it amid the heaviest camouflage of rubble and dirt and glass."

In Tel Aviv, Filkins recalls, he watched Orthodox Jewish volunteers seeking out the same sort of item in the aftermath of a suicide bomb. Filkins takes shelter from the cool night in the Brooks Brothers store in One Liberty Plaza. "Later that night," he writes, "I was awoken many times, usually by the police. Once when I came to, a group of police officers were trying on cashmere topcoats and turning as they looked in the mirror. There was lots of laughter. 'Nice,' one of them said, looking at his reflection, big smile on his face. 'Look at that.' "

Dexter Filkins, one of The New York Times's most talented reporters, employs a fine journalistic restraint, by which I mean he does not force irony or paradox but leaves that process to the reader. Nor does he speculate on what he does not see. These are worthy attributes, and whether their roots are in journalistic discipline or not they serve this unforgettable narrative superbly.

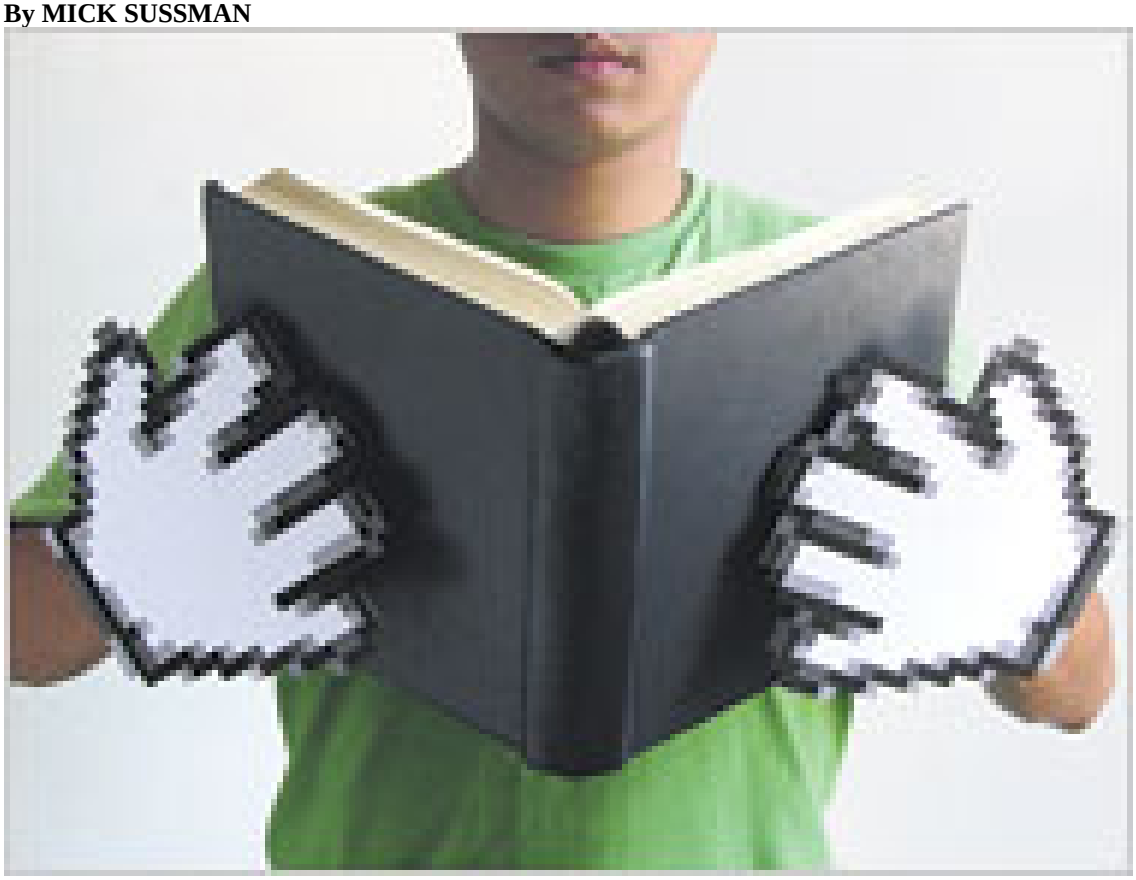
Someone, Chesterton it may have been, identified the sense of paradox with spirituality. Though Filkins does not rejoice in paradoxes, he never seems to miss one either, and the result is a haunting spiritual witness that will make this volume a part of this awful war's history. He entitles his section on Manhattan "Third World," and he leaves us feeling that the history he has set down here will not necessarily feature in our distant cultural recollections but may rather be history — the thing itself — come for us at last.

Robert Stone is the author of the novel "Dog Soldiers," set during the Vietnam War. His most recent book is "Prime Green: Remembering the Sixties."

http://www.nytimes.com/2008/09/14/books/review/Stone-t.html?8bu&emc=bua1

Attack of the Megalisters

By MICK SUSSMAN



Like his novels about the Old West, Larry McMurtry's memoir "Books" is an elegy for a disappearing way of life. For McMurtry, selling used books was a calling, one that attracted eccentric personalities (like the store owner who hid his best books in paper sacks) and demanded esoteric knowledge, "near to alchemy," of "editions, variants, points, bindings, provenance, cost codes." McMurtry especially relishes the tactile aspects of the trade most threatened by the Internet. "What fun is there in clicking," he asks, "compared to the pleasure of handling a fine copy of a rare book?"

Indeed, the state of the art in used-book selling these days seems to be less about connoisseurship than about database management. With the help of software tools, so-called megalisters stock millions of books and sell tens of thousands a week through Amazon, AbeBooks and other online marketplaces. Some sellers don't even own their wares. They just copy other sellers' lists and then buy the books as necessary, pocketing the markup (though none acknowledge the practice, since it is banned on most commercial sites).

To small sellers like Joe Orlando of Fenwick Street Used Books and Music in Leonardtown, Md., megalisters treat books as "simply a widget that they can make a few bucks on." The megalisters — a name originally intended as a term of abuse but now accepted by the accused — don't quite disagree. "What we're trying to do is provide cheap books for everybody," said G. Seth Beal, the president and chief operating officer of Thrift Books, which lists three million books and has 180 employees. Beal says he personally loves handling and collecting old volumes, but his business model is based on achieving economies of scale through automation.

Thrift Books acquires its stock literally by the ton, usually from libraries, secondhand stores and charities. Employees enter each book's ISBN code into the company's inventory, then post the book for sale on Amazon and other marketplace Web sites, using software to determine the price in relation to the competition. It isn't just a matter of beating the lowest price. Sellers can adjust a set of variables — specifying a price floor, for instance, or ignoring competing stores with poor customer ratings — to come up with their own algorithmic "secret sauce," explained Marc Fournet, the director of business development at FillZ, an inventory and pricing service.

Because of the sophistication of the software, automated pricing doesn't necessarily lead to a race to the bottom. Still, many popular books can be found on Amazon for a penny — including "The MacGregor Brides," by Nora Roberts; "The Bourne Ultimatum," by Robert Ludlum; and six of the other 15 titles on The Times's paperback fiction best-seller list from a year ago. The trick, according to a recent article in the trade magazine Fine Books & Collections, lies in the shipping allowance ($3.99 at Amazon), which lets an exceptionally efficient seller squeeze about 75 cents out of a transaction. Achieving that efficiency isn't easy. With 13 employees and an inventory of more than 140,000 books, Harvest Book Company is on the threshold of megalister status, but Eugene Okamoto, the company's president, says he hasn't yet pushed costs down enough to make a profit from penny books. "That's the holy grail," he said.

Though the rise of the megalisters has hurt many mom-and-pop operations, the toll has been less than catastrophic. A database maintained by Susan Siegel of Book Hunter Press lists 3,968 "open shops" — as brick-and-mortar outlets are known — across the United States today, down from 4,119 in 2002. A 4 percent drop over six years might not be something to cheer about, but it would seem downright enviable to record or video store owners. What method are the smaller used-book sellers using to survive? "Hit 'em where they ain't" by turning the labor-intensive "hand selling" approach into an advantage, says Gene Alloway, the co-owner of Motte & Bailey, Booksellers, in Ann Arbor, Mich.

The new strategy involves a selective embrace of e-commerce, focused mainly on a category of book that scarcely existed before the Internet — books you might call "rare but not collectible." These are books sought after not as artifacts or for resale value, but for their content — often concerning subjects with appeal to fervent communities of interest. If you absolutely have to have Joseph C. Lisiewski's "Kabbalistic Handbook for the Practicing Magician" right away, what else can you do but shell out the $149.50 for the cheapest of the three paperback copies available on Amazon? (The other two are priced at $349.19 and $349.89.) Before the Internet, a magic aficionado would almost certainly not have found that copy of the "Kabbalistic Handbook" in his local store, nor would the seller have known to set the book's price so high.

This segment of the market is not insubstantial. A recent search on Amazon, sorting by year, genre and price, turned up 99 biographies with paperback editions published in 2000 selling for over $100, including "Seth Green" ($201.88 and up), Elina and Leah Furman's "unauthorized biography" of the actor who played Dr. Evil's son in the "Austin Powers" movies, and "Without You" ($290 and up, with a CD), Dan Matovina's group portrait of the Welsh power-pop band Badfinger.

In some cases, less obscure used books will also become extravagantly expensive. "Before the Storm," Rick Perlstein's 2001 book on Barry Goldwater and the rise of the conservative movement, was selling in July for prices above $130. "The original publisher took the book out of print quite prematurely," Perlstein explained in a comment to a blog post on the subject.

A hand seller like Joe Orlando of Fenwick Street is doing much of his online business in this mid-to-high range. On Biblio.com, a marketplace devoted to independent sellers and the high-end rare-book trade, 44 percent of the offerings from Orlando's Fenwick store were selling for $25 or more and 17 percent for $50 or more. When it comes to selling rare books, megalisters may be at a disadvantage, partly because there are fewer benchmarks for their pricing software. And Alloway of Motte & Bailey says he's able to outwit the megalisters' computers, provoking price wars and then buying up books at below market value, holding them until prices readjust.

Hand sellers are preserving and circulating this new alchemical trade wisdom in online forums on sites like BookThink and AbeBooks. “This thread is potentially worth thousands of dollars to each and every one of you,” one participant in a discussion board on eBay wrote under the heading “A book that looks like nothing,” where sellers pass along tips on surprisingly valuable books. And the hand sellers have allies in marketplace sites like Biblio, which keeps out the penny sellers with policies like a $1 minimum price. “The meat of our sales tends to fall in the $40 to $125 range,” said Brendan J. Sherar, Biblio’s chairman and chief executive.

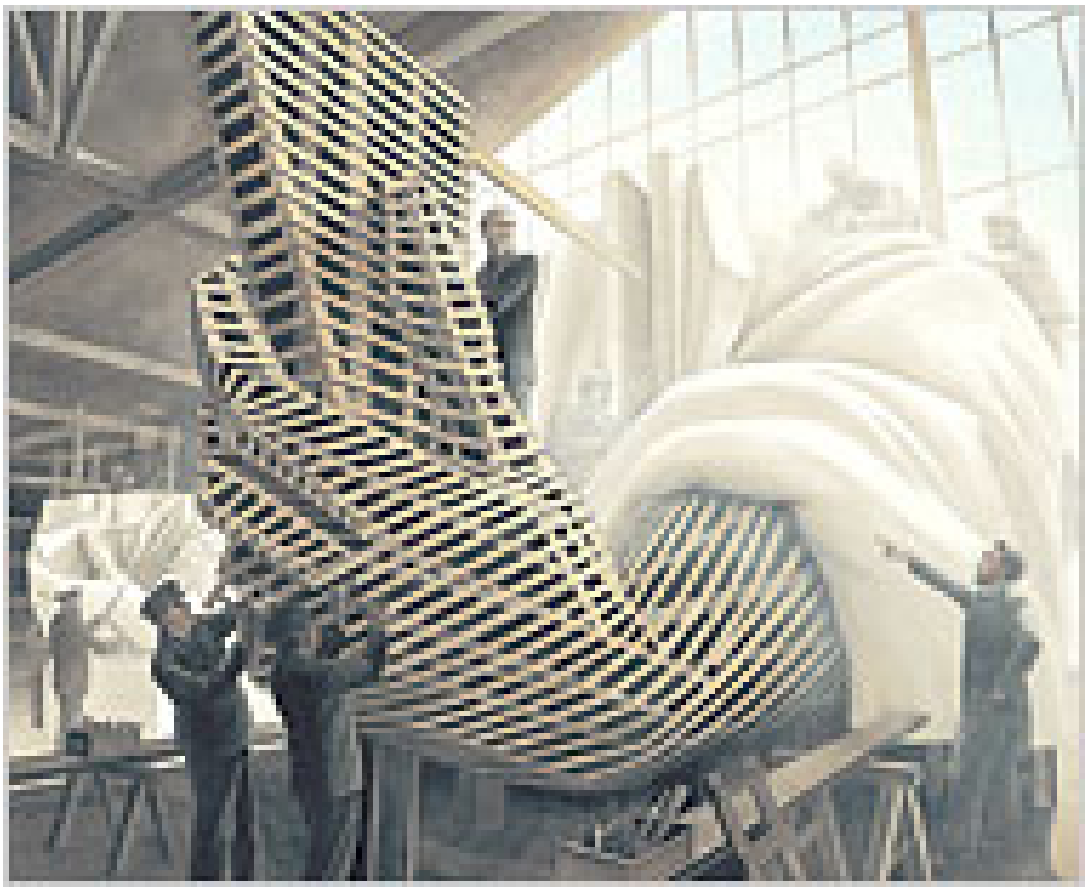
After the great wave of creative destruction set off by e-commerce, the more adaptable breed of used-book seller seems to have survived with McMurtrian ideals intact. Chris Volk, a store owner and the vice president of the Independent Online Booksellers Association, says her colleagues are frustrated but undaunted by the megalisters. “In the long run,” she said, “people who know what they’re doing will win out.”

Mick Sussman produces the home page for The New York Times on the Web.

http://www.nytimes.com/2008/09/14/books/review/Sussman-t.html?8bu&emc=bub1

New York Stories

Reviews by JAMES McMULLAN



LADY LIBERTY

A Biography

By Doreen Rappaport

Illustrated by Matt Tavares. Unpaged. Candlewick Press. $17.99. (Ages 5 to 9)

BUILDING MANHATTAN

Written and illustrated by Laura Vila

By Unpaged. Viking. $16.99. (Ages 6 to 8)

The question of how long or how short the text should be hangs over the author of a picture book in a way that a writer in no other form has to face. First there is the question of attention span: both of the child listening and of the parent reading. Then there is the more fundamental question of how the words and the

pictures work together. As Maurice Sendak says in Selma Lanes's book about him, "An illustration is an enlargement, an interpretation of the text." Later he adds, "It's a funny kind of juggling act, which takes a lot of technique and experience to keep the rhythm going."

One of the books considered here, "Building Manhattan," by Laura Vila, aspires to this back-and-forth relationship between short text and illustrations. The other, "Lady Liberty," by Doreen Rappaport, has a much longer narrative that essentially parallels the pictures. In this case the book with the longer text is more successful.

Rappaport uses a literary device that gives the writing a satisfying emotional immediacy: after an introduction about her immigrant grandfather, she tells the story of the statue's conception and construction entirely through the imagined voices of the principal actors. The visionary Édouard de Laboulaye, for instance, not only explains the beginnings of his idea to make the monument a gift to the people of America, but also suggests the early skepticism of the historian Henri Martin. In five short paragraphs, in a conversational voice, Rappaport has given us the simple facts as well as an insight into the personalities of two men who were involved in the statue's beginnings. It is historical teaching in a smoothly disguised form that should appeal to the curious 7- or 8-year-old, who would be the ideal reader for this book.

Rappaport includes all the expected figures — Auguste Bartholdi, Gustave Eiffel, Emma Lazarus and Joseph Pulitzer — but she chooses some unknown citizens as well, like Florence de Foreest, a little girl from Metuchen, N.J., who contributed two roosters to the campaign to raise money for building the statue's base. The story of digging the foundation for that base is told by Charles P. Stone, the construction supervisor, in the words of someone who is down in the mud with his workers. These modest voices enlarge the narrative and, at the same time, make it more intimate.

The book also provides several pages of facts about the statue and its history: important events, selected sources, an author's note and an illustrator's note. This added material seems totally appropriate for the smart, practical kid I can imagine poring over this volume.

In Matt Tavares, Rappaport has been matched with a wonderfully sympathetic illustrator. Where she gives the reader a first-person description of Lady Liberty's making, Tavares creates images with a pageantlike grandeur. He achieves this by arranging the figures in classically simple compositions and through his use of light. When we first encounter the statue, for instance, it is backlighted against the sun, turning it into a near silhouette. Later the statue is shrouded in haze; at another point it is theatrically lighted by the first rays of dawn. Eventually, in a lift-up flap, the statue emerges triumphantly out of the fog.

Tavares's talent for depicting physical operations is particularly evident in the pictures dealing with the sawing, nailing, pounding and shaping that went into making the 151-foot copper statue. There is one particularly beautiful picture showing the wooden armature for the hand holding the torch: Tavares has lovingly delineated each of the laths as they turn in space to form the shape, and he has painted the workers bending so benevolently to attend to this huge hand that they could be monks at a religious ceremony. An image of the workers digging the foundation achieves a muralistic monumentality, their simplified brown bodies almost merging with the earth their shovels have carved.

In "Building Manhattan," Laura Vila uses words and pictures to cover the history of the island from primeval times to the present. A text that travels that much territory in 30 pages is going to be a lightly skipping rock over a vast ocean of fact, but perhaps this kind of extreme abbreviation is all a younger child is ready to hear. (There is, at the end of the book, a timeline that expands slightly on the main text.) With a "just the facts, ma'am," brevity, Vila boils the Dutch entry into Manhattan down to the following: "The Dutch came searching for land and riches. They made maps of every place they explored." It will be up to the parent to explain what happened to the Native Americans who inhabited the two previous pages. In other spreads she introduces quirky details to enliven the sentences and the illustrations. In describing

the Lower East Side at the time of Eastern European immigration, she writes, “These people built skinny row houses on skinny roads with funny names.” This gives her the opportunity to make a picture with a view looking down a narrow alley at foreshortened houses and signs that name, among others, Lispenard and Desbrosses Streets.

The reader is treated to more unconventional perspectives: an eagle’s-eye view of Dutch forts at one moment, and then the sightline from a sailing ship’s crow’s nest as British explorers see the island for the first time. Later, the frame shifts to an angle looking straight up at 20th-century towers, perhaps from the vantage point of a city mouse. There are dizzying helicopter-height views of careening cars and intermingling expressway interchanges, and an up-close perspective from behind the luggage of a tourist. These drastic changes are an ingenious way to suggest the acceleration of human activity and are the most successful aspect of the illustrations.

While Vila’s paintings are many-hued, color is not used consistently, either to establish space in the pictures or to define shapes in one-dimensional patterns. In the book’s early landscapes, the color is controlled effectively, but then Vila introduces flat flags and symbols that sit uneasily in pictures that are otherwise rendered with a soft realism. Some of her human figures, too, vacillate between heads rendered more or less realistically and bodies delineated with arcs that aspire to the geometric and have a weak connection to anatomy. The overall effect is of stylistic wavering in the execution of an ambitious idea.

These two books about aspects of Manhattan plumb the subject from very different perspectives and will appeal to different children. Despite my reservations about the art in “Building Manhattan,” it is, nevertheless, a cheery, colorful book that a parent could read with some pleasure to introduce a child to the basic history of the island. “Lady Liberty” provides a slightly older child with a richer and more imaginative reading experience and is a book that could be revisited numerous times.

James McMullan is the author, with Kate McMullan, of “I Stink,” “I’m Dirty” and, most recently, “I’m Bad.”

http://www.nytimes.com/2008/09/14/books/review/McMullan-t.html?8bu&emc=bub1

One for the Books

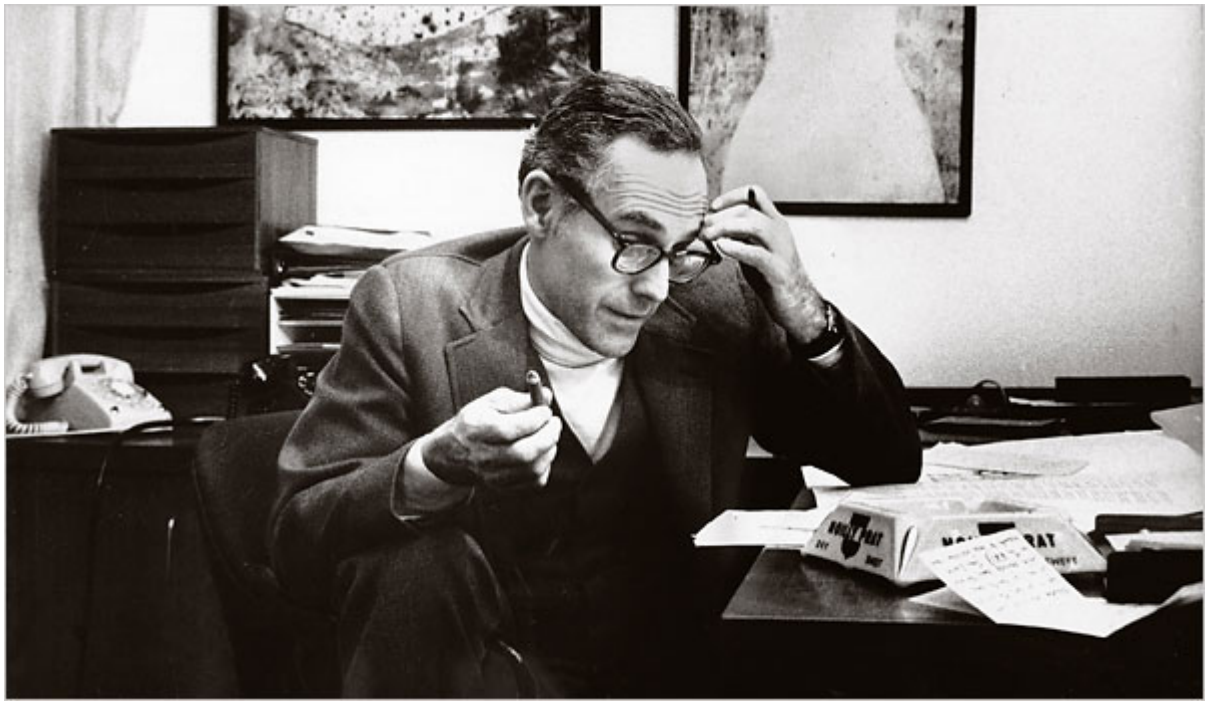
By BRUCE JAY FRIEDMAN

THE TIME OF THEIR LIVES

The Golden Age of Great American Book Publishers, Their Editors and Authors

By Al Silverman

Illustrated. 498 pp. Truman Talley Books/ St. Martin's Press. $35



I have a tendency to miss out on Golden Ages — even when I'm in the thick of them. From the '60s on through the '80s, I wrote stories and articles for magazines like Harper's and Esquire, only to be told, much later, that I had lived through and been part of a Golden Age of Magazine Publishing. If only I'd been tipped off, I might have asked for more money.

Now Al Silverman has come along with an amiable and doggedly researched history, "The Time of Their Lives," in which he makes a strong case for a Golden Age of Publishers and Editors (with writers trailing along behind them), stretching from 1946 into the early 1980s. Once again, there I was, scribbling away, unaware that anything special was going on. I'd had a long and bitter struggle in my 20s, during which I'd tried to get the hang of writing a novel. And then, suddenly, I had broken through and my books were being published, first by the scrappy anything-goes Simon & Schuster and then by the august Alfred A. Knopf. My editor throughout was Robert Gottlieb, one of the best — and not even arguably. Gottlieb's editing style, at least in my case, was to wave at an occasional passage and say, "Do a little something here." Yet the waves were brilliant, and once I'd addressed the "little somethings" the books were enriched. Everything I tried, or so it seemed, was snapped up, not only by publishers, but by the films and theater as well. It couldn't last — and it didn't — but looking back, perhaps there was something a little golden about the period.

Silverman has staked out as his territory a time when "books were most beloved by a reading public." Soon afterward, the great "bookmen" stepped aside and the bottom-liners of business took over.

To make his case, Silverman, for years the president of the Book of the Month Club (and later, at Viking, the editor of Saul Bellow, T. C. Boyle and William Kennedy), sought out survivors of "the good old days" and found 120 of them. Many were cleareyed and bouncing around in their 80s and 90s. (Take heart, McCain doubters.) The publishers seemed to have outlived their authors. Perhaps it was because they knew when to quit. Writers never do, or can't afford to. Curtis Benjamin, once chairman of McGraw-Hill, is clear on this subject: "There's no such thing as a poor publisher."

Silverman, with the help of his sprightly crew of old-timers, has sketched out a profile of the great houses and the bookmen who gave each one a distinctive character. Some, like Grove Press's Barney Rosset, were risk-taking buccaneers. A man with a "whim of steel" (as one of his editors put it), he faced down the courts and bulled through first "Lady Chatterley's Lover" and then "Tropic of Cancer." Others were less bold. The cautious George Braziller (still "trim as a quartermaster" in his late 80s) had an ability to "sniff out books." Some started with money. Charles Scribner V has an advisory for aspiring publishers: "Marry a girl who's the daughter of the richest man in America," the way his great-great-grandfather did. Ian Ballantine started with $500 and a dream. (The money was a gift from his wife's father.)

Alfred A. Knopf, who favored purple shirts and green ties, put as much emphasis on the appearance of a book as on its contents. Even today, the borzoi colophon seems to give Knopf titles a leg up on their competitors. Little, Brown, then in Boston, was "WASPy to the core," cultivating "an aura of Henry James respectability." Henry Kissinger could not resist this quality and chose the publisher for the first volume of "White House Years." Harper was defined by Cass Canfield ("a 'working stiff' with style," one editor called him), who believed that any one of his friends "had a book in him." It helped that his circle included Eleanor Roosevelt, Adlai Stevenson and John F. Kennedy. He carried a blank contract with him, the name and the title not yet filled in. "You never could tell," Silverman writes.

Doubleday, a proudly "middlebrow" company, was founded by Frank N. Doubleday, who suffered from flatulence. As a result, none of the characters in the books he published were allowed to pass wind.

Silverman's golden age wasn't all that golden for women. Jane Friedman, who became president of HarperCollins, began as an assistant at Random House in 1967. "Bennett Cerf . . . would come over and pull my ponytail," she recalled. As a board member at Harper, Ursula Nordstrom, a noted children's book editor, was asked at an all-male meeting to make coffee and said she didn't know how. Despite the roadblocks, women made their mark. Judith Jones, a secretary at Doubleday's Paris bureau, was asked to write rejection letters for a pile of manuscripts. One caught her attention. In tears, she mailed it off to Doubleday in Manhattan. "The Diary of Anne Frank" was published in 1952.

Despite a small female presence, publishing at the time, undeniably, was a boys' club, with gifted and often quirky editors in key positions. A major figure at Viking was the "loved" Cork Smith, a stubborn champion of Thomas Pynchon, though he ran into resistance from his superior George Stevens, who predicted, "This guy will be selling used Chevrolets within a year." At Little, Brown, Alfred McIntyre's judgment of a manuscript was governed by sentiment. "If, after a second highball, it brought tears to his eyes, he would recommend publication." Was there anyone more inventive (and some might say courageous) than Little, Brown's Stan Hart, who plucked Lillian Hellman away from Random? "We'd take a taxi back to her place, where we'd fall into bed."

My personal favorite in the book is Jim Silberman (James Baldwin's and Hunter Thompson's editor), who keeps being "wooed away" from one publisher to another. No sooner does he settle in at his desk than a new courtship begins. I've met this genial man and confess I felt an urge to woo him away from a publisher, too.

Silverman showers praise on publishers, editors, salesmen and, yes, even switchboard operators. (Is there a Golden Age of Bookkeepers in the works?) Still, it's the writers, bless them, who keep finding the spotlight. Manuscript in hand, W. H. Auden showed up at Random House in carpet slippers and said, "I'd like to have my money right now." Samuel Beckett, a tall, gaunt figure, knocked on the door of Grove's Richard Seaver in Paris, handed him an envelope and said, "Here's 'Watt.' " Seaver answered, "What?" thinking he'd become part of an Abbott and Costello routine. At a dinner party, Blanche Knopf, the full--figured wife of Alfred Jr., descended the "Hollywood-type staircase" of their apartment, a sight at which Joseph Conrad was heard to exclaim, "Quelle belge!" Before he became the celebrated author of "Ragtime," E. L. Doctorow said of his editorial position at New American Library that he occupied "the 'Jewish seat.' "

In a glittering moment for writers, Thomas Harris refused to make a single change to "The Silence of the Lambs" — of the seven or eight that were suggested (demanded?) by St. Martin's Press.

There's a degree of schadenfreude in learning of The Ones That Got Away. In turning down "The Godfather," all three editors at Atheneum concurred: "The Mafia is coming out of our ears." What was Mike Bessie of Harper thinking when he found his interest "flagging" and rejected "Lolita"? Still, one feels some sympathy for New American Library's Victor Weybright when he learns that he might lose the reprint rights to "The Catcher in the Rye" and "breaks into a cold sweat."

There are some wearying passages in Silverman's book. Yet, who knows, an aspiring young M.B.A. student might experience a frisson upon learning that after World War II, "Macmillan's No. 1 ranking" fell quickly, and "Doubleday, McGraw-Hill and Prentice-Hall had all pulled ahead" (like Seabiscuit?). But over all, this is a wonderful book, filled with anecdotal treasures. It could have been written only by a "bookman," someone with printer's ink in his blood and bones. We're often told that books are on their way out. Don't say this to Silverman. Fittingly, he prefaces his monumental work with a poem by Czeslaw Milosz. The last lines:

> I imagine the earth when I am no more:
> Nothing happens, no loss, it's still a strange pageant,
> Women's dresses, dewy lilacs, a song in the valley.
> Yet the books will be there on the shelves, well born,
> Derived from people, but also from radiance, heights.

Bruce Jay Friedman's latest book is "Three Balconies: Stories and a Novella."

http://www.nytimes.com/2008/09/14/books/review/Friedman-t.html?8bu&emc=bua2

The Collectors

By OLIVIA JUDSON

DRY STOREROOM NO. 1

The Secret Life of the Natural History Museum

By Richard Fortey

Illustrated. 352 pp. Alfred A. Knopf. $27.50

One entrance to the Other Museum stands behind the massive skeleton of the giant ground sloth. Another is opposite the crocodiles. For the building that houses the public galleries of London's Natural History Museum also houses an entirely different museum — a working museum, where the aim isn't public edification or entertainment but the care, cataloging and description of millions of different life-forms, both extinct and extant, as well as thousands of different minerals. An inventory of the planet.

The offices, laboratories, libraries and vast storerooms of the Other Museum are wrapped around the public galleries like ivy on a fence. The storerooms house about 80 million specimens, from whale skeletons and jars of mites to stacks of pressed flowers and meteorites. The offices house a collection of — judging by Richard Fortey's entertaining memoir, "Dry Storeroom No. 1" — extremely eccentric scholars.

We meet, for example, Leslie Bairstow, an expert on belemnites (the fossil remains of ancient squid-like beings) who joined the museum in 1932. During his tenure at the museum, Bairstow published nothing but collected everything, including the string from parcels that had been sent to him. When he retired, the string turned out to have been filed in boxes according to length; one box contained "pieces of string too small to be of use." Herbert Wernham, a curator in the botany department in the early part of the 20th century, enjoyed the company of prostitutes. When he died, a card catalog was found in his office; on each card was a woman's name and a sample of pubic hair, like "so many delicately colored ferns."

Some of the inhabitants are more heroic, like Martin Hall, an expert on screw worms. These are parasitic flies that lay their eggs in the living, healthy flesh of mammals; when the maggots hatch, they "screw" deeper into the flesh, releasing digestive enzymes as they do so, turning the animal's tissues into soup. The most notorious species lives in the tropics of the New World. But on a visit to Libya in 1989, Hall noticed screw worm maggots in a herd of animals belonging to the Ministry of Agriculture. When no one believed him, he reared some of the maggots in his hotel room. The result? An immediate, and successful, eradication program, during which 60 million sterilized male flies (raised on meat paté) were brought from Mexico to Libya every week. As a result, one of the nastiest parasites was prevented from spreading across Africa.

And then there's our guide, Richard Fortey himself. Trilobite expert, tiddlywinks player, mushroom hunter, poetry enthusiast and ardent lover of the museum, Fortey joined the staff of the paleontology department in 1970. He tells us that at the time he joined, the museum was so hierarchical that there were separate lavatories for "scientific officers" and "gentlemen." (Both, however, were supplied with toilet paper that had "Government Property" stamped on each sheet.) The common room was wreathed in cigar smoke (now to smoke you have to go outside); and every morning you had to collect your keys from a warder.

Keys in hand, Fortey roams the labyrinthine corridors of the Other Museum, exploring, reminiscing, reflecting on the history of the place and discovering what's going on now. Here, in this tower, dead piglets are being eaten by maggots as part of a study on the decomposition of corpses. Out here, behind the museum, is what used to be the "Spirit Building." It was the home of the pickled animals — jar upon jar of fishes, lizards, snakes, lobsters, stored in alcohol or formaldehyde, their colors long since vanished. Pale ghosts of their former selves. And down here, in the basement, Fortey takes us into the room that gives the book its title, Dry Storeroom No 1. Inside, he finds a jumble of old exhibits and apparently forgotten specimens, including the "type" specimen of the sunfish — that strange-looking fish that appears to be a pair of fins stuck onto a disk-like head.

A type specimen is the official example of a given species, against which all creatures like it can be compared. The housing of type specimens is one of the most important roles of all the great natural history museums, from the American Museum of Natural History in New York to the venerable Muséum National d'Histoire Naturelle in Paris.

When Fortey joined the museum in London, comparisons were made as they had been for hundreds of years — by examining the physical shape of the organism, counting the hairs on its legs, the length of its pincers. Now, as Fortey explains, much of this work is done by looking at an organism's DNA. (Where it can be, that is: fossils like his beloved trilobites will continue to be examined in the traditional way.)

The ability to extract DNA from old specimens has led to a new role for museums. Since many of the specimens were collected years ago, they provide a window into the genetics of the past. For instance, DNA from museum specimens of blowflies (another nasty parasite of livestock) collected before pesticides were used have allowed us to understand how and when their ability to resist pesticides evolved. DNA from museum specimens of endangered bird species show how much genetic diversity the species used to have.

The role of museums and their importance is the real theme of Fortey's book. And he shows again and again that for all they sound fusty and dusty, they are much more than repositories of the past. They have a vital role to play now and in the future.

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http://www.nytimes.com/2008/09/14/books/review/Judson-t.html?8bu&emc=bua2

Reign of Counterterror

By MICHAEL CROWLEY

THE WAY OF THE WORLD

A Story of Truth and Hope in an Age of Extremism

By Ron Suskind

415 pp. Harper/HarperCollins Publishers. $27.95

"How real is this nuclear terrorism thing?" That is the oddly glib question, according to a top American intelligence official, posed by George W. Bush during a 2006 White House briefing. That the president was still unsure of its answer, fully five years after Sept. 11, is more than a little unsettling.

That's because, in Ron Suskind's account, the threat is very real, but our understanding of it is dangerously limited. "The Way of the World" has commanded headlines with its explosive (and controversial) charges of extreme Bush administration malfeasance — including still more misuse of prewar intelligence and an alleged forgery scheme that Suskind calls possible grounds for impeachment. But these are increasingly matters for the historical record. At the heart of Suskind's story is a potentially existential threat to the United States in the here and now. It is "what may be humanity's last great race," as he puts it — one between civilized governments and radical terrorists, with the prize being a mushroom cloud in an American city, or its merciful absence.

Suskind approaches this terrible theme in distinctly human terms. The rare writer who combines excellent reporting with a knack for novelistic writing about real people, he skillfully traces several interwoven stories of cultural clashes and cross-pollination, all of them pursuing the question of whether America and the Muslim world can ever look past their differences and find understanding.

Toward that end, we follow the story of a troubled Afghan exchange student in Colorado who reels at the sight of buxom cheerleaders and people cohabiting with dogs, which he was raised to consider vermin. We meet an idealistic Pakistani émigré, living in Washington, whose admiration for America is cruelly tested after a misunderstanding involving the presidential motorcade leads to his bruising detention and a sneering interrogation by the Secret Service. There is the dogged American lawyer who represents a Libyan imprisoned at Guantánamo on the basis of evidence first dismissed as feeble and then reclassified, without explanation, as grounds for confinement. And we follow Benazir Bhutto through the final months leading to her assassination in December, as she pleads in vain with the Bush administration to provide her with more support in her fight for democracy in Pakistan.

Each story speaks to the crosswinds of culture and politics that will determine the course of history and the role of America in the world. But none give the book quite as much urgency as Suskind's portrait of Rolf Mowatt-Larssen, a former C.I.A. case officer and senior Department of Energy official who monitors the global black market in nuclear materials that terrorists might use to fashion a crude device capable of killing tens of thousands. Mowatt-Larssen's tale of government inaction on this score is nothing short of chilling. He's the one who recounts Bush's clueless question about "this nuclear terrorism thing," as well as another White House meeting so unproductive that this grizzled spook left in a state of nausea.

Having concluded that only a shock to the national psyche can force real action, Mowatt-Larssen dreams up a plan befitting a Tom Clancy novel: the "Armageddon Test," a scheme to dispatch undercover teams around the world to purchase enough black-market nuclear material for a working bomb. The teams would then smuggle their terrible bounty onto American soil and unveil it, thereby demonstrating just how real the threat is. (The project never gets off the ground, thanks in part to bureaucratic inertia that leads Mowatt-Larssen to contemplate outsourcing the mission to private contractors.)

Much like Suskind's previous books about the Bush administration, "The Price of Loyalty" and "The One Percent Doctrine," "The Way of the World," though occasionally breathless, is a reportorial feat — particularly when it comes to chronicling the internal machinations of the administration's national security team. For example, Suskind relates how, in the summer of 2006, American officials exposed a terrorist cell apparently plotting to blow up several airliners in midflight. His account suggests that Bush's action was motivated less by fear of an imminent attack (British officials, who opposed the arrests, argued that the plot was far from complete) than by a desire to make headlines before the midterm elections.

