



future news

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The evolution of science

Elisabet Sahtouris calls herself a post-Darwinian evolution biologist. "The theory that Darwin gave us was wonderfully pioneering over a century ago," she says. "But how many scientists are still working with theories from over a century ago?"

Fresh from talks with the Dalai Lama in Rome (and a physicist in Tel Aviv who's exploring the intelligence of bacteria), Dr Sahtouris offered members of the Futures Foundation a sampling of her ideas, with a sampling menu, at lunch in Sydney on June 15. Conversation ranged from the notion of the organisation as a family to the suggestion that we can better understand the behaviour of humans if we recognise ourselves as an immature species (see panel, top right).

We have reported in previous issues how effectively Dr Sahtouris uses metaphors from living systems to help us understand the nature of organisations. On

this visit, she emphasised also that it's time to concede the limitations of Darwinism – and to recognise how little we really know about ourselves.

Here are some extracts from her work: for more, visit www.sahtouris.com.

Darwin worked within a scientific worldview of a non-living universe without intelligence or purpose, evolving by accidental mechanical events. The official story of Earth was that particles of dumb mud bootstrapped themselves into intelligent, living systems.

Frankly, I think that story is going to look a little bit foolish as physics continues with its understanding of zero point energy, non-locality, the fundamental role of consciousness and the replacement of particles with information as the fundamental units of matter. I hope these concepts will creep into biology, because most macro- and micro-biologists are still working at the Newtonian level of mechanics. They see molecules with certain shapes bumping into each other, with this and that happening by accident, and evolution mechanically replacing those organisms that don't work well with others that do.

We have fifty years of laboratory evidence (for example) that DNA reorganizes itself intelligently in response to events outside the organism. That work was pioneered over half a century ago by Nobel laureate biologist Barbara McClintock, demonstrating "responses of the genome to challenge" in corn, a highly evolved species. A lot of later work, such as that of Eshel Ben Jacob, has been done with bacteria

CHARACTERISTIC	BEHAVIOURS
Young species	Mature species
<ul style="list-style-type: none"> • Take maximum resources • Hog territory • Multiply wildly • Are highly competitive 	<ul style="list-style-type: none"> • Share resources • Share territory • Help insure the life of other species • Are far more cooperative
<p>Is humanity an immature species, asks evolution biologist Elisabet Sahtouris? See story page 3.</p>	

because they're easier to study over many generations. Ben Jacob concludes that bacteria not only alter their individual genomes intelligently but display group mind in doing so.

As an illustration of our failure to understand life, take the human genome project. I like to say that when they map the human genome they're going to know as much about a human body as you would know about New York City from looking at its telephone directory; or as much as you would know about a beautiful Peruvian hand-knit sweater if you unraveled it and measured the kinks in the yarn. Would you be able to reconstruct it from those kinks? -- from that string of kinks, from that series? DNA is usually pictured for us in books as this neat, static double helix, along which we can map its chemical components in a linear chain. First of all, consider the sheer amount of it in your own body. If you could take the DNA in each of your cells, and stretch these bits out end to end -- about 15 cm per cell -- guess how long it would take a jet plane flying at a thousand kilometers an hour to get to the end of your own DNA? Would you believe



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several centuries, flying day and night? We are talking about a serious amount of DNA in every one of us. Work it out: you have 30 to 50 trillion cells in your body. Now consider how all that DNA in each cell is packed up into a tiny little, invisibly small nucleus, in which it is writhing around like a mass of snakes. And it is not only in there by itself; it's wrapped around bits of protein that help it organize and of course there's water in there and all of this is highly active and reactive. It is subjected to things coming in and out of your cells and their nuclei all the time -- viruses, bacteria, loose snippets and rings of DNA called prions, transposons, etc. from who knows where or whom. All this DNADialogue is happening continually -- endless conversation going on right inside the nucleus of every one of your cells, not to mention the cells of all other living creatures, including the soil bacteria, which are so closely packed that a small pile of soil contains more DNA than your body!

Whenever appropriate, some little piece of DNA brings itself to the cell's nuclear surface and unfurls itself-- exactly the piece that needs to be unfurled --

ESSENTIAL FEATURES OF HEALTHY LIVING SYSTEMS

- 1 *Self-creation (autopoiesis)*
- 2 *Complexity – diversity of parts*
- 3 *Embeddedness in larger holons and dependence on them – holarchy*
- 4 *Self-reflexivity – autognosis, self-knowledge*
- 5 *Self-regulation/maintenance (autonomics)*
- 6 *Responseability – to internal and external stress or change*
- 7 *Input/output of matter/energy/information from/to other holons*
- 8 *Transformation of matter/energy/information*
- 9 *Communications among all parts*
- 10 *Empowerment – full employment of all component parts*
- 11 *Coordination of parts and functions*
- 12 *Balance of interests – negotiated self-interest at all levels of holarchy*
- 13 *Reciprocity of parts in mutual contribution and assistance*
- 14 *Conservation of what works well*
- 15 *Innovation – creative change of what does not work well.*

"Unequal global development is like a family starving three children in order to make the fourth obese"

and copies itself. The copy shoots off to another part of the cell where the plan is copied again to, say, build some particular needed protein from it.

