



future news

a newsletter from the *futures* foundation

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Australia joins global lookout study

The Futures Foundation has agreed to act as the auspice for the local node of the Millennium Project, a global foresighting study coordinated by the United Nations University in Washington, DC.

In what might be seen as the toughest challenge of all, the study seeks to identify the top 15 challenges that face the world, and to harvest ideas about effective responses to these challenges.

"More than 1,500 futurists, business planners, scientists, scholars, and decision-makers in more than 50 countries have contributed to this cumulative research," said Paul Wildman, chair of the Millennium Project's South Pacific node. "They are people who work for international organisations, governments, private corporations, NGOs, and universities.

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"The Project collects insights from these creative and knowledgeable people on emerging crises, opportunities, strategic priorities, and the feasibility of actions. It synthesises the information that is received and feeds it back to participants for checking and further comment. The final content of the project's annual State of the Future Report is the result of a careful, iterative process that incorporates serious contributions from serious thinkers."

The 15 challenges themselves range from such obvious topics as poverty, the role of women and the shortage of

"A unique resource for those who care about global change and improving the future"

fresh water through to more subtle challenges, such as the increasing difficulty of decision-making (see p2).

Future News has summarised past "State of the Future" reports, including both challenges and responses (see www.futurists.net.au).

"A unique resource for those who care about global change and improving the future, the State of the Future Report provides an assessment of the human situation as a whole, prospects for the future, and possible actions for today," Paul Wildman said.

Each chapter in the book is an executive summary of more complete reports in the CD-ROM section of about 2,500 pages. It provides a common platform for global actors, educators, and the concerned public to use in

“ Sustainable development is a concept that should be applied to decisions of all nations to the benefit of all people. It includes the right to and availability of safe water, energy, food, and health services. To achieve sustainable development, population and resources must be balanced by forward-looking, democratic governance. In turn, improved decision-making must be based on proper information and a new global sensitivity to ethics. Decisions that encourage sustainable development will work to counter terrorism and organized crime. Improved decision-making will help close the rich-poor gap, and support the changing role of women. Science and technology, properly managed, will benefit humanity. But we lack full understanding of the complexities of the global situation at any time, the inter-relationships that determine the outcomes - expected and unexpected - of strategies at all levels. The State of the Future Report is designed to promote understanding of what strategies and policies may be needed and their outcomes; it is designed to be used by policymakers and educators around the world. ”

www.millennium-project.org

building more coherent policy.

Although the study has been criticised by some futurists for its methodology, and is sometimes seen to be less than truly global in its reach, the



The really big issues....

These are the top 15 Global Challenges identified by the Millennium Project Global Outlook Project:

1. How can sustainable development be achieved for all?
2. How can everyone have sufficient clean water without conflict?
3. How can population growth and resources be brought into balance?
4. How can genuine democracy emerge from authoritarian regimes?
5. How can policymaking be made more sensitive to global long-term perspectives?
6. How can the global convergence of information and communications technologies work for everyone?
7. How can ethical market economies be encouraged to help reduce the gap between rich and poor?
8. How can the threat of new and reemerging diseases and immune micro-organisms be reduced?
9. How can the capacity to decide be improved as the nature of work and institutions change?
10. How can shared values and new security strategies reduce ethnic conflicts, terrorism, and the use of weapons of mass destruction?
11. How can the changing status of women help improve the human condition?
12. How can transnational organized crime networks be stopped from becoming more powerful and sophisticated global enterprises?
13. How can growing energy demands be met safely and efficiently?
14. How can scientific and technological breakthroughs be accelerated to improve the human condition?
15. How can ethical considerations become more routinely incorporated into global decisions?

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Futures Foundation has decided to support the project and help develop local activities that can contribute to a richer process and broader outcomes. In addition to the core activity of collecting input from suitable contributors, the local node will focus on bringing a depth approach to the foresighting process. This could be done using the Causal Layered Analysis methodology developed by Professor Sohail Inayatullah (see p 8).