More startling are Suskind's revelations about the Iraq war and the handling of prewar intelligence regarding weapons of mass destruction. In one instance, Suskind says that denials by the foreign minister of Iraq, Naji Sabri, that his country possessed W.M.D. were simply rewritten — "almost certainly altered under pressure from Washington," Suskind writes — into a false assertion that Sabri had substantiated suspicions about active Iraqi biological and nuclear programs.

Even more disturbing is the story of a former Iraqi intelligence chief named Tahir Jalil Habbush. Suskind describes in gripping detail secret meetings between Habbush and British intelligence in January and February of 2003. Habbush insisted that Saddam Hussein had abandoned his weapons programs but would not publicly admit it, so as to maintain a facade of deterrence against regional rivals like Iran. Not only did the White House dismiss Habbush's statements, Suskind writes, but an irritated Bush even asked whether the Iraqi could be asked for "something we can use to help us make our case." A subsequent $5 million C.I.A. payment to Habbush, disclosed by Suskind, has the smell of hush money.

Then comes what may be the ultimate bombshell: that the White House instructed the C.I.A. to forge a letter, backdated to July 2001, stating that the 9/11 hijacker Mohamed Atta had trained in Iraq and, furthermore, that Iraq had received suspicious shipments (presumably of yellowcake) from Niger with Al Qaeda's help. The letter was to be written and signed by Habbush on Iraqi government stationery and addressed to Hussein himself. This preposterously convenient summary of what a perfect case for war might look like almost resembled some wry gag from The Onion. But at the end of 2003 the letter did, in fact, turn up in a British newspaper, before seeping into the American media.

Suskind does not establish who dreamed up this pernicious document. But he says one of his sources, a former senior C.I.A. operative named Robert Richer, recalls being ordered directly by George Tenet, then the director of central intelligence, to have Habbush transcribe it himself from a draft produced by the White House. Richer even remembers "the creamy White House stationery on which the assignment was written," as Suskind puts it. Since the book's release, however, Tenet, Richer himself and another key source have adamantly denied that such a thing occurred. (Tenet also denies that Habbush's prewar claims were muffled.)

Even in the context of the past seven years, the stupid brazenness of a forged letter drafted on White House stationery does test credulity. But any claims made by Suskind, a former Wall Street Journal reporter and a Pulitzer Prize winner, should not be casually dismissed. That no credible challenges have been made to numerous other scoops in his book suggests an attempted covering of exposed derrières. Still, his release of partial transcripts from recorded interviews with Richer has not definitively affirmed his reporting.

Suskind's point isn't about proving liability. Rather, the Habbush episodes, if accurate, illustrate a creeping amorality in the way America has managed its war on terror. As our moral standing suffers, so does our ability to shame other nations into cracking down on their nuclear black markets. And so does our battle for the hearts and minds of people like the Afghan exchange student, the Pakistani émigré, the possibly innocent Guantánamo detainee and the followers of Benazir Bhutto. Their conclusions about America may determine whether Rolf Mowatt-Larssen will have the pleasure of being remembered as a - Chicken Little, or will experience the horror of becoming a prophet of atomic disaster.

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http://www.nytimes.com/2008/09/14/books/review/Crowley-t.html?8bu&emc=bua2

We Got Trouble

By JONATHAN TEPPERMAN

THE LIMITS OF POWER

The End of American Exceptionalism

By Andrew J. Bacevich

206 pp. Metropolitan Books/ Henry Holt & Company. $24

Andrew J. Bacevich thinks our political system is busted. In “The Limits of Power: The End of American Exceptionalism,” he argues that the country’s founding principle — freedom — has become confused with appetite, turning America’s traditional quest for liberty into an obsession with consumption, the never-ending search for more. To accommodate this hunger, pandering politicians have created an informal empire of supply, maintaining it through constant brush-fire wars. Yet the foreign-policy apparatus meant to manage that empire has grown hideously bloated and has led the nation into one disaster after another. The latest is Iraq: in Bacevich’s mind, the crystallization of all that’s gone wrong with the American system.

In the dog days of the George W. Bush era, as the fighting drags on in Afghanistan and Iraq and global food, energy and economic crises mount, this argument has huge intuitive appeal, and indeed Bacevich’s book has climbed the best-seller lists. The nation does seem to be in serious trouble. Figuring out how it got that way is important, and a root-and-branch rethink may be necessary to set things right.

That’s just what Bacevich aims to provide. Hailing from what might be called the ultratraditionalist school of American foreign policy, Bacevich, who teaches history and international relations at Boston University, sees himself as a modern Jeremiah, railing at a fat and self-indulgent country that’s lost its way. By his reckoning, things started going sideways at the end of World War II, when the United States first emerged as “the strongest, the richest and . . . the freest nation in all the world.” As American power expanded abroad, liberty grew at home. But the country’s expectations soon exceeded its ability to satisfy them. At that point, Americans faced a choice: “curb their appetites and learn to live within their means, or deploy . . . United States power in hopes of obliging others to accommodate” them. You can guess which one Bacevich thinks Americans went for.

As its citizens were growing soft, the United States government was mutating as well. Responding to the shocks of the Communist revolution in China, the Soviets' atom bomb and the onset of the Korean War, Washington created a vast new permanent security apparatus, consisting of the Pentagon, the F.B.I., the C.I.A. (along with the smaller intelligence agencies) and the National Security Council. These bodies, and a compliant Congress, enabled a huge expansion in executive power.

Still, this new setup might have been fine, Bacevich argues, had it worked the way it was supposed to. But of course it didn't. The vast bureaucracy quickly proved more hindrance than help; individual agencies put their interests above the nation's; the generals just looked out for themselves and their particular services. Frustrated presidents from John Kennedy on turned to informal kitchen cabinets for advice, shutting out the newly established security system. And things quickly fell apart. In relatively short order we got the Bay of Pigs, Vietnam, the '70s oil crisis, Lebanon, Star Wars, the Persian Gulf war of 1991, Somalia, Kosovo and then, after 9/11, the "Long War" on terror, which has made conflict a "permanent condition." Then came Iraq: proof, for Bacevich, of our political, economic and military rot.

As a story this all sounds plausible, but it unravels slightly on closer inspection. First, while Bacevich no doubt would describe himself as a realist, his nostalgia for the enlightened republic Americans supposedly enjoyed before World War II involves a large dose of myth-making. Excess consumption is hardly a postwar phenomenon, and even by the time John Quincy Adams warned against going "abroad in search of monsters to destroy," American presidents were already violating the dictum.

Another sticking point is Bacevich's rhetoric. This short, punchy book is clearly meant as a polemic, and that's not necessarily bad. The problem is that certain of Bacevich's verbal tics, like his annoying references to America's supposed "emperor-president," sound paranoid and ring false. They make it hard to take the argument seriously.

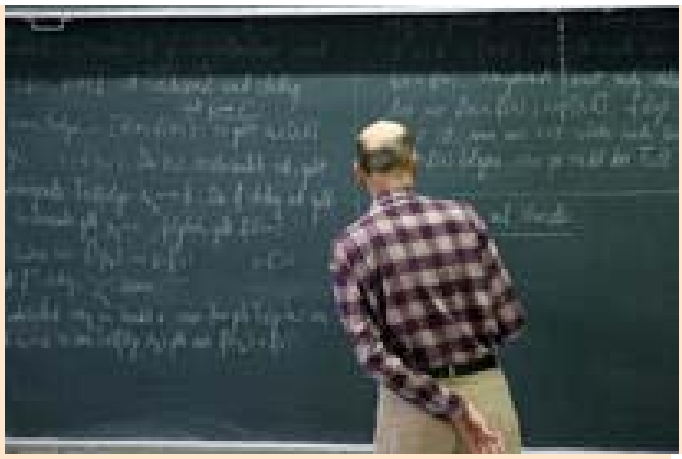
Which is a pity, for many of Bacevich's points are well taken, including his critique of the hypocrisy inherent in Americans' talk of their supposedly universal values. The same goes for his emphasis on the similarities between the policies of recent presidents. Bacevich's awareness of the continuities in American foreign policy is especially useful today, when Obamamania has convinced so many that everything will be different come November. According to Bacevich, it won't be, and he's probably right — especially if the United States remains dependent on foreign oil, cheap Chinese goods and infinite credit. And special interests will no doubt continue to warp policy no matter who wins office.

Unfortunately, Bacevich is not very good at offering suggestions. Given the sweep of his attacks, the alternatives he comes up with are surprisingly small-bore: America should live within its means, pursue a more modest foreign policy, act to abolish nuclear weapons and combat global warming — all sensible ideas but hardly the sort of grand transformation he says the country needs. Perhaps Bacevich doesn't feel he has to provide detailed answers because he sees himself more as a prophet than as a policy maker. But surely what we require today, more than broad condemnations of American consumerism, are very specific solutions to very specific problems.

Jonathan Tepperman is an assistant managing editor of Newsweek International.

http://www.nytimes.com/2008/09/14/books/review/Tepperman-t.html?8bu&emc=bua2

Will Professors Delay Retirements?



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At TIAA-CREF this week, the volume of calls from clients is up 30 percent from the same point a year ago.

Given the dramatic drops on Wall Street, it's not surprising that many in academe are wondering about the status of their retirement funds. But a big question for academe may be whether those funds are shrinking substantially enough to prompt professors to delay retirement. Many think that the drops this week — coming in a year in which funds were already going down — may in fact be that significant.

"When the market went down a lot in 2000, we definitely saw some professors delaying a retirement decision," said John Vineyard, an Ithaca, N.Y., investment counselor whose clients include many academics. While he said it was too soon to be sure, "I'm sure there's a lot of concern."

Robert Clark, a professor of management at North Carolina State University who has conducted several studies of retirement patterns among faculty members, said that the long-term picture remains uncertain. But he said that in the short run, more professors are likely to stay put. "If you were thinking about annuitizing and you have 5 or 10 percent less, you might reconsider," he said. Many are likely to think that staying an extra year or two could result in a significantly larger retirement fund, assuming markets recover.

Clark said that the impact might be less evident at public colleges with defined benefit state retirement plans. But he noted that the population using TIAA-CREF and other investment accounts includes many professors at the private institutions that have historically been the most concerned about the end of mandatory retirement for faculty members, and that have most wanted to have some predictability about when academics leave full-time work.

Kenneth E. Cool, president of Emeriti Retirement Health Solutions, a company that works with colleges to provide health insurance for retirees, said that while information remains anecdotal, "we're hearing about people on the cusp of retirement who are deferring their retirement decisions, and they are thinking about deferring because obviously the accumulations have dropped, some on the order of 15 percent or more."

Most academics (and most people) don't make the decision to retire in a single day or week — and those who predict a delay in retirements stress that it's not just because of the collapses and bailouts this week that have led stocks to tumble. Rather it is that 2008 has already been a tough year, economic uncertainty can produce caution, and with people living longer, many want to have more money before they stop full-time work.

Some of these issues are not unique to higher education. But for many colleges, the issues raised by delays in retirement pose particular challenges. In higher education, tenured faculty members have job security unlike that of much of American society. And many colleges — even as they value the experience of their senior professors — see retirements as a way to assure that departments attract new thinkers, and that academic priorities can be realigned. In addition, because higher education until 1994 had an exemption from mandatory retirement bans, colleges have only relatively minimal experience with professors — not institutions — controlling the retirement timeline.

Even if they can't control that timeline, many colleges have been making assumptions about when the baby boom generation of faculty members would retire. And any delay could have a real impact on when jobs open up for younger scholars.

Kiernan Robert Mathews is director of the Collaborative on Academic Careers in Higher Education, which studies the policies and programs used by colleges to effectively recruit and retain talented academics starting their careers. He said that most of the colleges participating have been expecting a retirement wave. "But while we were expecting most baby boomers to retire at 65, we're finding them sticking around longer," he said.

Delays are likely to frustrate many younger academics. "I get the sense that there is the concern that: When is it going to be our turn?" Mathews said. "But you can't blame the baby noomers if they haven't earned enough to retire." For many academics, these issues are a mix of the practical and philosophical. When Brian Leiter, a philosopher at the University of Chicago and a popular blogger, recently expressed concern about job prospects for young academics, one reader asked whether older academics have an obligation to retire, to make way for new blood — and the response on all sides was intense.

The backdrop to the current developments is evidence that many faculty members are already moving beyond any assumptions about 65 as an automatic retirement age. A survey released last year by TIAA-CREF found that among academics today, 70 is seen as a more likely target age for retirement than 65. And 9 percent of academics surveyed — well before the poor investment performance of 2008 — saw their target age for retirement as older than 70.

The Impact of the Markets

So what's going on in people's accounts? In an era of many choices, it's impossible to generalize.

TIAA-CREF, asked for some examples of typical outcomes, provided three scenarios, based on whether individuals are invested in conservative, moderate or aggressive portfolios. For the three different scenarios, losses in 2008 through the end of August would have been 1 percent, 5 percent and 8 percent. A key point is that those losses would not include the notable losses of this week. TIAA-CREF officials stressed that there are so many combinations possible today that no one fund is "typical," but said that most investors are middle of the road.

Dan Keady, director of financial planning for TIAA-CREF, said it's impossible to know how many people in the different types of fund allocations will now put off retirement. He said that TIAA-CREF has encouraged diversification as a tool to gain when the markets are healthy and to minimize losses in times like these. He also said that the pension giant advises participants to run "a stress test" on their funds, and to work with TIAA-CREF to determine how they would fare in various scenarios, including one in which markets are down substantially and inflation is up.

Keady said he hoped that more fund participants would consider the need to protect themselves from sudden downturns. "It's so important for clients to have guard rails," he said.Officials of Fidelity, another pension company with a large higher education clientele, said that the market remains too volatile for the company to comment.Another major player for academics planning retirements is AIG Retirement (formerly called AIG Valic). The company responded to questions via e-mail and said first that the despite the severe problems facing AIG, the retirement funds were not being affected and were managed separately. The company noted similar statements issued by the National Association of

Insurance Commissioners. “The underlying strength of VALIC, the insurance company backing AIG Retirement, remains unaffected by issues with the parent company,” the AIG Retirement statement said.

On the issue of whether more professors would delay retirements, the AIG statement said that “the market volatility we are currently facing may prompt some to continue working and delay retirement. The importance of asset allocation helps to mitigate the risks associated with short term volatility of the market and minimizes its impact.”

Practical Advice

So what should colleges do?Valerie Martin Conley, director of the Center for Higher Education at Ohio University and author of a report on college retirement policies issued last year by the American Association of University Professors, said that she thinks colleges may need to start by recognizing patterns. Just as economic downturns bring increases in enrollments, they may bring delays in faculty retirements.

At the same time, she said, it was important for colleges to remember the factors that they do and don’t control. On retirement decisions, she said, the “big three” factors for making the decision are age, health and wealth. And another key fact is that people “make retirement decisions over a period of time,” not just at one point when they announce it. “If you are an administrator, and you are thinking about what to do, wealth is more under control of institutions than the other factors,” she said. But even there, colleges may face limits. For example, research suggests that many potential retirees continue to work not for their salaries, but for their health insurance. This leads some institutions to add or improve retiree health insurance. But for some public universities, there may be little flexibility from state benefits plans, she said. As a result, this points to the need for senior administrators to “get in those conversations early enough” with state retirement agencies so that public colleges have tools to use to make retirement feasible for their professors. The AAUP report Conley wrote also stressed the importance of creating retirement paths as opposed to a working/retired dichotomy. More colleges are creating part-time programs so that retirement can be phased in, for example.More analysis is needed, she said, of the impact of a range of policies — buyouts, part-time work, and so forth — so that colleges have a better sense of whether certain policies will be effective.

Cool, of Emeriti, said he is already seeing increased interest from colleges in talking about additional benefits that can be offered to retirees. “I think colleges are very concerned about orderly retirement,” he said, and as a result are willing to consider benefits to encourage retirements.Gary Rhoades, director of the Center for the Study of Higher Education at the University of Arizona, and the next general secretary of the AAUP, said he has no doubt the economic downturn will affect retirement patterns. He said that a smaller market dip a few years ago took place just before a colleague was to retire; the man ended up sticking around for a few more years, citing the investment losses in his retirement fund as the reason.Rhoades cautioned that many of the tools that appeal to administrators, such as buyouts, aren’t necessarily effective at improving institutions. “Often, you see retirement schemes and the people you want to retire don’t and the people you don’t want to retire do,” he said. “It’s hard to fine tune” the programs. A particular concern, Rhoades said, is the “squeeze on the young generation.” Not only might jobs be harder to find, but institutions are pushing to offer new faculty members less generous health and other benefits than long-time professors.

Looking broadly, Rhoades said, it is important to go beyond the campus level, and for academic leaders to talk about the potential loss for society of a lack of good job opportunities for younger scholars. “What is really needed at the national and state levels is to get out the message that this really important work force is getting old,” Rhoades said. And higher education needs levels of financial support so that institutions don’t respond to retirement delays by killing other positions and benefits. “We need to make sure that we don’t have a missing generation of knowledge generators,” he said.

— Scott Jaschik

The original story and user comments can be viewed online at
http://insidehighered.com/news/2008/09/18/retire.

Reforming the Requirement-Free Curriculum

Some prominent institutions, such as Columbia University or the University of Chicago, are famous for what they require of all undergraduates. Brown University has for the last 40 years been much loved in some circles, and disdained in others, for what it doesn't require.

Brown's "new curriculum" — adopted in 1969 at the height of '60s-era reforms of higher education — requires very little. Students must demonstrate writing competence, finish a major, complete four years' worth of courses, and pay their bills. While the university has always encouraged students to consider the values of general education or science or languages or any number of other educational priorities, students have had the freedom largely to create their own curriculum.

With the new curriculum approaching middle age, Brown is the midst of what many view as a significant overhaul. The university isn't abandoning the basic concept of student choice — and the requirements for students won't look much different. But Brown is taking a series of steps to encourage more coherence in the experience of students and in the offerings of each department. It is also is trying to provoke explicit discussions and planning among students and faculty members to craft educational agendas and to evaluate whether they have succeeded.

Under a final plan released last week, the university will:

Aim to produce and regularly distribute to students a statement about the values of liberal education and what they mean for Brown and its students.

Review every major, and ask every department offering majors to rethink introductory courses, add "capstone" experiences for seniors, and produce in writing a rationale for its program and major requirements as well as explanations of how its courses promote general education values and not just the requirements of majors.

Introduce the use of e-portfolios to document both individual student progress toward meeting educational goals, and to allow for more detailed analysis of what Brown students do over the course of their time there.

Create several new forums for academic advising, to encourage students to interact more with faculty in plotting out their programs.

Use the above changes and others to be able to demonstrate the value of a Brown education.

Because Brown isn't challenging the basic "no requirements" model, it doesn't have the options available to other colleges and universities of reconfiguring a list of general education courses or altering the distribution requirement list. And perhaps as a result, the changes appear to have strong support — students have even publicly been demanding more guidance from their professors. And because parts of the plan were released for comment earlier, the final version isn't now being debated per se, but is already moving to execution, with specific dates offered for various objectives.

In fact, some experts on the curriculum say that Brown's recent history with giving students freedom is simply a more explicit version of what plenty of colleges do — but has forced the university to be more thoughtful about how to encourage the most educationally sound choices by students.

"The fact of the matter is that even at institutions that require students to complete general education, almost every college and university offers enormous freedom and very few have required sequences," said Carol Geary Schneider, president of the Association of American Colleges and Universities. "The curriculum really means a menu and the operative principle is a maximum degree of choice for students."

In this sense, Brown is more open about embracing student choice than are most colleges, but not as unusual as commonly believed in the extent of freedom given to students. Where Schneider said Brown is "providing exciting leadership," and going beyond many colleges that have many more apparent requirements on their books, is in "moving to provide an explicit statement and in plain English of what liberal education can be for their students."

When she meets with academic leaders considering their colleges' curricular plans, Schneider said, she frequently asks if they have ever written them down in a way that could be communicated to students — and is stunned by how rarely this happens. While not all students will pay attention, colleges can't expect students to embrace a curricular vision that has never been articulated.

Schneider also said Brown was potentially playing a key role in the way it is calling on every department to consider its general education role and not just its role in training majors. There has been a false dichotomy in too many discussions of curricular reform, Schneider said, between changes in major requirements and changes in general education requirements. Even at institutions with more requirements than Brown has, she said, the major needs to be considered as part of the general education goals, not separate from it.

Katherine Bergeron, dean of the college and professor of music at Brown, led the faculty and student committee that developed the plan. She said Brown was also challenging another false dichotomy — the alleged split between giving students freedom and articulating an educational vision.

The final plan for the curriculum doesn't just call for a statement on liberal education at Brown, but produces the first such statement — two and a half pages and addressed to students, urging them to do specific things that the curriculum doesn't force on them (The statement, already sent to new students, is at the end of the plan).

For each suggestion, a succinct rationale is also provided. Some of the suggestions won't surprise conservative critics who love to bash Brown — students are encouraged, for example, to study such topics as race, gender, ethnicity and religion. But students are also urged to engage in "close reading," to focus on the history of people and institutions, and to "experience scientific inquiry." And when the statement to students encourages them to "embrace diversity," it says this is about both people and "a range of intellectual perspectives," and encourages students to seek out perspectives that "will challenge your assumptions."

That suggestion echoes one made by Ruth Simmons, the president of Brown, who in a 2005 speech urged students to take more courses from professors with whom they are likely to disagree. "Familiar and appetizing offerings can certainly be a pleasing dimension of learning, but too much repetition of what we desire to hear can become intellectually debilitating," she said.

Bergeron said that reforming advising also requires a statement of values from the university, so that students have a framework for making academic choices. While "no requirements are being imposed," she said, there are still goals in the range of offerings the university provides. "We need to state more clearly our goals," she said. "We're viewing this as an opportunity for communicating with students differently."

"There are intellectual capacities everyone should try to develop," Bergeron said. And without specifying individual courses or even disciplines, Brown wants to be explicit about that, she said.

The new plan for undergraduate education also talks explicitly about assessment. The plan notes that Brown has already used a series of "indirect ways to measure student success," among them student surveys, alumni surveys, data on admission rates to graduate programs, and so forth. While embracing the idea behind assessment, and calling for more assessment, the plan takes care to promote individualized approaches. For example, the report calls on each academic department to develop a formal assessment system in order to have some way to judge its success. While it's fine if different departments take different approaches, the plan says, they must be "designed to be repeatable on a regular cycle" so progress can be tracked.

Continuing the individualized approach, the plan calls for all course syllabi to state learning goals and objectives, and to — where possible — detail goals and objectives for specific course requirements. "When individual instructors and departments are explicit about their learning goals, their standards of achievement, and their methods for assessing student learning, students are in a much better position to engage in meaningful reflection about their own learning," the plan says.

To encourage such reflection and to improve advising, the plan calls for the creation of e-portfolios that would include in one place a much more complete portrayal of students' Brown experience than can be found on a transcript, or that any one faculty adviser might remember. The e-portfolio would include such documents as student papers, declaration of major forms, creative works, capstone project proposals and whatever else would be relevant. Students would be encouraged to think more about their education as a whole, while advisers would have a better sense of their students' progress. Seniors would also be encouraged to produce a "concluding statement" summing up their educational experiences.

Departments would then be asked to share sample e-portfolios for use in university-wide efforts to measure the impact of the Brown education on students, to identify patterns that encouraged more or less learning, and so forth. The target date for starting the e-portfolios is next year.

In endorsing the e-portfolio idea, the Brown plan explicitly considers and rejects the alternative way to judge progress of undergraduates — the use of standardized tests such as the Collegiate Learning Assessment that have been endorsed as a key part of assessment by the Spellings Commission and others. "Such tests not only run counter to Brown's educational philosophy, they also fail to capture the full range of our students' educational experiences," the report says.

Brown's revisions come at a time when others have also been starting to explore how colleges can encourage certain behaviors, even in the absence of requirements. A recent report financed by the Teagle Foundation, for example, looked at Brown and a handful of other colleges with minimal requirements — and while generally praising the quality of education being offered, stressed the importance of advising in making these programs work.

Evidence suggests that Brown students – while still proud not to have much in the way of requirements – are not offended by the idea that their professors want to promote a more coherent approach to course selection, and the progression through four years of college.

A recent editorial in *The Brown Daily Herald*, endorsing the idea that students need to be forced to talk to their advisers and encouraged to listen to them, put it this way: "[I]t's easy to say Brown is meant for people who are thirsty for an education and leave it at that. But many of us, thirsty as we may be, are busy and let that which is not required slip by. In those cases, it's the university's duty as our educator to step in and force a little help on us before we proceed with the time-honored tradition of choosing our own path."

— Scott Jaschik

The original story and user comments can be viewed online at http://insidehighered.com/news/2008/09/15/brown.

Taxi drivers 'have brain sat-nav'

By Elizabeth Mitchell
Science reporter, BBC News

Scientists have uncovered evidence for an inbuilt "sat-nav" system in the brains of London taxi drivers.

They used magnetic scanners to explore the brain activity of taxi drivers as they navigated their way through a virtual simulation of London's streets.

Different brain regions were activated as they considered route options, spotted familiar landmarks or thought about their customers.

The research was presented at this week's BA Science Festival.

Earlier studies had shown that taxi drivers have a larger hippocampus - a region of the brain that plays an important role in navigation.

Their brains even "grow on the job" as they build up detailed information needed to find their way around London's labyrinth of streets - information famously referred to as "The Knowledge".

"We were keen to go beyond brain structure - and see what activity is going on inside the brains of taxi drivers while they are doing their job," said Dr Hugo Spiers from University College London.

The scientists used functional magnetic resonance imaging (fMRI) to obtain "minute by minute" brain images from 20 taxi drivers as they delivered customers to destinations on "virtual jobs".

The scientists adapted the Playstation2 game "Getaway" to bring the streets of London into the scanner.

After the scan - and without prior warning - the drivers watched a replay of their performance and reported what they had been thinking at each stage.

"We tried to peel out the common thoughts that taxi drivers tend to have as they drive through the city, and then tie them down to a particular time and place," said Dr Spiers.

The series of scans revealed a complex choreography of brain activity as the taxi drivers responded to different scenarios.

The hippocampus was only active when the taxi drivers initially planned their route, or if they had to completely change their destination during the course of the journey.

The scientists saw activity in a different brain region when the drivers came across an unexpected situation - for example, a blocked-off junction.

Another part of the brain helped taxi drivers to track how close they were to the endpoint of their journey; like a metal detector, its activity increased when they were closer to their goal.

Changes also occurred in brain regions that are important in social behaviour.

Taxi driving is not just about navigation: "Drivers do obsess occasionally about what their customers are thinking," said Dr Spiers.

Animals use a number of different mechanisms to navigate - the Sun's polarized light rays, the Earth's magnetic fields and the position of the stars.

This research provides new information about the specific roles of areas within the brains of expert human navigators.

Story from BBC NEWS:
http://news.bbc.co.uk/go/pr/fr/-/2/hi/science/nature/7613621.stm

Published: 2008/09/13 19:35:49 GMT

Broccoli 'may help protect lungs'

A substance found in broccoli may limit the damage which leads to serious lung disease, research suggests.

Chronic obstructive pulmonary disease (COPD) is often caused by smoking and kills about 30,000 UK residents a year.

US scientists found that sulforapane increases the activity of the NRF2 gene in human lung cells which protects cells from damage caused by toxins.

The same broccoli compound was recently found to be protective against damage to blood vessels caused by diabetes.

Brassica vegetables such as broccoli have also been linked to a lower risk of heart attacks and strokes.

Cell pollutants

In the latest study, a team from Johns Hopkins School of Medicine found significantly lower activity of the NRF2 gene in smokers with advanced COPD.

Writing in the American Journal of Respiratory and Critical Care Medicine, they said the gene is responsible for turning on several mechanisms for removing toxins and pollutants which can damage cells.

> **We know broccoli naturally contains important compounds but studies so far have taken place in the test tube and further research is needed to find if you can produce the same effect in humans**
> Spokeswoman, British Lung Foundation

Previous studies in mice had shown that disrupting the NRF2 gene caused early onset severe emphysema - one of the conditions suffered by COPD patients.

Increasing the activity of NRF2 may lead to useful treatments for preventing the progression of COPD, the researchers said.

In the study, they showed that sulforapane was able to restore reduced levels of NRF2 in cells exposed to cigarette smoke.

"Future studies should target NRF2 as a novel strategy to increase antioxidant protection in the lungs and test its ability to improve lung function in people with COPD," said study leader Dr Shyam Biswal.

A spokeswoman for the British Lung Foundation said: "This is an important study for the 3 million people in the UK with COPD because of its findings about the imbalance of oxidants and antioxidants in the lungs.

"We know broccoli naturally contains important compounds but studies so far have taken place in the test tube and further research is needed to find if you can produce the same effect in humans."

Story from BBC NEWS:
http://news.bbc.co.uk/go/pr/fr/-/2/hi/health/7612813.stm

Published: 2008/09/12 23:05:12 GMT

Men 'unhappy' with their bodies

By Anthony Baxter
Revealed Presenter

One of Britain's leading eating disorder experts says as many as one in five young men are deeply unhappy with their body image.

Dr John Morgan said that for every man with an eating disorder there were 10 more who desperately wanted to change the way they looked.

"One in five young men have some degree of quite extreme distress," he said.

Dr Morgan said he had also seen a big rise in the number of men with anorexia and bulimia.

Dr Morgan, who runs the Yorkshire Centre for Eating Disorders in Leeds, told the BBC's news programme for teenagers, Revealed, that men who were unhappy with their bodies would like to change them.

Eating disorder

While the official estimate for the number of men with an eating disorder stands at around 10-15% of all sufferers, the real figure is much higher.

"We know that 1 in 20 young people suffer from some degree of disordered eating and that at least 15% of them are men and yet that's a tip of an iceberg," he said.

"There are men who have problems with compulsive exercise and excessive bodybuilding who have an illness, but we haven't defined them. Our definitions of illness have been focused on women, rather than men."

In 2000, a report for the Eating Disorder Association found that not enough was being done to help care for men with eating disorders.

Eight years on Dr Morgan says the situation is now worse.

"When the report was written there were some units that had dedicated expertise in male eating disorders. A couple of these have now closed down," he explained.

"There's a lack of funding, a lack of interest. You're dealing with a situation where you're trying to develop a national service for men across the country, but the Health Service is now more focused on the local."

Seriously ill

At 13, George became seriously ill with anorexia. He says initially doctors didn't spot the problem.

He said: "The diagnosis is very vague, especially in boys. It's not something that someone would presume was the case.

"I was tested for cancer, Aids, gluten allergies, and all various things like that, which really, I knew deep down, were completely irrelevant."

George was eventually admitted to a clinic where he was told he had just four weeks to live.

His body had started to eat its own muscles and organs to survive.

"Anorexia dictates everything you do," George said.

"Everything that your healthy mind says is right, 'You can eat this, it wont make you fat at all, in fact, it's completely healthy, it's what normal people do'.

"But then anorexia would jump in straight off and be like - 'What are you doing, this is terrible. You're driven by an evil, deceiving affliction that's not good, it's really wrong'."

Dr John Morgan said he believes images of male beauty in the media are part of the problem, and that there's now just as much pressure on young men to look slim as there is on women.

"The ideal male body image has changed into quite an unhealthy shape," he admitted.

Huge pressures

In the past blokes have been comfortable with beer bellies. Now, men and boys are under huge pressures to look good."

He explains that while the slim but muscular look, a six-pack, big arms, and a slim waist, has become the cultural 'norm', it's not a naturally obtainable figure.

The pressure is increasing on everyone to look better and better and better
Marcus O'Donovan

Dr Morgan added: "It's completely unhealthy, and to achieve that sort of shape you've got to be either working out for hours in a gym, making yourself sick, or taking certain kinds of illegal drugs."

While it's often actors, models and celebrities who are blamed for putting pressure on the rest of us to look slim, it seems stars are under an equally intensifying amount of pressure.

Marcus O'Donovan is an actor who's been in Holby City and the recent Narnia film, Prince Caspian.

He said getting in shape for a role and enjoying a normal life is very difficult.

"The pressure is increasing on everyone to look better and better and better," Marcus said.

"I like to eat, it's that simple, I love my food, and I do find that I'm quite worried. I have to watch what I eat and make sure that I train. It's quite difficult to balance that and a really happy lifestyle."

The Eating Disorder Charity, BEAT says that since May this year, it's seen a huge increase in the number of men coming forward and asking for help.

The charity says it thinks high profiled cases of eating disorders, like John Prescott's battle with bulimia, encourages more men to seek help.

Revealed… Manorexia is on BBC2 on Saturday 13 September, at 13.45pm.

If you're worried about any of the issues raised in this report and want to talk to someone about it you can call the BBC's Action Line on 0800 110 100 which is free from UK landlines.

Story from BBC NEWS:
http://news.bbc.co.uk/go/pr/fr/-/newsbeat/hi/health/newsid_7611000/7611115.stm

Published: 2008/09/12 06:32:23 GMT

Parents 'should know the teacher'

Children perform better in schools if their parents know their teacher, Schools Secretary Ed Balls has said.

Co-operation between home and school may increase progress and ensure children behave in class, he said.

His comments come as ministers prepared to launch the Time To Talk consultation, to gather parental views on issues from childcare to homework.

Government-sponsored research suggests parents become less involved when their child moves into secondary school.

The survey was commissioned by the Department for Children, Schools and Families.

It concluded that barriers to parent involvement included limited time and a reluctance to "bother" busy secondary schools.

Researchers spoke to 56 parents in four locations around the country.

'**Momentum gained**'

Mr Balls said: "Parents' active encouragement and support for their children's learning produces academic benefits and children have a more positive attitude.

"But there are still many parents who feel that it is difficult to get involved in their local schools, especially at secondary level.

"I want to keep up the momentum gained in primary schools where parents are far more likely to get involved.

"From these research findings and the Time to Talk consultation events happening over the coming months I hope to be able to pull together a really coherent picture on how we can make it much easier for parents to get involved at every level."

The Time to Talk consultations in Leeds, Birmingham and London are designed to gather information from parents that will be used to formulate policy.

Parents will meet Mr Balls, Children's Ministers Beverley Hughes and Kevin Brennan, and Schools Ministers Jim Knight and Andrew Adonis to discuss their concerns and ideas.

Story from BBC NEWS:
http://news.bbc.co.uk/go/pr/fr/-/2/hi/uk_news/education/7613706.stm

Published: 2008/09/13 02:42:58 GMT

Many women 'do not check breasts'

Only 35% of women regularly check their breasts for signs of cancer - and 23% seldom or never do, a survey suggests.

The charity Breakthrough Breast Cancer surveyed 2,005 women aged between 18 and 64.

Over a third (37%) who reported not checking their breasts regularly said they did not know how to check - or what to look out for.

Nearly 46,000 UK women are diagnosed with breast cancer each year - making it the UK's most common form of cancer.

CHANGES TO LOOK OUT FOR
Size or shape - for instance, one breast larger or lower than the other
Skin texture - such as puckering or dimpling of the skin
Appearance or direction of nipple - one nipple might become inverted
Discharge - one or both nipples might discharge a blood-stained liquid
Rash or crusting of the nipple or surrounding area
Lump in the breast or armpit
Lumpy area or unusual thickening of breast tissue that doesn't go away after your period
Pain in part of the breast or armpit that is unrelated to periods

Breakthrough is launching a campaign to encourage more women to check their breasts regularly for changes, and to report anything suspicious to their doctor.

Early diagnosis of breast cancer offers the best chance of successful treatment.

Dr Sarah Cant, from Breakthrough, said: "We know that the earlier breast cancer is diagnosed the more likely it is that treatment will be successful.

"Checking your breasts isn't complicated and there's no need to follow a fancy routine.

"Just be familiar with how they look and feel normally."

The Breakthrough survey revealed widespread confusion over what signs to look out for when examining the breasts.

The majority of women (88%) recognised that lumps could be a possible sign of the disease.

However, only 12% of those surveyed identified changes in skin texture, such as puckering or dimpling of the skin, as a potential warning sign.

Just 7% knew that a sudden inversion of the nipple was something that should be reported to a doctor, and a mere 5% were aware that changes in the size or shape of a breast could be a sign of cancer.

In the UK, the focus is on breast "awareness", rather than more complex and involved checks.

Experts say there is no evidence that rigorous monthly "self-examination" reduces breast cancer deaths and it can lead to unnecessary biopsies.

Instead, women are advised to get to know what is normal for them, and feel their breasts regularly for signs of any changes.

Story from BBC NEWS:
http://news.bbc.co.uk/go/pr/fr/-/2/hi/health/7606884.stm

Published: 2008/09/13 23:00:09 GMT

No 2008 record for Arctic sea ice

By Richard Black
Environment correspondent, BBC News website

Sea ice in the Arctic appears to have passed its minimum extent for 2008 without breaking last year's record.

The US National Snow and Ice Data Center (NSIDC) says the ice covered 4.5 million sq km (1.7 million sq miles) at its lowest point on 12 September.

Last year's minimum was 4.1 million sq km (1.6 million sq miles).

This summer's ice cover was the second lowest since satellite records began 30 years ago, which NSIDC says emphasises the "strong negative trend".

> **People might be tempted to call it a recovery, but we're still on a downwards trend towards ice-free Arctic summers**
> Dr Walt Meier, NSIDC

Temperatures have been lower in the Arctic this year than in 2007, largely because of La Nina conditions, which create a colder climate globally from their source in the Pacific.

"I think this summer has been more remarkable than last year, in fact, because last year we had really optimal conditions to melt a lot of ice," said Walt Meier, a research scientist at NSIDC in Boulder, Colorado.

"We had clear skies with the Sun blazing down, we had warm temperatures, and winds that pushed the ice edge northwards," he told BBC News.

"We didn't have any of this this year, and yet we still came within 10% of the record; so people might be tempted to call it a recovery, but I don't think that's a good term, we're still on a downwards trend towards ice-free Arctic summers."

No laughing matter

Even with cooler conditions anticipated, scientists had predicted at the beginning of the Arctic summer that last year's record might be broken, because much of the ice was thinner than usual, having formed during only a single winter.

Instead, the 2008 graph now appears to be indicating the beginning of an expansion from the 12 September minimum, as the Arctic autumn sets in.

The NSIDC team will continue to monitor the ice area and will release a full analysis towards the end of this month.

The end of this summer will probably find the ice in a marginally healthier state than at this time last year. Some of the thin floes remaining will presumably thicken during the winter, leaving the ice a little more robust.

With governments around the Arctic now seeking economic opportunities from a navigable ocean and a sea bed open to exploration, an important question is when the region will become ice-free in summers.