By the way, the only part of the DNA that scientists know anything about is the protein-coding part, and that's about three to five percent. The other ninety-five to ninety-seven percent, they don't talk about, or if they do, they often call it garbage, or junk DNA. Now, as far as I know, junk is a human invention. If you look very carefully at nature, you will not find any junk. So it likely has a lot to do with the organization and maintenance of this highly intelligent system of cells in a body. And we don't know anything about it yet.

Microbiologists discovered the capacities of bacteria to go in and out of cells and nuclei, and move things around, and switch genes. They even talk about editor genes and repair genes, yet official dogma still has it that none of this is supposed to be intelligent. How does DNA make its "appropriate choices"? Why can a bacterial colony change its DNA depending on what's outside the colony or what's to eat out in their grazing fields? And how can they all change at once, say to change their DNA to create new equipment for digesting what's available to them when humans give them something they can't eat? They do it intelligently.

Genetic engineering is only possible because we enslave bacteria to do the work for us. How do you think genetic engineering works? Scientists enslave bacteria and viruses to carry DNA into targeted cells, because they can't do it by themselves, any more than we can make beer or yoghurt without the help of microbes. It's only in physics that we're beginning to talk about the deep reality of non-locality, which means that every point in the universe has access to the information at any other point. There will probably also be acknowledged, if it is not already, such a thing as non-temporality, in which anything at any given time in the universe (linear time) has access to the information at any other time. Because the basis of the universe is turning out to be a non-time-space "something" that is really "everything" -- precisely what the ancient Greeks called the Plenum. It isn't limited by time-space con-

Thinking differently about organisations: from machines to living systems...

Mechanism: allopoietic | **Organism: autopoietic**

- *Is assembled*
 - *Rules given*
 - *Hierarchic*
 - *Is invented*
 - *Is repaired*
- *Grows itself*
 - *Rules itself*
 - *Holarchic*
 - *Evolves*
 - *Repairs itself*

straints. It doesn't have to worry about linear time. And as the deep reality of our universe, it is of course the deep reality of every one of our cells! It's the deep reality of each one of our molecules. It's the deep reality of each of us.

We need to think more loosely and largely than our current paradigms. We need to think about the possibility that many other human cultures were right in perceiving a cosmic consciousness that creates itself as it goes and that is intelligent at every step of the way. We need to go way beyond asking "Is a bacterium intelligent at that lowly stage of evolution?" and ask "Are all bacteria and their planet Earth and our physical Universe and the entire Cosmos of material and non-material realms intelligent as a whole, as a whole intelligent unity or Oneness?"

I believe that this is what we are finding out: that consciousness is the source of evolution, rather than a late product of an evolution in which dumb mud bootstrapped itself into intelligence.

HUMAN BODY INC.

"Imagine trying to run your body like the world economy. You'd have these Northern Industrial organs (the heart-lung system) with the power to exploit the bone marrow for their resources. The raw material blood cells would be swept up there, the blood purified, oxygen added (that actually happens), to make a useful product. Then we have an announcement from the Heart Distribution Center for this finished blood product. The price for it today is so much. Who wants it? You send it down to those organs that can afford it and the rest of it you have to chuck out as surplus or bottle it until someone can pay for it. How long would you last in that system? How long will our world economy last under that system?"

Can "Simultaneous Policy" create global cooperation?

Understanding how cooperation has worked through millennia of evolution can help humanity as it faces a critical crisis of survival on planet Earth. What we can learn from that cooperation might make survival possible, says John Bunzl, founder of the International Simultaneous Policy Organisation. What is Simultaneous Policy? Here are extracts from a paper in which he explains.....

Evolution biologists are increasingly questioning the Darwinist view, which describes evolution in terms of competition and natural selection, in favour of a "post-Darwinist" stance that recognises the crucial role of co-operation.

An important theory underlying this is Koestler's concept of holons and holarchies. This is the idea that reality is composed of holons or "whole/parts" that are simultaneously composed of smaller parts and are themselves also parts of larger wholes. The entire system is a "holarchy": a hierarchy of holons or 'whole/parts' which is endless in either direction. Each higher-level holon emerges out of its predecessor, transcending and including it. Each holon on the same level has an inherent tension between its 'wholeness' on one side, and its 'partness' on the other; between a desire for individuality, and a need for conformity to the society - or holarchy - to which it belongs. This tension drives evolution towards ever-larger scales of cooperation.