The South Pacific node of the Millennium Project comprises ten senior futurists and agents of change, including Sohail Inayatullah and Futures Foundation chair, Charles Brass. Margot Brodie will liaise on behalf of the Futures Foundation, and Jan Lee Martin has agreed to act as vice-chair. Under the terms of the agreement with the United Nations University, node committee members, coordinated by Paul and Margot, will be seeking people who can make a useful contribution to the lookout study because of their extensive knowledge and their ability to add fresh or new thinking to the study. If you would like to nominate a contributor, please contact Margot at mebrodie@bigpond.com.

Dr Peter Saul also draws our attention to the Copenhagen Consensus project in Denmark and a parallel priority list from its Youth Forum: see www.copenhagenconsensus.com. ff

"On Reason and Emotion": the Sydney Biennale

"Since the seventeenth century, when ...Descartes said: 'I think, therefore I am', the idea of the mind/body split has been a foundation of modern society and thinking," wrote Isabel Carlos, curator of the current Sydney Biennale, in a foreword to the exhibition guide. "As the 51 artists in the Biennale invite audiences to explore and question this core belief, they suggest that there are more connections than separations in our bodies and the world around us."

That won't be news to anyone who works in futures, but it is interesting to see the world of art applying its talents to communicating the difficult ideas we have been struggling with since western science took a turn in this direction early in the 20th century.

"*On Reason and Emotion* has at its core an exploration of perception and its borders, yet there are several complex threads intertwining throughout the exhibition," Carlos wrote. "These include the connection between human consciousness and

physicality, the architecture of the built environment as a parallel anatomy to the human body and, conversely, 'my body is my home'; the environment as an experience of space; and the politics and poetics of human relationships where communication is a mutual exchange rather than a passing on of information."

It thus serves to connect ideas and people rather than become a platform for individual expression, she says.

"The exhibition immerses the viewer in art from around the world, with a particular focus on the south, to challenge ways of seeing and experiencing. European stereotypes have historically made linkages between the South with emotion and the North with reason. These stereotypes again parallel the supposed mind/body split.

"The works in the exhibition create a bridge between reason and emotion, so that one can also say, 'I feel, therefore I am'."

The power of perception....

Following public outrage at a wave of corporate scandals, some of us are beginning to hope that the corporate world is finally getting the message. Their licence to operate is at risk. In a world where younger generations are applying tougher criteria for measuring the behaviour of organisations, doing the right thing is finally being seen as the right thing to do. More organisations are recognising that an ethical approach delivers commercial advantage.

That's the good news.

The bad news is that, just as professional communicators are starting to wonder if they are winning the case for truth, integrity, and authenticity in organisations, other parts of society seem to be heading the other way.

Bad enough that school children are being advised to "get their teeth done" and polish up the exterior packaging of hair, eyebrows, clothes as a crucial way of enhancing the employment (or entertainment!) product they offer. Bad enough that a growing number of Americans and others are spending thousands of dollars on cosmetic surgery -- even for feet. Bad enough that in this world of want, our glossy magazines are advertising fashion accessories with price tags that would feed a third world village for years.

The real bad news comes from recent revelations that people engaged in political power games are resorting to inhuman behaviour for the sake of the TV news story.

Ignoring, for the moment, Australia's own stories of cruelty and deception, let's just look at one story that gained momentary attention in the past month and at what it might mean to all of us.

A report from Pakistan by Greg Bearup (*Sydney Morning Herald* 16 05 04) tells the story of a young man called Ijaz. This is how it began....

"The gaudy mansions of those who have 'made it' sit out of place in a sea of poverty, surrounded by dull, red-brick huts, wallowing buffalo and the stench of open sewers.

"Fatima Bibi is a sweeper in one of these houses, working not for money, but for a bowl of rice or some flour.

"Her employers in the small central Punjabi village of Sivia had been poor too, but now live in relative luxury because a son 'went to New York to drive taxis'.

"Fatima's son wasn't so lucky.

"When 20-year-old Ijaz set off for Europe early in 2002 he carried the hopes of his family. Ijaz was the second-youngest of the widow's nine children. He ended up 'collateral damage' in the 'war on terror', gunned down by Macedonian police, who claimed he and six others were terrorists.

"Last week the Macedonians admitted that this was a lie, and that the shooting was a 'stage murder', part of a clumsy plot to try to impress the Americans." And the story continues with more tragic detail.