A few years ago, most computer models of climate were projecting dates about 80 years hence. Then, as the melt rate accelerated around the turn of the millennium, the projected date advanced to about 2040.

Now, some climate modellers expect to see nothing but open water within five years.

"To my mind that's a bit aggressive, but certainly not impossible," said Dr Meier.

"Five years ago that would have got someone laughed out of the room; but no-one's laughing now."

Richard.Black-INTERNET@bbc.co.uk

Story from BBC NEWS:
http://news.bbc.co.uk/go/pr/fr/-/2/hi/science/nature/7619770.stm

Published: 2008/09/16 19:26:14 GMT

Health moves 'halve early deaths'

Women could halve their risk of premature death by adopting a healthier lifestyle, research suggests.

By avoiding cigarettes, exercising regularly, eating healthily and keeping weight in check, 55% of early deaths from chronic diseases could be avoided.

Following all four lifestyle tips could cut 44% of cancer deaths and 72% of cardiovascular deaths, the study of nearly 80,000 nurses suggests.

The work is published on the British Medical Journal website.

In the 24-year study, 28% of the 8,882 deaths could be attributed to smoking and 55% to the combination of smoking, being overweight, not doing enough exercise and a poor diet.

> **It's simple dietary changes like eating more whole-grains and less red meat, walking to work and to the grocery shop, these really add up**
> Report author Dr Rob van Dam

Drinking too much alcohol also contributed, but women with "light-to-moderate" alcohol consumption of up to one drink a day were less likely to die from cardiovascular diseases than teetotallers.

Report author Dr Rob van Dam, from the Brigham and Women's Hospital and Harvard Medical School, said the study's positive findings on moderate consumption of alcohol should not encourage people to "go overboard".

"It seems to be that drinking a little alcohol can lower the risk of heart disease, but you have to look at the overall picture too. We also saw in our study that people who drink a lot of alcohol have a higher risk of dying from cancer."

He said it could be easy for people to adopt the basic lifestyle recommendations.

Simple advice

"In busy, modern life it's more difficult to adapt to these factors, but people don't have to spend hours lifting heavy weights.

"It's simple dietary changes like eating more whole-grains and less red meat, walking to work and to the grocery shop, these really add up. And of course the thing to state is not to smoke."

According to Dr van Dam, the recommendations in his study could apply to men as well as women.

> **It is worth making lifestyle changes now, so that our later years are spent free from diseases**
> British Nutrition Foundation spokeswoman

The 77,782 women aged 34 to 59 who took part in the study completed detailed follow-up questionnaires every two years about their diet, frequency of physical activity, alcohol intake, weight, how much they smoked, and disease history.

Over the follow-up period the authors documented 8,882 deaths including 1,790 from heart disease and 4,527 from cancer.

A spokeswoman from the British Nutrition Foundation said: "This study reaffirms the importance of prevention.

"It is worth making lifestyle changes now, so that our later years are spent free from diseases such as cancer and heart disease."

Risk reduction

Meanwhile, a study by the British Heart Foundation has found women at high risk of diabetes can reduce their body's insulin resistance - the most important biological risk factor for diabetes - by exercising.

After seven weeks of an exercise programme of three 30 minute exercise sessions in the first week, working up to five 60 minute sessions in weeks six and seven, insulin resistance had reduced by 22% in women whose family history put them at a high risk of type 2 diabetes.

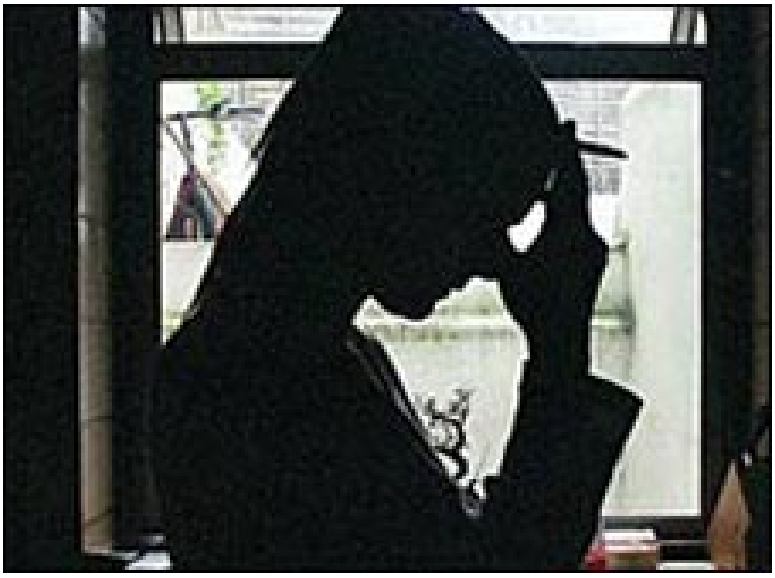
Professor Peter Weissberg, medical director at the BHF, said: "I hope the findings will encourage people to get active for their health."

Story from BBC NEWS:
http://news.bbc.co.uk/go/pr/fr/-/2/hi/health/7617146.stm

Published: 2008/09/16 23:21:54 GMT

Autism 'may be missed in girls'

Girls with mild autism are less likely to be identified and diagnosed than boys, a study suggests.



Researchers examined 493 boys and 100 girls with autistic spectrum disorders.

They found the girls showed different symptoms, and fewer signs of symptoms traditionally associated with autism, such as repetitive behaviour.

The researchers, who presented their work to a Royal College of Psychiatrists meeting, said this might mean cases among girls are missed.

"We shouldn't assume autism or Asperger syndrome will look the same in both sexes
Professor Simon Baron-Cohen
University of Cambridge

Autism is thought to affect four times as many boys as girls - but the latest study suggests this might not be the case.

Most of the children featured in the study had been seen at the Social and Communication Disorders Clinic at Great Ormond Street Hospital in London. Additional cases came from Sunderland and Finland.

All the children were classified as "high-functioning". They did not have classic autism, but did have difficulties with socialising and communication.

Relationship obsessions

The researchers, who have yet to publish their research, found that the girls were more likely to have obsessional interests centred around people and relationships.

However, these interests were more likely to be acceptable to their parents, and therefore tended not to be reported to doctors.

Characteristics such as shyness and over-sensitivity, common to people affected by autism, are sometimes deemed to be typically female traits
Judith Gould
National Autistic Society

In addition, these types of obsessions were less likely to be discovered using standard diagnostic questionnaires.

The investigators said more research was needed to analyse how autism spectrum conditions manifest differently in the sexes.

Professor Simon Baron-Cohen, an autism expert at the University of Cambridge, agreed.

He said: "This is an important clinical issue and there are too few studies addressing it.

"We shouldn't assume autism or Asperger syndrome will look the same in both sexes.

"There may be many factors leading to these conditions either being underdiagnosed or misdiagnosed in females, or leading females to require a diagnosis less often."

Judith Gould, of the National Autistic Society, said: "We hear from many women who have been diagnosed later in life.

"The way autism is presented in women can be very complex and so can be missed.

"It might be that due to misconceptions and stereotypes, many girls and women with autism are never referred for diagnosis, and so are missing from statistics.

"This may mean that many women who are undiagnosed are not receiving support, which can have a profound effect on them and their families."

Ms Gould said it was also possible that girls were better at masking difficulties in order to fit in with society.

"Characteristics such as shyness and oversensitivity, common to people affected by autism, are sometimes deemed to be typically female traits.

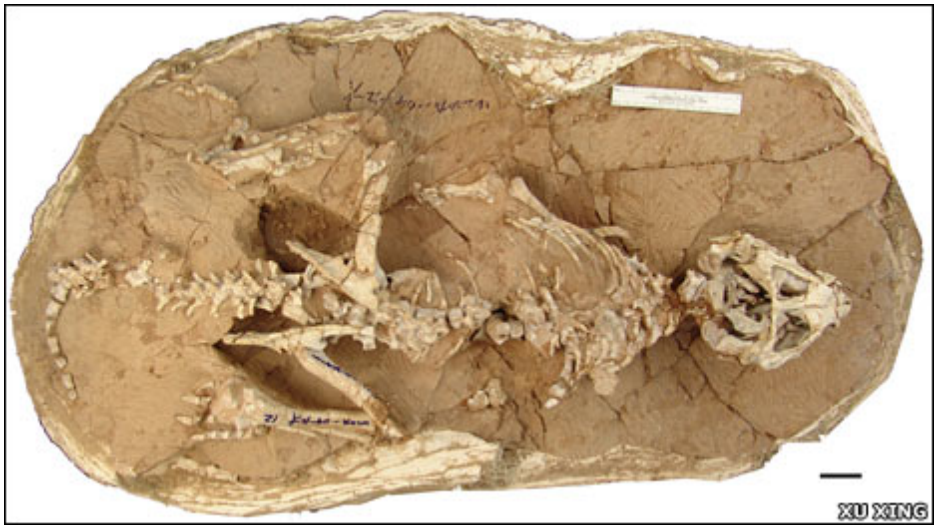
"However if a boy were to display such characteristics, concerns may be raised."

Story from BBC NEWS:
http://news.bbc.co.uk/go/pr/fr/-/2/hi/health/7616555.stm

Published: 2008/09/16 23:22:12 GMT

Will the real dinosaurs stand up?

By Jonathan Amos
Science reporter, BBC News



Most of the newly discovered dinosaurs are just that - new to science, an assessment concludes.

With many past fossil finds named on the basis of partial remains, there has been concern that a lot of double counting has been taking place.

Recent studies had even suggested this error rate might be as high as 50% - with some species being catalogued with several aliases.

But the journal Biology Letters reports that modern practice is now very good.

"My research suggests we're getting better at naming things; we're being more critical; we're using better material," said Professor Michael Benton from Bristol University, UK.

The scientist looked at the original descriptions of all 1,047 species of dinosaurs ever named, from 1824 to the present day.

He assessed the quality of the specimens on which the names were founded - the type specimens. Professor Benton said some 500 were genuinely distinct, and the confidence surrounding the latest discoveries - about one new species a fortnight - was now very high.

"The bane of the dinosaurologist's life is species that have been named on the basis of incomplete specimens," Professor Benton explained.

"In Victorian times, palaeontologists were keen to name new species, and in the excitement of the great 'bone wars' for example, from 1870 to 1890, they rushed into print with new names for every odd leg bone, tooth, or skull cap that came their way.

"Later work, on more complete specimens, reduced more than 1,000 named dinosaurs to 500 or so."

Professor Benton said science had now put in place far more rigorous naming protocols, dramatically reducing the "alias problem".

Since 1960, the great majority of new species are founded on more or less complete specimens, sometimes even whole skeletons.

Professor Benton has a critical interest in the topic because he studies the evolution of dinosaurs. He tries to understand how this famous animal group changed and diversified over almost 200 million years.

"There's no point somebody such as myself doing big statistical analyses of numbers of dinosaur species through time - or indeed any other fossil group - if you can't be confident that they really are genuinely different," he told BBC News.

"This is important also for studies of modern biodiversity. People have also been looking at our current knowledge of mammals and insects and other animal groups and asking the simple question: are the species totals and lists we use for important conclusions - including to give political advice about endangered species - are they correct?

"There's been a big debate about vast extinctions among amphibians. We have to know what the species are first, before we can talk about that."

Story from BBC NEWS:
http://news.bbc.co.uk/go/pr/fr/-/2/hi/science/nature/7620621.stm

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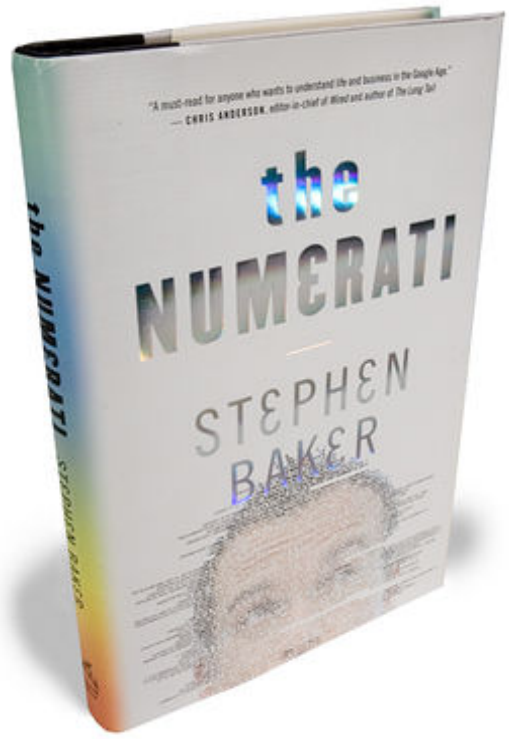
Drilling Through Data

By JOHN DERBYSHIRE

The world is buried in data, great banks and drifts of the stuff. In recent years a new technology has emerged: computer programs that will drill through it all to pick out patterns and trends -- information that may be useful to marketers, politicians, employers, doctors, matchmakers or national-security analysts. Such programs are extraordinarily sophisticated, and their creators need to be very clever indeed. A doctorate in math or computer science is pretty much required. Stephen Baker calls such whizzes the Numerati. Using "data mining," they seek out veins of useful ore in the mountains of facts that computers accumulate every day.



In "The Numerati," Mr. Baker offers a highly readable and fascinating account of the number-driven world we now live in. He shows us, for instance, how political consultants, mining databases that track consumer and "lifestyle" preferences, sort us into tribes by behavioral proxy. Cat owner? Likely Democrat. NRA member? Probably Republican. Mailings and phone calls can then be targeted more accurately. Health professionals, especially when treating older patients, are now monitoring such things as weight, body temperature and pulse by having a computer follow data streams from sensors on clothing or even from sensor-laden "magic carpets" laid around the house. Disturbing patterns prompt the computer to signal a problem. The Numerati are taking over dating services, too. How do you find that special one in a million? By mining the data of the million. How do you improve your own chances of being found? By the same techniques that companies use to show up first in a Google inquiry -- "search engine optimization," now a flourishing industry.

The Numerati are even mining the output of bloggers, those stream-of-consciousness online diarists and self-promoters. "What makes the blog world especially valuable to marketers," Mr. Baker writes, is "its unfiltered immediacy." What do consumers think of your new product? What desires are still not satisfied by products of this kind? You can commission a poll or wait for the sales figures to come in . . . or you

can read the blogs. Better yet, you can hire Numerati to write programs that will read them for you, since there are now more than 20 million bloggers in the U.S. alone.

The Numerati
By Stephen Baker
(Houghton Mifflin, 244 pages, $26)

There is active advertising to be done on blogs, too. If you read these things, or write one, you know that Google's Adsense service will automatically place context-related ads on a blog page, splitting the click-measured revenue with the blogger. So far, so good. But Adsense has set in motion an ugly arms race online as robot bloggers -- clever computer programs -- have generated hundreds of thousands of spam blogs, or "splogs."

A splog, though unreadable, is seeded with words that will attract Google ads. A computer-user may be annoyed at finding himself staring at a screen full of gibberish but click on an ad anyway, allowing the robot blogger to harvest revenue. This sleight of hand has the Numerati hard at work getting their software to distinguish between a blog and a splog. Mr. Baker gives a helpful sketch of the math involved, each blog reduced to a vector in a space of several dozen dimensions.

In Mr. Baker's chapter on terrorism, we meet Numerati who seek traces of the abnormal and unexpected in their data sets and who must then try to identify the individual "subjects of interest" who are generating those traces. The task of matching abnormal data to actual individuals, though, presents problems -- their names, for example. Researching a book about math once, I turned up 32 different Latin-alphabet spellings of the Russian name "Chebyshev." Arabic, Indian, Chinese and African names present especially daunting challenges. Mr. Baker quotes a Numeratus, a Ph.D. in computational linguistics, who has researched the electronic recognition of names for more than 20 years: "Untangling global names," he says, "will continue to confound us for generations."

To make things worse, terrorists themselves are data-savvy and skillful exploiters of the Internet. "Hundreds of Dutch Web Sites Hacked by Islamic Hackers" reads the headline on a technical news site I was just reading. Jihadists may want to take us back to the seventh century, but they are willing to detour through the 21st to get us there. It doesn't help that our National Security Agency, the proper home of anti-terrorist Numerati, is restricted to hiring U.S. citizens and paying civil-service salaries while their competitors in recruitment -- Yahoo, Google, IBM Research -- can cast their net world-wide and engage in bidding wars for top talent.

So the Numerati follow the electronic trails that we all now leave behind us as we work, shop, travel, date, trade or fall sick: What then of our privacy? What if the NSA, having scrutinized my data trail and determined that I am not a terrorist, sees that I may be cheating on my taxes? Or that I am running for public office while subscribing to a pornography service? Mr. Baker cites Jeff Jonas, a security Numeratus who got his start working for casinos (places also keen to spot "subjects of interest"). "We technologists," Mr. Jonas warns, "had better spend a little more time thinking about what we're creating." Mr. Baker acknowledges that privacy is a problem -- we are, after all, the raw material of data mining. Are we also its beneficiaries? He offers a qualified "yes."

Mr. Derbyshire is the author of "Prime Obsession: Bernhard Riemann and the Greatest Unsolved Problem of Mathematics."

http://online.wsj.com:80/public/article/SB122143747437734337.html?mod=2_1578_leftbox

Reading to children losing out to TV and dinner

Booktrust survey finds that reading to children has fallen again in recent years

- Alison Flood
- guardian.co.uk,
- Thursday September 18 2008 09:55 BST

Fresh evidence has shown that the decline in parents reading aloud to their children has deepened over the past two years, with busy lives, dinner and TV all getting in the way of a story at bedtime.

A survey of more than 1,500 parents by books charity Booktrust found that only one in three parents are reading to their children daily, down from 43% two years ago. The average four to five-year-old spends twice as long watching TV every week as they do reading with their parents, while secondary school starters spend more time doing their chores (46 minutes) than reading with their parents (41 minutes). The average 11 to 12-year-old is in front of the television for 8 and a half hours a week, surfing the internet for four hours 14 minutes and reading alone for only three hours 19 minutes, Booktrust found.

Parents blamed their busy lives, fatigue and having to cook dinner, but Booktrust director Viv Bird stressed the importance of reading together at a young age to prepare children for later life. "I think that modern life is more stressful - people are working harder and longer hours, and also there is more competition amongst the leisure activities children can do such as playing on the computer, and watching television or DVDs. Time just gets squeezed," she said. "That's why reading before bedtime is such an important routine to get into – it's a time for children to talk to parents about their day, an opportunity to touch base at the end of a long day.

"Encouraging pleasure and enjoyment of reading needs the support of parents - just spending that time helps children have fun with books," she continued. "Ultimately we know that if young people are reading in their leisure time they are more likely to go on and achieve."

Booktrust will be giving away more than two million books to children this school term, with every reception-aged pupil and Year 7 pupil in the UK to receive a free book over the next few weeks. Four to five-year-olds will be given a copy of Harry and the Dinosaurs Go to School by Ian Whybrow, illustrated by Adrian Reynolds, while older children will be able to select a book from a list of 12 titles, including Mitchell Symons' Why Eating Bogeys Is Good For You and Derek Landy's Skulduggery Pleasant. The initiative is supported by the Department for Children, Schools and Families and publisher Pearson.

http://www.guardian.co.uk/books/2008/sep/18/booktrust.survey.reading.to.children

Gut Instinct's Surprising Role in Math

By NATALIE ANGIER

You are shopping in a busy supermarket and you're ready to pay up and go home. You perform a quick visual sweep of the checkout options and immediately start ramming your cart through traffic toward an appealingly unpeopled line halfway across the store. As you wait in line and start reading nutrition labels, you can't help but calculate that the 529 calories contained in a single slice of your Key lime cheesecake amounts to one-fourth of your recommended daily caloric allowance and will take you 90 minutes on the elliptical to burn off and you'd better just stick the thing behind this stack of Soap Opera Digests and hope a clerk finds it before it melts.

One shopping spree, two distinct number systems in play. Whenever we choose a shorter grocery line over a longer one, or a bustling restaurant over an unpopular one, we rally our approximate number system, an ancient and intuitive sense that we are born with and that we share with many other animals. Rats, pigeons, monkeys, babies — all can tell more from fewer, abundant from stingy. An approximate number sense is essential to brute survival: how else can a bird find the best patch of berries, or two baboons know better than to pick a fight with a gang of six?

When it comes to genuine computation, however, to seeing a self-important number like 529 and panicking when you divide it into 2,200, or realizing that, hey, it's the square of 23! well, that calls for a very different number system, one that is specific, symbolic and highly abstract. By all evidence, scientists say, the capacity to do mathematics, to manipulate representations of numbers and explore the quantitative texture of our world is a uniquely human and very recent skill. People have been at it only for the last few millennia, it's not universal to all cultures, and it takes years of education to master. Math-making seems the opposite of automatic, which is why scientists long thought it had nothing to do with our ancient, pre-verbal size-em-up ways.

Yet a host of new studies suggests that the two number systems, the bestial and celestial, may be profoundly related, an insight with potentially broad implications for math education.

One research team has found that how readily people rally their approximate number sense is linked over time to success in even the most advanced and abstruse mathematics courses. Other scientists have shown that preschool children are remarkably good at approximating the impact of adding to or subtracting from large groups of items but are poor at translating the approximate into the specific. Taken together, the new

research suggests that math teachers might do well to emphasize the power of the ballpark figure, to focus less on arithmetic precision and more on general reckoning.

"When mathematicians and physicists are left alone in a room, one of the games they'll play is called a Fermi problem, in which they try to figure out the approximate answer to an arbitrary problem," said Rebecca Saxe, a cognitive neuroscientist at the Massachusetts Institute of Technology who is married to a physicist. "They'll ask, how many piano tuners are there in Chicago, or what contribution to the ocean's temperature do fish make, and they'll try to come up with a plausible answer."

"What this suggests to me," she added, "is that the people whom we think of as being the most involved in the symbolic part of math intuitively know that they have to practice those other, nonsymbolic, approximating skills."

This month in the journal Nature, Justin Halberda and Lisa Feigenson of Johns Hopkins University and Michele Mazzocco of the Kennedy Krieger Institute in Baltimore described their study of 64 14-year-olds who were tested at length on the discriminating power of their approximate number sense. The teenagers sat at a computer as a series of slides with varying numbers of yellow and blue dots flashed on a screen for 200 milliseconds each — barely as long as an eye blink. After each slide, the students pressed a button indicating whether they thought there had been more yellow dots or blue. (Take a version of the test.)

Given the antiquity and ubiquity of the nonverbal number sense, the researchers were impressed by how widely it varied in acuity. There were kids with fine powers of discrimination, able to distinguish ratios on the order of 9 blue dots for every 10 yellows, Dr. Feigenson said. "Others performed at a level comparable to a 9-month-old," barely able to tell if five yellows outgunned three blues. Comparing the acuity scores with other test results that Dr. Mazzocco had collected from the students over the past 10 years, the researchers found a robust correlation between dot-spotting prowess at age 14 and strong performance on a raft of standardized math tests from kindergarten onward. "We can't draw causal arrows one way or another," Dr. Feigenson said, "but your evolutionarily endowed sense of approximation is related to how good you are at formal math."

The researchers caution that they have no idea yet how the two number systems interact. Brain imaging studies have traced the approximate number sense to a specific neural structure called the intraparietal sulcus, which also helps assess features like an object's magnitude and distance. Symbolic math, by contrast, operates along a more widely distributed circuitry, activating many of the prefrontal regions of the brain that we associate with being human. Somewhere, local and global must be hooked up to a party line.

Other open questions include how malleable our inborn number sense may be, whether it can be improved with training, and whether those improvements would pay off in a greater appetite and aptitude for math. If children start training with the flashing dot game at age 4, will they be supernumerate by middle school?

Dr. Halberda, who happens to be Dr. Feigenson's spouse, relishes the work's philosophical implications. "What's interesting and surprising in our results is that the same system we spend years trying to acquire in school, and that we use to send a man to the moon, and that has inspired the likes of Plato, Einstein and Stephen Hawking, has something in common with what a rat is doing when it's out hunting for food," he said. "I find that deeply moving."

Behind every great leap of our computational mind lies the pitter-patter of rats' feet, the little squeak of rodent kind.

http://www.nytimes.com/2008/09/16/science/16angi.html?8dpc

Stressed plants 'produce aspirin'

Plants facing stressful conditions like drought produce their own aspirin-like chemical, US researchers say.

The chemicals are produced as a gas to boost the plant's biochemical defences, say scientists from the National Center for Atmospheric Research in Colorado. They suggest that monitoring this could give farmers early warning of possible crop failures.

However, they also say the chemicals could affect pollution levels by combining with industrial gases.

Thomas Karl, who led the study, said the chemical triggers "the formation of proteins that boost their biochemical defences and reduce injury". "Our measurements show that significant amounts of the chemical can be detected in the atmosphere as plants respond to drought, unseasonable temperatures, or other stresses."

Ability to communicate

Writing in the journal Biogeosciences, the researchers said they found the chemical accidentally when they were monitoring emissions of volatile organic compounds in a California walnut grove.

Mr Karl said the chemical - methyl salicylate - could act as a "warning signal" allowing farmers to take action against pests much sooner. "The earlier you detect that something's going on, the more you can benefit in terms of using fewer pesticides and managing crops better," he said.

The researchers believe it may also help plants to signal danger to one another. "These findings show tangible proof that plant-to-plant communication occurs on the ecosystem level," says Alex Guenther, a co-author of the study.

"It appears that plants have the ability to communicate through the atmosphere."

Story from BBC NEWS:
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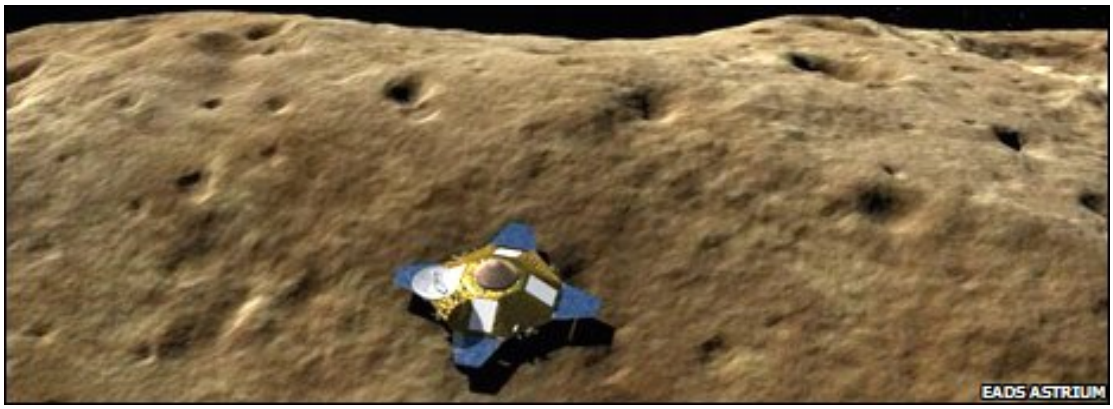
Published: 2008/09/19 04:54:59 GMT

Europe plans asteroid sample grab

By Jonathan Amos
Science reporter, BBC News



European scientists and engineers are working on a potential new mission to bring back material from an asteroid.

The venture, known as Marco Polo, could launch in the next decade, and would be designed to learn more about how our Solar System evolved.

The plan is to select a small asteroid - less than 1km across - near Earth and send a spacecraft there to drill for dust and rubble for analysis.

Mission plans are being worked on by UK Astrium and OHB in Germany.

Both satellite manufacturers have been asked to undertake a feasibility study, to assess the type of spacecraft architecture that would be needed to carry out the project.

A final decision on whether to approve the mission will be made by the European Space Agency (Esa) in a few years' time. The mission would launch towards the end of the next decade, in about 2017.

Please turn on JavaScript. Media requires JavaScript to play.

Esa says the mission could fly towards the end of the next decade

Asteroids are the debris left over from the formation of the Solar System about 4.6 billion years ago.

Studying their pristine material should provide new insights about how the Solar System came into being and how planets like Earth evolved.

Asteroids are the rubble left over after the planets formed

"We'll be looking at the best solution for getting there and back," UK Astrium's Dr Ralph Cordey told BBC News.

"We've got to look at all elements of the mission - how we would design the mission, how to design the trajectory to one of a number of possible asteroids, how to optimise that so we use the smallest spacecraft, the least fuel and the smallest rocket."

Marco Polo might work like this:

• After the launch on a Soyuz rocket from Europe's Kourou spaceport, a propulsion unit would take the mission out to its target asteroid • The main spacecraft unit would undertake a remote-sensing campaign, gathering key information on shape, size, mass and global composition

• It would then attempt to land, drilling a few cm into the surface. Up 300g of dust and pebbles would be stored away in a sealed capsule • After lifting off the asteroid, the spacecraft would put itself on a homeward trajectory, releasing the capsule close to Earth for a re-entry

• The capsule would land without parachutes. It would be opened in a clean facility to ensure there was no Earth contamination Esa has an exploration roadmap for the missions it wishes to conduct in the coming years. Marco Polo is being considered under its Cosmic Visions programme, and is one of a number of competing ideas in a class of missions that could cost in the region of 300 million euros.

It is quite possible that Marco Polo, if approved, could be undertaken in partnership with Japan.

Sample return missions are of significant interest to scientists. Although in-situ measurements provide remarkable insights, so much more would be learnt if materials were brought back to Earth laboratories, where the full panoply of modern analytical technologies can be deployed.

An asteroid sample return mission would have huge scientific merit in its own right but it would also help develop the technology needed for the more challenging task of getting down and up from a large planetary body that has a much bigger gravitational pull - such as Mars. Not that getting down on to a small, low-gravity body is easy. The wrong approach could crush landing legs or even result in the vehicle bouncing straight back off into space.

Such problems were amply demonstrated by the recent Japanese attempts to grab samples off the surface of Asteroid Itokawa.

It is still not clear whether Japan's Hayabusa spacecraft managed to capture any material and the probe's return to Earth is still haunted by uncertainty. The Americans deliberately crash-landed their Near-Shoemaker probe on to Asteroid Eros at the end of the spacecraft's mission in 2001. They have also sent the Dawn spacecraft to rendezvous with Asteroid Vesta in 2011 before going on to visit Asteroid Ceres in 2015. But these are remote-sensing ventures, not sample return attempts.

Europe, itself, is no novice in the field of asteroid study. Its Rosetta probe, which is en route to a comet, took close-up pictures of Asteroid Steins during a flyby earlier this month. Ultimately, it is possible that astronauts could visit an asteroid. The US space agency is currently studying how this might be done; but even if approved, such a mission would not happen for many decades.

Story from BBC NEWS:
http://news.bbc.co.uk/go/pr/fr/-/2/hi/science/nature/7623411.stm

Published: 2008/09/18 23:34:55 GMT

Too much maths 'taught to test'

Almost half of England's schools are not teaching mathematics well enough, putting too much emphasis on "teaching to the test", inspectors have said.

Ofsted said pupils were taught to pass exams and results had improved, but understanding of the subject had not.

Teaching and learning, the curriculum and management were all stronger in primary schools than secondary schools.

The government said it was investing £140m in measures "to transform the standard" of maths teaching in England.

Ofsted said its report, Mathematics: Understanding the score, was based principally on evidence from inspections undertaken between April 2005 and December 2007 in 192 maintained schools in England, 84 primary and 108 secondary.

Please turn on JavaScript. Media requires JavaScript to play.

Pupils on solving the problem of maths lessons Many secondaries had big problems finding good teachers. Pupils' progress was inadequate in one in 10 lessons, Ofsted said.

The effectiveness of work in maths was judged to be outstanding in 11%, good in 44% and satisfactory in 40% - by an inspectorate which regards "satisfactory" as not being good enough.

Of the nine schools where the quality was deemed to be inadequate, six were secondary schools.

Strategies

The report said there had been a steady improvement in test and examination results. Key Stage 3 results - from the tests taken by pupils aged 13 and 14 - were improving and a greater percentage of pupils reached the vital threshold of grade C at GCSE level.

"But this does not tell the whole story," Ofsted said.

"Based on the gains made at Key Stage 3, more pupils than at present should be reaching the higher GCSE grades.

"Evidence suggests that strategies to improve test and examination performance, including 'booster' lessons, revision classes and extensive intervention, coupled with a heavy emphasis on 'teaching to the test', succeed in preparing pupils to gain the qualifications but are not equipping them well enough mathematically for their futures.

We need children to be equipped to use mathematics with confidence in and beyond the classroom to play their part in a rapidly changing society
Chief inspector Christine Gilbert

"It is of vital importance to shift from a narrow emphasis on disparate skills towards a focus on pupils' mathematical understanding."

Pupils should be taught to make sense of mathematics - so they could use it confidently in their everyday lives and were prepared for further study and the workplace.

Chief inspector Christine Gilbert said: "The way mathematics is taught can make a huge difference to the level of enthusiasm and interest for the subject.

"As well as developing fluent numeracy skills to deal with everyday mathematics, children and young people need to be able to think mathematically, model, analyse and reason."

She added: "We all benefit from the advanced mathematics that underpins our technological world.

We know that more needs to be done to improve maths for the long term
Jim Knight, Schools Minister

"We need children to be equipped to use mathematics with confidence in and beyond the classroom to play their part in a rapidly changing society."

Among a series of recommendations, Ofsted said the Department for Children, Schools and Families should reintroduce separate reporting of pupils' attainment in "using and applying mathematics".

The National Centre for Excellence in the Teaching of Mathematics - set up after a previous critical inquiry into maths teaching in England - should help teachers assess their own knowledge, get access to training and share good practice.

To an extent Ofsted's report has been overtaken by a later review the government commissioned, by Sir Peter Williams, which was published in June.

Accepting his findings, ministers said 13,000 maths specialists would spearhead better primary school teaching. It will take 10 years to train them.

England's Schools Minister Jim Knight said: "While Ofsted recognises there are positive trends, with results in maths up at all ages, we know that more needs to be done to improve maths for the long term.

"That's why we are introducing a whole range of measures, backed by £140m, which will transform the standard of maths teaching in this country.

"Good teachers know that the best way to ensure pupils make good progress – and to pass exams and tests - is to give them a broad, in depth understanding of the subject. There is no reason why testing should result in a narrow focus or uninspiring lessons.

"This year's new secondary curriculum will help bring mathematics to life. It will promote better mathematical thinking and problem solving as well as developing pupil's confidence in maths and their ability to apply maths in real life, relevant contexts."

Story from BBC NEWS:
http://news.bbc.co.uk/go/pr/fr/-/2/hi/uk_news/education/7623436.stm

Published: 2008/09/19 00:12:25 GMT

Early Parenting Plays Key Role In Infants' Physiological Response To Stress

ScienceDaily (Sep. 19, 2008) — In infancy, genes are the key influence on a child's ability to deal with stress. But as early as 6 months of age, parenting plays an important role in changing the impact of genes that may put infants at risk for responding poorly to stress.

That's the message from a new study by researchers at the University of North Carolina-Chapel Hill, Pennsylvania State University, the University of North Carolina-Greensboro, and North Carolina State University. It appears in the September/October 2008 issue of the journal Child Development.

The researchers looked at 142 infants who had been placed in a stressful situation—being separated from their mothers—when they were 3, 6, and 12 months old. They measured infants' heart rates while they were exposed to the stressor, isolating a cardiac response called vagal tone. Vagal tone acts like a brake on the heart when the body is in a calm state, but during a challenging situation, this brake is withdrawn, allowing heart rate to increase so the body can actively deal with the challenge.

They also collected DNA to determine which form of a dopamine receptor gene the infants carried; specific forms of this gene are related to problems in adolescence and adulthood including aggression, substance abuse, and other risky behaviors. To assess the mothers' behavior as high or low in sensitivity, they also videotaped the mothers and their infants playing together for 10 minutes when the babies were 6 months old.

Both genes and parenting were found to be important to the infants' development of the way in which the brain helps regulate cardiac responses to stress. At 3 and 6 months old, those infants with the form of the

dopamine gene associated with later risky behaviors did not display an effective cardiac response to the stressor (a decrease in vagal tone which takes the brake off the heart so it can respond appropriately), while those infants with the non-risk version of the gene did. At these early ages, the researchers found, it didn't appear to matter whether mothers were sensitive or not.

However, by the time the infants were 12 months old, the pattern changed. Infants with the risk form of the gene who also had mothers who were highly sensitive now showed the expected cardiac response while they were exposed to the stressful situation. Those infants with the risk form of the gene who had insensitive mothers continued to show the ineffective cardiac response to the stressor. These findings suggest that although genes play a role in the development of physiological responses to stress, environmental experience (such as mothers' sensitive care-giving behavior) can have a strong influence, enough to change the effect that genes have on physiology very early in life. The researchers suggest this may be because of the cumulative effect on infants of exposure to their mothers' behavior.

"Our findings provide further support for the notion that the development of complex behavioral and physiological responses is not the result of nature or nurture, but rather a combination of the two," says Cathi Propper, research scientist at the University of North Carolina-Chapel Hill and the study's lead author. "They also illustrate the importance of parenting not just for the development of children's behavior, but for the underlying physiological mechanisms that support this behavior.

"Lastly, infancy is an important time for developing behavioral and biological processes. Although these processes will continue to change over time, parenting can have important positive effects even when children have inherited a genetic vulnerability to problematic behaviors."

The study was funded by the National Science Foundation.

Journal reference:

1. Propper et al. **Gene-Environment Contributions to the Development of Infant Vagal Reactivity: The Interaction of Dopamine and Maternal Sensitivity**. *Child Development*, 2008; 79 (5): 1377 DOI: 10.1111/j.1467-8624.2008.01194.x

Adapted from materials provided by Society for Research in Child Development, via EurekAlert!, a service of AAAS.

http://www.sciencedaily.com:80/releases/2008/09/080916100928.htm

Astronomers Discover Most Dark Matter-dominated Galaxy In Universe

Segue 1 is 50 times dimmer than the star cluster pictured above but is 1000 times more massive, meaning most of its mass must be made up of dark matter. (Credit: Sloan Digital Sky Survey)

ScienceDaily (Sep. 19, 2008) — A team led by a Yale University astronomer has discovered the least luminous, most dark matter-filled galaxy known to exist.

The galaxy, called Segue 1, is one of about two dozen small satellite galaxies orbiting our own Milky Way galaxy. The ultra-faint galaxy is a billion times less bright than the Milky Way, according to the team's results, to be published in an upcoming issue of The Astrophysical Journal (ApJ). But despite its small number of visible stars, Segue 1 is nearly a thousand times more massive than it appears, meaning most of its mass must come from dark matter.