Evolution biologist Elisabet Sahtouris explains: "There is a cycle of evolution that occurs all over, across time and space, at the tiniest levels of biology, and in the largest cosmic processes. It always begins with unity that then individuates - as in the ancient Vedic creation story in which a little wavelet forms in a smooth sea, and forever after is torn between loving its own individuality and wanting to merge back into the One. This universal tension between part and whole, and among parts, drives evolution. Individuation always leads to a kind of tension and conflict [i.e. to competition]. If the parts don't kill each other, they start negotiating. Negotiations can lead to resolutions of some of the tensions, moving from conflict to cooperation, and then to some new level of unity" [that is, to a new, higher-level, larger-scale holon].

In large-scale human societies cooperation is made

possible by forms of governance; by political systems. As evolutionist John Stewart points out, "cooperative organisations were formed through the emergence of constraints that limit the independence of the independent entities. These constraints (e.g. governance, management, etc.) restrain destructive competition and enable cooperation to emerge. In the evolving governance of human societies, we could see a holarchy as: individual - family - local/regional government - national government.

The highly developed nature of global communications and the interconnectedness of economies we see today (i.e. globalisation), as well as the threats humanity faces such as global warming, global poverty and ecological destruction, presage a further move in this evolutionary development. This is the emergence of a holon of democratic planetary governance that transcends and includes the lower holons in the holarchy. Post-Darwinist evolutionists contend that this is but the next natural - but by no means assured - stage in humanity's evolution towards ever-larger scales of cooperation.

The problem is that the present highest holons of governance - nation-states - are configured to govern only in the national space. But global capital, trade and transnational corporations (and international crime and terrorism) already operate in the global space. Further, we live in a world of competing nations who are unwilling to relinquish their sovereignty to any institution of global governance. The UN, not possessing any binding authority over them, is not configured to provide it. Indeed, far from cooperating, governments are preoccupied with competing with one another for inward investment and jobs. They are thus easy prey for free-riding global investors and transnational corporations who happily play one government off against another. Governments also destructively compete to boost employment and inward investment by levelling social and environmental protection laws and by reducing corporate taxes. But this governmental imperative to maintain "international competitiveness" also has an important consequence for democracy. Since the threat of capital and employment flight forces governments, regardless of the party in power, to conform to a very narrow span of market and business-friendly policies it necessarily reduces democracy to an electoral charade

in which voting no longer has any significant meaning.

Sahtouris points out that destructive competition and free-riding are especially characteristic of immature species: "Young species are found to have highly competitive characteristics: They take all the resources they can, they hog territory, they multiply wildly. Sound familiar? But a lot of species have managed to grow up, to share things and territory, to cooperate. It's what keeps them alive." To survive, therefore, humanity will - like all other organisms - have to grow up: we will have to abandon the present immature, competitive paradigm of international economic relations and evolve it into a mature and cooperative one.

The human species, like all others, is following the same cycle of competitive individuation leading (hopefully) to negotiation, leading in turn to a new higher level of cooperative unity. How can cooperation possibly be made in the interests of individual nations when first-movers will suffer competitive disadvantage?

This impasse may potentially be overcome by citizens around the world who are increasingly joining the International Simultaneous Policy Organisation (ISPO), initiated in 2000. ISPO provides a process for moving to a cooperative global society which requires neither nations nor politicians, nor individuals to act against their interests.

SP is a range of legislative measures designed by ISPO's members and their advisers to bring economic justice, environmental sustainability and peace to the world. It is to consist only of those desirable measures which cannot be implemented unilaterally by any nation due to the fear of first-mover competitive disadvantage and is therefore to be implemented by all, or virtually all, nations simultaneously, removing the crucial barrier to cooperation. With SP, no nation, corporation or citizen loses out to any other.

The paradox of all previous major evolutionary transitions is, of course, that if left to reach a critical stage, competition ultimately ceases to be a strategy for individual survival but instead becomes a strategy for collective suicide. At that point - a point humanity is now fast approaching - co-operation becomes in everyone's self-interest.

More information at www.simpol.org

Coming unstuck? Global money and US debt

Trustees of the US Medicare organisation have admitted that it will go bankrupt by 2014, reports US Senator Joseph Lieberman. And lost in the coverage of their report was an even more startling revelation: the entire US government is going bankrupt. "The trustees found that our obligations to future retirees are unfunded by a staggering \$62,000 bn," he wrote. "Add that to an earlier estimate of unfunded liabilities for the social security pension system and the figure rises to \$72,000bn. That does not include the debt we will incur for operating the rest of the government."

Why aren't we hearing more about America's huge indebtedness?