What does it mean? Different things to different people, of course. To a professional communicator, it tells a sad story of deceit and manipulation and the ruthless abuse of power to feed an insatiable need for more power.

To Sohail Inayatullah (whose wife, the futurist Ivana Milojevic, drew our attention to the story), it speaks of the complexity of uneven global development -- an issue that Richard Slaughter has identified as the problem that underpins the major problems of humanity (see p 6).

Sohail draws attention to the deeper signals in the story.... signals of poverty (having children as a form of superannuation); signals of dreams (a better life in the USA); signals of tragedy (pressures from the US); and perhaps a signal of hope -- a trial at the International Court of Justice in the Hague..

"Imagine even 30 years ago that a poverty stricken Pakistani woman would be part of a trial at the International Court," he said.

Who killed Nick Berg?

For an even darker story of the manipulation of world opinion through deceit, read Richard Neville's story of this name at www.richardneville.com. (And congratulations to the *Sydney Morning Herald* for publishing a large part of this story -- albeit very carefully.)

Questions have been raised about the ghastly video that purported to show the execution of the idealistic young American. They include conflicting statements about whether Nicholas Berg had been held by the US military (the Berg family launched an action against the US military for false imprisonment in the Philadelphia office of the US Supreme Court on April 5: Berg was released the following day). On the video, Berg is wearing an orange jumpsuit of the kind familiar from Guantanamo Bay. The man who claimed to have murdered Berg is masked, yet his face is well-known and he has publicly credited himself with the deed. Why the mask? One conspiracy theorist points out that the scarves of the men in the video are "worn and tied by people who haven't a clue, like actors in Hollywood movies". Medical experts agree it is highly probable that Berg had died before the on-screen decapitation.

The details are ghastly but the story needs to be pursued, says Richard Neville.

Who killed Nick Berg, and why?

....and the writers of history

In this world of intrigue and suspicion, small wonder that the "conspiracy genre" in literature is booming. Publishers were caught unawares by the runaway success story of the last year, *The Da Vinci Code*, reports Julian Lee (SMH 18 05 04). Now they are bringing out more books that centre on "challenging the Christian orthodoxy that Christ died a bachelor on the cross". Many older books have been rapidly re-issued. "*The Holy Blood and the Holy Grail*, which was selling 600 copies a year since its debut in the 1980s, sold 10,000 copies last month alone. *Bloodline of the Holy Grail*, which purports to trace the descendants of Jesus, and *Woman with the Alabaster Jar*, which claims Mary Magdalene was the lost bride of Christ, are among a score of books selling fast." This worldwide phenomenon is being accompanied by a resurgence in new age, self-help motivational books that explore spirituality, according to one publisher. Futurists who have read Riane Eisler's fascinating book, *The Chalice and the Blade*, will find familiar references in *The Da Vinci Code*.

Australia's health system - how to fix the mess: Baume

Emeritus Professor the Hon. Peter Baume, AO, Chancellor of the Australian National University, is a former board member of the Futures Foundation. He is also a specialist in internal medicine and a former Australian Senator who held a range of portfolios including that of Federal Minister for Health. Dr Baume recently retired from the position of Head of the School of Community Health at the University of New South Wales in Sydney.

The Current Mess

The Australian health system is a mess. It operates inefficiently between many levels of government. Our politicians are leading a wrongly based debate. They espouse utopian values. They promise what cannot be delivered.

Australia supports professional monopolies that are not good for anyone. Let me explain.

The Constitutional power for administering health lies with one level of government (the States) while "new money" lies with the Commonwealth. Much of the debate is about "blame shifting" and much of the activity is about "cost shifting" between those levels of government. Some States have tried to use "Areas" (closer to the community) to deliver care.

The Reason

The main reason our system is unsustainable is that we promise to our society what cannot be delivered.

Specifically, we promise to deliver, at public expense, all possible care to all people all the time. The reality is different and sobering. Resources are finite. Resources are not sufficient to provide everything for everyone. Resources have never been enough to do that. They never will be.

We cannot provide, at public expense, using best contemporary knowledge, simultaneously, procedural care, personal care, protection of the public health, and prevention of future disease.