"I'm excited about this object," said Marla Geha, an assistant professor of astronomy at Yale and the paper's lead author. "Segue 1 is the most extreme example of a galaxy that contains only a few hundred stars, yet has a relatively large mass."

Geha, along with her colleague Josh Simon at the California Institute of Technology, has observed about half of the dwarf satellite galaxies that orbit the Milky Way. These objects are so faint and contain so few stars that at first they were thought to be globular clusters – tightly bound star clusters that also orbit our host galaxy. But by analyzing the light coming from the objects using the Keck telescope in Hawaii, Geha and Simon showed that these objects are actually galaxies themselves, albeit very dim ones.

Looking only at the light emitted by these ultra-faint galaxies, Geha and her colleagues expected them to have correspondingly low masses. Instead, they discovered that they are between 100 and 1000 times more massive than they appear. Invisible dark matter, she said, must account for the difference.

Although dark matter doesn't emit or absorb light, scientists can measure its gravitational effect on ordinary matter and believe it makes up about 85 percent of the total mass in the universe. Finding ultra-faint galaxies like Segue 1, which is so rife with dark matter, provides clues as to how galaxies form and evolve, especially at the smallest scales.

"These dwarf galaxies tell us a great deal about galaxy formation," Geha said. "For example, different theories about how galaxies form predict different numbers of dwarf galaxies versus large galaxies. So just comparing numbers is significant."

It's only recently that astronomers have discovered just how prevalent these dwarf satellite galaxies are, thanks to projects like the Sloan Digital Sky Survey, which imaged large areas of the nighttime sky in greater detail than ever before. In the past two years alone, the number of known dwarf galaxies orbiting the Milky Way has doubled from the dozen or so brightest that were discovered during the first half of the twentieth century.

Geha predicts astronomers will find even more as they continue to sift through new data. "The galaxies I now consider bright used to be the least luminous ones we knew about," she said. "It's a totally new regime. This is a story that's just unfolding."

The authors of the paper are Marla Geha (Yale University), Beth Willman (Harvard-Smithsonian Center for Astrophysics), Joshua D. Simon (California Institute of Technology), Louis E. Strigari (University of California, Irvine), Evan N. Kirby (University of California, Santa Cruz and Lick Observatory), David R. Law (California Institute of Technology) and Jay Strader (Harvard-Smithsonian Center for Astrophysics).

Adapted from materials provided by Yale University.

http://www.sciencedaily.com/releases/2008/09/080918170630.htm

New Method For Building Multilingual Ontologies That Can Be Applied To The Semantic Web

ScienceDaily (Sep. 19, 2008) — Researchers from the Validation and Business Applications Group based at the Universidad Politécnica de Madrid's School of Computing (FIUPM) have developed a new method for building multilingual ontologies that can be applied to the Semantic Web.

An ontology is a structured set of terms and concepts underpinning the meaning of a subject area. Artificial intelligence and knowledge representation systems are the principal users of ontologies. Researchers from all over the world are now working on applying ontologies to the Internet with the aim of building a Semantic Web and providing users with a intelligent tool for using the information on the web.

The importance of the proposal by Jesús Cardeñosa, Carolina Gallardo, Luis Iraola and Miguel Ángel de la Villa is that it revolutionizes current ontology building systems. Until now, these systems have had a major stumbling block: the multilingual component. The application of ontologies to the Internet comes up against serious problems triggered by linguistic breadth and diversity. This diversity stands in the way of users making intelligent use of the web.

So far all approaches to solve the multilingual component have run into serious difficulties. Some were based on experts agreeing on the terms to be used in each language. These endeavours failed to take off due to the difficulty of finding experts in many languages. Other approaches set out to use one language (almost always English) as a pivot. Again the results were held back, this time because the use of a natural language as an interlanguage occasions ambiguity. As the researchers note, early attempts at using

a natural reference language to build machine translation systems go back 20 years ago, and the results were no good.

Multilingual thesauruses

Neither has the 1985 international standard on the creation and development of multilingual thesauruses (ISO 5964:1985) solved the problem. A thesaurus is a list of hierarchically interrelated (general and subordinate terms) terms, possibly containing more than one word, used to index (for archiving purposes) and retrieve documents.

Although an ontology is not exactly the same thing as a thesaurus, the researchers claim that it is very similar because a great many ontologies are actually a simplified version of its huge potential for representation, confined to three basic relations ("is-part-of", "is-a-type-of", "is-a"). The above ISO standard on thesauruses covers these three basic relationships.

According to these researchers, the current approaches for solving the multilingual component in ontology building are mostly applied to ontologies with the same representation power as a thesaurus, without even applying the above ISO 5964:1985 standard to deal with multilingualism. But, even if this standard is applied, the approach always has to use a reference language, which, as mentioned, has never worked.

Language-independent ontologies

The method proposed by the School of Computing researchers solves this problem because it is based on building ontologies that can represent information irrespective of the language. They are therefore applicable to multilingual systems.

This method is an advance in that, after analysing the natural language, the method looks for linguistic patterns (grammatical structures) that match the exact ontological structures. This it does multilingually, as the linguistic patterns are capable of building language-independent structures.

The innovative thing about what these researchers are proposing is the construction of multilingual ontologies using what are known as universal words as the concept name. The concept of universal word stems from the United Nations University's UNL Project (Universal Networking Language). This project was set up to break down the linguistic barriers on the Internet. The researchers claim that the characteristics of UNL also very close match the features of an ontology.

These researchers assume that ordinary texts contain more information than what can be extracted using just the domain terms, as any text has implicit ontological relations that can be extracted by analysing certain grammatical structures of the sentences making up the text.

A case study

In an article presented last July at The 2008 International Conference on Semantic Web and Web Services (SWWS'08), these researchers describe their approach and explain a case study demonstrating the validity of their method. The case study used the contents of the current catalogue of Spanish monuments as part of the Patrilex project, funded by the Spanish National Research Plan in conjunction with the Underdirectorate General of Cultural Heritage.

In this case study, the sentences from the catalogue of Spanish monuments were coded in UNL language. This codification is a semantic representation of the catalogue contents. The researchers then searched for predefined linguistic patterns in the semantic representation. After identifying the contents matching the patterns, they instantiated the contents as ontological structures.

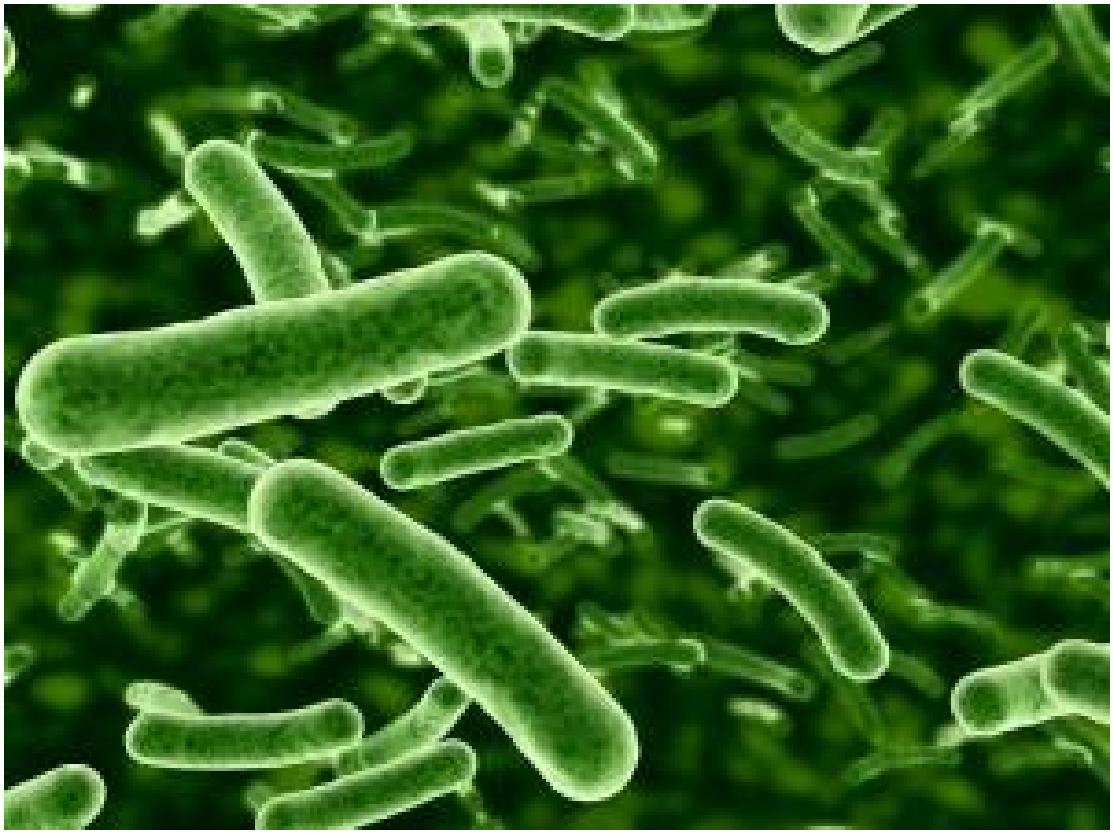
The big advantage of using the UNL system is that the universal words are independent of the language and are not ambiguous. The non-ambiguity makes the translation of the ontology built this way to any language extremely precise.

The universal words used can be viewed and used publicly at the public access repository developed by the researchers. Universal words are usually used to develop multilingual dictionaries, as explained in another press release.

Adapted from materials provided by Facultad de Informática de la Universidad Politécnica de Madrid, via AlphaGalileo.

http://www.sciencedaily.com/releases/2008/09/080918091618.htm

World Faces Global Pandemic Of Antibiotic Resistance, Experts Warn



All antibiotic use "uses up" some of the effectiveness of that antibiotic, diminishing the ability to use it in the future, experts warn, and antibiotics can no longer be considered as a renewable source. (Credit: iStockphoto/David Marchal)

ScienceDaily (Sep. 18, 2008) — Vital components of modern medicine such as major surgery, organ transplantation, and cancer chemotherapy will be threatened if antibiotic resistance is not tackled urgently, warn experts on bmj.com.

A concerted global response is needed to address rising rates of bacterial resistance caused by the use and abuse of antibiotics or "we will return to the pre-antibiotic era", write Professor Otto Cars and colleagues in an editorial.

All antibiotic use "uses up" some of the effectiveness of that antibiotic, diminishing the ability to use it in the future, write the authors, and antibiotics can no longer be considered as a renewable source.

They point out that existing antibiotics are losing their effect at an alarming pace, while the development of new antibiotics is declining. More than a dozen new classes of antibiotics were developed between 1930 and 1970, but only two new classes have been developed since then.

According to the European Centre for Disease Prevention and Control, the most important disease threat in Europe is from micro-organisms that have become resistant to antibiotics. As far back as 2000, the World Health Organisation was calling for a massive effort to address the problem of antimicrobial resistance to prevent the "health catastrophe of tomorrow".

So why has so little been done to address the problem of resistance, ask the authors?

Antibiotics are over prescribed, still illegally sold over the counter in some EU countries, and self medication with leftover medicines is commonplace.

There are alarming reports about serious consequences of antibiotic resistance from all around the world. However, there is still a dearth of data on the magnitude and burden of antibiotic resistance, or its economic impact on individuals, health care, and society. This, they suggest, may explain why there has been little response to this public health threat from politicians, public health workers, and consumers.

In addition, there are significant scientific challenges but few incentives to developing new antibiotics, state the authors.

The authors believe that priority must be given to the most urgently needed antibiotics and incentives given for developing antibacterials with new mechanisms of action. In addition, "the use of new antibiotics must be safeguarded by regulations and practices that ensure rational use, to avoid repeating the mistakes we have made by overusing the old ones", they say.

They point out that reducing consumer demand could be the strongest force to driving change—individuals must be educated to understand that their choice to use an antibiotic will affect the possibility of effectively treating bacterial infections in other people.

But, they claim, the ultimate responsibility for coordination and resources rests with national governments, WHO and other international stakeholders.

Not only is there an urgent need for up-to-date information on the level of antibiotic resistance, but also for evidence of effective interventions for the prevention and control of antibiotic resistance at national and local levels, while more focus is needed on infectious diseases, they conclude.

Adapted from materials provided by BMJ-British Medical Journal, via EurekAlert!, a service of AAAS.

http://www.sciencedaily.com/releases/2008/09/080918192836.htm

COPD? Eat Your Veggies

You know it's good for you in other ways, but could eating your broccoli also help patients with chronic lung disease? It just might. (Credit: iStockphoto)

ScienceDaily (Sep. 18, 2008) — You know it's good for you in other ways, but could eating your broccoli also help patients with chronic lung disease? It just might.

According to recent research from Johns Hopkins Medical School, a decrease in lung concentrations of NRF2-dependent antioxidants, key components of the lung's defense system against inflammatory injury, is linked to the severity of chronic obstructive pulmonary disease (COPD) in smokers. Broccoli is known to contain a compound that prevents the degradation of NFRP.

COPD is the fourth-leading cause of death in the U.S. and affects more than 16 million Americans.

In this study, researchers examined tissue samples from the lungs of smokers with and without COPD to determine if there were differences in measured levels of NRF2 expression and the level of its biochemical regulators, including KEAP1, which inhibits NRF2, and DJ-1, which stabilizes it. Dr. Biswal had previously shown that disruption in NRF2 expression in mice exposed to cigarette smoke caused early onset of severe emphysema.

When compared to non-COPD lungs, the lungs of patients with COPD showed markedly decreased levels of NRF2-dependent antioxidants, increased oxidative stress markers, a significant decrease in NRF2 protein with no change in NRF2 mRNA levels (indicating that it was expressed, but subsequently degraded), and similar KEAP1 levels, but a marked decrease in the level of DJ-1.

"NRF2-dependent antioxidants and DJ-1 expression was negatively associated with severity of COPD," wrote principle investigator, Shyam Biswal, Ph.D., an associate professor in the Bloomberg School's

Department of Environmental Health Sciences and Division of Pulmonary and Critical Care at the Johns Hopkins School of Medicine. "Therapy directed toward enhancing NRF2-regulated antioxidants may be a novel strategy for attenuating the effects of oxidative stress in the pathogenesis of COPD."

While clinical trials to date of antioxidants have been disappointing in improving the clinical course of patients with COPD, this study points to a possibility of benefit from restoring NRF2 levels in damaged lungs by reducing the action of KEAP1, which is an inhibitor of NRF2. "[I]ncreasing NRF2 may also restore important detoxifying enzymes to counteract other effects of tobacco smoke," wrote Peter Barnes, D.M., of the National Heart and Lung Institute in London, in the accompanying editorial. "This has been achieved in vitro and in vivo by isothiocynate compounds, such as sulforaphane, which occurs naturally in broccoli and [wasabi]."

Sulforapane has been shown to be able to restore antioxidant gene expression in human epithelial tissue in which DJ-1 has been reduced. Isothicyanate compounds such as that found in broccoli inhibit KEAP1, and thus prevent it from degrading NRF2, according to Dr. Barnes.

"Future studies should target NRF2 as a novel strategy to increase antioxidant protection in the lungs and test its ability to decrease exacerbations and improve lung function in patients with COPD," concluded Dr. Biswal.

John Heffner, MD, past president of the ATS, commented that "mounting evidence over several decades underscores the importance of oxidant-mediated damage for the development of COPD in addition to other lung diseases. This study adds greater precision to our understanding of the specific antioxidants that may protect the lung against emphysema to allow clinical trials based on valid pathophysiologic principles."

The findings were published in the second issue for September of the American Journal of Respiratory and Critical Care Medicine, published by the American Thoracic Society.

Adapted from materials provided by American Thoracic Society, via EurekAlert!, a service of AAAS.

http://www.sciencedaily.com/releases/2008/09/080912075156.htm

Scientists Behind 'Doomsday Seed Vault' Ready World's Crops For Climate Change

Global Seed Vault in Svalbard, Norway. (Credit: Mari Tefre/Global Crop Diversity Trust)

ScienceDaily (Sep. 18, 2008) — As climate change is credited as one of the main drivers behind soaring food prices, the Global Crop Diversity Trust is undertaking a major effort to search crop collections—from Azerbaijan to Nigeria—for the traits that could arm agriculture against the impact of future changes. Traits, such as drought resistance in wheat, or salinity tolerance in potato, will become essential as crops around the world have to adapt to new climate conditions.

Climate change is having the most negative impact in the poorest regions of the world, already causing a decrease in yields of most major food crops due to droughts, floods, increasingly salty soils and higher temperatures.

Crop diversity is the raw material needed for improving and adapting food crops to harsher climate conditions and constantly evolving pests and diseases. However, it is disappearing from many of the places where it has been placed for safekeeping—the world's genebanks. Compounding the fact that it is not well conserved is the fact that it is not well understood. A lack of readily available and accurate data on key traits can severely hinder plant breeders' efforts to identify material they can use to breed new varieties best suited for the climates most countries will experience in the coming decades. The support provided by the Global Crop Diversity Trust will not only rescue collections which are at risk, but enable breeders and others to screen collections for important characteristics.

"Our crops must produce more food, on the same amount of land, with less water, and more expensive energy," said Cary Fowler, Executive Director of the Global Crop Diversity Trust. "This, on top of climate change, poses an unprecedented challenge to farming. There is no possible scenario in which we can continue to grow the food we require without crop diversity. Through our grants we seek, as a matter of urgency, to rescue threatened crop collections and better understand and conserve crop diversity."

Through a competitive grants scheme, the Trust will provide funding for projects that screen developing country collections—including wheat, chickpea, rice, barley, lentils, coconut, banana, maize, and sweet potato—for traits that will be essential for breeding climate-ready varieties. These projects involve 21 agricultural research institutions in Argentina, Bangladesh, Brazil, India, Israel, Mali, Nigeria, Niger, Pakistan, Papua New Guinea, Peru, the Philippines, South Africa, Sri Lanka, and Syria.

Scientists will be screening chickpea and wheat collections in Pakistan for traits of economic importance for farmers; characterizing rare coconuts in Sri Lanka for traits of drought tolerance and tolerance to other pests and diseases; screening for salinity tolerance in sweet potatoes in Peru; and identifying drought-tolerant bananas in India.

Much of the screening will take place within collections where many of the unique samples are at risk. Therefore, in addition to its efforts to bolster the development of climate-ready crops, the Trust will provide funding to save unique crop collections that are at risk of disappearing. Crop collections need to be re-grown at regular intervals, and fresh seed harvested and placed in seedbanks to ensure long-term conservation and availability. The Trust is working with more than 60 countries to "regenerate" unique collections of crops critical for food security, and to ensure that they are duplicated elsewhere for safety in a collection that meets international standards, as well as in the Svalbard Global Seed Vault.

Worldwide, there are a handful of crop collections that can be said to meet international standards. And even these few, despite their role in protecting the foundation of our food supply, lurch from one funding arrangement to the next without ever having any real long-term security. The Trust is now endowing these, the world's most important collections, ensuring their conservation and availability for the future of agriculture. Crops already being safeguarded by the Trust's pledge of financial security include banana, barley, bean, cassava, faba bean, forages, grass pea, lentil, pearl millet, rice, sorghum, taro, wheat and yam. These are housed in collections managed in trust for humanity at eight agricultural institutions that are supported by the Consultative Group on International Agricultural Research (CGIAR) and by the Secretariat for the Pacific Community.

"Secure funding on this sort of time-scale has been unheard of in this field. Crop collections are all too often amassed and then lost according to changing funding fashions and priorities," said Daniel Debouck, Head of the Genetic Resources Unit at the International Center for Tropical Agriculture (CIAT), one of the agricultural institutions supported by the CGIAR. "Genebanking is not something you can turn on and off, and a shortfall in funding of just a few months can result in the permanent loss of unique varieties. We need to be sure that we will have sufficient funding year after year after year. The Trust is now providing that security."

"The contents of our genebanks—some 1.5 million distinct samples—are the result of a 13,000-year experiment in the interaction between crops and environment, climate and culture," said Fowler. "If we are wise enough to conserve these collections, we will have a treasure chest of the very traits that crops used in the past when they successfully adapted to new conditions—the traits they will need again in the future to adapt as climates and environments change."

The Global Crop Diversity Trust

The mission of the Trust is to ensure the conservation and availability of crop diversity for food security worldwide. Although crop diversity is fundamental to fighting hunger and to the very future of agriculture, funding is unreliable and diversity is being lost. The Trust is the only organization working worldwide to solve this problem, and has already raised over $140 million. For further information, please visit: http://www.croptrust.org.

Adapted from materials provided by Burness Communications, via EurekAlert!, a service of AAAS.

http://www.sciencedaily.com/releases/2008/09/080917145518.htm

Doppler On Wheels Deployed At Hurricane Ike

In the name of science, this mobile Doppler on Wheels braved Ike's hurricane winds last week. (Credit: Josh Wurman)

ScienceDaily (Sep. 18, 2008) — The only scientific team to successfully brave Hurricane Ike's knock-down winds and swells in Galveston was the DOW, the Doppler on Wheels mobile weather radar operated by the Center for Severe Weather Research (CSWR) in Boulder, Colo.

"The DOW mission to Ike provided, for the first time, high-resolution radar data collected from the ground of the inside of a hurricane eye strengthening during landfall, and from a hurricane that directly impacted a large urban area," said scientist Josh Wurman of CWSR.

The National Science Foundation (NSF)-supported DOW was deployed on a 35-foot-high overpass in Galveston during the passage of Ike.

"The mission will allow researchers to better understand how phenomena called fine-scale wind streaks and boundary layer rolls, discovered by the the DOW in 1996, affect hurricane evolution," said Steve Nelson, program director in NSF's Division of Atmospheric Sciences, which funds the DOW. "These rolls may be important in how efficiently heat is extracted from the ocean, and how strongly hurricane winds are slowed by surface friction."

The DOW collected data for 17 hours. The center of Ike's eye passed nearly directly over the DOW, allowing scientists to take measurements of the front and rear eyewalls, and of the inside of the eye.

Deployed with the DOW were two vehicles equipped with instruments to track winds and raindrop size distributions, and ten unmanned "pods," which measured winds at locations so close to the water that human observers could not safely remain in the vicinity.

The vehicles were deployed at raised locations near the ends of the Galveston Causeway.

The pods stood watch in lines on the end of the Galveston Sea Wall and the Texas City Sea Wall, with 500-meter-spacing so the passage of small-scale gusts could be measured.

The DOW observed several mesovortices--swirling winds--in Ike's eyewall, which intensified winds and rainfall as these mesovortices rotated around the eye.

"The mesovortices are likely associated with some of the worst localized wind damage caused by Ike," said Wurman.

"The understanding from the DOW project is essential to improving forecasts of hurricane intensity, path, and rainfall amounts," he said. "It will lead to new insights on the nature of near surface winds in hurricanes, the behavior of hurricane eyewalls and processes inside eyewalls, and processes in hurricane rainbands."

Adapted from materials provided by National Science Foundation.

http://www.sciencedaily.com/releases/2008/09/080918091331.htm

More Than Skin Deep: There's No Such Thing As A 'Safe' Suntan, Researchers Warn

Exposure to UV radiation -- for example, from sunbathing or using an indoor tanning bed -- affects the skin in a number of ways, including causing DNA damage, photoaging (damage to the skin from chronic exposure to sunlight) and skin cancer, researchers say. (Credit: iStockphoto/Lise Gagne)

ScienceDaily (Sep. 18, 2008) — There may be no such thing as a 'safe' tan based on ultraviolet (UV) radiation, according to a series of papers published in the October issue of Pigment Cell & Melanoma Research, the official journal of The International Federation of Pigment Cell Societies (IFPCS) and the Society for Melanoma Research.

The authors of the three review papers – leading researchers in the fields of cell biology, dermatology and epidemiology – have examined the effects on skin of UV radiation, including that from indoor tanning beds. As well as highlighting the need for greater research into this area, they have called for the use of such beds by under-18s to be banned, along with any publicity that claims that tanning beds are safe.

Exposure to UV radiation -- for example, from sunbathing or using an indoor tanning bed -- affects the skin in a number of ways, including causing DNA damage, photoaging (damage to the skin from chronic exposure to sunlight) and skin cancer. UV radiation is the most ubiquitous carcinogen (cancer-causing agent) for humans, in whom skin is the organ most commonly affected by cancer.

Although more research is required, published data suggest that indoor tanning beds, which are used most by young women, are linked to an increased risk of melanoma (the most dangerous form of skin cancer), and do not support the idea that tanning beds are safe.

In one of three papers in the series published today, Dr David E Fisher, dermatologist and president of the Society of Melanoma Research, and colleagues from the Massachusetts General Hospital, Boston have explored the social issues and molecular mechanisms related to tanning caused by UV exposure. Reviewing published data in the field, the authors report that both tanning and skin cancer seem to begin with the same event – DNA damage caused by UV exposure. This leads them to suggest that a 'safe' tan with UV may be a physical impossibility.

The authors conclude: "UVR [ultraviolet radiation] exposure represents one of the most avoidable causes of cancer risk and mortality in man. Whereas genetic and other factors undoubtedly contribute importantly to skin cancer risk, the role of UV is incontrovertible, and efforts to confuse the public,

particularly for purposes of economic gain by the indoor tanning industry, should be vigorously combated for the public health."

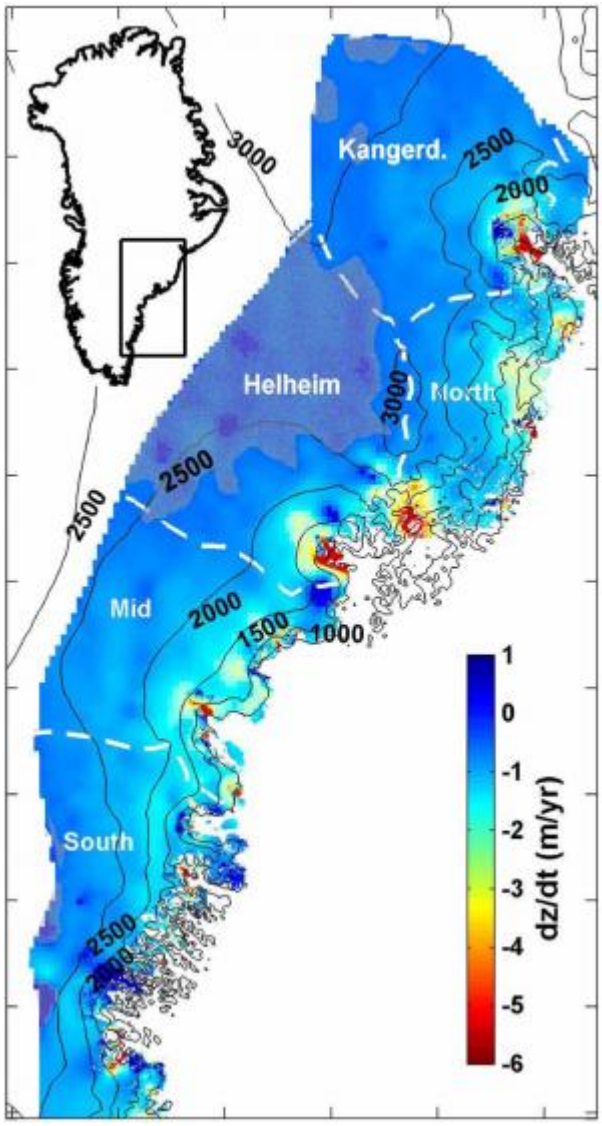
The other two papers in the series have been written by Dr Marianne Berwick, an epidemiologist at the University of New Mexico Cancer Research and Treatment Centre, and Dr Dorothy C Bennett, a dermatologist at the Division of Basic Medical Sciences, St George's, University of London, London, UK.

Skin cancer is the most common malignancy in the US; the American Academy of Dermatology reports than one American dies every 62 minutes from melanoma. The WHO estimated that, in the year 2000, up to 71 000 deaths worldwide were attributed to excessive UV exposure.

Adapted from materials provided by Wiley-Blackwell, via EurekAlert!, a service of AAAS.

http://www.sciencedaily.com/releases/2008/09/080918081046.htm

Small Glaciers -- Not Large -- Account For Most Of Greenland's Recent Loss Of Ice, Study Shows



The image above shows the southeast region of Greenland that was the focus of Howat's study. The color scale shows changes in ice thickness over time. (Credit: Photo courtesy of Ian Howat.)

ScienceDaily (Sep. 18, 2008) — The recent dramatic melting and breakup of a few huge Greenland glaciers have fueled public concerns over the impact of global climate change, but that isn't the island's biggest problem.

A new study shows that the dozens of much smaller outflow glaciers dotting Greenland's coast together account for three times more loss from the island's ice sheet than the amount coming from their huge relatives.

In a study just published in the journal Geophysical Research Letters, scientists at Ohio State University reported that nearly 75 percent of the loss of Greenland ice can be traced back to small coastal glaciers.

Ian Howat, an assistant professor of earth sciences and researcher with Ohio State's Byrd Polar Research Center, said their discovery came through combining the best from two remote sensing techniques. It provides perhaps the best estimate so far of the loss to Greenland's ice cap, he says.

Aside from Antarctica, Greenland has more ice than anywhere else on earth. The ice cap covers four-fifths of the island's surface, is 1,491 miles (2,400 kilometers) long and 683 miles (1,100 kilometers) wide, and can reach 1.8 miles (3 kilometers) deep at its thickest point.

As global temperatures rise, coastal glaciers flow more quickly to the sea, with massive chunks breaking off at the margins and forming icebergs. And while some of the largest Greenland glaciers – such as the Jakobshavn and Petermann glaciers on the northern coast – are being closely monitored, most others are not.

Howat and his colleagues concentrated on the southeastern region of Greenland, an area covering about one-fifth of the island's 656,373 square miles (1.7 million square kilometers). They found that while two of the largest glaciers in that area – Kangerdlugssuaq and Helheim – contribute more to the total ice loss than any other single glaciers, the 30 or so smaller glaciers there contributed 72 percent of the total ice lost.

"We were able to see for the first time that there is widespread thinning at the margin of the Greenland ice sheet throughout this region.

"We're talking about the region that is within 62 miles (100 kilometers) from the ice edge. That whole area is thinning rapidly," he said.

Howat says that all of the glaciers are changing within just a few years and that the accelerated loss just spreads up deeper into the ice sheet.

To reach their conclusions, the researchers turned to two ground-observing satellites. One of them, ICESAT (Ice, Cloud, and land Elevation Satellite), does a good job of gauging the ice over vast expanses which were mostly flat.

On the other hand, ASTER (Advanced Spaceborne Thermal Emission and Reflection Radiometer) does a better job at seeing changes at the steeper, less-flat margins of the ice sheet, Howat said.

"We simply merged those data sets to give us for the first time a picture of ice elevation change – the rate at which the ice is either going up or down – at a very high (656-foot or 200-meter) resolution.

"They are a perfect match for each other," Howat said.

"What we found is the entire strip of ice over the southeast margin, all of these glaciers, accelerated and they are just pulling the entire ice sheet with it," he said.

Howat said that their results show that such new findings don't necessarily require new types of satellites. "These aren't very advanced techniques or satellites. Our work shows that by combining satellite data in the right way, we can get a much better picture of what's going on," Howat said.

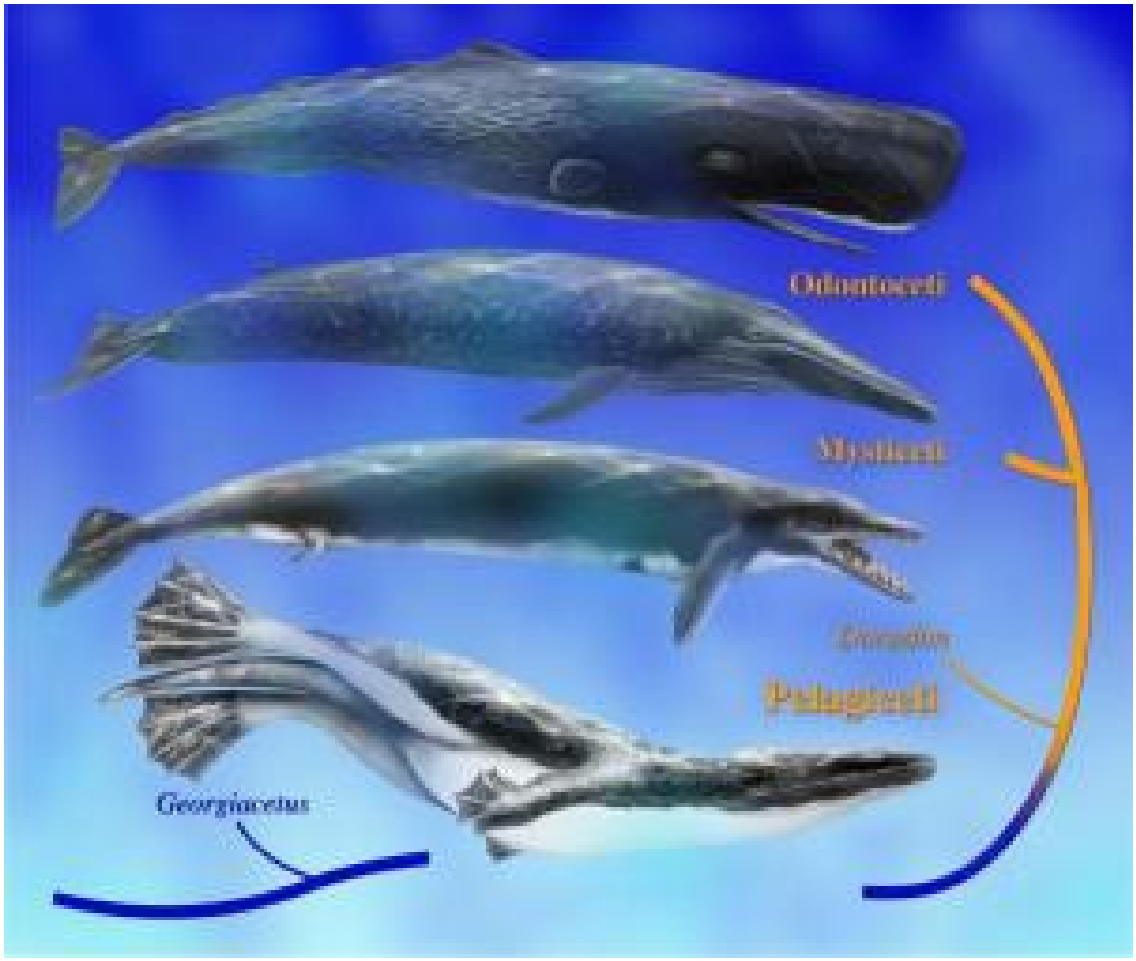
Along with Howat, B.E. Smith and I Joughin, both of the University of Washington, and T.A. Scambos from the National Snow and Ice Data Center at the University of Colorado worked on the project.

The research was funded in part by the National Aeronautics and Space Administration.

Adapted from materials provided by Ohio State University.

http://www.sciencedaily.com/releases/2008/09/080915121319.htm

It's All In The Hips: Early Whales Used Well Developed Back Legs For Swimming, Fossils Show



The tail-powered swimming of modern baleen (Mysticeti) and toothed (Odontoceti) whales evolved from the hip wiggling style of the ancient whale Georgiacetus. (Credit: Illustration by Mary Parrish, Smithsonian Institution)

ScienceDaily (Sep. 18, 2008) — The crashing of the enormous fluked tail on the surface of the ocean is a "calling card" of modern whales. Living whales have no back legs, and their front legs take the form of flippers that allow them to steer. Their special tails provide the powerful thrust necessary to move their huge bulk. Yet this has not always been the case.

Reporting in the latest issue of the *Journal of Vertebrate Paleontology*, paleontologist Mark D. Uhen of the Alabama Museum of Natural History describes new fossils from Alabama and Mississippi that pinpoint where tail flukes developed in the evolution of whales.

"We know that the earliest whales were four-footed, semi-aquatic animals, and we knew that some later early whales had tail flukes, but we didn't know exactly when the flukes first arose," said Uhen. "Now we do."

The most complete fossil described in the study is a species called *Georgiacetus vogtlensis*. Although not new to science, the new fossils provide some very significant new information. In particular, previously unknown bones from the tail show that it lacked a tail fluke. On the other hand, it did have large back feet

and Uhen suggests that it used them as hydrofoils. Undulating the body in the hip region was the key factor in the evolution of swimming.

The very different body forms seen in the lineage of whales point to very different methods of swimming underwater. Previous studies have proposed a possible process to evolve from the ancestral form, paddling with all four legs, to the modern-day whale in which the tail oscillates up and down. Living vertebrates that are capable swimmers employ a whole range of different techniques, including five particularly well defined methods: quadrupedal paddling, paddling only using the back legs, undulation of the hips, tail undulation, and tail oscillation.

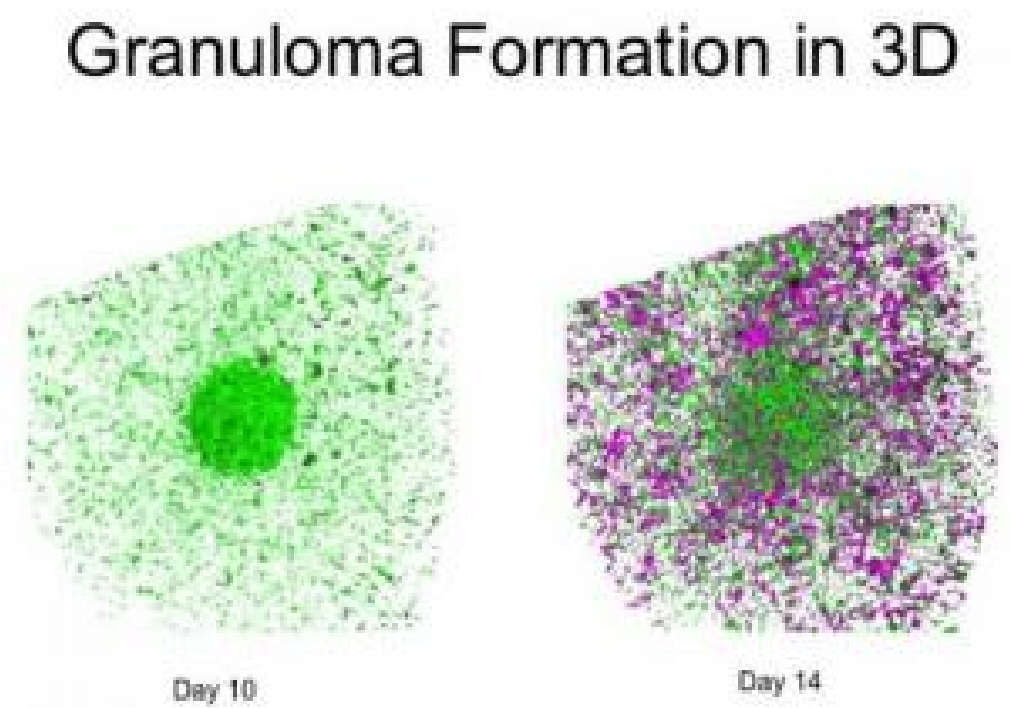
Interestingly, it had been suggested that during whale evolution each of these steps occurred in turn, but that the hip undulation stage might have been by-passed. The new discoveries indicate that the complete opposite was true, and as Uhen says “wiggling hips were a significant step in the evolution of underwater swimming in whales.”