Choices between possible uses of resources will have to be made in the future, as they have been made in the past, as they are being made now.

Failure to recognise this, or to say it clearly to the public, makes it inevitable that there will be "failures" within the system. They are really not so much "failures" as the inevitable result of a flawed debate.

The vicious arguments today are about who gets publicly-subsidised help, who misses out, how long people have to wait, etc. The politically powerful and the politically savvy usually win that argument.

That there are significant, and growing, regional

and class differences is just becoming clear.

The idealists might wish that things were different, but consider the realities. Money for medical services and hospitals is allocated, both Federally and in the States, as part of the budget process.

An eloquent Minister, at either level, could expect to win an extra amount in Budget discussions. The amount, however, is likely to be relatively small and finite. After all, budget discussions occur in an environment where the size of the cake is known. A bigger slice of that cake for one supplicant means smaller slices for one or more others.

"No State Premier and no Prime Minister has told the Australian public the truth about the possibilities or the facts."

That same Minister might not get a similar increase in future years, and, in any case, when that resource is used up, choices still have to be made.

There are always shortages. There are always things that could be done that are not done.

In the absence of enlightened or educated intervention by the public, the choices between possible interventions are made "off stage" by others, often providers or administrators. Their values are never examined, their reasons and rationale never tested.

A word about monopolies.

In order to stop "fly by night" operators and training institutions, governments have instituted systems of licensing for most people in the personal care area. But they have often passed the administration of those systems back to the interested professions, which then act as a "choke" for the entry of new players. We have a monopoly medical system where only those who come from approved courses at universities can access medical benefits. We have restrictions on the entry of overseas-trained people at the same time as we have increasing shortages here.

Established players claim that it is only an interest in standards that holds up new players.

But they accept and condone, at the same time, the shortages that exist in Australia.

How to Fix it

We require a reorientation of the public debate to recognise, and emphasise, that resources are always finite and that choices always have to be made.

We require that our population face the fact of increasing ageing and determine how much public money we should allocate to interventions at an advanced age.

But the question is: how might those resource allocation decisions be made?

At present decisions are made. It is not always obvious how they are made, or who is making them. Young registrars, area accountants, Ministerial offices, admitting officers all make some decisions.

There are two sides to any coin. There are costs and benefits to any decision. A decision NOT to treat x might mean a decision to allow treatment of y. But x might then die sooner.

Those that argue costs without benefits, or vice versa, are misleading the public.

The best way that decisions seem to have been made so far is to let the public (rather than professionals) decide, using what are called citizen juries.

In this model, juries are empanelled in the usual way, and addressed by advocates for each side of the proposition. The juries then decide. At least in this model, it is clear that a choice has been made and that costs and benefits will follow.

An American philosopher has invited us to consider withdrawing public subsidy for certain procedures after certain ages. This could be a progressive withdrawal, and would still leave open the option of using disposable income for certain procedures (this is the case now with simple cataract removal in Victoria).

No State Premier and no Prime Minister has told the Australian public the truth about the possibilities or the facts. But something needs to be done for a debate which is dishonest, misleading and unsustainable as it stands. *ff*

Nanotechnology ... the really small issues

Attending a workshop on developments in nanotechnology had more than a touch of déjà vu for this reporter. Way back in the 1950s, when I worked for IBM, computers were making their debut. There was a lot of excitement about the power and potential of this new technology -- but very few people outside the industry really understood what computers might do. Today nanotechnology seems to be at the same point. Here's a quick Q&A summary of the summary presented at a workshop hosted by the NSW Department of State & Regional Development and the Warren Centre of Sydney University.....JLM

What is a nanometre? A nanometre is 1 000 000 000th of a metre. One explanation of its scale is to say that a nanometre is to a golf ball as a golf ball is to the Earth. Very, very small. Because this is at the level of atoms and molecules, the behaviour of these particles does not follow the rules of Newton's physics. Instead they need to be understood and managed by the principles of quantum physics, a field that has been contributing new understandings to science for more than half a century, but is still poorly understood by most people.

How will nanotech be used? Nanotechnology is a materials technology. As Dr Carl Masens of UTS pointed out, everything is made of something. The properties of the things we make and use depend upon the properties of the material used in making them. Rubber is used for flexibility, copper is used for its conductivity, and so on. "And that is just the bulk material," he said. He emphasised the fundamental importance of the interactions that take place on the surface of materials:

- light falls on the surface
- corrosion begins at the surface
- friction and wear occur at the surface
- dampness begins at the surface.

"So surfaces and their coatings are very important. Controlling surfaces controls the interactions of matter with other matter and many other aspects of the physical world."

What can nanotech coatings do? They can control optical interactions, change the way light travels on a surface. They can provide surface coatings with control over solar and thermal energy. They can eliminate photo-damage. As just one example, titanium dioxide coatings made with particles on the nano scale can be used for solar cells that collect energy. "Dollar per watt,

this is already competitive with silicon -- though it is not yet as efficient, so at this stage you have to use it for systems that don't draw so much energy down," Dr Masens explained.

Where is the market for nanotech? The experts remind us that it's not so much a market for nanotech as a market for what nanotech can do.

"Customers don't want nanotech," said Carl Masens. "What they want is improved performance, like lower electrical resistance, greater chemical stability, impact resistance, flexibility and thermal control."

Already there are nanotech coatings that can control surface properties. They include multicolour coatings that can be applied to wood, stone, textile, glass and ceramics. These will repel water and oil, can be self-cleaning, and are resistant to damp and mould. And they can protect from friction. When it comes to thermal properties, nanotech coatings can be used for heating and cooling (of water, or interior spaces, for example); for storing heat in matter (such as walls, bricks, concrete or water); and for insulation.

Dr Masens' own project, the NanoHouse™, is a means of demonstrating how many of these technologies can be put to use in an environment as ordinary as a domestic home. (nano.uts.edu.au/nanohouse.html)

The Global Picture In a quick overview of nanotech around the world, Dr Terry Turney, director of the CSIRO Nanotechnology Centre, highlighted the rapid growth of research and development in this field. Already, he said, there are up to 1000 research groups claiming nanotech as their core activity. There are about 2000 start-up nanotech companies, although many of these are seeking ownership of intellectual property rather than using the technology.

"Most multinational pharmaceutical chemical and it companies have active nanotech R&D programs. Global expenditure on this research was \$US4.5 bn in 2003."

In Australia about 40 companies are working in nanotech, although only four of them have reached the stage where they are generating a positive cash flow. As one of them pointed out in a specialist session at the workshop, they do need very patient investors.

Where is nanotechnology going? Dr Turney described the value-adding chain of nanotechnology, starting with research into the manufacture of particles (including their suspension in a medium -- a critical fea-

ture); materials made with nano-particles; and systems and devices using the technology. So far, much of the exploitation has occurred in what Dr Turney called accidental structures like carbon black and silica. For the future, he sees five generations of nanotech on the way: passive nanostructures, including catalysts and polymer composites; active nanostructures; self-assembled nanostructures; and multi cellular nanostructures.

What are the risks? The nanotech industry, like any other industry, needs a licence to operate. In this case there is certainly risk. However the risk is not so much about the technology, said Dr Turney, but about the way the technology is used.

"It is about responsibility," he explained. "Energy can kill, if it is not used responsibly. Water can kill. These forces, like the force of nanotechnology, need to be used responsibly."

"We have all seen the consequences of corporate behaviour that doesn't respect the right of the community to participate in the decisions of science. One company has paid a high price for not consulting customers on the genetically modified organisms that it produces."

Dr Turney said that there were no laws yet to deal explicitly with nanotechnology, but that people working in this area would be subject to the provisions of legislation dealing with the safety of workers and users, environmental hazards, and so on.

"Under the provisions of the Commonwealth Government Occupational Health and Safety Act of 1991, you have to do everything you can to make sure that the health of the employees and users of the technology are protected. There are environmental impact laws that apply. The NSW Dangerous Goods Act, and the Environmental and Hazardous Chemicals Act deal with discharges into air and water. There is the national Industrial Chemicals Act, which covers toxicity and deals with exposure, use, public health, occupational health and safety.

"We also need to recognise that carbon nanotubes can breach the blood/brain barrier. No-one yet knows the significance of some of these issues. Studies are expensive. They have to be international. The cost is prohibitive, and there is no adequate support for doing those studies in Australia at the moment."