So now we know that Elvis was not the first to owe success to undulating hips!

Adapted from materials provided by Society of Vertebrate Paleontology.

http://www.sciencedaily.com/releases/2008/09/080917210028.htm

From Xbox To T-cells: Borrowing Video Game Technology To Model Human Biology



Within a few minutes, the GPU-driven software developed by the Michigan Tech team provides a 3-D model of the human immune response to a TB infection. (Credit: Image courtesy of Michigan Technological University)

ScienceDaily (Sep. 18, 2008) — A team of researchers at Michigan Technological University is harnessing the computing muscle behind the leading video games to understand the most intricate of real-life systems.

Led by Roshan D'Souza, the group has supercharged agent-based modeling, a powerful but computationally massive forecasting technique, by using graphic processing units (GPUs), which drive the spectacular imagery beloved of video gamers. In particular, the team aims to model complex biological systems, such as the human immune response to a tuberculosis bacterium.

Computer science student Mikola Lysenko, who wrote the software, demonstrates. On his computer monitor, a swarm of bright green immune cells surrounds and contains a yellow TB germ. These busy specks look like 3D-animations from a PBS documentary, but they are actually virtual T-cells and macrophages—the visual reflection of millions of real-time calculations. "I've been asked if we ran this on a supercomputer or if it's a movie," says D'Souza, an assistant professor of mechanical engineering–engineering mechanics. He notes that their model is several orders of magnitude faster than state-of-the art agent modeling toolkits. According to the researchers, however, this current effort is small potatoes.

"We can do it much bigger," says D'Souza. "This is nowhere near as complex as real life." Next, he hopes to model how a TB infection could spread from the lung to the patient's lymphatic system, blood and vital organs.

Dr. Denise Kirschner, of the University of Michigan in Ann Arbor, developed the TB model and gave it to D'Souza's team, which programmed it into a graphic processing unit. Agent-based modeling hasn't replaced test tubes, she says, but it is providing a powerful new tool for medical research.

Computer models offer significant advantages. "You can create a mouse that's missing a gene and see how important that gene is," says Kirschner. "But with agent-based modeling, we can knock out two or three genes at once." In particular, agent-based modeling allows researchers to do something other methodologies can't: virtually test the human response to serious insults, such as injury and infection.

While agent-based modeling may never replace the laboratory entirely, it could reduce the number of dead-end experiments. "It really helps scientists focus their thinking," Kirschner said. "The limiting factor has been that these models take a long time to run, and [D'Souza's] method works very quickly and efficiently," she said.Dr. Gary An, a surgeon specializing in trauma and critical care in Northwestern University's Feinberg School of Medicine, is a pioneer in the use of agent-based modeling to understand another matter of life and death: sepsis. With billions of agents, including a variety of cells and bacteria, these massive, often fatal infections have been too complex to model economically on a large scale, at least until now.

"The GPU technology may make this possible," said An. "This is very interesting stuff, and I'm excited about it."

About agent-based modeling

Agent-based modeling simulates the behaviors of complex systems. It can be used to predict the outcomes of anything from pandemics to the price of pork bellies. It is, as the name suggests, based on individual agents: e.g., sick people and well people, predators and prey, etc. It applies rules that govern how those agents behave under various conditions, sets them loose, and tracks how the system changes over time. The outcomes are unpredictable and can be as surprising as real life.

Agent-based modeling has been around since the 1950s, but the process has always been handicapped by a shortage of computing power. Until recently, the only way to run large models quickly was on multi-million-dollar supercomputers, a costly proposition.

D'Souza's team sidestepped the problem by using GPUs, which can run models with tens of millions of agents with blazing speed."With a $1,400 desktop, we can beat a computing cluster," says D'Souza. "We are effectively democratizing supercomputing and putting these powerful tools into the hands of any researcher. Every time I present this research, I make it a point to thank the millions of video gamers who have inadvertently made this possible."

The Tech team also looks forward to applying their model in other ways. "We can do very complex ecosystems right now," said Ryan Richards, a computer science senior. "If you're looking at epidemiology, we could easily simulate an epidemic in the US, Canada and Mexico.""GPUs are very difficult to program. It is completely different from regular programming," said D'Souza, who deflects credit to the students. "All of this work was done by CS undergrads, and they are all from Michigan Tech. I've had phenomenal success with these guys—you can't put a price tag on it."

D'Souza's work was supported by a grant from the National Science Foundation. In addition to Lysenko and Richards, computer science undergraduate Nick Smolinske also contributed to the research.

Adapted from materials provided by Michigan Technological University.

http://www.sciencedaily.com/releases/2008/09/080916155058.htm

Blanket Ban On Bushmeat Could Be Disastrous For Forest Dwellers In Central Africa, Says New Report

Bush pigs, duikers, and monkeys for sale. Makokou market, Gabon. (Credit: Photo by Nathalie van Vliet - December 2007)

ScienceDaily (Sep. 18, 2008) — A new report from the Center for International Forestry Research (CIFOR), the Secretariat of the Convention on Biological Diversity (CDB) and partners warns that an upsurge in hunting bushmeat—including mammals, birds, reptiles and amphibians — in tropical forests is unsustainable and that it poses serious threats to food security for poor inhabitants of forests in Africa, who rely largely on bushmeat for protein.

The authors of the report call on policymakers in the region to develop policies protecting endangered species, while allowing sustainable hunting of "common" game, since there is no clear substitute available if common wild meat sources were to be depleted.

According to the report, large mammal species are particularly vulnerable. Many – such as elephants, gorillas and other primate species - have already become locally extinct, while fast reproducing generalist species that thrive in agricultural environments—such as duikers or rodents—may prove more resilient. The report makes an urgent appeal for a coordinated policy response to the crisis at the local, national and international levels, but warns that blanket bans on hunting and trade that don't discriminate between specific local contexts and species are bound to fail.

Researchers estimate that the current harvest of bushmeat in Central Africa amounts to more than 1 million tonnes annually—the equivalent of almost four million head of cattle. Bushmeat provides up to 80 percent of the protein and fat needed in rural diets in Central Africa, according to the report.

"If current levels of hunting persist in Central Africa, bush meat protein supplies will fall dramatically, and a significant number of forest mammals will become extinct in less than 50 years," said Robert Nasi of CIFOR, an author of the report.

The report, "Conservation and Use of Wildlife-Based Resources: The Bushmeat Crisis," was published by CBD and CIFOR, one of 15 centers supported by the Consultative Group on International Agricultural Research (CGIAR). It also includes major contributions from the Overseas Development Institute (ODI) and the Wildlife Conservation Society (WCS).

The report sums up the latest state of knowledge on this controversial issue and makes a strong case for developing a regulated and legalized bushmeat industry to ensure that the poorest forest-dwellers can continue to access this vital source of protein and livelihoods, but in a more sustainable way.

Local, national and regional trade in bushmeat has become a significant part of the informal sector's "hidden economy." Overall, international trade in wild animal products has an estimated value of US$3.9 billion. For West and Central Africa alone, the estimates range from $42 to $205 million a year. Yet, these statistics are still largely ignored in official trade and national policies regulating forest policy.

The report notes that it is important to make a clear distinction between commercial entrepreneurs, who engage in what they know to be an illicit activity, and poor rural people, for whom bushmeat represents both animal protein and a cash-earning commodity.

"If local people are guaranteed the benefits of sustainable land use and hunting practices, they will be willing to invest in sound management and negotiate selective hunting regimes," said Frances Seymour, Director General of CIFOR. "Sustainable management of bushmeat resources requires bringing the sector out into the open, removing the stigma of illegality, and including wild meat consumption in national statistics and planning."

"Reframing the bushmeat problem from one of international animal welfare to one of sustainable livelihoods—and part of the global food crisis—might be a good place to start," she added.

Wildlife is also adversely affected by the industrial extractive sector - logging, mining and oil drilling, for example – as these activities directly facilitate hunting through road construction and/or the provision of transportation for hunters. Salaried employees and their extended families that live in company camps or near the timber concessions are a major source of local demand for – and supply of – bushmeat.

European consumers are also partly responsible. Apart from the direct demand for bushmeat products from expat communities, European demand for African timber exports helps to drive this local timber extraction – both legal and illegal.

The report recommends that the local and international timber industry work with NGOs, local communities, and governments to develop forest policies and management plans that incorporate wildlife concerns, rather than focusing just on timber and other forms of natural resource extraction. Such plans should include conservation education, an agreed system of law enforcement, development of alternative protein supplies and an intensive monitoring program. If designed and applied appropriately, this will not only serve to enhance wildlife conservation, but will ultimately benefit the private sector and local communities as well.

According to the authors, the so-called bushmeat crisis is the focus of many conservation organizations, whose advocacy for a "crackdown" on the trade has fostered confusion and misunderstanding about the links between hunting, wildlife trade, livelihoods, and ecosystems.

Most people in tropical forests hunt, the report notes, and meat sales within the local village can be significant—including up to 90 percent of the catch sold in the Democratic Republic of Congo. Such figures counter the conventional wisdom of many conservation groups that suggests banning all commercial sales of bushmeat will deliver a win-win solution for both conservation and the poor.

The report advocates a more secure rights regime as the key to any solution. "Only if the local hunter is bestowed with some right to decide what, where and how he may hunt—as well as the knowledge to understand the consequences of his decisions—will he embrace his responsibility to hunt sustainably," Nasi said.

The report emphasizes that it is of critical importance to craft a specific, tailored approach for different cases and species, while also recommending that policymakers look to other renewable resource sectors, such as fishing and logging, for clues on how to develop a sustainable management strategy for bushmeat.

Adapted from materials provided by Center for International Forestry Research (CIFOR).

http://www.sciencedaily.com/releases/2008/09/080916101152.htm

Researchers Suppress 'Hunger Hormone' In Pigs: New Minimally Invasive Method Yields Result As Good As Bariatric Surgery

In a study in pigs, a procedure known as gastric artery chemical embolization produced an effect similar to bariatric surgery by suppressing ghrelin levels and subsequently lowering appetite, researchers report. (Credit: iStockphoto/Brendan Hunter)

ScienceDaily (Sep. 18, 2008) — Johns Hopkins scientists report success in significantly suppressing levels of the "hunger hormone" ghrelin in pigs using a minimally invasive means of chemically vaporizing the main vessel carrying blood to the top section, or fundus, of the stomach. An estimated 90 percent of the body's ghrelin originates in the fundus, which can't make the hormone without a good blood supply.

"With gastric artery chemical embolization, called GACE, there's no major surgery," says Aravind Arepally, M.D., clinical director of the Center for Bioengineering Innovation and Design and associate professor of radiology and surgery at the John Hopkins University School of Medicine. "In our study in pigs, this procedure produced an effect similar to bariatric surgery by suppressing ghrelin levels and subsequently lowering appetite."

Reporting on the research in the September 16 online edition of Radiology, Arepally and his team note that for more than a decade, efforts to safely and easily suppress grehlin have met with very limited success.

Bariatric surgery - involving the removal, reconstruction or bypass of part of the stomach or bowel - is effective in suppressing appetite and leading to significant weight loss, but carries substantial surgical risks and complications. "Obesity is the biggest biomedical problem in the country, and a minimally invasive alternative would make an enormous difference in choices and outcomes for obese people," Arepally says.

Arepally and colleagues conducted their study over the course of four weeks using 10 healthy, growing pigs; after an overnight fast, the animals were weighed and blood samples were taken to measure baseline ghrelin levels. Pigs were the best option, he says, because of their human-like anatomy and physiology.

Using X-ray for guidance, members of the research team threaded a thin tube up through a large blood vessel near the pigs' groins and then into the gastric arteries supplying blood to the stomachs. There, they administered one-time injections of saline in the left gastric arteries of five control pigs, and in the other five, one-time injections of sodium morrhuate, a chemical that destroys the blood vessels.

The team then sampled the pigs' blood for one month to monitor ghrelin values. The levels of the hormone in GACE-treated pigs were suppressed up to 60 percent from baseline.

"Appetite is complicated because it involves both the mind and body," Arepally says. "Ghrelin fluctuates throughout the day, responding to all kinds of emotional and physiological scenarios. But even if the brain says "produce more ghrelin," GACE physically prevents the stomach from making the hunger hormone."

The research was funded by the National Institutes of Health.

Authors on the paper are Brad P. Barnett, Tarek T. Patel, Valerie Howland, Racy C. Boston, Dara L. Kraitchman, Ashkan A. Malayeri, and Arepally, all of Hopkins.

Journal reference:

1. Arepally et al. **Catheter-directed Gastric Artery Chemical Embolization Suppresses Systemic Ghrelin Levels in Porcine Model**. *Radiology*, 2008; 249 (1): 127 DOI: 10.1148/radiol.2491071232

Adapted from materials provided by Johns Hopkins Medical Institutions.

http://www.sciencedaily.com/releases/2008/09/080916100946.htm

Explorers Find Hundreds Of Undescribed Corals, Other Species On Familiar Australian Reefs

Ctenophore, or comb jelly, collected off Wassteri Reef, Heron Island. (Credit: Photo by Gary Cranitch, Queensland Museum, 2008)

ScienceDaily (Sep. 19, 2008) — Hundreds of new kinds of animal species surprised international researchers systematically exploring waters off two islands on the Great Barrier Reef and a reef off northwestern Australia -- waters long familiar to divers.

The expeditions, affiliated with the global Census of Marine Life, help mark the International Year of the Reef and included the first systematic scientific inventory of spectacular soft corals, named octocorals for the eight tentacles that fringe each polyp.

The explorers have released some initial results and stunning images from their landmark four-year effort to record the diversity of life in and around Australia's renowned reefs.

Discoveries at Lizard and Heron Islands (part of the Great Barrier Reef), and Ningaloo Reef in northwestern Australia, included:

- About 300 soft coral species, up to half of them thought to be new to science;
- Dozens of small crustacean species -- and potentially one or more families of species – likewise thought unknown to science;
- A rarely sampled amphipod of the family Maxillipiidae, featuring a bizarre whip-like back leg about three times the size of its body. Only a few species are recorded worldwide;
- New species of tanaid crustaceans, shrimp-like animals, some with claws longer than their bodies;

- The beautiful, rare Cassiopeia jellyfish, photographed upside down on the ocean floor, tentacles waving in the water column -- a posture that enables symbiotic algae living in its tentacles to capture sunlight for photosynthesis;
- Scores of tiny amphipod crustaceans – insects of the marine world – of which an estimated 40 to 60% will be formally described for the first time.

As well, the researchers deployed new methods designed to help standardize measurement of the health, diversity and biological makeup of coral reefs worldwide and enhance comparisons.

Preparing for future discoveries, the divers pegged several layered plastic structures – likened to empty doll houses – for marine life to colonize on the ocean floor at Lizard and Heron Islands. Creatures that move into these Autonomous Reef Monitoring Structures (ARMS), which provide shelter designed to appeal to a variety of sea life, will be collected over the next one to three years.

"Corals face threats ranging from ocean acidification, pollution, and warming to overfishing and starfish outbreaks," says Dr. Ian Poiner, Chief Executive Officer of the Australian Institute of Marine Science (AIMS), which led the research. "Only by establishing a baseline of biodiversity and following through with later censuses can people know the impact of those threats and find clues to mitigate them."

Dr. Poiner also chairs the Scientific Steering Committee of the CoML which, after a decade of research, will release its first global census in October 2010.

Dr Julian Caley, Principal Research Scientist at AIMS and co-leader of CoML's CReefs project, says the three explored coral reef sites are located in two ocean basins with different levels of biodiversity.

"These site characteristics offer clues to predict patterns of biodiversity on reefs that are well known and those that aren't."

Previous studies have uncovered large differences in the biodiversity at the Great Barrier Reef's Lizard Island and, further south, Heron Island – 30% more hard corals, 40% more fishes, for example. The cause of such gradients in species diversity is poorly understood, but species richness in the region tends to decrease with distance from the equator.

Ningaloo Reef appears to be the least biodiverse of the three sites studied, which may be related to its comparative isolation from other reef systems.

Understanding these biodiversity gradients and the influence of connectivity will help scientists predict reef biodiversity worldwide.

Expeditions to the same three sites will be repeated annually over the next three years to continue their inventory and measure impacts of climate change and other processes over time.

The number of species living on reefs is roughly in reverse proportion to body size, with microbes most numerous and larger animals such as corals and fishes smallest in number.

Says Dr. Caley: "We were all surprised and excited to find such a large variety of marine life never before described – most notably soft coral, isopods, tanaid crustaceans and worms – and in waters that divers access easily and regularly."

"Compared to what we don't know, our knowledge of marine life is a proverbial drop in the ocean. Inventorying the vast diversity and abundance of life across all ocean realms challenges both science and the imagination."

First systematic inventory of soft corals on Barrier Reef

The expedition marks the first census of soft corals, named octocorals for the eight tentacles that fringe each polyp.

Researchers believe between one-third to half of the hundreds of soft corals found are species new to science.

While the colorful animals are not reef builders, they dominate some areas studied, covering up to 25 per cent of the ocean floor. They also provide important habitat for other species.

The addition of perhaps as many as 150 new species to the global inventory of soft corals is a major addition to the knowledge of this group which, despite its high distribution worldwide, remains one of the most poorly understood groups.

Despite the large number of new species already discovered, Dr. Caley believes as many new species again may be found on future expeditions. DNA barcoding will dramatically expedite the identification of these species in future, he adds.

Vultures of the sea

Researchers were intrigued as well by discoveries of various isopods, often referred to as vultures of the sea, because some feed on dead fish.

Of the many isopod species collected during the first two expeditions, approximately 100 are not yet described in the scientific literature.

Some isopods are parasitic and burrow into the flesh of live fish. Most infamous of the parasitic isopod are cymothoids – the "tongue biter" – so called because they invade a fish and eat its tongue off, essentially replacing the tongue by attaching to the host's mouth.

Still more discoveries

Other major finds included many potentially new polychaetes, a class of marine animals known as "bristle worms," a relative of leeches and earth worms. Up to two-thirds of species found at Lizard Island alone are thought to be undescribed.

The scientists' studies also included seaweeds, urchins, and lace corals. More formally known as Bryozoans, lace coral colonies consist of asexually budded (and therefore genetically identical) individuals. Colonies form large intricate structures which bear no resemblance to the structure of the individual.

"Amazingly colorful corals and fishes on reefs have long dazzled divers, but our eyes are just opening to the astonishing richness of other life forms in these habitats," says CoML Chief Scientist Ron O'Dor. "Hundreds of thousands of forms of life remain to be discovered. Knowledge of this ocean diversity matters on many levels, including possibly human health – one of these creatures may have properties of enormous value to humanity."

Says Dr. Nancy Knowlton of the Smithsonian Institution, Washington, another principal investigator with CReefs: "The new Australian expeditions reveal how far we are from knowing how many species live in coral reefs around the globe. Estimates span the huge range from1 to 9 million."

CReefs has embarked on a mission to create a more precise estimate of reef species by the time of the first CoML synthesis report in 2010.

Adds Dr. O'Dor: "Even at the low end of this range, we must wonder why nature has evolved such prolific diversity on coral reefs. While they are icons of diversity, the processes that have generated and maintained coral reef biodiversity are still unknown.

Expeditions

Each of the three expeditions (Lizard Island, April 2 - 22, Ningaloo June 5 - 25 and Heron, Aug 25 - Sept 14) was three weeks in duration and included about 25 members.

Researchers adapted sampling methods and applied these in a wide range of habitats, including sampling diversity in dead coral heads -- the skeleton of a coral emptied of the fleshy animal that once lived inside. Samples were obtained by enveloping small dead coral heads in a bag and carefully chiseling off the base to capture all of the animals inside. A single dead coral head can yield more than 150 individual crustaceans, molluscs, and echinoderms. Worldwide, these dead coral heads host many thousands of species and their use is emerging as an important tool for assessing coral reef biodiversity.

As with the ARMS devices, the collection and analysis of biodiversity in dead coral heads is being standardized to promote the comparability of research worldwide.

Funding for the work was provided from several sources: BHP Billiton (the giant multinational resources company), the Great Barrier Reef Foundation, the Census of Marine Life, and AIMS, which leads the Australian node of the international CReefs project. As well, the Australian Biological Resources Study is funding follow-up taxonomic work, including DNA barcoding of organisms in support of the Barcode of Life initiative.

Generous support has also been provided by the many consortium partners.

Led by AIMS, the distinguished group of institutions in the consortium includes the Australian Museum, the Museum and Art Gallery of the Northern Territory, Museum Victoria, the Queensland Museum, the South Australian Museum, the Western Australian Museum, the University of Adelaide, Murdoch University, the South Australian Herbarium, and the Smithsonian Institution.

CoML Census of Coral Reef Ecosystems (http://www.creefs.org)

The Australian expedition is part of an unprecedented global census of coral reefs, CReefs, one of 17 Census of Marine Life projects.

Coral reefs are highly threatened repositories of extraordinary biodiversity and therefore have been called "the rainforests of the sea," but little is known about the ocean's diversity as compared to its terrestrial counterpart.

Important issues being addressed by CReefs Australia include:

- How many species live on coral reefs?
- How many of these are unique to coral reefs? and
- How does this diversity respond to human disturbance?

CReefs, led by scientists at AIMS, the Smithsonian Institution, and the Pacific Islands Fisheries Science Center of the National Oceanic and Atmospheric Administration (NOAA), aims to census life in coral

reef ecosystems, to consolidate and improve access to coral reef ecosystem information scattered throughout the world, and to strengthen tropical taxonomic expertise.

The biodiversity data generated will be made publicly available through the Ocean Biogeographic Information System (OBIS) (http://www.iobis.org), an initiative of the Census of Marine Life.

A three-week CReefs expedition to Hawaii's French Frigate Shoals in 2006 discovered more than 100 potential new species and/or location records and advanced understanding of marine biodiversity in the Hawaiian Archipelago.

An international team of taxonomists and crew collected and photographed several potentially new species of crabs, corals, sea cucumbers, sea quirts, worms, sea stars, snails, and clams. Many other species familiar in other ocean areas had never been recorded around Hawaii.

Among other global activities, CReef associates in India this year convened to review the success of a series of 17 recommendations made to government in 1998, ranging from the establishment of marine protected areas and related legislation to the creation of a National Coral Reef Research Center.

Meanwhile, US and Mexican researchers have chronicled a century of research on 46 named coral reefs of the southern Gulf of Mexico. The chronicle links to GulfBase (http://www.gulfbase.org), a database listing species inhabiting southern Gulf reefs (2057 species) and islands (298 species), reflecting greater-than-expected biodiversity there.

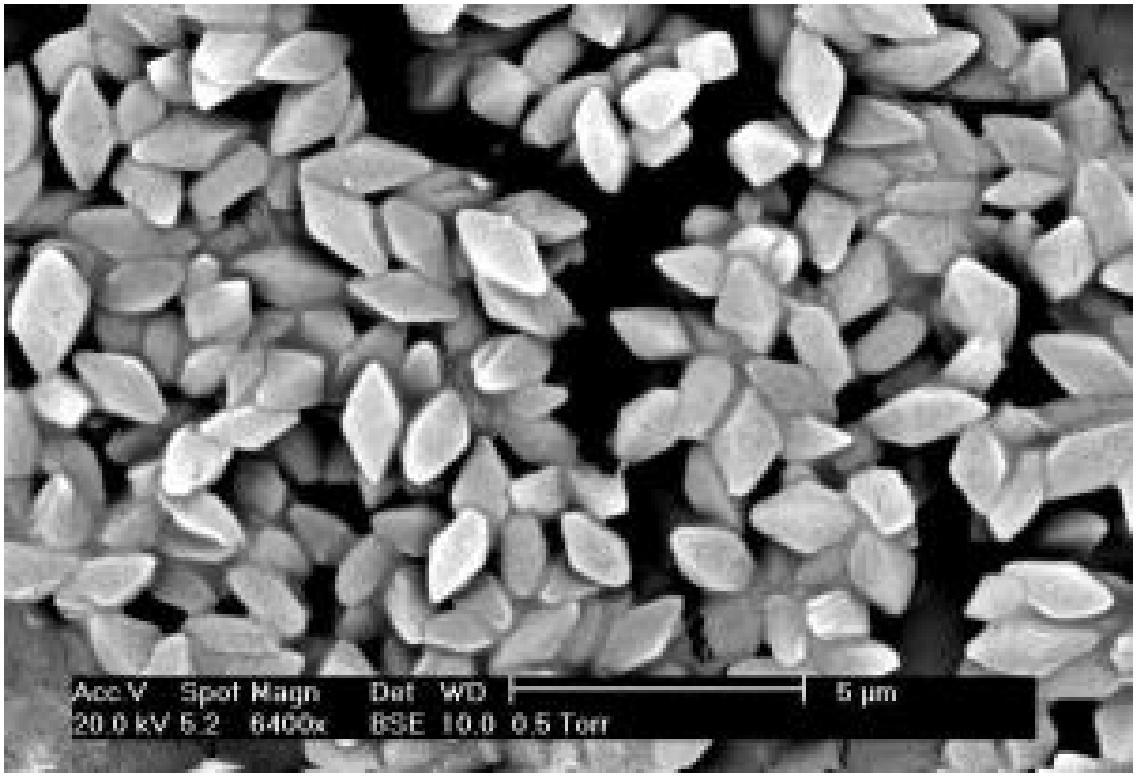
The chronicle (http://www.tamu.edu/upress/BOOKS/2007/tunnell.htm) reveals that reef condition is better further offshore, away from population centers, and in areas of low rainfall and runoff, according to lead editor Wes Tunnell, Vice Chair of the US National Committee for the Census of Marine Life.

The Census of Marine Life (http://www.coml.org) is a global network of researchers in more than 80 nations engaged in a 10-year initiative to assess and explain the diversity, distribution, and abundance of marine life in the oceans – past, present, and future. The network will release the first Census of Marine Life in 2010.

Adapted from materials provided by Census of Marine Life.

http://www.sciencedaily.com/releases/2008/09/080918170401.htm

Genetically Modified Crops Protect Neighbors From Pests, Study Finds



Bt is an insecticide derived from the spores and toxic crystals of the bacteria Bacillus thuringiensis (shown above). (Credit: Microscopy by Jim Buckman / Courtesy of Wikimedia Commons)

ScienceDaily (Sep. 19, 2008) — A study in northern China indicates that genetically modified cotton, altered to express the insecticide, Bt, not only reduces pest populations among those crops, but also reduces pests among other nearby crops that have not been modified with Bt. These findings could offer promising new ideas for controlling pests and maximizing crop yields in the future.

The report will be published by the journal Science on Friday, 19 September. Science is the journal of AAAS, the nonprofit science society.

Dr. Kong-Ming Wu from the Chinese Academy of Agricultural Sciences in Beijing and colleagues analyzed data from 1997 to 2007 about the agriculture of Bt cotton in six provinces in northern China, covering 38 million hectares of farmland cultivated by 10 million resource-poor farmers. They compared that information with data on pest populations in the region, focusing on the cotton bollworm, a serious pest for Chinese farmers.

The researchers' results show that populations of the cotton bollworm were dramatically reduced with the introduction of Bt cotton, especially during the period from 2002 to 2006. They considered the contribution of temperature and rainfall along with the introduction of the genetically modified cotton, and confirmed that Bt cotton was responsible for the long-term suppression of the pests in the cotton and a host of other un-modified crops after 10 years. Dr. Wu and colleagues suggest that this may be because cotton is the main host for bollworm eggs, and reducing larval populations in the cotton consequently reduces the entire population and protects other crops.

Bt is an insecticide derived from the spores and toxic crystals of the bacteria Bacillus thuringiensis, and has been sold commercially since 1960. It is considered non-toxic to humans, animals, fish, plants, micro-organisms, and most insects. However, it is highly selective and lethal to caterpillars of moths and butterflies. Bt is currently registered and marketed for use as an insecticide in more than 50 countries worldwide. It does not contaminate groundwater because it degrades so rapidly.

The authors say that Bt technology gives China a new tool for pest control, and that all farmers in a Bt cotton-planting region will experience the benefits. "In 1992, cotton bollworms caused about a 30 percent loss in the cotton yield in northern China. Because of the high costs for pest control then, many farmers refused to plant cotton," said Dr. Wu in an email interview. "This case study of Bt cotton implies that other Bt crops, such as Bt rice, may also have great potential for agricultural practices in China. This success with Bt cotton could push forward the commercial processes of genetically modified crops in China."

Dr. Jian-Zhou Zhao, a co-author of the report, also highlights the health benefits of using Bt cotton. "Poisoning from other insecticides, and even death, was a big problem for cotton farmers in the 1990's," Zhou said. "Most farmers did not have proper protective clothes while applying insecticides with small backpack sprayers. This may be another reason that many farmers refused to plant cotton before Bt was available -- it was too dangerous and scary."

The use of Bt cotton and other genetically modified crops could provide a safer and more economical solution to pest control in many small farms around the world. Dr. Wu and the team of researchers, however, acknowledge that a major challenge to the success of Bt cotton is the potential for insects to evolve resistance to the insecticide. They insist that despite its considerable value, Bt cotton should still be considered only one component in the overall management of pests.

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Jian-Zhou Zhao is also affiliated with Pioneer Hi-Bred International, Inc., Johnston, IA 50131, USA. Yu-Ying Jiang is from the National Agro-Technical Extension and Service Center, Beijing, 1000026, P. R. China.

This research was supported by the Ministry of Science and Technology of China and the National Natural Science Foundation of China.

Journal reference:

1. Wu et al. **Suppression of Cotton Bollworm in Multiple Crops in China in Areas with Bt Toxin-Containing Cotton**. *Science*, 2008; 321 (5896): 1676 DOI: 10.1126/science.1160550

Adapted from materials provided by American Association for the Advancement of Science, via EurekAlert!, a service of AAAS.

http://www.sciencedaily.com/releases/2008/09/080918170355.htm

Key Advance In Treating Spinal Cord Injuries Found In Manipulating Stem Cells

ScienceDaily (Sep. 19, 2008) — Researchers in Rochester, N.Y., and Colorado have shown that manipulating stem cells prior to transplantation may hold the key to overcoming a critical obstacle to using stem cell technology to repair spinal cord injuries.

Research from a team of scientists from the University of Rochester Medical Center and the University of Colorado Denver School of Medicine, published today in the online Journal of Biology, may lead to improved spinal cord repair methods that pave the way for victims of paralysis to recover the use of their bodies without the risk of transplant-induced pain syndromes.

The research focuses on a major support cell in the central nervous system called astrocytes. When nerve fibers are injured in the spinal cord, the severed ends of the nerve fibers fail to regenerate and reconnect with the nervous system circuitry beyond the site of the injury. During early development, astrocytes are highly supportive of nerve fiber growth, and scientists believe that if properly directed, these cells could play a key role in regenerating damaged nerves in the spinal cord.

The Rochester team – which consists of biomedical geneticists Chris Proschel, Ph.D., Margot Mayer-Proschel, Ph.D., and Mark Noble, Ph.D. – are pioneers in manipulating stem cells to generate nervous system cells that can be used for therapeutic treatments. Rather than transplanting naïve stem cells, the team has adopted an approach of pre-differentiating stem cells into better defined populations of brain cells. These are then selected for their ability to promote recovery. Here glial restricted precursor (GRP) cells – a population of stem cells that can give rise to several different types of brain cell – were induced to make two different astrocyte sub-types using different growth factors that promote cell formation during normal development. Although these astrocytes are made from the same stem cell population, they apparently have very distinct characteristics and functions

"These studies are particularly exciting in addressing two of the most significant challenges to the field of stem cell medicine – defining the optimal cell for repair and identifying means by which inadequately characterized stem cell approaches may actually cause harm," said Noble, who is also co-director of the New State Center of Research Excellence in Spinal Cord Injury, one of the primary funders of the research.

The research team in Colorado, which consisted of Stephen Davies, Ph.D. and Jeannette Davies, Ph.D., transplanted the two types of astrocytes into the injured spinal cords of rats and found dramatically different outcomes. One type of astrocyte was remarkably effective at promoting nerve regeneration and functional recovery, with transplanted animals showing very high levels of new cell growth and survival, as well as recovery of limb function. However, the other type of astrocyte not only failed to promote nerve fiber regeneration or functional recovery but also caused neuropathic pain, a severe side effect that was not seen in rats treated with the beneficial astrocytes. Moreover, transplantation of the precursor cells themselves, without first turning them into astrocytes, also caused pain syndromes without promoting regeneration.

"To our knowledge, this is the first time that two distinct sub-types of astrocytic support cells generated from a common stem cell-like precursor have been shown to have robustly different effects when transplanted into the injured adult nervous system," said Mayer-Proschel.

"It has long been a concern that therapies that promote growth of nerve fibers in the injured spinal cord would also cause sprouting in pain circuits," said Stephen Davies. "However by using the right astrocytes to repair spinal cord injuries we can have all the gains without the pain, while these other cell types appear to provide the opposite – pain but no gain."

"These results emphasize the importance of astrocytes in controlling the outcome of neurological disease processes," said Proschel. "In addition, because transplants of undifferentiated stem cells harbor the risk of making deleterious astrocytes, it is important to understand their properties and how they might form. By being able to study different types of astrocytes derived from a common neural precursor, we are now underway to finding means of preventing the formation of the deleterious astrocyte type in the first place."

The research teams in Denver and Rochester consider the dramatically dissimilar outcomes between the different astrocyte transplants a development that can change the way stem cell technologies are used to repair spinal cord injuries. To that end, the researchers are in the process of developing a safe, efficient and cost-effective way to use this approach to better define the optimal human astrocytes with an eye toward use for clinical trials.

Also participating in this research was Ningzhe Zhang, Ph.D., with the University of Rochester Department of Biomedical Genetics. In addition to the New York State Spinal Injury Research Board, this research was supported by the Lone Star Foundation and donations from private individuals.

Journal reference:

1. Davies et al. **Transplanted astrocytes derived from BMP or CNTF treated glial restricted precursors have opposite effects on recovery and allodynia after spinal cord injury**. *Journal of Biology*, 2008; 7 (7): 24 DOI: 10.1186/jbiol85

Adapted from materials provided by University of Rochester Medical Center, via EurekAlert!, a service of AAAS.

http://www.sciencedaily.com/releases/2008/09/080918192939.htm

Smart Desks Make Sci-fi A Reality In The Classroom

Schools are set for a Star Trek make-over thanks to the development of the world's first interactive classroom by experts at Durham University. (Credit: Image courtesy of Durham University)

ScienceDaily (Sep. 19, 2008) — Schools are set for a Star Trek make-over thanks to the development of the world's first interactive classroom by experts at Durham University.

Researchers at the Technology-Enhanced Learning Research Group (TEL) are designing new learning environments using interactive multi-touch desks that look and act like a large version of an Apple iPhone.

The team observed how students and teachers interact in classes and how Information Communications technology (ICT) could improve collaboration. They then set about designing an interactive classroom solution called 'SynergyNet' to reflect TEL's aims of achieving active student engagement and learning by sharing, problem-solving and creating.

The team has linked up with manufacturers to design software, and desks that recognize multiple touches on the desktop, using vision systems that can see infrared light.

SynergyNet will integrate ICT into the fabric of the classroom. The new desk with a 'multi-touch' surface will be the central component; the desks will be networked and linked to a main smartboard offering new opportunities for teaching and collaboration.

Several students will be able to work together at a desk as the desks allow simultaneous screen contact by multiple users using fingers or pens. Durham researchers want to create a 'natural way' for students to use computers in class. The system encourages collaboration between students and teachers, and a move away from teacher-centric learning.

The government's ICT vision aims to: 'transform teaching, learning and help to improve outcomes through shared ideas, more exciting lessons… and to engage 'hard to reach' learners, with special needs support, more motivating ways of learning, and more choice about how and where to learn.'

Dr. Liz Burd, Director of Active Learning in Computing at Durham University says: "Our vision is that every desk in school in 10 years time will be interactive. IT in schools is an exciting prospect - our system is very similar to the type of interface shown as a vision of the future in the TV series Star Trek!

"We can now by-pass the 'move-to-use' whiteboard. The new desk can be both a screen and a keyboard, it can act like a multi-touch whiteboard and several students can use it at once. It offers fantastic scope for more participative teaching and learning.

"The system will also boost equal access in school. In IT, we have found that males have been the dominant actors - interactive classrooms will encourage more females to take part in lessons. It will also enable more disabled students to participate in lessons and allow more personalized learning."

A single work-desk can operate as a set of individual work spaces and/or a large screen allowing students to cooperate on a task. The software will be used to link everything together in a fully interactive classroom system of desks and smartboards.

Teachers will be able to instantly display examples of good work by students on the main smart-board; tasks could also be set for each individual desk. Numeracy tasks could include exercises where pupils have to split a restaurant bill by sliding visual representations of money into a group space.

After testing the system with students of all ages, the software will be available to schools for free as open source code.

TEL in Computing is the largest funded research study to look at multi-touch interactive systems for education. £1.5 million has been awarded to Durham researchers who will design the system and software, and test it with students from primary and secondary schools, and university students over the next 4 years.

Dr. Andrew Hatch from Durham's Technology-Enhanced Learning Research Group adds: "It changes the move-to-use principle; instead the computer becomes part of the desk. It's a practical change that will provide a creative interface for life-long learning for all students!"

The Computing Department at Durham University leads TEL and England's only Centre of Excellence in Teaching and Learning (CETL) in Computer Science, called Active Learning in Computing (ALiC). This centre seeks to facilitate a shift towards far higher levels of active student engagement, where knowledge is obtained by sharing, problem-solving and creating, rather than by passive listening. Providing novel facilities and encouraging new ways of working will be a central focus.