More information on nanotechnology can be found at www.nanotechnology.gov.au.

WAKING UP AFTER THE WAR

This is the third and final in a series of essays by Professor Richard Slaughter of the Australian Foresight Institute, addressing what he calls the “world problematique”. It summarises new tools, perspectives and capacities available to today’s post-conventional futurists.

What does post-conventional mean? To be conventional is to operate within pre-defined boundaries according to clearly defined rules using well-known ideas and methods. The bulk of futures work in the world is conventional. One of the hallmarks of conventional futures work is that it overlooks interiors. On the other hand, post-conventional practitioners understand that the external world is mediated by inner structures of meaning and significance. Post-conventional work demands more of the practitioner. It means that a concern with ‘ways of knowing’ becomes unavoidable.

Different approaches and methods in futures work are now being linked with a deep appreciation of individual interiors. One approach has been Spiral Dynamics (*Future News* March). This and other ‘stage development’ theories offer insights into over 20 distinct paths of development in humans. These give us greater clarity about our own ways of knowing, preferences, strengths and blind spots, and those of others.

One of the great discoveries of integral futures work is that levels of development within the practitioner, more than anything, determine how well any methodology will be used or any task will be performed.

The system we call the Integral Operating System offers a framework for integrating various dimensions. Here are some of the ways it is being used by post-conventional futurists.

Reconceptualising macrohistory

Andrew Weinberg, a graduate student at the Australian Foresight Institute, has reviewed the way macrohistory has been applied to futures studies. By considering macrohistory through the lens of the IOS, Weinberg was able to ‘interrogate the interiors’ of this body of work in sufficient depth to diagnose some current weaknesses and develop its strengths for application in a futures context.

Open source democracy

Douglas Rushkoff critiques US media policy, including the selling of the Iraq war, and suggests that ‘the market’s global aspirations amount to a whitewash of

regional values... globalism, to almost anyone but a free market advocate, has come to mean the spread of the Western corporate value system to every other place in the world.”

Here is an example of advanced work that looks beneath the surface and questions some of the shaping realities that can now be understood, challenged and subjected to greater democratic openness.

Reframing Environmental Scanning

Environmental Scanning (ES) was once seen as a straightforward method for detecting signals from the environment, outlining organisational implications and feeding these into a decision making process. It alerted an organisation to external changes and provided time for strategic responses to be developed. So far so good. What had been overlooked, however, was that the world ‘out there’ is framed, conditioned and mediated by the world ‘in here’. Using the four quadrant model of the Integral Operating System, Joseph Voros developed a method for clarifying the filters at work in the minds of scanners.

**“the central issue
that should concern us
is uneven development”**

The moral maturity of organisations

In an integral view, the nature of the consciousness that is experiencing or directing change is crucial. Peter Hayward used Jane Loevinger’s stage development theory to show how ‘the organisational capability to consider future implications (of foresight projects etc.) is synonymous with the individual capability of people in that organization to do that very same thing’.

His conclusion was clear. Questions of human developmental stages, of the development of higher order moral, cognitive and other capabilities are central to understanding and dealing with the global problematique in all its guises.

Conclusion

At the outset I suggested that the central issue that should concern us is uneven development. More advanced forms of futures enquiry and action are being developed that can help us engage in depth with the multiple crises that continue to threaten our world and its nascent futures.

While I was working on this material, notice of a conference called by prominent US futurists arrived. The conference will consider the role of technology in creating ‘solutions’ to the world’s problems. I was saddened to see this because, while I am not anti-technology in any simple-minded sense, I cannot see how investments in increasingly powerful technologies can possibly help to create a better world.

Now that terrorists are using mobile phones to set off bombs that massacre innocent civilians, it is all too clear that genomics, nanotech and other innovations now being developed will also be misused. HG Wells saw this many years ago and the questions he raised then have still not yet been answered. Some of them hit very close to home. Where, we should ask, did ‘weapons of mass destruction’ come from, if not from the West, which shirked its moral responsibility to ban them when it could? Where are they currently stored, and with whose permission?