Example: Click here to see how the new desks work:
http://smart.dur.ac.uk/index.php?n=Main.MultitouchPage

The Active Learning in Computing research is funded by the EPSRC - Engineering and Physical Sciences Research Council; the ESRC - Economic and social research council, and the TLRP - Teaching and learning research programme.

Adapted from materials provided by Durham University, via EurekAlert!, a service of AAAS.

http://www.sciencedaily.com/releases/2008/09/080916215203.htm

Road Crossing Structures Important In Reduction Of Animal Mortality On Roads

A stag crossing under a subway, showing the band of powdered marble. (Credit: SINC / Cristina Mata)

ScienceDaily (Sep. 19, 2008) — Spanish highways are increasingly incorporating walkways specially designed for wild animals, or mixed use structures designed for other purposes, which connect wildlife from one side of the road to the other. Researchers at the Autonomous University of Madrid have analysed 43 walkways used by vertebrates to quantify the importance of these structures, which facilitate animals' natural movements and reduce mortality caused by vehicles and, consequently, traffic accidents.

Researchers from the Department of Ecology at the Autonomous University of Madrid and the CEDEX (Ministry of Public Works) have spent several years studying how various animal species use the wildlife walkways and other structures that enable them to cross highways. According to the scientists, these crossings, which may be specifically designed for the purpose, or have mixed use (drains, subways and bridges) reduce traffic accidents through collisions with animals.

"The effectiveness of these structures is a key feature in wildlife conservation, particularly bearing in mind the relentless growth of communication networks, which is leading to an increasingly fragmented countryside, full of barriers to wildlife that are at times impossible to cross," Cristina Mata, researcher at the Autonomous University of Madrid, told SINC.

The study, published in the most recent issue of the Journal of Environmental Management, has enabled an evaluation to be carried out of the design of structures that stop animals crossing the tarmac and reduce the accident rate on Spanish roads. According to data from the Directorate General of Traffic (DGT), there were 10,000 traffic accidents caused by collisions with animals on roads in 2006 alone, resulting in 1,000 human injuries and 23 deaths.

Of the 43 structures analysed using digital photography techniques and other more traditional means, such as footprints left on a powdered marble surface, the tracks of 424 different animals were recorded between the months of March and June 2001. Mata says that this "shows how the construction of walkways specifically for the use of wildlife is justified, while the adaptation of drains or increasing the size of existing structures should also be borne in mind because of the attraction of these structures for certain species and their relatively low cost".

The work was carried out on part of the A-42 highway between Camarzana de Tera (km 34, in the province of Zamora) and Orense (km 217). This four-lane road is fenced along its length and was opened to traffic in 1998. It is used each day by about 4,500 vehicles, 23% of them lorries, which could endanger the lives of vertebrate populations living in the area.

A solution to reduce accidents involving wild boar and deer

Lizards, snakes, small rodents such as mice, shrews, moles and rats, Iberian hares, weasels, wild cats, wolves and dogs are among the animals identified, as well as wild boar and deer. On average, the researchers registered 0.99 animal tracks per day during the study period.

The results show that 17 different animal species use the structures that cross the road. One of the most commonly recorded in all the various structures were foxes, with an average of 0.27 crossings per day. Other species such as badgers also showed high usage. The results obtained for wild boar, as well as for roe deer and other deer, support the importance of building large crossing points specifically designed for these animals.

Adapted from materials provided by Plataforma SINC, via AlphaGalileo.

http://www.sciencedaily.com/releases/2008/09/080917074132.htm

Concern over mouth cancer checks

Many dental surgeries do not routinely provide appointments within a week for patients suffering from symptoms of mouth cancer, a survey suggests.

The Facial Surgery Research Foundation, Saving Faces, telephoned almost 250 NHS dental surgeries in London.

Almost a third of dental receptionists did not offer a prompt consultation when given common oral cancer symptoms.

The Department of Health said urgent appointments should have been given in such cases.

Early diagnosis and treatment can increase a patient's chances of survival from just below 50% to around 90%.

Consultant oral and maxillofacial surgeon Professor Iain Hutchison, who is chief executive of Saving Faces, says the situation must improve.

"The longer you leave the cancer the greater the likelihood of it spreading which means the chances of curing it are less."

New contracts

New dental contracts introduced in April 2006 were intended to increase access to NHS dentists. Charges were simplified and Primary Care Trusts were given the responsibility to allocate the amount of NHS work a dentist can do.

But Professor Hutchison believes the new rules may be acting as a barrier to patients getting an emergency appointment.

In the survey, 6% of all the receptionists contacted told the researchers that the practice could not see any new NHS patients because they had used up the quota allocated by the PCT.

Professor Hutchison said this is "a new phenomenon... and clearly an inappropriate response to someone who may have mouth cancer."

Symptoms

Mouth cancer kills about 1,700 people in the UK every year.

The most common symptoms include painless ulcers that do not heal, red and white patches and unusual changes in the mouth.

Smokers and drinkers aged over 40 are particularly at risk.

Dom's on the Case of...
Dentists , Mon 22 Sept 9:15am
Hospital Charges , Tue 23 Sept 9:15am
Drugs Lottery , Wed 24 Sept 9:15am
Eye Care , Thu 25 Sept 9:15am
Private Health , Fri 26 Sept 9:15am

For the survey, the researchers told dental receptionists they had been experiencing the symptoms for four weeks.

The Department of Health said the "advice and guidance from the DoH is to give an urgent appointment" in such cases.

Professor Hutchison said his team undertook the research "to try to identify any potential source of delay in patients seeking treatment", and that the results were "an improvement on similar research done in 1992 but not satisfactory."

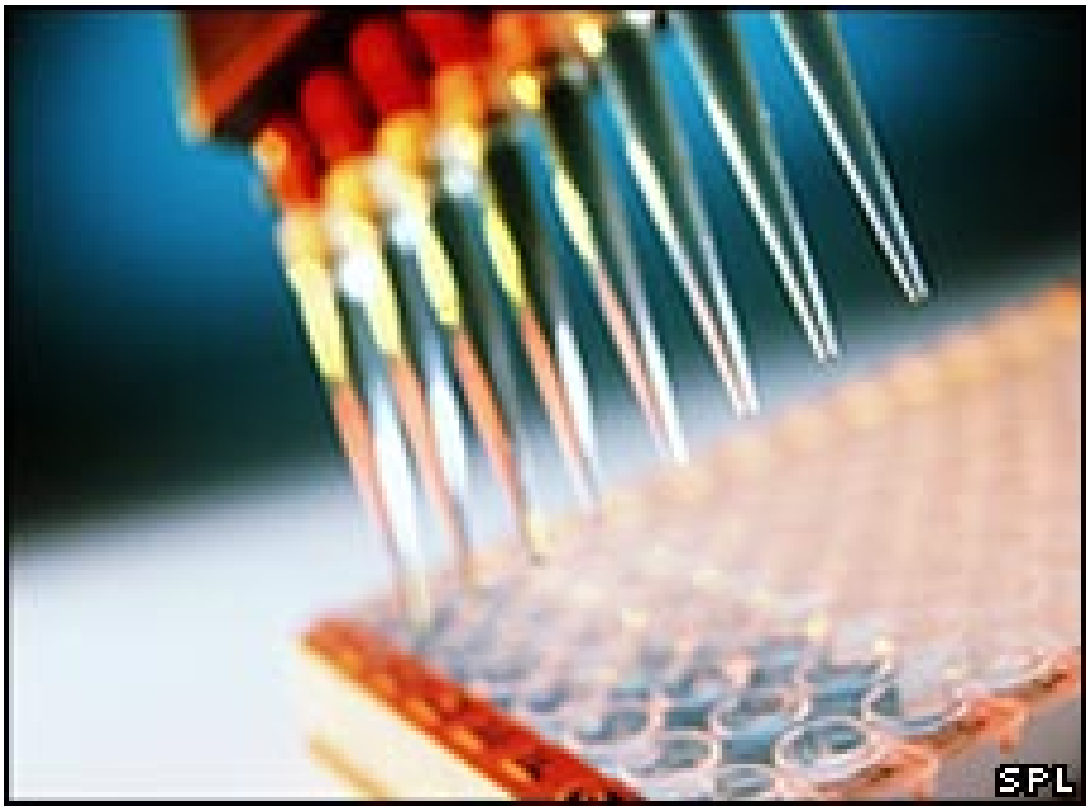
***Dom's on the Case* , a five-part investigation into the NHS, will be broadcast on weekdays at 0915 on BBC One starting on Monday, 22 September, 2008.**

Story from BBC NEWS:
http://news.bbc.co.uk/go/pr/fr/-/2/hi/health/7623107.stm

Published: 2008/09/19 23:06:39 GMT

'Universal' HIV testing planned

By Emma Wilkinson
Health reporter, BBC News



All 15-59 year olds in some areas of England should be offered a HIV test by their GP, new recommendations say.

In 42 trusts with more than two HIV cases for every 1,000 people, everyone should be offered the test when they join a GP surgery, experts said.

Around 20% of the population would fall under the universal testing policy.

The guidelines, backed by the Department of Health, also support improved testing in high-risk groups such as men who have sex with men.

Most of the high-prevalence areas are in London, but others include Brighton, Manchester, Blackpool and Birmingham.

> **Without earlier diagnosis we will not see the reduction in transmission that we need to see, nor a further fall in serious disease**
> Professor Peter Borriello, HPA

Dr Adrian Palfreeman, author of the guidelines, and a consultant in Leicester said the idea was to "normalise" HIV testing.

"Until recently it was regarded as something exceptional that you needed special counselling for.

"What we're saying is that, in these areas, anyone attending primary health care the offer of the test should be made - for example when the patient registers with the GP for the first time."

All general medical admissions to hospital should also be offered the test, the guidelines advise.

Dr Palfreeman added that implementing the recommendations would require a change in the culture of primary care and also stressed no one would be tested without their consent.

The guidelines, developed by the British HIV Association, the British Association for Sexual Health and HIV and the British Infection Society also promote routine testing in antenatal clinics, sexual health clinics and drug dependency programmes in all areas of the country.

The Health Protection Agency (HPA), which has backed the recommendations, calculates a universal offer of HIV testing is cost-effective when the diagnosis rate is greater than one per 1,000 tests.

Late diagnosis

Professor Peter Borriello, director of the HPA Centre for Infections, said around a third of the 73,000 people with HIV in the UK do not know that they have the infection.

"The trouble with so many people being unaware of their infection is that onward transmission is more likely, and late diagnosis is associated with more serious HIV disease.

"Without earlier diagnosis we will not see the reduction in transmission that we need to see, nor a further fall in serious disease.

"Increased HIV testing under the new guidelines should lead to much earlier HIV diagnosis for those that are infected."

He added the guidelines would help to normalise testing and remove the "stigma".

Elizabeth Pisani, an epidemiologist and journalist who has worked on HIV programmes around the world said on the whole the recommendations were "extremely sensible".

But she questioned the need for a universal approach if high-risk groups were targeted properly.

"It's sort of a cop-out because it's allowing GPs and health services to not have to ask about high-risk behaviour.

"If you target your testing to those high-risk groups you will pick up a much higher proportion for much lower testing cost."

Story from BBC NEWS:
http://news.bbc.co.uk/go/pr/fr/-/2/hi/health/7626101.stm

Published: 2008/09/19 17:24:43 GMT

Baby paracetamol asthma concern

Use of paracetamol in babies increases the risk of developing asthma five years later, a study of more than 200,000 children suggests.

Those given the painkiller for fever in the first year of life had a 46% increased risk of asthma by the age of six or seven, The Lancet reported.

Researchers do not know if the drug directly increases asthma risk or another underlying factor is to blame.

Experts said parents should still use the drug for high temperatures.

Increasing use of paracetamol in children has coincided with rising cases of asthma over the past 50 years, the researchers said.

> **This underlines the importance of a current recommendation that paracetamol should not be used regularly in young children and should be reserved for times when they have a fever of 39°C or more and are in obvious discomfort or pain**
> Professor Jeffrey Aronson

The latest study, carried out in 31 countries, is the largest to date looking at paracetamol use and childhood asthma.

Parents of children aged six and seven were asked questionnaires about symptoms of asthma, eczema and related allergic conditions in addition to details on paracetamol use for fever in the child's first year of life and the past 12 months.

The results also showed that higher doses and more regular use of the drug are associated with a greater risk of developing asthma.

Analysis of current use in 103,000 children showed those who had used paracetamol more than once a month in the past year had a three-fold increased risk of asthma compared with those who had not taken the drug in the past 12 months.

Use of paracetamol was also associated with more severe asthma symptoms.

And risk of eczema and hayfever was also increased.

Cause and effect

One explanation for the findings is that paracetamol may cause changes in the body that leave a child more vulnerable to inflammation and allergies.

Another is that the use of paracetamol in children may be a marker for something else which is causing increased rates of asthma, such as lifestyle issues or the underlying infection causing the fever, experts said.

Study leader Professor Richard Beasley from the University of Auckland said: "We stress the findings do not constitute a reason to stop using paracetamol in childhood.

"However the findings do lend support to the current guidelines of the World Health Organization, which recommend that paracetamol should be reserved for children with a high fever (38.5C or above)."

Professor Jeffrey Aronson, president of the British Pharmacological Society, said the dose relationship with paracetamol and asthma suggested there was a real association between the two.

"This confirms previous findings and underlines the importance of a current recommendation that paracetamol should not be used regularly in young children and should be reserved for times when they have a fever and are in obvious discomfort or pain."

Leanne Male, Asthma UK's assistant director of research, said: "Despite a great deal of research being carried out, we still don't know how important different lifestyle and genetic factors are in affecting the development of asthma.

"If we can establish the mechanisms behind how paracetamol might affect it, this could go some way towards helping to prevent the condition in the first place.

"At this stage however, the use of paracetamol should not be a concern for parents or carers who are worried about the development of asthma in their children."

Story from BBC NEWS:
http://news.bbc.co.uk/go/pr/fr/-/2/hi/health/7623230.stm

Published: 2008/09/19 06:29:54 GMT

As Text Messages Fly, Danger Lurks

By JENNIFER STEINHAUER and LAURA M. HOLSON

LOS ANGELES — Senator Barack Obama used one to announce to the world his choice of a running mate. Thousands of Americans have used them to vote for their favorite "American Idol" contestants. Many teenagers prefer them to actually talking. Almost overnight, text messages have become the preferred form of communication for millions.

But even as industry calculations show that Americans are now using mobile phones to send or receive more text messages than phone calls, those messages are coming under increasing fire because of the danger they can pose by distracting users. Though there are no official casualty statistics, there is much anecdotal evidence that the number of fatal accidents stemming from texting while driving, crossing the street or engaging in other activities is on the rise.

"The act of texting automatically removes 10 I.Q. points," said Paul Saffo, a technology trend forecaster in Silicon Valley. "The truth of the matter is there are hobbies that are incompatible. You don't want to do mushroom-hunting and bird-watching at the same time, and it is the same with texting and other activities. We have all seen people walk into parking meters or walk into traffic and seem startled by oncoming cars."

In the latest backlash against text-messaging, the California Public Utilities Commission announced an emergency measure on Thursday temporarily banning the use of all mobile devices by anyone at the controls of a moving train.

The ban was adopted after federal investigators announced that they were looking at the role that a train engineer's text-messaging might have played here last week in the country's most deadly commuter rail accident in four decades.

A California lawmaker is also seeking to ban text-messaging by drivers, a step already taken by a handful of other states. "We have had far too many tragic incidents around the country that are painful proof that this is a terrible problem," said the legislator, State Senator Joe Simitian, who wrote the California law requiring drivers who are talking on a cellphone to use hands-free devices.

The fight against text messages is also reaching beyond the realm of public safety. The National Collegiate Athletic Association's board recently upheld a 2007 ban on all text-messaging by coaches to student recruits.

"The student athlete advisory committee believed that it was unprofessional, intrusive and expensive," said Erik Christianson, a spokesman for the N.C.A.A.

Theaters, too, long accustomed to chiding cellphone users as well as people who crumple their cough drop wrappers, have taken on texting. And, assisted by cellphone service providers, parents have moved to limit the hours in which their children can get and send text messages.

Text-messaging, also known as S.M.S. messaging (the abbreviation stands for short message service), first took off in Japan, cellphone technology experts say, in part because the cost of texting there was less than that of making cellphone calls.

In the United States, the practice has accelerated greatly in the last few years, as the technology has improved with the introduction of products like the Apple iPhone. In June, 75 billion text messages were sent in the United States, compared with 7.2 billion in June 2005, according to CTIA — the Wireless Association, the leading industry trade group.

The consumer research company Nielsen Mobile, which tracked 50,000 individual customer accounts in the second quarter of this year, found that Americans each sent or received 357 text messages a month then, compared with 204 phone calls. That was the second consecutive quarter in which mobile texting significantly surpassed the number of voice calls.

The lure of texting is self-evident. It is fast and direct, screening out the pleasantries that even standard e-mail messages call for, like "how are you." It is used to blast information among co-workers and inform parents of their children's whereabouts, and, as Kwame M. Kilpatrick demonstrated en route to his downfall as mayor of Detroit, is useful in expressing feelings of romantic desire. (Object lesson No. 2: text messages are also subject to subpoena.)

"It is just a super useful tool," said Caitlin Williams, a San Francisco bakery owner whose outgoing cellphone message encourages people to send her a text.

"You can kind of cut to the chase," Ms. Williams said. "Sometimes you just want your questions answered without having to answer a lot of questions about how your day is."

For all her love of texting, Ms. Williams says she has seen the underbelly as well.

"Of course there is the dangerous driving while texting," she said, "and the obnoxious person in front of you texting instead of ordering their coffee, which happened to me yesterday. We are not at a point where there are a whole lot of rules for proper etiquette for texting. I think as it becomes a more acceptable form of communication, people will regulate themselves a little more."

Teenagers and young adults have adopted text-messaging as a second language. Americans 13 to 17 years of age sent or received an average of 1,742 text messages a month in the second quarter, according to Nielsen. And according to one survey commissioned by CTIA, 4 of 10 teenagers said they could text blindfolded.

Kyle Monaco, a 21-year-old student in Chester, Pa, estimates that he sends 500 text messages a month, compared with 50 phone calls. "It's not that I don't like to talk on the phone," Mr. Monaco said. "Sometimes I just want to see what's going on, as opposed to having a conversation. So it is easier to send a text."

Parents are often torn between their love of instant access to their children and their loathing of others' having the same. In August, Verizon began offering a service that blocks texting during certain times of the day.

"Usage controls were developed at the request of customers," said Jack McArtney, associate director of advertising and content standards for Verizon. "We know of some people who want to keep the kid's phone from buzzing all night. They want them to get some sleep."

And texting at the wrong time can be extremely dangerous. Over the last two years, news accounts across the country have chronicled the death or serious injury of people who walk into traffic while texting or who drive while doing so. Police officials said last year that a crash that killed five cheerleaders in upstate New York might have been linked to texting. A recent Nationwide Insurance survey of 1,503 drivers found that almost 40 percent of those respondents from 16 to 30 years old said they text while driving.

On Wednesday, the National Transportation Safety Board said its investigators had determined from phone records that the commuter-train engineer in last week's disaster had sent and received text messages during the run in which the train ultimately collided with a freight locomotive. Twenty-five people were killed in the crash, and more than 130 injured.

Further, a group representing emergency room doctors issued a warning in July against texting while doing other activities, citing a rise in injuries and deaths seen in emergency rooms around the country stemming from texting.

As policy makers consider their options, use of the technology shows no sign of ebbing.

Joanne Kent, 62, found herself flummoxed when her two granddaughters sent her text messages she did not know how to retrieve. So Ms. Kent, a retired physician's assistant, attended a class held by AT&T at a seniors center in Wallingford, Conn., hoping someone there could show her how.

"They'd send me a text saying, 'Have papa come pick me up,' and I couldn't open it," she said of her granddaughters. "They finally told me I had to learn."

http://www.nytimes.com/2008/09/20/us/20messaging.html?_r=1&th=&adxnnl=1&oref=slogin&emc=th&adxnnlx=1221951921-wcpdve3qk5Wxw8cvqiLZGw

Seeing Past the Slave to Study the Person

By PATRICIA COHEN

When, 11 years ago, DNA evidence convinced most experts that Thomas Jefferson had fathered children with his slave Sally Hemings, many people talked about what the discovery said about Jefferson. Yet few seemed all that interested in what it said about the young girl he owned.

Annette Gordon-Reed was one of those few. Her 1997 book, "Thomas Jefferson and Sally Hemings: An American Controversy" (University of Virginia Press), examined how historians throughout the decades consistently discounted the rumored relationship, ignoring the oral testimony of black descendants. Since then she has combed legal records, diaries, farm books, letters, wills, old newspapers, archives, relatives' memories and more to rescue not only Sally but the entire Hemings clan from obscurity.

Their story is contained in her book "The Hemingses of Monticello: An American Family" (W. W. Norton), to be released on Monday. In nearly 800 pages she follows four generations of Hemingses, starting with their origins in Virginia in the 1700s and continuing through 1826, when Jefferson died and his home, Monticello, was put up for sale.

"I wanted to tell the story of this family in a way not done before" so that readers can "see slave people as individuals," Ms. Gordon-Reed said, sitting on a bench at the slavery exhibit at the New-York Historical Society, where she will be speaking on Oct. 14 with Brent Staples, an editorial writer for The New York Times. Looking down from the balcony, visitors can see glass cabinets holding dozens of busts and statues, including a small one of Jefferson. On another shelf is a bronze cast of Lincoln's face and hands.

When it comes to blacks in America, Ms. Gordon-Reed said, social history has trumped biography. "We tend to think of group identity instead of individuals," she said, which leads us to "miss the complexity of black lives."

"Robert, James, Elizabeth and Sally are not concepts but people," she added, referring to the Hemings family.

Ms. Gordon-Reed turns over the decisions that Sally Hemings and her family made throughout their lives, examining them from every side as if they were a Rubik's Cube. She refuses to accept generalizations and easy conclusions; for instance, she rejects the assertion that all sex between master and slave must be viewed as rape, saying it strips black women of the singularity of their life stories and their dignity.

As Ms. Gordon-Reed spoke about how profoundly strange life in Monticello must have been, a large monitor played a short history of slavery in New York City.

Sally Hemings's father was John Wayles, a slave owner and the father of Jefferson's wife, Martha. After his death, all the Hemingses eventually came to Monticello.

It is almost impossible to put ourselves in their places, Ms. Gordon-Reed said. As she writes of James Hemings in her book, "A man is born into a society that allows his half-sister and her husband to hold him as a slave." Does he grieve when Martha dies, she asks, or when her child — his niece — is buried? Did he and his brother resent the fact that the man who controlled their lives inherited the fortune that — as John Wayles's sons — would have been theirs had they been born free white men? And what did Jefferson, who gave his enslaved servants a relative amount of freedom and sometimes considered himself a friend, suppose of their feelings?

"The connections between these two men are so divorced from anything resembling what could be recognized today as 'normal' human relations that they can be recovered only in the imagination and, even then, only with great difficulty," she writes of James Hemings and Jefferson.

And then there is Sally, light-skinned and beautiful, who apparently bore a remarkable resemblance to her dead half-sister.

Ms. Gordon-Reed tries to understand why the pregnant Sally Hemings made the decision to return with Jefferson to Virginia from Paris, where the law declared her a free person and where there was a community of free Africans.

She suggests that an insecure existence in a foreign country, away from her family, would be a frightening prospect for a pregnant teenager. Jefferson promised to free their children in exchange for her coming back to Virginia; she would have a home and a powerful protector.

All four of her children were later freed; three of them passed as white.

Joseph Ellis, a Jefferson scholar who had been wary of the claims about Hemings before the DNA tests, called Ms. Gordon-Reed's book "the best study of a slave family ever written."

Ever since she was a child in Conroe, Tex., Ms. Gordon-Reed has been interested in Thomas Jefferson. In the third grade she read a children's biography of him that showed him as a child with a slave his own age. "Jefferson was smart," she said, but the black boy in that book "was a person of no consequence and no curiosity."

The depiction bothered her, she recalled: "That was supposed to be a stand-in for me."

Before integration, her mother was an English teacher at a black high school; Ms. Gordon-Reed went to the better-financed white elementary school. She was the only black in her first-grade class. "Delegations of people would stand in the doorway," she remembered, as if they were thinking, "Let's see how this experiment is going."

Though she was mostly accepted, she said, she did break out in hives, probably from the stress. The following year the schools were legally integrated.

At 14 she read Fawn Brodie's "Thomas Jefferson: An Intimate History," about his relationship with Hemings. It was a book widely disdained by Jefferson scholars at the time.

Ms. Gordon-Reed's fascination with history continued at Dartmouth, but by the time she graduated academic jobs were hard to come by. So she ended up going to Harvard Law School, where she met her husband, now a civil court judge in Brooklyn.

"I always wanted to come to New York and be a famous writer," she said, recalling how in Conroe she would read copies of The New Yorker. Now she teaches at New York Law School and in the history department of Rutgers University in Newark.

More than histories, Ms. Gordon-Reed said she expects a gold rush of fiction about the Hemings family. "We don't have any letters from her," she said of Sally. "She is a canvas that people can paint on."

Ms. Gordon-Reed plans to write a second volume that will follow the family up through the late 19th century.

About four years ago, Ms. Gordon-Reed's family gathered for a reunion for the first time. She had doggedly researched Sally Hemings's ancestors and progeny, but realized that she knew little about her own.

"I've started thinking about my family a lot more," she said. "Maybe that's the next project for me."

Years ago a state highway was built to run right through her family's cemetery in Livingston, Tex., so all the graves were moved, and a record was made of every one.

"That," she said, "would be a starting place."

http://www.nytimes.com/2008/09/20/books/20hemings.html?th&emc=th

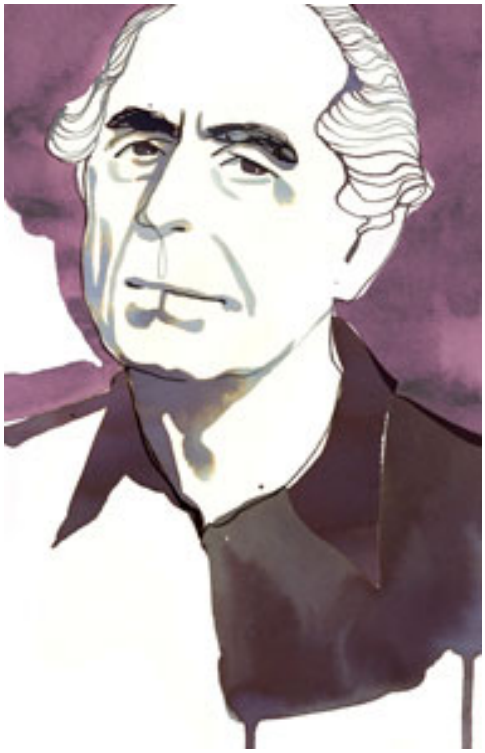
The Student of Desire

By DAVID GATES

INDIGNATION

By Philip Roth

By 233 pp. Houghton Mifflin Company. $26



In his new novel, "Indignation," Philip Roth withholds a crucial piece of information — and that's an understatement — until about a quarter of the way through. This placement seems to me right on the borderline of fair game for reviewers, and not to tell it would misrepresent the book. (A more alert reader than I was might figure it out simply by looking at the table of contents.) Still, it seems mean to spoil a strategic surprise for folks who like that kind of thing. So in case you want to head for the exit now, I'm going to vamp for a couple of paragraphs of harmless generalities and evasive plot summary before getting specific. Roth has a couple more surprises, too (which you might see coming but probably won't), and I promise not to get anywhere near those. Anyhow, isn't it surprising enough that Roth, now 75, has just published his third novel in three years?

Well, at this point, maybe not. Roth has been burning up the track for well over a decade now. Since "Sabbath's Theater" in 1995, Roth has written eight novels, including two general-consensus masterworks — "American Pastoral" (1997) and "Everyman" (2006) — the conclusion of his long Zuckerman saga (last year's "Exit Ghost") and a half-dozen other exceptionally strong books. And in "Indignation," his power and intensity seem undiminished. I generally prefer Roth's short, devastating sex-and-mortality novels — "Everyman," "Exit Ghost," "The Dying Animal" (2001) — to his larger social/political/historical excursions — "American Pastoral," "The Human Stain" (2000), "The Plot Against America" (2004) — although I admit the big books are more fun to read, since they offer a richer menu of topical distractions from what's ultimately in store for each of us. "Indignation," set during the Korean War in a small, conservative Ohio college — hat-tippingly named Winesburg — has something in common with both Rothian modes. It evokes a nasty period of America's social history (you know, as opposed to all those idyllic ones), but like Roth's two previous novels, it's also ruthlessly economical and relentlessly deathbound.

The narrator, a college sophomore named Marcus Messner, who says he used to be "the nicest boy in the world," is the Everyteen of his superficially innocent era. "In my high school years, I had been a prudent, responsible, diligent, hard-working A student who went out with only the nicest girls, a dedicated debater and a utility infielder for the varsity baseball team." The summer after high school, Marcus worked 60-hour weeks in his father's kosher butcher shop in Newark — yet another of Roth's lovingly researched workplaces, like the glove factory in "American Pastoral." And at Winesburg, Marcus studies all week and waits tables all weekend. "I wanted to do everything right," he says. "If I did everything right, I could justify to my father the expense of my being at college in Ohio rather than in Newark. I could justify to my mother her having to work full time in the store again." His goal is to become valedictorian, and since he's only human — as well as a Philip Roth character — "to have intercourse before I died." At 19,

Marcus is just beginning to distill a self out of all this slop of generic niceness: to his surprise, if not to ours, he finds a quality for which Roth's title, with its implication of justified outrage at violated dignity, is the mot juste.

Back when Marcus was in grade school, during World War II, he and his classmates had to learn what they were told was the national anthem of China, America's Pacific Theater ally: "Arise, ye who refuse to be bondslaves! / . . . Indignation fills the hearts of all of our countrymen, / Arise! Arise! Arise!" Now, during a war in which China has become the enemy, Marcus sings this call to arms in his head when forced to attend chapel, with Christian hymns and sermons about "Christ's example" — objecting "not because I was an observant Jew but because I was an ardent atheist." As Marcus's troubles and his defiance mount — neither of them especially high — he's called into the office of a cartoonishly offensive dean and again sings to himself "the most beautiful word in the English language: 'In-dig-na-tion!' " What has the nicest boy in the world done? Changed dorm rooms, twice, to get away from roommates who were driving him crazy. Neither this nor his subsequent infractions, linked from one to another with a horrible inexorability, would amount to anything today, and not one does a bit of harm. But in a novel set in 1951, this series of dinky moments is more than enough to bring on the denouement. Everything in "The Human Stain," you may remember, turns on Coleman Silk's use of a single word; for Marcus Messner, it takes two to change his life forever.

Roth holds back his final surprise — those two words, and all that they lead to, until a few pages before the end; that's the one we won't touch. Marcus, though, has gotten us only from Newark to Winesburg, and into a car for his first date with a delightful basket case named Olivia, when he stops his narrative at a cliffhanging point — during an episode more astonishing to him than it is to us — and imparts something as astonishing to us as it is to him. Which is simply . . . ah, but let's cliffhang for a minute ourselves, O.K.? How does Roth get away with this stuff? The cliffhanger, the obscure portent, the withholding of essential information? He doesn't use these antiquated devices ironically. And those occasional descents into boilerplate prose? It's no Barthelme-like feat of postmodernist ventriloquism that leads him to use such a phrase as "the turbulent decade of the 1960s." Roth's secret, I think, is his supreme confidence as a storyteller — and, paradoxically, a supreme humility. His writing is at the service of his story and characters; he's a pragmatist, not a belletrist. If certain conventions of plot and language do the job, why get fancy? He can break out the fine writing when the occasion requires.

As it does when Marcus delivers his revelation: which is simply . . . that he is dead, and has been "for I don't know how long." For three pages of eloquently discomfiting monologue, Roth makes Marcus sound like a more lucid and connected version of Samuel Beckett's Unnamable: "Even now (if 'now' can be said to mean anything any longer), beyond corporeal existence, alive as I am here (if 'here' or 'I' means anything) as memory alone (if 'memory,' strictly speaking, is the all-embracing medium in which I am being sustained as 'myself'), I continue to puzzle over Olivia's actions. . . . Who could have imagined that one would have forever to remember each moment of life down to its tiniest component? . . . There is no letup — for the afterlife is without sleep as well. . . . There are no doors. There are no days. . . . And the judgment is endless, though not because some deity judges you, but because your actions are naggingly being judged for all time by yourself." Then again, this state may be "merely the anteroom to oblivion." There, feel better?

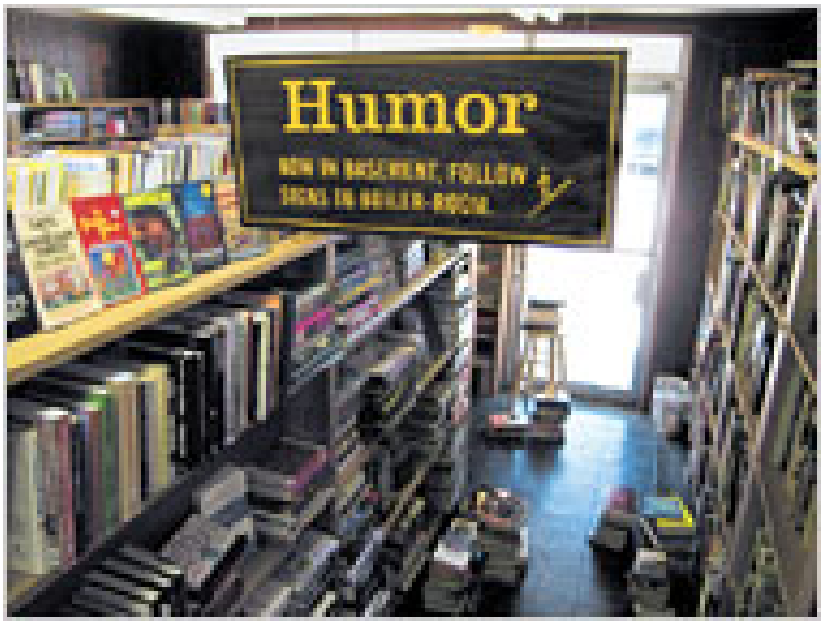
The unnamed protagonist of "Everyman" at least gets a joyous flash of himself as a boy at the ocean before the lights go out; "Indignation" makes even that terminally grim book seem sentimental. "Everyman" and "Exit Ghost" both have a mood of sorrowful resignation; this book goes about its grieving savagely. And of all Roth's recent novels, it ventures farthest into the unknowable. In his unshowy way, with all his quotidian specificity and merciless skepticism, Roth is attempting to storm heaven — an endeavor all the more desperately daring because he seems dead certain it's not there.

David Gates's most recent book is "The Wonders of the Invisible World," a collection of stories.

http://www.nytimes.com/2008/09/21/books/review/Gates-t.html?8bu&emc=bua1

Laughter in the Dark

By JACK HANDEY



In general, the easiest way to locate the Humor section in any bookstore is to go through the front entrance of the bookstore and to the farthest point from the entrance. That's where the Humor section will be.

If the bookstore has a second floor, the Humor section will be on the second floor, at the farthest point from the entrance. If the second floor has a window that can be jimmied open, and there's a ledge outside, the Humor section will be at the very end of the ledge.

Sometimes the Humor section is in another building entirely, like an old, burned-out warehouse. If so, it will be in the back of the warehouse, behind some boards.

Because of its remoteness, it is a good idea to make a lot of noise when you approach the Humor section, to avoid surprising people engaged in a sex act. More prostitutes are arrested in Humor sections than in any other part of the bookstore.

I've made it sound easy to find the Humor section, but often it's not. The front part of a bookstore is simple to negotiate, with its wide aisles laid out in a grid pattern. But the Humor section is usually in the older part of the store, where the aisles are crooked and narrow.

Another problem is that most Humor sections are small and easily overlooked. Often they're no more than a single bookcase or just a couple of shelves. Sometimes you can find yourself in the Humor section but not see any books at all. (Hint: Look under the rug.)

Occasionally a bookstore will merge the Humor section with another section, and that makes it even harder, because you have to go to World War II & Humor or Tax Preparation & Humor or Outdoor Power Tools & Humor. When I'm looking for a book of golf jokes, I don't want to have to look through a bunch of books on golf. That's crazy!

There are people in every bookstore who will sell you maps to the Humor section. My advice: Walk away. The maps are usually bogus, or they lead you to a desk where a man will try to sell you time shares.

People say, Why not just ask for directions at the store's information counter? Because here's what will happen: The person behind the counter will get a stunned look on his face and say, "Wait here." Then he'll go over to the other information people and whisper something. They'll all give you worried looks. Then the manager will approach. "Can I help you, sir?"

"Yes, I'm looking for the Humor section, please."

"We don't have one. Never have." He might glance back at the others for encouragement.

"Then why, on your list of sections, is one of them Humor?"

"Get him!!"

Let's hope you get away. If you don't, in about a thousand years some archaeologists will find your skull in a big pile of skulls. "Hmmm, I guess they liked skulls," the guy will say. Then he'll ask another archaeologist if your skull is a keeper or not.

The best way to find the Humor section, in my opinion, is to seek out an old homeless man who lives in the bookstore. His name might be Potatoes, or Taters, or Tate. He'll have a big, bushy gray beard and a dirty cowboy hat pushed up in the front. If you're lucky, he'll be wearing clothes.

He'll ask you what you're looking for. Then he'll ask what's in it for him. That's when you pull out a bottle of whiskey. He'll look at it longingly and wipe his lips with his dirty shirt sleeve. "Sorry, friend," he'll say, "I've been off the booze for 20 years."

That's when you unscrew the cap, take a big slug and say, "Man, that is good whiskey!" If that doesn't convince him, take another big swallow, give a head shake and say: "Oh, mama, that's fine. I feel like I could drink the whole thing."

First, Potatoes will take you to the Religion section and make you swear on a stack of Bibles. Then he will secretly lead you high into the rafters of the store, through back stairways, where few men and no burros have ever been. Finally, not far from the main condensing unit for the air-conditioning system, he will reveal the mother lode. Walls glittering with Robert Benchley and James Thurber and Woody Allen. Chests and chests of insult jokes and cat jokes and funny sex tips. First-person tales of young single women in the city and gay men in France. You will fall to your knees, but just for a moment, because then you and Potatoes will be whooping and hollering and doing your happy cowboy dances.

Some scientists bemoan the fact that it's so hard to find humor in bookstores. But I prefer to look at it philosophically. I think it was Robert E. Lee who said, "It is well that the Humor section is so terribly hard to find, lest we laugh too much."

Jack Handey's latest book, "What I'd Say to the Martians: And Other Veiled Threats," is now in bookstores — in the Humor section.

http://www.nytimes.com/2008/09/21/books/review/Handey-t.html?8bu&emc=bub1

Bons Mots and Bêtes Noires

By CHRISTOPHER HITCHENS

LEFT IN DARK TIMES

A Stand Against the New Barbarism

By Bernard-Henri Lévy. Translated by Benjamin Moser

233 pp. Random House. $25

The election of Nicolas Sarkozy to the presidency of the French Republic, on a ticket of the Gaullist and centrist right, was marked by two kinds of defection from the left. In advance of the vote, a number of former Marxist Parisian intellectuals like André Glucksmann announced their intention of voting for Sarkozy and against the rather vapid and temperamental quasi-spousal Socialist party team of Ségolène Royal and her significant other, François Hollande. And then, once the victory of Sarkozy had been assured — probably rather more by the votes of former rightists than former leftists — the new president offered some plum jobs to prominent Socialists like Bernard Kouchner, the ex-Communist and cofounder of the campaigning internationalist outfit Doctors Without Borders, who is now foreign minister, before himself proceeding to give new meaning to the term “husband and wife team” by marrying the former supermodel Carla Bruni in the Élysée Palace itself.

You might say that this situation was superbly designed for an address from Bernard-Henri Lévy — universally known in France as BHL — who cuts a commanding figure both in the circles of the Left Bank intelligentsia and in the world of Parisian high fashion and salon society (and whose lovely wife, Arielle Dombasle, could look Carla Bruni in the eye any day). But the fact is that these developments make him feel extremely uncomfortable. He happens to have known Sarkozy since 1983, when Sarkozy was elected mayor of Neuilly; yet when he received a telephone call from Sarkozy last year, demanding to know when the BHL endorsement would be coming, he found himself unable to play ball. In fact, he found himself abandoning intellectual terrain for a moment and saying that he would cast his vote for the left candidate, as ever, because it was la gauche that was his “family.”

The verbatim account of this telephone call, which forms a sort of prologue to “Left in Dark Times,” is actually the key to the entire book. Lévy defends himself vigorously from the aggressive and often vulgar

baiting of a fairly obvious egomaniac, who loudly demands to know what he is doing in such a galère of fools and fellow travelers as the French left has become. While resenting the demagogy, BHL keeps being forced to admit that the candidate of the right has some shrewd points to make, about Darfur, about Hezbollah, about Chechnya. Indeed, I sometimes can't help feeling that it might be nice to live in a country where a presidential nominee will call you up, drop the names of your intellectual enemies and recall their perfidious reactions to one of your books, before adding, "Do you really think I'm an idiot or do you really believe what you are saying, that these people are your family?"

Rather than respond conventionally — because after all, isn't a lot of family life like that? — Lévy embarks on a long excursion into what Diderot may have been the first to call l'esprit d'escalier, all the fine rejoinders that occur to one only when one is descending the stairs and it's just too late. He feels bound, in other words, to vindicate the honor of the left. And he also feels obliged to say that the left requires a bit of a makeover. Navigating these shoals, and continually asking himself as well as others to confront the hard questions, he produces a text that I think many readers will find highly absorbing.

I should not delay any further in saying that BHL and I have been on the same platform once or twice (on opposite sides in the case of the American intervention in Iraq and on the same side concerning the veiling of Muslim women in Europe) and that we have a fairly friendly truce on some other matters. If you wanted to sum up his political outlook in a phrase, you would find yourself borrowing Orwell's remark that it's not enough to be antifascist; one must also be in principle antitotalitarian.

I sometimes wish that Lévy were capable of being this terse and lucid. He can take a long time to show how agonized he is by leftist compromises with every disgraced regime and ideology from Slobodan Milosevic to Islamic jihadism, but the effort expended is worthwhile and shows some of the scars of political warfare from Bangladesh to Bosnia. He is much readier to defend Israel as a democratic cause than are most leftists and many Jews, but he was early in saying that a Palestinian state was a good idea, not because it would appease Arab and Muslim grievances but for its own sake. (This distinction strikes me as both morally and politically important.)

So it is of some interest that he confronts Sarkozy on the very question that probably propelled the former mayor of Neuilly to the forefront of French politics in the first place: the highly toxic question of violent conduct in les banlieues. In these gruesome districts on the Parisian periphery, Muslim youths of Arab and African provenance have long been staging a rolling showdown with the French police. Some secular liberals and leftists agreed in general with Sarkozy when he referred to the rioters as "scum" or "riff-raff." These racaille were not deprived, but depraved. And behind their vandalism lurked the specter of radical Islam. The problem, then, was to be defined by Sarkozy only as one of law and order. In reply to this, Lévy collects himself and delivers a very eloquent statement to the effect that one must never define the have-nots out of existence. He offers, first, a play on the word banlieue itself, which is associated with the medieval term lieu de banor place of the outcasts. For this one must substitute the term "neighborhood," Lévy argues, and for the following reason:

"Better that than connotations of banishment; better something overly sociological than something that reeks of banished pariahs, the refuse of the social contract, rubbish, ghosts, the damned. Because after all . . . arsonists are one thing. But how useful is it to treat entire neighborhoods just as the 'dangerous classes' used to be treated?"

He continues in this vein for some time. One or two of his chapters can be described as almost an interior monologue or stream of consciousness, where the son of a man who fought for the Spanish Republic is having trouble with a redefinition of what the verses of the "Internationale" call "the wretched of the earth." Not everyone will share in the historic misery of this experience, of having seen Cambodia or Zimbabwe, say, turn into something rather worse than a negation of the liberating dream.

But for those who have, as well as for those who haven't, Lévy provides a good register of what it felt like. And then there is this:

"I'm convinced that the collapse of the Communist house almost everywhere has even, in certain cases, had the unexpected side effect of wiping out the traces of its crimes, the visible signs of its failure, allowing certain people to start dreaming once again of an unsullied Communism, uncompromised and happy."

If this is not precisely true, even of those nostalgic for "Fidel," apologetic about Hugo Chávez, credulous about how "secular" the Baath Party was, or prone to sympathize with Vladimir Putin concerning the "encircling" of his country by aggressive titans like Estonia and Kosovo and Georgia, still it does contain a truth. One could actually have gone further and argued that the totalitarian temptation now extends to an endorsement of Islamism as the last, best hope of humanity against the American empire. I could without difficulty name some prominent leftists, from George Galloway to Michael Moore, who have used the same glowing terms to describe "resistance" in, say, Iraq as they would once have employed for the Red Army or the Vietcong. Trawling the intellectual history of Europe, as he is able to do with some skill, Lévy comes across an ancestor of this sinister convergence in a yearning remark confided to his journal by the fascist writer Paul Claudel on May 21, 1935: "Hitler's speech; a kind of Islamism is being created at the center of Europe."

Lévy is better when tracing these filiations and complexities than when making idealist generalizations like: "the double crown of freedom and equality … a liberal torpedo in the egalitarian granite … the two-headed eagle of the desire for emancipation." This constitutes, I think you may agree, a surfeit of metaphors. The possibility also exists that he may have been ill served by his translator, who renders the wicked old antireformist slogan of "the worse the better" as the confusingly neutral phrase the "politics of the worst."

In his last book, a retracing of Tocqueville's "Democracy in America," Lévy appeared in the role of mediator at a time when French-American relations were in a sorry condition. Here, too, he takes a stand against the mindless anti-Americanism that is so prevalent among the lumpen intellectuals of Europe. In his view, the phenomenon has two highly unpleasant subtexts to it. The first is envy and resentment, deriving from the fact that the United States has several times intervened to save Europe from itself and from the consequences of its ideological dementias. The second, perhaps not unrelated, is a no-less-envious perception of America as a handmaiden and vassal of the Jews.

This blending of a relatively modern prejudice with the oldest prejudice of them all is what sickens Lévy enough to give it the appellation "Red-Brown." It is the "new barbarism" of his subtitle. Against it, he counterposes the values of the Enlightenment, the France of the Dreyfusards, of Camus rather than Sartre, of Jean Moulin and Pierre Mendès-France rather than Maurice Thorez or — BHL's true bête noire — that debased Jacobin of today's French Socialism, Jean-Pierre Chevènement. The left, he insists, must renounce any version of ultimate or apocalyptic history, along with any mad schemes to create heaven on earth. A secular, pragmatic humanism will be quite demanding enough, thank you.

In conclusion, Lévy repudiates radical sympathy with theocracy, and indeed theology, by inverting Pascal and saying that "we have to make an antiwager that we can win not by betting on the existence but on the nonexistence of God. That's the price of democracy. And the alternative, the only one, is the devil and his legions of murderous angels." It's hard not to wish him well in striving to purge the left of its demons. But an antiwager is still a wager, and one sometimes has the feeling that the dark times of the old left are only just beginning.

Christopher Hitchens is a columnist for Vanity Fair, a media fellow at the Hoover Institution at Stanford and the author, most recently, of "God Is Not Great."

http://www.nytimes.com/2008/09/21/books/review/Hitchens-t.html?8bu&emc=bua2

Disappearing to Be Seen

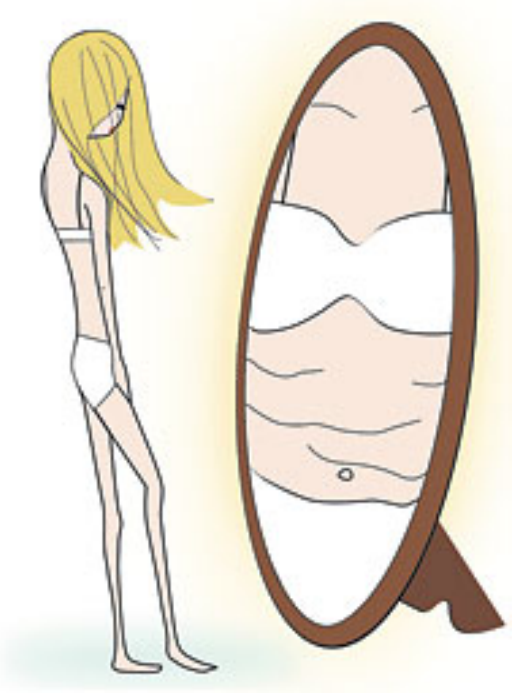
By GINIA BELLAFANTE

GOING HUNGRY

Writers on Desire, Self-Denial, and Overcoming Anorexia

By Edited by Kate Taylor

306 pp. Anchor Books. Paper, $15.95



On June 7, 1866, The Brooklyn Daily Eagle published a story about an 18-year-old girl named Mollie Fancher, who, in the paper's mind, represented the grim side of America's preoccupation with personal productivity. The daughter of a local merchant, Mollie acquitted herself ably at a private school in Brooklyn Heights. "Her books were her delight," The Eagle noted. "She neglected all for them, and would arise late in the morning in consequence of weakness, hasten away to school without breakfast, fearful of being tardy, and then at evening . . . neglect a meal for which she felt no inclination." When the article ran, Mollie had avoided meals for seven weeks. Her asceticism was assumed to carry with it supernatural ability. Eventually, she became famous. Representatives for P. T. Barnum sought to recruit her. Over a century before the tabloid scare headlines ("Is Nicky Hilton Too Thin?"), anorexia had taken its place in America's celebrity vaudeville.

Anorexia is a disease of contradiction: it demands both discipline and indulgence; it summons self-control to construct images of impotence. The anorexic disappears in order to be seen; she labors to self-improve as she self-annihilates. Mollie Fancher is never mentioned in "Going Hungry," a collection of first-person essays on the allure of dangerously austere eating, but she is a paradigm for a view in which anorexia emerges less palpably as a humiliating physical and psychological affliction than as an elevated state of mind, an intellectualized hallucination.

The torment is hardly obscured — in these essays, bodies tumble in rickety frames, hospital stays are endured, shame and isolation overwhelm. The anorexic surfaces, though, not simply in pursuit of an empty "Gossip Girl" perfectionism, but as a figure who equates her unsated hunger with nobler concentration and moral purpose. She reimagines restraint and mythologizes it as virtue. (I say "she" because 16 of the 18 contributors are women.) Francine du Plessix Gray, in an essay first written in 1991 and updated with an addendum here, writes eloquently of a lifelong obsession with weight loss, stemming from the harsh judgments of a mother enraptured by fashion. In the face of such relentless criticism, she finds anguish in privation but also "mental clarity and spiritual worth," an association made repeatedly

throughout the book and in Gray's case repudiated only when her parents are long dead — there are no more opponents left in her masochistic war.

To read "Going Hungry" is to suspect an effort has been made to convince us there is no such thing as a superficial anorexic, no creature whose radical self-regulation comes unaccompanied by an impressive imagination or intelligence. The collection, compiled by Kate Taylor, a reporter at The New York Sun, includes essays by two young African-American writers and one by a Latino, to reflect the spread of anorexia beyond a core population of affluent white women. But Taylor offers no diversity of aspiration, little variance in desire. (If she believes that all anorexics are driven by the same essential longings, then an anthology like this one is perhaps the wrong approach.) Discussing an adolescence spent withering to 104 pounds in an immigrant household in the border town of Brownsville, Tex., Rudy Ruiz provides an aside typical in the book: "By the middle of junior year, my Harvard prospects were brightening." Five of the essayists mention time spent at Harvard; the presumptive slackers refer to matriculation at Yale, Dartmouth, Barnard and Penn. In her introductory essay, Taylor writes with grace and insight of her self-imposed malnourishment. Speaking of the liberation she found in treatment, she notes that "the other patients defied all the stereotypes." It is odd, then, that she has emphatically reproduced one of the most prevailing stereotypes of all — the anorexic as achiever or genius.

This vision is felt most dramatically in an essay by Louise Glück, who writes of her disordered eating as if it were the preordinance of her immense creative ambition. As a girl interested in painting, "the context in which I judged what I made was not the schoolroom, but the history of art," she says. By age 3 she was well versed in Greek myth, and not long afterward she was reading Shakespeare. No matter how alert she is to her childhood grandiosity, she ends up romanticizing the self-denial in which she finds so much despair.

Glück did battle with anorexia in the 1950s, but many of her co-authors struggled with eating disorders in the '70s and '80s, just as the culture was beginning to think about them. For the novelist Jennifer Egan, an early article warning of anorexia functioned "as a how-to manual." Both she and Priscilla Becker point astutely to the role of the health food movement in ushering teenage girls into the habits of extreme dieting. Becker's family consumed fermented almonds and liquid chlorophyll, and chewed each morsel of food 32 times. This obsession with digestion leads Becker down the path of strictly regimented eating — and toward laxatives.

The happy family is, of course, rarely the anorexic's breeding ground. Anorexia is considered a disease of control, but it is also, notably, a disease of differentiation as the anorexic tries to occupy a separate and autonomous emotional space, as if the act of shrinking will ease the fit. Unlike most other compulsions, anorexia inspires envy. Several contributors note the perversity in receiving compliments for the results of their perilous behavior. "Going Hungry" properly abhors such glamorization, but it also supposes, however indirectly, that women who starve themselves to "Villette" ought to lay greater claim to our interest than the girls who waste away with Vogue. I'm not so sure this doesn't amount to a similar sin.

Ginia Bellafante is a television critic at The Times.

http://www.nytimes.com/2008/09/21/books/review/Bellafante-t.html?8bu&emc=bua2

Hello, Gorgeous

By CAROLINE WEBER

GLAMOUR

A History

By Stephen Gundle

Illustrated. 472 pp. Oxford University Press. $39.95

A few months ago, I traded my natural, burnt-butter shade of blond for “it’s fake and I know it” platinum. “The world will fall in love with you,” my stylist cooed, and initially, against all odds, it came to pass. Men whistled from car windows, park benches and, in one memorable instance, an organic vegetable stand. My husband proposed a trip to the lingerie store. My best friend accused me of using Botox — then demanded my doctor’s phone number. I was feeling pretty good until an elderly woman I’m fond of fixed me with a cold, flinty eye and said, “Good Lord, you’ve gone glamorous.”

That adjective might sound like praise, but coming from someone whose idea of feminine allure still involves a hat and gloves, it most definitely was not. Thanks to Stephen Gundle’s “Glamour: A History,” I understand why. For glamour, as Gundle defines it, is neither beauty nor elegance, but rather an unsettling, unholy blend of “class and sleaze” that defies elitist notions of decorum and good taste. Since the presidential election is upon us, let me put it this way: “glamorous” is to “tasteful” as Nancy Reagan’s showy furs were to Pat Nixon’s “respectable Republican cloth coat.”

According to Gundle, a film and television studies professor at Warwick University in England, glamour first came into being in Europe in the late 18th and early 19th centuries, when the French revolutionaries and Napoleon Bonaparte dealt a series of crushing blows to fixed social hierarchies and entrenched class prerogatives. During this period, an increasingly powerful bourgeoisie began "contesting many of the hereditary privileges of the aristocracy" and arrogating to itself the nobility's onetime "monopoly over style, beauty, fashion, luxury and even fame." Abetted by a burgeoning news media and consumer culture, the middle class succeeded in reinventing the attractions of the aristocratic lifestyle as qualities that were imitable, not innate — as products one might acquire, not inherit. For this reason, Gundle explains, "the advent of bourgeois society did not result simply in the aura of aristocracy passing intact to the new class or even to selected members of it. Glamour was a result of the release on to the market of the possessions, heritage, styles and practices of the aristocracy and of the appropriation and manipulation of these by commercial forces and other actors in the urban environment."

If these lines make you want to jam a freshly sharpened pencil into your eye, then trust me, you're not alone. They are, however, fairly typical of the author's prose. The courtesans of the belle epoque, he observes, "offered a phantasmagoria of glamour as a commercial aesthetic of illusion and fascination." In 1950s America, where housewives and pinup girls emerged as rival feminine ideals, "the tensions between domesticated and eroticized female appeals was played out not only in the mass media and the leisure industries but also in the new dialectic that the American-led consumer revolution created between the United States and Western Europe." Meanwhile, back in Monaco, Grace Kelly's wedding to Prince Rainier "consolidated the popular passion for fashion and elevated aristocratic-type stars and models to a central position in its diffusion."

However awkwardly formulated, these examples do have the merit of revealing the vast historical scope of the story Gundle tells. In his narrative, glamour's first poster child was Napoleon, the upstart-turned-emperor who captured the imagination of millions by transcending his roots and conquering a continent. At the dawn of the democratic age, this was heady stuff, and so "glamour took shape as an enticing image of the fabulous life," which was theoretically — as Julien Sorel pondered in "The Red and the Black" — available to anyone. During the Great Depression, when American escapism replaced French égalité as the dominant public craving, film stars appealed for similar reasons. Because these ethereal, lavishly costumed sophisticates were known to have once been ordinary mortals (e.g., Greta Garbo, who started out as the frizzy-haired, double-chinned Greta Gustaffson), they sold the illusion "that anyone, potentially, could be a star." A few decades later, in nouveau riche New York, Andy Warhol drew on the same logic, retooling the humble Campbell's soup can (a relic of his own Depression-era childhood) as high art and a cast of unremarkable nobodies as celebrities. Today, Gundle identifies glamour's undiminished "capacity to transform a commonplace individual into a dream-being" in the otherwise baffling fame of Paris Hilton and Victoria Beckham (a k a Posh Spice).

Come to think of it, Beckham's nickname pretty much says it all, combining the snooty pretensions of "poshness" with the lowbrow sass of the Spice Girls. Indeed, for all their obvious differences, Posh and her predecessors belong together because they each, in a particular historical moment, exemplified the oxymoronic qualities of glamour: "sleazy elegance, accessible exclusivity, democratic elitism." By embodying these paradoxes, they held out "the promise of a mobile and commercial society that anyone could be transformed into a better, more attractive and wealthier version of themselves." And they all thrived on publicity. As Gundle remarks, "the glamorous personality is always performing for an audience, without whose envy or admiration he or she would not exist. . . . Not even the most interesting, sexy and fashionable person can be glamorous without venturing into the public realm and winning attention." Just as the sound of a tree falling fails to register if there's no one around to hear it, so a platinum-blond dye job loses its glamour if there's no one at the farm stand to ogle it.

Speaking of ogling, these glamour pusses were also adept at exploiting their audience's desire — which Gundle identifies as desire not only for personal transformation, but also for those who have already achieved it. From Lord Byron to James Bond, Marilyn Monroe to Madonna, seduction is a crucial ingredient in the glamour cocktail: it's the olive that makes the martini tasty as well as dirty. Which, to be honest, is probably what I was after when I went platinum. "The whole world will fall in love with you."

Perhaps you're not tempted by this prospect, but it sure appealed to me. Not so, I'd guess, to Gundle. For although he provides more of a jumbled catalog of glamour's incarnations than a sustained analysis of its significance and staying power, he does note that it has served to "fuel illusions and deceive people about the hierarchical reality of social relations. In this way, glamour played an important role in the creation and maintenance of a given pattern of power." Glamour, then, is a magic mirror that blinds us to who we really are and where we really stand. Unlike our sex symbols and screen sirens, we do not rise above the muck of daily life, with its unending struggle for money, recognition, joy. At best, glamour soothes us with a lie: that these things can be ours in spades, if only we are willing to dream. And do something drastic to our hair.

Caroline Weber is a frequent contributor to the Book Review. Her most recent book is "Queen of Fashion: What Marie Antoinette Wore to the Revolution."

http://www.nytimes.com/2008/09/21/books/review/Weber-t.html?8bu&emc=bua2

Chechnya's Victims

By PETER BAKER

THE ANGEL OF GROZNY

Orphans of a Forgotten War

By Asne Seierstad. Translated by Nadia Christensen

340 pp. Basic Books. $25.95

They steal, they hit, they kill dogs. And for New Year, they decorate the holiday tree in the backyard with the skeleton of a Russian soldier.

After some 14 years of war, terror and lawlessness, the children of Chechnya have been damaged in ways outsiders can barely fathom. Even now, with the war part of the war essentially over, Chechnya remains a place of hidden horrors, where life is fragile and exceedingly cheap.

The world long ago turned its gaze away, content that the big guns had been silenced and uninterested in peering beyond the illusion of stability that Vladimir Putin's government in Moscow presents. But Asne Seierstad forces us to look again, to confront the reality of a savage place, to recognize that a broken, brutalized people have only begun to figure out how deep the wounds really go.

"The Angel of Grozny," as it happens, comes at a grimly appropriate moment, as Russian tanks have once again been rolling through the tumultuous Caucasus, this time in the former Soviet republic of Georgia and its breakaway enclave of South Ossetia, not all that many miles from where Seierstad's narrative

plays out. As a French journalist friend who also once covered the region suggested in an e-mail message, you have a pretty chilling sense of déjà vu if you swap the words “Georgia” and “Chechnya.”

This remote part of the world, with its mix of nationalities, religions and languages, has long endured or rebelled against domination from Moscow, making it the tinderbox at the bottom of the Russian empire. But the trials of these people last far longer than any particular burst of shelling or cascade of bombing. The fear and dysfunction of daily life after the wars, or between them, are no less profound.

Seierstad, a Norwegian journalist who achieved international fame with the best-selling “Bookseller of Kabul,” has gone back to Chechnya, long after most Western writers have moved on, and produced a gripping portrait of a forgotten war zone, looking past the superficial signs of recovery to find that while buildings may be reconstructed, souls are not so easily repaired.

Seierstad was one of many Moscow correspondents who trekked down south during the first Chechen war, which lasted from 1994 to 1996. She did not return until 2006, after the second Chechen war, launched by Putin in 1999, had largely ended, won by Moscow not so much through force on the ground as by buying off enough of the other side and giving converted separatists free rein to rule as they wished so long as they paid official fealty to the Kremlin.

Even now, Chechnya remains a land of disappearances and destitution, torture and travail, reprisals and repression. As Seierstad prepares to enter the region in disguise, she is advised to stop smiling because of course no Chechen woman would have much to smile about. “Keep your head down, frown and look unfriendly,” she is instructed.

She tells the stories of victims from both sides, the traumatized Chechens and the disfigured Russians. She writes about Iznaur, a Chechen boy who disappeared in 2000, not to return until 2007, tortured by a Russian lieutenant who assumed he had information about the separatists. The Russian hammered a nail into his shoulder, drove a pencil into his chest, pulled flesh out of his chest with tongs. “To get me to talk,” Iznaur explains.

Another victim of the same lieutenant, Seierstad writes, demanded to speak to a lawyer when he was seized. The soldiers happily gave him a phone, but with wires connected to his ear and finger, so that when he dialed, the current was activated and he shocked himself. The procedure was called zvonok advokatu — calling a lawyer.

On the other side, Seierstad travels to the home of a Russian soldier blinded and maimed by a land mine and essentially forgotten by the country he served. His mother cannot get the Defense Ministry to help the young man because records show he is still fighting in Chechnya. Even bringing her son to a military bureaucrat’s office to prove he is not does no good.

What’s most telling, though, are the twisted psyches of some of the people she meets, especially the children. She spends time in the home of Hadijat and Malik, who have taken in orphans, many of them troubled or beaten down. Although they make up only part of the book, Hadijat is the angel of Seierstad’s title, and in this rendering she earns the description. These are the children who bash rocks against dogs’ heads and recover the skeletal remains of a Russian sharpshooter for holiday decoration. One of the boys confides to Seierstad that he believes he has evil in his heart.

The book largely stays away from geopolitics, though the author skillfully depicts the fawning nature of Putin’s state-controlled television and includes a revealing visit with Putin’s hand-picked president of Chechnya, Ramzan Kadyrov, whose armed Kadyrovtsi are widely accused of terrorizing the countryside. Kadyrov denies having anything to do with the murder of the courageous Russian journalist Anna Politkovskaya, asserting that she was killed by her own patrons. “As a woman,” he says dismissively, “she should have stayed in the kitchen.”

Seierstad skates a little too lightly over abuses by the other side, still referring to it as "the resistance," a more romantic phrase than may be merited by the trail of civilian corpses left behind by suicide bombings and hostage takings. For those of us who sidestepped body bags filled with children slain in the siege of the school in Beslan in 2004, the romance of that resistance faded long ago.

Still, Seierstad has produced a masterly and much needed call to attention for the international community. In Nadia Christensen's translation, Seierstad displays the same literary style that distinguished "The Bookseller of Kabul," a lyrical account of an Afghan family she lived with for several months in 2002. Her portrayal of a sophisticated man of letters who at home could be a cruel patriarch struck a nerve in the West. But it outraged its subject, who complained that Seierstad abused his hospitality and presented a warped version of his family's life. The bookseller eventually wrote his own volume rebutting hers.

This time around, Seierstad writes, she showed Hadijat and Malik the portions of the book detailing their lives and those of the children they care for, gaining their approval for her accounts. She says she changed the names of all the children and let the adults decide for themselves whether they wanted to be identified by their real names. However faithful the details may be, the portrait she offers is certainly reflective of larger truths in Chechnya today.

These are not truths that Putin's Russia wants to confront. Like their president turned prime minister, many Russians resent the judgment of outsiders and have little sympathy for the Chechens. Seierstad encountered this bitterness on a train ride when the others in her compartment asked what she was doing in their country.

"The book is about those who have been destroyed in the war," she explains. "Who have been violated. Who, yes, have been dispossessed."

"But why do you have to come here to write about that?" one passenger asks. "Can't you pick on your own country?"

"What right do you have to criticize us?" another asks. "Who gave you that right?"

Fortunately for us, and for her subjects, she has claimed that right anyway. And if there are few angels watching over the orphans of Grozny, at least they have someone to tell their stories.

Peter Baker is a Washington correspondent for The Times and a co-author, with Susan Glasser, of "Kremlin Rising: Vladimir Putin's Russia and the End of Revolution."

http://www.nytimes.com/2008/09/21/books/review/Baker-t.html?8bu&emc=bua2

Lebensraum

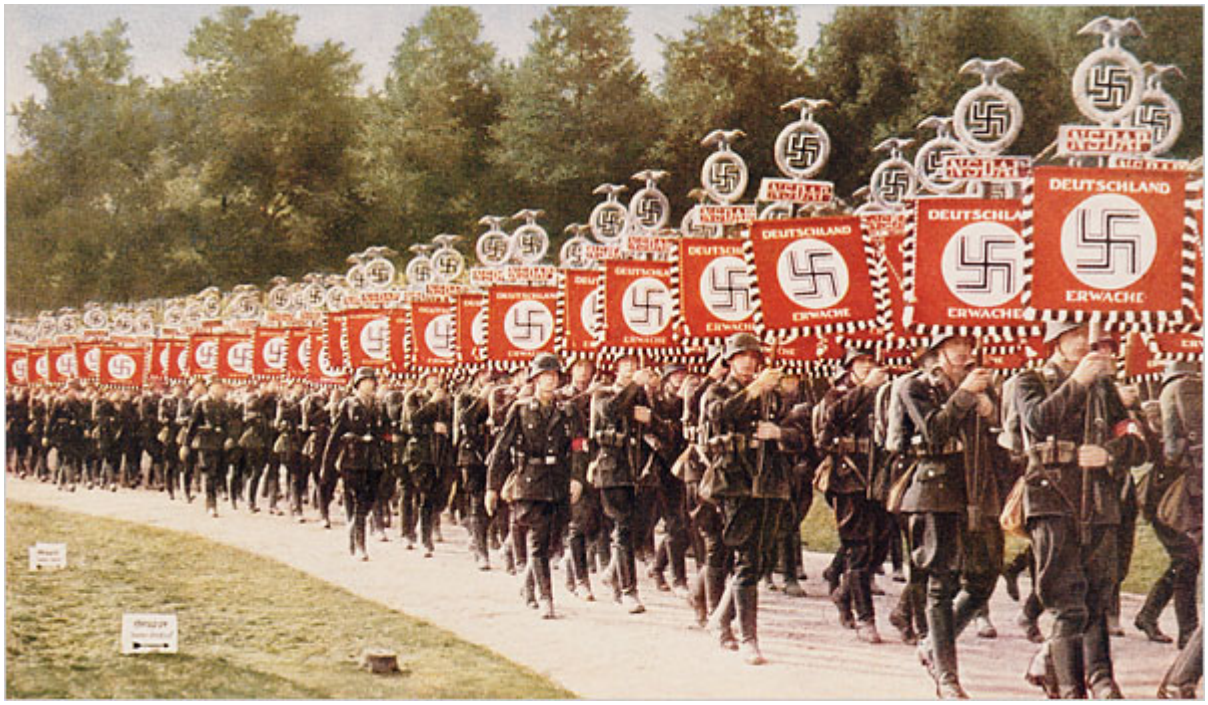
By JAMES J. SHEEHAN

HITLER'S EMPIRE

How the Nazis Ruled Europe

By Mark Mazower

Illustrated. 725 pp. The Penguin Press. $39.95



"If Berlin were to meet the fate of Rome," Hitler wrote in 1925, only "the department stores of some Jews, and the hotels of some corporations" would be left for future generations to admire. These tawdry commercial buildings, he believed, accurately reflected the Weimar Republic's political corruption and social disintegration. One day, the Führer was determined, Germany would have a capital worthy of its imperial destiny; when distant generations visited the remains of his Thousand-Year Reich, they would find ruins to rival Rome's. Of course Hitler's empire lasted only a fewyears, not a thousand; it left behind only piles of rubble. In this important book, Mark Mazower provides the best available survey of the Nazi empire's precipitous rise and violent demise.

Hitler never imagined Germany as one sovereign state among others, but rather as the center of an empire, extending across Europe and including the resource-rich colonies of central Africa. The heart of this empire was the territory on Germany's eastern frontier; some would be annexed to the Reich, the rest settled by German colonists, its Slavic population enslaved, its Jews and other inferior races exterminated. About the future of western and northern Europe Hitler was less certain; here some states might continue to exist, but they would be subordinated economically, politically and militarily to German interests. Aside from the abiding goal of racial mastery, the Nazis left the character of their empire purposefully vague and unsettled. "If anyone asks how you conceive the new Europe," Goebbels told German

journalists in April 1940, “we have to reply that we don’t know. . . . When the time comes we will know very well what we want.”

As Mazower explains in “Hitler’s Empire,” there was often something improvised and disorganized about the Nazis’ rule: they wildly underestimated, for example, the demographic and logistical challenges involved in Germanizing the conquered lands of Eastern Europe. Even the murderous answer to the “Jewish question,” the empire’s most persistent and pervasive goal, emerged slowly and unevenly.

Like the rest of the Nazi system, the empire was the site of bitter rivalries: among individuals and institutions, party bosses and civil servants, regular army and SS, businessmen and ideologues. Nothing is more misleading than the Nazis’ carefully cultivated image of disciplined cohesion. As the French collaborator Pierre Laval remarked when someone described Nazi Germany as an authoritarian state, “Yes, and what a lot of authorities.”

The quality of life in Hitler’s Europe varied enormously, most obviously between east and west. In the west, the occupiers’ hand was, at least until the final stages of the war, relatively light. Denmark held free elections in 1943 (the Nazis got just 2 percent of the vote). Paris remained a relatively peaceful city, a popular destination for visiting intellectuals like the philosopher Hans-Georg Gadamer, who lectured at the German cultural institute and enjoyed the company of much of the French capital’s intellectual elite. In the east, rule was harsh, rations short, repression close to the surface. But even in the east, there were profound differences, for instance between the General Government of the formerly Polish territories (Poland had ceased to exist) and the Czech protectorate. When Hans Frank, the General Government’s brutal chief, visited Prague and saw a poster announcing that seven Czechs had been shot, he thought that if he were to put up a poster every time he shot seven Poles, “all the forests in Poland would not suffice in order to produce the paper.”

The Third Reich was a national enterprise, run by and for a racially defined German Volk. But the empire, Mazower makes clear, could not have functioned without swarms of international collaborators, who supported the Germans because of conviction or self-interest or some complex combination of the two. When they were winning the war, the Nazis could set the terms for this collaboration, encouraging or discouraging it to suit their ideological inclinations and immediate advantage. As the tide of battle turned, people’s willingness to collaborate with the Germans ebbed, until at the end there was no one left but the deluded and desperate, like those members of the French SS unit who died fighting the Red Army in the streets of Berlin.

One of the most striking themes in “Hitler’s Empire” is the contrast between the Nazis’ military prowess and their political incompetence. Hitler was simply not interested in developing a program that might appeal to potential allies, for whose national interests and aspirations he had little sympathy. He left the political direction of his Eastern European regime to Alfred Rosenberg, who — as Hitler expected — wasted his time on elaborate but irrelevant programs and pronouncements. Nazi diplomacy, since 1938 directed by the monumentally inept Joachim von Ribbentrop, was an oxymoron. In 1942, when officials in the foreign office pleaded with Hitler to issue a statement about the future, he tersely replied, “No such preparations for peace are necessary.”

As so often happens, repressive violence rushed into this political vacuum, its instruments in the hands of Germany’s most energetic and talented servants. It began with the Polish campaign in 1939, gradually spreading throughout the empire, with a brutality that challenges the imagination. Resistance was met with immediate and disproportionate retaliation: according to their own estimates, the German military killed 73 Belarussians for every dead German. Among Mazower’s most depressing conclusions is that the policy worked. Terror, when applied without hesitation or remorse, was usually sufficient to prevent or eradicate effective opposition. Resistance movements turned out to be extremely important for Europe’s political future, but in most places, for most of the time, they did not seriously weaken the German war effort.

The empire brought out the worst in those caught in it. There were, to be sure, acts of courage and humanity, but these scattered points of light merely accentuate the surrounding darkness. Mazower, a professor of history at Columbia and the author of a number of important books, including a splendid study of the German occupation of Greece, tells this somber story with great skill. He captures the diversity of Europeans' experience without getting lost in detail; he maintains narrative momentum without losing sight of major themes. By describing a carefully selected set of individuals and events, he gives the experience of war a human face, bringing to life an extended cast of villains and victims. While his focus is on the Germans, he makes a number of illuminating comparisons with other regimes. In a stimulating and provocative final chapter, he explores the war's meaning for world history. The war was not, he writes, the end of Europe, but "it was the end of Europe as the maker of norms and world policeman. . . . Henceforth, international order would emerge on a different basis, guided by different hands."

"Hitler's Empire" is a useful antidote to the argument — most recently advanced in Nicholson Baker's "Human Smoke" — that World War II was neither necessary nor just. While we should never underestimate or forget the appalling cost, Mazower's eloquent and instructive book reminds us what the world would have been like if Hitler's enemies had been unwilling or unable to pay the price of defeating him.

James J. Sheehan's most recent book is "Where Have All the Soldiers Gone? The Transformation of Modern Europe."

http://www.nytimes.com/2008/09/21/books/review/Sheehan-t.html?8bu&emc=bua2

Start Me Up

By EUGENIE ALLEN

THE COMEBACK

Seven Stories of Women Who Went From Career to Family and Back Again

By Emma Gilbey Keller

228 pp. Bloomsbury. $25

For mothers contemplating a return to the work force after years spent raising children, Emma Gilbey Keller has good news: if the women she profiles in her new book can do it, so can you. And if you're not quite as well-off, well educated and well connected as most of these woman are — well, not to worry. You can launch your comeback with a big dose of the self-confidence she serves up in this breezy, feel-good book.

Keller is tired of hearing about the financial, professional and emotional hazards of opting out, and she's betting you are, too. Arguing that isolation and insecurity are among the biggest problems faced by at-home mothers, she embarks on a major pep talk, starting with her own story. After an exciting career as a journalist and author (she wrote a 1993 book called "Lady: The Life and Times of Winnie Mandela"), she was equally excited to start a family and devote herself to motherhood — until, that is, she developed a serious case of postpartum inertia.

Make that very postpartum, as in: "You turn down one piece of work because you don't want to travel, another because you're tired, then another because your brain feels rusty — and before you know it, three years have gone by and you can list every child's activity in your neighborhood. . . . You weigh about 20 pounds more than you ever imagined, and people who are put next to you at dinner parties ask you for your husband's opinions."