So the futures work outlined here is not merely theoretical. It is intensely relevant and practical. I have argued that it is necessary to critique the current world order. It is equally necessary to confront the sources of unrestrained power and the mad pursuit of material wealth. As futurists and foresight practitioners we need to start looking more deeply into ourselves and into our social contexts to find the levers of change, the strategies, the enabling contexts, pathways to social foresight.

Post-conventional futures work is not for the faint-hearted, but it does suggest a range of constructive responses to a world currently set on the path to oblivion. *ff*

Are nanobacteria alive?

Some claim they are a new life form responsible for a wide range of diseases, including the calcification of the arteries that afflicts us all as we age. Others say they are simply too small to be living creatures. Now a team of doctors has entered the fray surrounding the existence or otherwise of nanobacteria, reports the *New Scientist* (22 05 04), and in a cautious report describes how they isolated miniscule cell-like structures from diseased human arteries. The particles self-replicated in culture, and could be identified with an antibody and a DNA stain. "The evidence is suggestive," is all they would claim.

Moving into the nano levels of life itself is an area that has long fascinated futurists. What could be more fascinating than the organelles called mitochondria, which are responsible for creating respiration and energy (so what is life itself?).

And is the link with the "microvita" of Indian philosopher P.R. Sarkar no more than a similarity of scale and spelling? (Sarkar suggested that the basic nature of microvita was a blend of idea and matter.)

Futures might be about big ideas, but some of those big ideas come in very small packages!

Our leaders need "safe spaces": Senge

The lack of an opportunity among leaders for real conversation and meaningful connection affects the kinds of decisions they make, wrote Peter Senge in a Brahma Kumari journal, *Experiments in Silence*.

"Imagine if leaders could come together around important decisions in conversations that expand the possibilities -- conversations filled with insights, ideas and fresh perspectives. They might find themselves making decisions that nobody would have anticipated. When you really have something creative happening, it is a building process... good conversation versus bad conversation." He contrasted that with meetings where something is already on the table, and is whittled down so everyone can live with it. And, he said, "we get too obsessed with the outcome, with producing high quality decisions. All decisions are flawed and incomplete. They are the best we can do at the time. The important issue is how can we go about implementing and learning going forward.

"The real crux of any decision-making process is to get headed in a direction that has possibility."

BP: 7 years of 3BL

Oil and natural gas group BP has launched its 7th annual report on its environmental, social and ethical performance. The Sustainability Report 2003 replaces BP's Environmental and Social Review. Its integrated report explains the relationship between environmental, social and ethical issues and its business strategy, including a number of factors relevant to the long-term future of BP.

The report signals progress in a number of fields, including long-term measures to tackle climate change, and action being taken to minimise greenhouse gas emissions. For the first time, BP is reporting in accordance with the Global Reporting Initiative guidelines - a comprehensive set of indicators covering all aspects of sustainable development.

Further information, data and charting tools are available at

<http://www.bp.com/environmentandsociety>

BP invites feedback at

<http://www.bp.com/sustainabilityfeedback>

Rocking global politics

Just as Peter Garrett, former lead singer of Midnight Oil, announced that he will enter politics with the Australian Labor Party, rock music hit the headlines elsewhere in world news as a major contributor to the demise of the Soviet Union. Eulogies following the death of Ronald Reagan in US news media are crediting the former US president with winning the Cold War. The progressive press is responding with corrections. For example, Harvey Wassermann writes that the real causes were rock music and radiation.

"The GOP military's 1980s attempt to "spend the Soviets into oblivion" certainly feathered the nests of the defense contractors who contributed to Reagan's campaigns here, and who still fatten George W. Bush. Lockheed-Martin, Halliburton and an unholy host of GOP insiders have scored billions in profits from Iran-Contra to Star Wars to Desert Storm to Iraq," he wrote. "But these were not the people who brought down the Kremlin. If anything, they prolonged Soviet rule with the unifying threat of apocalyptic attack. No,

GLOBAL FUTURES ROUNDUP

it was rock & roll that wrecked the USSR. From the late 1960s on, the steady beat of the Beatles and Motown, Bob Dylan and Jimi Hendrix, shattered Stalinism at its stodgy core." Chernobyl, with its attempted cover-ups, its enormous clean-up costs and its associated social tragedies finished the job.