The condition was especially painful for Keller. Her husband, Bill Keller, is executive editor of The New York Times, so his opinions seemed to matter more than most. When she began to avoid going to events without him, she knew it was time for a change, so she went looking for inspiration from similarly situated mothers who had managed to opt back in. Not only did she find it, but she used it as the basis for her own comeback: this book. Now she wants to inspire you, too.

Keller, who is 47, profiles seven thriving returnees in their 40s, 50s and 60s: a venture capitalist, a furniture designer, a teacher, a human rights activist, a photographer, a doctor and a lawyer. It's easy to see why they excelled at re-entry. All seven finished college (several have advanced degrees), all delayed childbearing until their careers were well under way and all were able to reinvent themselves using work skills that were highly portable — from one job to the next, one geographic location to the next, even one profession to the next.

Keller will come back just fine, too. She chats and charms her way through the book, interweaving obsessively detailed portraits of her subjects with quick sketches of larger issues including women's entrepreneurship; sexism in the fields of medicine, law and architecture; the benefits of joint custody to divorced mothers' work schedules; and the effect (or not) of changing gender roles on housework.

Keller struggles at times to sustain her central conceit: that these women are Everywoman. For one thing, her subjects are hardly representative. Six of the seven are married, and although she labels them middle-class, most can afford luxuries like world travel and private schools for their children. (The lone divorced woman, the doctor, says that money was tight for a while, but she now enjoys horseback riding and voice lessons.) For another, Keller sometimes works so hard to get past women's differences that she overstates their similarities. At one point, for example, she declares that all women network and "like to join things," but just four pages later she says, "We all feel insecure, shy and anxious." Which is it?

When Keller allows her subjects to speak for themselves, though, they manage to speak to everyone. The photographer describes having her first child: "It was like stepping off the world into a part of eternity. I loved being a mother. I didn't miss photography at all." The lawyer remembers being so exhausted after she first returned to work that about once a month she took a two-hour lunch and stole away to her friend Bebe's house. "She would cook me lunch, give me a pair of her silk pajamas, and I would climb into her water bed and go to sleep. . . . It was heaven, absolute heaven."

IN the end, these accomplished, lucky women bring reassuring voices to our increasingly urgent national conversation about mothers and work; now it's time for their less fortunate peers to make themselves heard. Earlier this summer, new Congressional data confirmed what some experts have been warning about for years. Many women have left the work force not because they craved more time with their children, but because they've been squeezed out of a weak labor market.

The publication of "The Comeback" is nearly synchronous with two landmark moments in the debate about work/family balance: John McCain's selection of Sarah Palin as his running mate, and the 20th anniversary of the Harvard Business Review article that introduced the galvanizing notion of the mommy track. If Keller's Everywoman can finally effect lasting political and economic change, perhaps her daughters won't need to stage a career comeback: they won't have to leave in the first place.

Eugenie Allen has written for Time and Parenting magazines, among other publications.

http://www.nytimes.com/2008/09/21/books/review/Allen-t.html?8bu&emc=bua2

Sleepless in Vermont

By TOM LeCLAIR

MAN IN THE DARK

By Paul Auster

180 pp. A Frances Coady Book / Henry Holt & Company. $23

A few years ago, Paul Auster told an interviewer that "I get the best reviews and the worst reviews of any writer I know." His previous novel, "Travels in the Scriptorium," rewarded his best reviewers and other admirers with a reunion of previous Auster characters in a familiar plot of confused identity. With this new one, "Man in the Dark," Auster takes revenge on his worst reviewers by making his protagonist/-narrator a 72-year-old literary critic with multiple miseries. His sister may have committed suicide, his wife has recently died, and his daughter and granddaughter are deeply unhappy. He suffers from insomnia and walks with a crutch because his leg has been mangled in one of those accidents Auster likes to inflict on his characters.

As the longtime book editor of The Boston Globe, August Brill wrote more than 1,500 essays, but he now believes all this work to be "ephemera." The only book project he ever began, a memoir about and for his family, was abandoned. Although he no longer writes, he tells himself stories in the dark to avoid thinking about the women with whom he lives: a daughter grieving over a broken marriage, and a granddaughter mourning a former boyfriend killed in Iraq. The novel is the narrative of one such sleepless night, a "Long Night's Journey Into Day," in which Brill invents a character named Owen Brick, a happily married 29-year-old man who wakes up in a parallel contemporary world where the United States is fighting a civil war. This Rip van Brick must cope with separation from his wife, altered conditions — random bombardments, very high inflation, no TV, few cars — and quantum quirks, like running into his

teenage "heartthrob." With this woman's aid, secessionists from the federal government dictate a mission implausible: Brick must return to the "real" world of 2007 and kill Brill, who has caused the civil war by imagining it.

Brick's story is interrupted by Brill's memories, by his awareness of physical discomforts and, near dawn, by his granddaughter, who also can't sleep. She lies down next to him and slowly, persistently, forces him to reveal the most painful part of his past, his betrayals of her beloved grandmother. By morning Brill has, through this nocturnal transmission, finished his memoir.

Invigorated, Brill wants "a farmer's breakfast." He doesn't realize the full extent of the punishment Auster has in store for him. Although a lifelong reader, Brill is in the dark as a storyteller: his alternative-world plot is hackneyed in concept and rickety in execution. But if his account of a war between American liberals and conservatives is sketchily imagined, Brill does no better with his personal materials, confabulated anecdotes rendered in a flat, chronicling style. One of his favorite phrases, which closes the book, is taken from Nathaniel Hawthorne's daughter Rose: "the weird world rolls on." The sentence summarizes Brill's banality and lack of originality, which discourage emotional engagement from anyone not a blood relative.

"Man in the Dark" might be mistaken for a clever mockery of literary critics if the slackness of Brill's narration didn't also mar Auster's other recent fiction. Auster is 61, but the focal characters of his last three novels are figurative or literal old men. The narrator of "Oracle Night" walks like a "shuffling geezer" after a near-fatal illness; the narrator of "Brooklyn Follies" has moved to Park Slope to die; and Mr. Blank of "Travels in the Scriptorium" is a geriatric case. Like Brill, these characters ultimately manage a modest revival, but for long stretches their sensibilities are dull, their perceptions dim, their language fatigued. Feeble figures, they provide a low-energy, high-fiber perpetuation of the Auster brand.

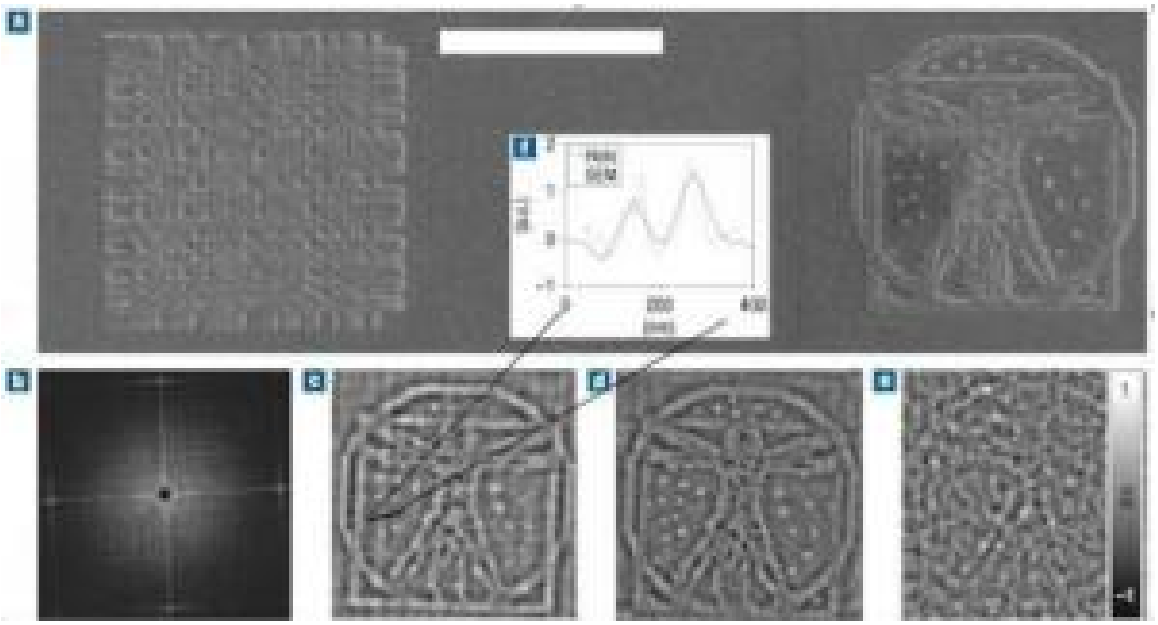
"Man in the Dark" is a slightly new and improved "Travels in the Scriptorium," which it partially rewrites in a semi-realistic vein. Both B-men occupy a context of imaginary political unrest, and both reveal themselves through their fictionalizing. But the buried associations between Brill's civil war and the family battles of his past keep "Man in the Dark" within a marginally interesting psychological realm, while "Scriptorium" is a self-regarding and airless authorial game. Yet the superiority of the new novel to "Scriptorium" becomes trivial when "Man in the Dark" is compared with a similar short novel by Max Frisch, "Man in the Holocene," which is also about an elderly, desperate man who spends a night awake. The scientific and cultural expansiveness of Frisch's novel make "Man in the Dark" seem narrow and perfunctory.

After, say, 10 books, maybe novelists should be retested, like accident-prone senior citizens renewing their driver's licenses. Veterans of literary wars would anonymously submit a new manuscript to agents. Of "Man in the Dark," I think they'd say, "third-rate imitation of Paul Auster." Then the author might decide to rev up a first-rate imitation of his first-rate early work. Or he might write a fourth-rate attack on literary agents.

Tom LeClair's fifth novel, "Passing Through," has just been published.

http://www.nytimes.com/2008/09/21/books/review/LeClair-t.html?8bu&emc=bua2

Improving Our Ability To Peek Inside Molecules



Massively parallel holography at high resolutions. (a) A lithographic test sample imaged by scanning electron microscopy (SEM) next to a 30-nm-thick twin-prime 71x73 array with 44-nm square gold scattering elements. The scale bar is 2 mm. (b) The diffraction pattern collected at the ALS (1 x 10^6 photons in a five second exposure, 200 mm from the sample). (c) The real part of the reconstructed hologram. d) The simulation with 1 x 10^6 photons. The grey scale represents the real part of the hologram. (e) A simulation with the same number of photons, but a single reference pinhole. (f) Line through the two dots indicated in image (c). (Credit: Image courtesy of DOE/Lawrence Livermore National Laboratory)

ScienceDaily (Sep. 18, 2008) — It's not easy to see a single molecule inside a living cell. Nevertheless, researchers at Lawrence Livermore National Laboratory are helping to develop a new technique that will enable them to create detailed high-resolution images, giving scientists an unprecedented look at the atomic structure of cellular molecules.

The LLNL team is collaborating with scientists across the country and in Germany and Sweden to utilize high-energy X-ray beams, combined with complex algorithms, to overcome difficulties in current technology.

The work began more than five years ago as a Laboratory Directed Research and Development (LDRD) project, headed by Stefano Marchesini. He has since transferred to Lawrence Berkeley Lab (LBNL), leaving the project in the hands of Stefan Hau-Riege, a materials science physicist at LLNL.

For now, the Advanced Light Source at LBNL and the FLASH facility in Hamburg, Germany, are being used to provide the X-ray beams. But a new facility under construction at Stanford University, the Linac Coherent Light Source (LCLS), will provide additional capabilities and greater imaging accuracy when it comes on line next year.

Another light source being built in Hamburg will be used as well. When completed in late 2013, the X-ray Free Electron Laser (XFEL) will be the world's longest artificial light source.

Using high-energy, extremely short-pulse - less than 100 femtoseconds, or one quadrillionth of a second - X-ray beams to examine nanoscale objects is not a new concept. The difficulty lies with the algorithms to convert the resulting patterns into usable images.

One method to increase the signal and resolution of the image is to include a second item with known features during the laser imaging. Known as a "reference object," it gives the researchers additional information with which to process the imaging data.

What is new is to use a very special reference object called a "uniformly redundant array" (URA). In this case, a combination of complex formulas known as a "Fourier Transform" and a "Hadamard Transform" are utilized to convert the data into an image that represents the object being examined. Hadamard transforms are commonly used in signal processing and data algorithms, including those used in photo and video compression.

According to Hau-Riege, "The resolution we achieved is among the best ever reported for holography of a micrometer-sized object, and we believe that it will improve in the future with the development of nano-arrays for Fourier Transform Holography at LCLS."

Other contributors to the findings include: Anton Barty, Matthias Frank, and Abraham Szöke, all from LLNL; researchers from LBNL; UC-Berkeley; Stanford University; Sweden's Uppsala University; the Centre for Free-Electron Laser Science at DESY in Hamburg, Germany; Arizona State University; and Princeton University.

Journal reference:

1. Marchesini et al. **Massively parallel X-ray holography**. *Nature Photonics*, 2008; 2 (9): 560 DOI: 10.1038/nphoton.2008.154

Adapted from materials provided by DOE/Lawrence Livermore National Laboratory.

http://www.sciencedaily.com/releases/2008/09/080916144006.htm

Coating Improves Electrical Stimulation Therapy Used For Parkinson's, Depression, Chronic Pain

Dr. Edward Keefer. (Credit: UT Southwestern Medical Center)

ScienceDaily (Sep. 18, 2008) — Researchers at UT Southwestern Medical Center have designed a way to improve electrical stimulation of nerves by outfitting electrodes with the latest in chemically engineered fashion: a coating of basic black, formed from carbon nanotubes.

The nanotube sheathing improves the signals received and transmitted by electrodes, which researchers say is a potentially critical step for advancing electrical nerve stimulation therapy. This type of therapy increasingly shows promise for diseases ranging from epilepsy to depression to chronic leg and back pain.

By implanting electronic nerve stimulators, doctors elsewhere have provided a quadriplegic patient with the ability to move a computer cursor at will, and monkeys have been able to move objects in a virtual world with mere mind power. For individuals who lose an arm or leg and rely on prosthetics, implanted stimulators offer promise in restoring feelings of sensation.

"The key to success for these types of brain-machine interfaces is where the electrode meets the nerve tissue," said Dr. Edward Keefer, instructor of plastic surgery at UT Southwestern and lead author of the study appearing in a recent issue of Nature Nanotechnology. "When we coat the electrodes with carbon nanotubes, it improves the stimulation of the nerve and the feedback from the sensors."

Depending on the way the nanotubes are fashioned, researchers were able to bolster either the stimulation or receptive capabilities to improve performance. In some tests, the nanotube coating improved performance by fortyfold, while in others it improved by a factor of as much as 1,600.

Nanotubes look like lattices rolled into a tube on a microscopic scale. Although they are 1/50,000 the width of a human hair, nanotubes are nonetheless among the stiffest and strongest fibers known, as well as excellent conductors of electricity.

Those properties proved to be just the attributes needed to help electrophysiologists conquer some of the hurdles facing them – issues such as battery power and chemical stability.

The carbon nanotube coating improves conductivity, which means less energy is needed to power the nerve stimulator. That can help reduce routine maintenance, such as the need to change batteries in implanted stimulation devices, as well as reduce tissue damage caused by the electrical charge.

"Our process is like taking a Ford Pinto, pouring on this chemical coating, and turning it into a Ferrari," Dr. Keefer said.

Researchers have tried several types of electrochemical coatings to see if they could improve conductivity, but the coatings often break down quickly or fail to stay affixed to the electrodes. The carbon nanotube coating shows far more promise, although further research is still needed, Dr. Keefer said.

"The development of new technologies by Dr. Keefer to potentially restore function in wounded tissues and future transplantations is exciting," said Dr. Spencer Brown, assistant professor of plastic surgery who heads research in the Nancy Lee and Perry R. Bass Advanced Plastic Surgery and Wound Healing Laboratory at UT Southwestern.

Other UT Southwestern researchers involved with the study include Dr. Barry Botterman, associate professor of cell biology, and Dr. Mario Romero-Ortega, assistant professor of plastic surgery. Researchers from Texas Scottish Rite Hospital for Children, Vanderbilt University and the University of North Texas also participated. The research was supported in part by Dallas-based Plexon, Inc.

Adapted from materials provided by UT Southwestern Medical Center.

http://www.sciencedaily.com/releases/2008/09/080916101024.htm

The Greening Of Sub-Saharan Africa

ScienceDaily (Sep. 18, 2008) — The green revolution that has led to food being far more abundant now than forty years ago in South America and Asia has all-but bypasses Sub-Saharan Africa as that region's population trebled over that time period.

Now, writing in the International Journal of Technology and Globalisation, researchers in The Netherlands point to possible causes for this disparity and offer hope of reversing the trend based on a technological approach.

Agricultural production expert Prem Bindraban, plant breeder Huub Loeffler, and ecologist Rudy Rabbinge of Wageningen University and Research Centre in The Netherlands, highlight the disparity between growing food availability across the globe compared with Sub-Saharan Africa (SSA). Food has increased by almost one third per person over the last forty years but has decreased by 12% in SSA.

Currently 90% of the SSA population lives in rural areas and 70% of the labour force works in the agricultural sector. This figure is higher for some countries, including Burundi. As such, agriculture is an important economic sector that generates 30-60% of Gross Domestic Product. Nevertheless, the population has increased from 200 million in 1960 to 600 million today and finds 180 million people malnourished in SSA.

With most poor people living in rural regions and employed in agriculture, they explain that there is new interest in how farming and food production might drive overall development. Bindraban and colleagues emphasise how agricultural development has served as a "stepping stone for overall economic development in developed nations and in newly developing economies in Asia".

While there have been a few isolated successes in development, modern agricultural technology, including genetically modified crops, modern pesticides, fertilisers and irrigation methods, mono-cropping for bulk production, has not spread widely to benefit the entire continent. "For agriculture to develop, proper market and institutional conditions should catalyse the process that is initiated by technologies, as has been found for the green revolution," the researchers explain.

Adapted from materials provided by Inderscience, via AlphaGalileo.

http://www.sciencedaily.com/releases/2008/09/080917145740.htm

Troubled Girls From Poor Neighborhoods More Likely To Have Sex In Early Adolescence

ScienceDaily (Sep. 18, 2008) — Young girls from poor neighbourhoods need to review more than the birds and bees with their parents – they need to hear about contraception and potential dangers of hanging out with older boys. A new study by researchers from the Université de Montréal, the University of New Brunswick and Tufts University, published in the journal Child Development, has found that girls living in poor neighbourhoods were more likely to engage in sexual intercourse in early adolescence and to be doing so with older boys.

"Young girls who live in disadvantaged neighbourhoods are more likely to initiate sex at an early age, especially those young women with conduct problems," said lead author, Véronique Dupéré, now a post-doctoral fellow at Tufts University, who completed the research at the Université de Montréal. "The results suggest that neighborhoods shape peer groups, which in turn influence when girls become sexually active."

Dupéré also found that teen girls from poor neighborhoods with a history of conduct problems were more likely to associate with deviant peers and to be initiated into sex by males that were three years older or more. "Girls with a history of conduct problems were found to be more likely to have deviant and older male friends when they lived in a disadvantaged context," said Dupéré. "Deviant peers are thought to provide a pool of willing partners and cultivate a sense that early sexual activity is desirable."

Wide sample of teens

For this study, the research team used a sub-sample of boys and girls from the National Longitudinal Survey of Children and Youth. A total of 2,596 Canadian adolescents were followed from the ages of 12 to 15 and one quarter of these participants were found to live in poor neighborhoods. In addition to neighborhood and peer characteristics, family characteristics were also considered, including socio-economic background and family structure.

The large majority of study participants were White. "Among this group, peer characteristics were found to represent a crucial factor for explaining why at-risk girls living in disadvantaged neighborhoods are more likely to initiate sex early," said Éric Lacourse, senior author of the study and a Université de Montréal sociology professor. "During adolescence, peers exert significant influences on different aspects of adolescent behavior and our study results show that sexuality is no exception."

At-risk girls vulnerable; boys unaffected

For this study, conduct problems were self-reported in late childhood or when participants were 10 or 11 years old. At-risk behaviors included physical aggression (e.g. bullying, fighting, kicking), destructive tendencies (e.g. vandalism, stealing) and violation of rules (e.g. running away, staying out all night). Subjects were considered to have conduct problems if they had engaged in three at-risk behaviors over one year. Of the sample, 13 percent were considered to have conduct problems.

Living in a disadvantaged neighborhood – among boys – was not directly associated with the timing of sexual initiation. "Contrary to girls for whom peers were of primary importance, family and individual risk appeared more influential in boys' timing their first sexual experience," said Dupéré.

Study helpful for sex ed

Identifying when and why young girls become sexually active, said Dupéré, is important in a public health perspective. "Other studies show that early initiators are more likely to contract sexually

transmitted diseases, undergo unwanted teen pregnancy and to report involuntary sexual experiences," she said.

"By identifying young adolescents who are particularly at-risk, this study provides valuable insights for future intervention efforts," added Dupéré. "To maximize effectiveness, prevention programs need to take the larger social context into account and make special efforts to enroll vulnerable young adolescents."

Journal reference:

1. Dupéré et al. **Neighborhood Poverty and Early Transition to Sexual Activity in Young Adolescents: A Developmental Ecological Approach**. *Child Development*, 2008; 79 (5): 1463 DOI: 10.1111/j.1467-8624.2008.01199.x

Adapted from materials provided by University of Montreal, via EurekAlert!, a service of AAAS.

http://www.sciencedaily.com/releases/2008/09/080916100940.htm

Drinking Water: The Need For Constant Innovation

Collection of water samples from the activated carbon filter at the research and pilot plant in the Lengg lake water facility of Zurich Waterworks (WVZ). (Credit: Image courtesy of EAWAG: Swiss Federal Institute of Aquatic Science and Technology)

ScienceDaily (Sep. 17, 2008) — Most western countries' drinking water is of excellent quality, but there is no room for complacency. The challenges are growing: undesirable contaminants are found in rivers, lakes and groundwater.

Climate change is also warming waterbodies, with implications for water quality, and in developing countries more and more people are reliant on groundwater containing natural contaminants. In industrialized countries water utilities are ageing and need to be renewed. In partnership with the water sector, the aquatic research institute Eawag is identifying ways of ensuring that high-quality drinking water supplies remain available in the future.

Challenges of climate change

Various models predict that rising atmospheric concentrations of greenhouse gases will lead not only to increases in air temperatures but also to warming of waterbodies. This prediction has been confirmed by observations: since 1945, for example, water at a depth of 5 m in Lake Zurich has warmed by around 1°C in the winter and by almost 2°C in the summer. The same trend is apparent in rivers. For the first time, researchers have now also compiled long-term time series for groundwater temperatures. Taking the example of groundwater at Rheinau (Switzerland, Canton Zurich), they have shown that the temperature of the water in the winter has risen by about 3°C since the 1950s. At the same time, the oxygen content has constantly declined.

During the 2003 summer heatwave, water completely devoid of oxygen was pumped from certain wells in the Thur and Glatt valleys. In the absence of oxygen, however, iron and manganese are dissolved below the surface. These substances then have to be removed before the water can be supplied to users. In lakes, higher temperatures can also have adverse effects on water quality: the spread of cyanobacteria (blue-green algae) is promoted. This may be problematic since these growths include species that produce toxins or taste and odour compounds. In addition, microorganisms generally grow more rapidly in warmer water. In future, more elaborate treatment methods could be required in places where drinking water has previously been supplied untreated or after only simple processing.

Facilitating rapid alerts

The safety of water supplies depends crucially on continuous monitoring. However, traditional methods for microbiological analysis of drinking water involve the growth of visible colonies of bacteria on nutrient plates. The plating method is time-consuming and underestimates the number of microorganisms contained in water samples. Eawag has now developed an analytical method based on flow cytometry. This process, in which cells pass through a laser beam, has mainly been used to date in medicine, e.g. for blood cell counts. At Eawag, it was adapted so as to permit reliable enumeration of bacterial cells.

Rather than having to wait for 18–24 hours, results are now available within 15 minutes. In close cooperation with Zurich Waterworks (WVZ), the researchers demonstrated that the results stand up well in comparison with conventional methods. In fact, they even provide a considerably more realistic picture, since special labelling means that the method also detects microorganisms which do not reproduce on nutrient media and have therefore been incorrectly considered to be inactive or dead. What makes the new method especially attractive – particularly for monitoring the microbiological safety of drinking water in developing countries – is the fact that, using specific antibodies, it is possible to screen samples for pathogens such as intestinal parasites and legionella or cholera bacteria. This would facilitate a rapid response in the event of contamination.

New treatment methods

In Switzerland, 43% of drinking water is sourced from springs, 40% from groundwater and 17% from lakes. Treatment is required mainly for lake and spring water. Together with partners from the engineering sector and WVZ, Eawag researchers have sought to identify the methods and combinations of processes best suited for meeting future challenges. Substantial investments are required to renovate water utilities, and new facilities are expected to have a lifetime of 30 or even 50 years. At a pilot plant in the WVZ Lengg lake water facility, it was shown that space-intensive sand filters could be replaced by ultrafiltration membranes with a pore size of 10 nm (1 nanometre = a millionth of a millimetre).

Apart from the saving in space, membrane filters offer the additional advantage of representing an absolute barrier to microorganisms. The combination of ultrafiltration with ozonation and activated carbon filtration, both of which are already used today, adds up to an extremely effective process chain for water treatment. It guarantees microbiologically safe drinking water, which can be supplied without chlorination – a process frowned upon by consumers. Any trace contaminants are efficiently removed.

Taking precautions and identifying risks

Experts are agreed that the most important type of protection for drinking water is provided not by technical treatment processes, but by careful management of water resources. Pollution needs to be prevented wherever possible. Since many groundwater wells in Switzerland are located close to a river, Eawag researchers have investigated what happens when riverbeds are widened in restoration projects. Using a specially developed method, it is possible to predict how likely it is that the water at a nearby pumping station is no longer “genuine” groundwater, but river water which has not been sufficiently purified as a result of a short residence time in the subsurface. Depending on the risks involved, this may mean that it is necessary to abandon or impose restrictions on a given river widening project.

Risk identification of a quite different kind is the subject of the "Water Resource Quality" research project (WRQ). Worldwide, millions of people rely on groundwater contaminated with health-threatening arsenic or fluoride of natural (geogenic) origin. With the aid of geological data and computer modelling, Eawag researchers have produced global maps indicating areas with a high risk for the occurrence of arsenic- or fluoride-contaminated groundwater. This mapping procedure, which has also already been successfully applied on the regional scale, is a valuable instrument for authorities, aid organizations and water suppliers. The WRQ project also involves efforts to develop and test simple, low-cost treatment methods particularly suitable for use in developing countries.

Adapted from materials provided by EAWAG: Swiss Federal Institute of Aquatic Science and Technology.

http://www.sciencedaily.com/releases/2008/09/080912091736.htm

Giant Grass Offers Clues To Growing Corn In Cooler Climes, Researchers Report

A protein that gives Miscanthus an advantage in cool weather may be used to develop cold-tolerant corn varieties. (Credit: Photo by Don Hamerman)

ScienceDaily (Sep. 17, 2008) — A giant perennial grass used as a biofuels source has a much longer growing season than corn, and researchers think they've found the secret of its success. Their findings offer a promising avenue for developing cold-tolerant corn, an advance that would significantly boost per-acre yields.

The new study, from researchers at University of Illinois, appears this month in Plant Physiology Preview.

Miscanthus x giganteus is one of the most productive grasses known. It is able to capture the sun's energy even as cool temperatures shut down photosynthesis in other plants.

In Illinois, green Miscanthus leaves emerge up to six weeks before corn can be planted. Miscanthus thrives into late October, while corn leaves wither at the end of August.

Corn and Miscanthus are C4 plants, which are more efficient than C3 plants in converting sunlight into leaves and stalks. (C3 and C4 simply refer to the number of carbon atoms in a molecule critical to photosynthesis.)

"The C4 process differs from C3 in having just four extra steps in its metabolism," said Stephen Long, a professor of crop sciences and principal investigator on the study. "There are four extra proteins in this process, so we assumed that these proteins are related to low temperature tolerance."

When they compared the levels of these proteins in plants grown in warm and cold conditions, the researchers noticed that one of the proteins, pyruvate phosphate dikinase (PPDK), was present at much higher levels in the Miscanthus leaves grown at cool temperatures than in the leaves of either corn or Miscanthus grown in warmer conditions.

Although photosynthesis declined in both plants when they were first subjected to cool temperatures, after two days, photosynthesis rebounded in the Miscanthus.

The increase corresponded to the upsurge in PPDK in its leaves.

"After seven days PPDK was 10 times the level it was in the warm conditions," Long said.

In C4 plants, PPDK catalyzes a chemical reaction in the leaf critical to the cascade of reactions that convert carbon from carbon dioxide into starches that form the plant's tissues.

Previous studies had shown that PPDK is generally not very stable in cold conditions. The protein is made up of four subunits, which tend to come apart at low temperatures, Long said.

To test how cold temperatures affect the protein when it is expressed in cells at high concentrations, post-doctoral fellow Dafu Wang cloned the PPDK gene into E. coli bacteria to produce large quantities of the protein.

"What he showed in the test tube was that if you concentrate the protein, then it becomes more resistant to cold," Long said. "At higher concentration the protein creates its own microenvironment where in the cold it doesn't come apart. This appears to be the secret of success for Miscanthus at low temperature: Expressing more of the protein allows it to photosynthesize at low temperature where corn can't."

The next step for the researchers is to develop a corn plant in which this gene is expressed at high levels to determine if that will make the corn more tolerant of low temperatures, Long said. Cold weather after emergence of corn in the spring or in late summer during grain-filling can limit photosynthesis, he said.

"This change should make corn more resistant to these cold weather events."

The National Science Foundation supported this research. The research team is also affiliated with the Institute for Genomic Biology at Illinois and the USDA.

Adapted from materials provided by University of Illinois at Urbana-Champaign.

http://www.sciencedaily.com/releases/2008/09/080915121331.htm

Roman York Skeleton Could Be Early TB Victim

A recently discovered skeleton could be that of one of Britain's earliest victims of tuberculosis. The man suffered from iron deficiency anaemia during childhood and was a shorter height than average for Roman males. (Credit: Image courtesy of University of York)

ScienceDaily (Sep. 17, 2008) — The skeleton of a man discovered by archaeologists in a shallow grave on the site of the University of York's campus expansion could be that of one of Britain's earliest victims of tuberculosis.

Radiocarbon dating suggests that the man died in the fourth century. He was interred in a shallow scoop in a flexed position, on his left side.

The man, aged 26–35 years, suffered from iron deficiency anaemia during childhood and at 162 centimetres (5ft 4in), was a shorter height than average for Roman males.

The first known case of TB in Britain is from the Iron Age (300 BC) but cases in the Roman period are fairly rare, and largely confined to the southern half of England. TB is most frequent from the 12th century AD in England when people were living in urban environments. So the skeleton may provide crucial evidence for the origin and development of the disease in this country.

The remains were discovered during archaeological investigations on the site of the University's £500 million expansion at Heslington East. Archaeologists unearthed the skeleton close to the perimeter of the remains of a late–Roman masonry building discovered on the site, close to the route of an old Roman road between York and Barton–on–Humber.

The burial site is on part of the campus that will not be built on. The University is developing plans for community archaeology and education visits once the investigations are complete.

Detailed analysis of the skeleton by Malin Holst, of York Osteoarchaeology Ltd, revealed that a likely cause of death was tuberculosis which affected the man's spine and pelvis. She says that it is possible that he contracted the disease as a child from infected meat or milk from cattle, but equally the infection could have been inhaled into the lungs. The disease then lay dormant until adulthood when the secondary phase of the disease took its toll.

Heslington East Fieldwork Officer Cath Neal, of the University's Department of Archaeology, said: "This was a remarkable find and detailed study of this skeleton will provide us with important clues about the emergence of tuberculosis in late-Roman Britain, but also information about what life was like in York more than 1,500 years ago.

"A burial such as this, close to living quarters, is unusual for this period when most burials were in formal cemeteries. It is possible that the man was buried here because the tuberculosis infection was so rare at the time, and people were reluctant to transport the body any distance."

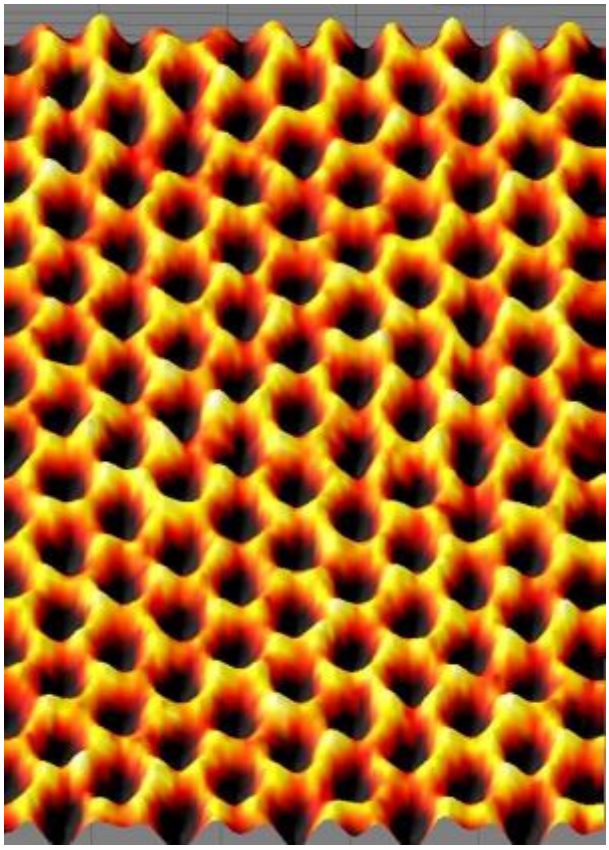
Malin Holst added: "There were signs of muscular trauma and strong muscle attachments indicating that the individual undertook repeated physical activity while he was in good health. There was some intensive wear and chipping on his front teeth which may have been the result of repeated or habitual activity. There was evidence for infection of the bone in both lower limbs but this appeared to be healing at death."

Investigation of the remains is continuing — Professor Charlotte Roberts, of Durham University, with Professor Terry Brown at Manchester University, is now studying DNA from the skeleton as part of National Environmental Research Council funded research into the origin, evolution and spread of the bacteria that causes TB in Britain and parts of Europe.

Adapted from materials provided by University of York.

http://www.sciencedaily.com/releases/2008/09/080916101038.htm

Breakthrough In Energy Storage: New Carbon Material Shows Promise Of Storing Large Quantities Of Renewable Electrical Energy



This image of a single suspended sheet of graphene shows individual carbon atoms (yellow) on a honeycomb lattice. (Credit: U.S. Department of Energy's Lawrence Berkeley National Laboratory)

ScienceDaily (Sep. 17, 2008) — Engineers and scientists at The University of Texas at Austin have achieved a breakthrough in the use of a one-atom thick structure called "graphene" as a new carbon-based material for storing electrical charge in ultracapacitor devices, perhaps paving the way for the massive installation of renewable energies such as wind and solar power.

The researchers believe their breakthrough shows promise that graphene (a form of carbon) could eventually double the capacity of existing ultracapacitors, which are manufactured using an entirely different form of carbon.

"Through such a device, electrical charge can be rapidly stored on the graphene sheets, and released from them as well for the delivery of electrical current and, thus, electrical power," says Rod Ruoff, a mechanical engineering professor and a physical chemist. "There are reasons to think that the ability to store electrical charge can be about double that of current commercially used materials. We are working to see if that prediction will be borne out in the laboratory."

Two main methods exist to store electrical energy: in rechargeable batteries and in ultracapacitors which are becoming increasingly commercialized but are not yet as popularly known. An ultracapacitor can be used in a wide range of energy capture and storage applications and are used either by themselves as the primary power source or in combination with batteries or fuel cells. Some advantages of ultracapacitors

over more traditional energy storage devices (such as batteries) include: higher power capability, longer life, a wider thermal operating range, lighter, more flexible packaging and lower maintenance, Ruoff says.

Ruoff and his team prepared chemically modified graphene material and, using several types of common electrolytes, have constructed and electrically tested graphene-based ultracapacitor cells. The amount of electrical charge stored per weight (called "specific capacitance") of the graphene material has already rivaled the values available in existing ultracapacitors, and modeling suggests the possibility of doubling the capacity.

"Our interest derives from the exceptional properties of these atom-thick and electrically conductive graphene sheets, because in principle all of the surface of this new carbon material can be in contact with the electrolyte," says Ruoff, who holds the Cockrell Family Regents Chair in Engineering #7. "Graphene's surface area of 2630 m2/gram (almost the area of a football field in about 1/500th of a pound of material) means that a greater number of positive or negative ions in the electrolyte can form a layer on the graphene sheets resulting in exceptional levels of stored charge."

The U.S. Department of Energy has said that an improved method for storage of electrical energy is one of the main challenges preventing the substantial installation of renewable energies such as wind and solar power. Storage is vital for times when the wind doesn't blow or the sun doesn't shine. During those times, the stored electrical energy can be delivered through the electrical grid as needed.

Ruoff's team includes graduate student Meryl Stoller and postdoctoral fellows Sungjin Park, Yanwu Zhu and Jinho An, all from the Mechanical Engineering Department and the Texas Materials Institute at the university. Their findings will be published in the Oct. 8 edition of Nano Letters. The article was posted on the journal's Web site this week.

This technology, Stoller says, has the promise of significantly improving the efficiency and performance of electric and hybrid cars, buses, trains and trams. Even everyday devices such as office copiers and cell phones benefit from the improved power delivery and long lifetimes of ultracapacitors.

Ruoff says significant implementation of wind farms for generation of electricity is occurring throughout the world and the United States, with Texas and California first and second in the generation of wind power.

According to the American Wind Energy Association, in 2007 wind power installation grew 45 percent in this country. Ruoff says if the energy production from wind turbine technology grew at 45 percent annually for the next 20 years, the total energy production (from wind alone) would almost equal the entire energy production of the world from all sources in 2007.

"While it is unlikely that such explosive installation and use of wind can continue at this growth rate for 20 years, one can see the possibilities, and also ponder the issues of scale," he says. "Electrical energy storage becomes a critical component when very large quantities of renewable electrical energy are being generated."

Funding and support was provided by the Texas Nanotechnology Research Superiority Initiative, The University of Texas at Austin and a Korea Research Foundation Grant for fellowship support for Dr. Park.

Adapted from materials provided by University of Texas at Austin.

http://www.sciencedaily.com/releases/2008/09/080916143910.htm