(www.commondreams.org)

Writer Zeynep Toufe agrees. He argues that the Soviet Union was already economically crumbling and in severe decline by the 1970s, barely able to keep its economy functioning let alone surpass the United States militarily or economically. "The Soviets were doing a pretty good job of bankrupting themselves and did not even try to keep up with the United States' insane levels of military spending in the eighties. Reagan's policies helped bust the United States' budget, provided massive corporate boondoggles to the military-industrial complex, such as the missile defense systems which did not work then and do not work now. If anything, emerging memoirs and interviews suggest that Reagan's aggressive policies impeded and delayed Gorbachev's efforts at reform." (<http://www.theatlantic.com/politics/foreign/reagrus.htm>)

Signals in the noise

Sydney's future eaten

The next 50 years offer Sydney the last chance to avoid catastrophic climate change that would devastate south-eastern Australia, the scientist Tim Flannery warned. Speaking at the State Government's Sydney Futures Forum, Dr Flannery warned of a city grappling with up to 60 per cent less water.

Sydney Morning Herald 19 05 04 1204

Plugging into a new kind of power plant

A promising new contender is emerging in the alternative energy stakes, reports Philip Hunter: the harnessing of photosynthesis, the mechanism by which plants derive their energy. The idea is to create artificial systems that exploit the basic chemistry of photosynthesis to produce hydrogen or other fuels for engines and electricity.

Australian Financial Review 14 05 04 1205

The case against perfection

Our moral vocabulary is ill-equipped to address the hardest questions posed by genetic engineering, says Michael J. Sandel, Professor of Government at Harvard University. "We need to confront questions about the moral status of nature and the proper stance of human beings toward the given world," he wrote. "Our powers of biotechnology make them unavoidable." He specifically explores artificial enhancement of muscles; memory, height and sex selection.

Future Survey March 2004 1206

Economic revival fails to lift Bush: will AWM?

One of the surprises of the current political cycle is that George Bush does not yet appear to be reaping political rewards from an improving economy, writes Tony Walker in Washington. On the other hand, Becky Tinsley argues in the *New Statesman* that, "defying all Marxist analysis", a growing number of Angry White Men are crazy about George W. Bush. Why are they so angry? Because although they are enjoying one of the world's highest living standards, life isn't what they were expecting when they were growing up in Eisenhower's America.

AFR, New Statesmen 28 05 04, 14 05 04 1207

How organisational charts lie

Managers who target strategic points in social networks can quickly increase an organisation's effectiveness, efficiency and opportunities for innovation, according to Rob Cross and Andrew Parker in their book *The Hidden Power of Social Networks: Understanding How Work Really Gets Done in Organizations*. (Harvard Business School Publishing 2004)

HBS Press 07 06 04 1208

The printing of organs?

Last month we reported how "rapid prototyping" creates 3D items out of material printed layer by layer. Now a US tissue engineering lab suggests that the process could be used to print organs such as hearts, livers and kidneys. It would be combined with smart polymers (synthetic polymer hydrogels, used as the structural matrices in bioengineering) and cell adhesion, the fusing of cell aggregates to imitate the fusion of sponge fragments.

Future Survey March 2004 1209

Dancing lasers levitate tomorrow's electronics

For the first time, carbon nanotubes have been picked up and moved with a laser beam. The trick may finally offer engineers who want to build microchips based on nanotube components a way to move the diminutive devices into place.

New Scientist 05 06 04 1210

Change? Keep it simple

A simple strategy of asking the simple questions, such as 'why', is emerging as the best way for organisations to institute meaningful change, writes Mark Abernethy. Experts agree that at least 70% of organisational change initiatives will fail, often because the senior people behind a change lose sight of the employees' aspirations as they chase short-term goals.

Charter June 2004 1211

New book from Inayatullah next month

Members who want to know more about Causal Layered Analysis, the methodology we have briefly introduced in recent issues, may want to get Professor Sohail Inayatullah's new book on the topic. Called *The CLA Reader: Integrating Policy Understandings*, it is being published by the Tamkang University Press, Taipei. The book will cost \$A40 plus postage, and is available from info@metafuture.org