Niall Ferguson, professor of history at the Stern School of Business in New York, discusses the dilemma of the global dollar in his book, *The Price of America's Empire*, and wonders if the greenback's days as the world's top currency are numbered. And he's not the first to do so. Ferguson himself quotes the words of Charles de Gaulle at a 1965 press conference: "The convention whereby the dollar is given a transcendent value as an international currency no longer rests on its initial base.... The fact that many states accept dollars in order to make up for the deficits of the American balance of payments has enabled the US to be indebted to foreign countries free of charge.

"Indeed, what they owe those countries, they pay in dollars that they themselves issue as they wish....

This unilateral facility attributed to America has helped spread the idea that the dollar is an impartial, international means of exchange, whereas it is a means of credit appropriated to one state."

According to Ferguson, the striking thing about de Gaulle's 1965 analysis is how very aptly it describes the role of the US dollar in 2004.

He says that the US has a total external debt of \$US2.9 trillion – about a quarter of its GDP.

Nonetheless, as recently as 1988 the US was still a global creditor. And that in turn means that between 10 and 20 per cent of all investment in the US economy in the past decade has been financed out of

the savings of foreigners, allowing Americans to spend and spend.

Asian banks have been keeping the US dollar strong by buying US dollars and bonds, to prevent their own currencies from appreciating relative to the dollar, says Ferguson. But for all its mystical appeal, the dollar bill is not a piece of gold. "Since the end of gold convertibility, a dollar has been little more than a flimsy piece of printed paper that costs around US3c to manufacture. The current design dates back to 1957. Since then, as a result of inflation, it has lost 84 per cent of its purchasing power."

Does the global economy need a global currency?

"Yes," says former US Federal Reserve chairman, Paul Volcker. "A world money would be an extraordinary boon to international stability". If the euro can replace the franc, mark and lira, why can't a new world currency merge the US dollar, euro and yen? (Not to mention the yuan.)

Ferguson compares the strengthening of the euro with the diminution of the dollar. He makes the points that "First, euro zone GDP is not much less than that of the US: 16 per cent of world output in 2002 compared with 21 per cent for the US.

"Second, unlike the US, the euro zone runs current account surpluses; there is plenty of slack in European demand. Third, and in my view most important, since the creation of the euro, more international bonds have been issued in euros than dollars."

"Could this mark a turning point?" he asks.

In a recent lecture in Washington, Ferguson reports, former US Treasury Secretary Larry Summers said that the world could no longer count on the US to be the consumer of first resort, which means in turn that "the growth plans of others that rely on export-led

growth will need to be adjusted in the years ahead'. Ferguson agrees that "Asians and Europeans alike need to sell their goods somewhere other than to profligate America. And they need to recognise that the emergence of the euro as an alternative reserve currency to the dollar creates a chance to fundamentally shift the centre of gravity of the international economy. "If the Europeans seize their chance, Americans could face the end of half a century of dollar domination. "Does it matter? You bet it does. For if Asian institutions start rebalancing their portfolios by switching from dollars to euros, it will become harder than it has been for many years for the US to fund its private and public sector consumption at what are, in terms of the returns to foreign lenders, low or negative real interest rates. (Do the maths: the return on a US 10-year treasury bond a year ago was about 4 per cent, but the dollar has declined relative to the Japanese currency by 9 per cent in the same period.)

"Losing that subsidy – in effect, the premium foreigners are willing to pay for the sake of holding the world's favourite currency – could be costly."

William Pesek Jr. of Bloomberg News suggests that Asia is indeed turning toward the euro. But he says that the fact that the Indonesian state oil company said it was considering moving from the dollar to the euro, and that Indonesian government officials also favour the euro, barely got a mention as war unfolded in Iraq and SARS swept Asia. He says other Asian countries may not be far behind in moves to dump the dollar. Pesek says it's not about conspiracy, or the fact that Indonesia is home to the world's largest Muslim population. Rather, US credibility in Asia has been shaken by accounting scandals and the view that little has been done to reform the system. Also, Asian leaders note that the euro lacks a domestic agenda: it is the shared currency of different countries, and it is managed by the European Central Bank, not politicians. "Under different circumstances, the yen could have served as Asia's preferred currency. But Tokyo's active manipulation of currency markets makes the yen about as appealing as the Russian rouble," wrote Pesek.

Yuan whose army?

Growing challenges to the US dollar could be the beginning of the end of 200 years of Western economic and cultural imperialism, according to commentators from three very different perspectives.

Futurist Hazel Henderson, Mohammed Al-Asuqf of Al Qaeda and New York banker Henry C.K. Liu agree on the possibility of a collapse in the dollar's reign.

Dr Henderson has been writing for years about the likely effects of a shift from dollars to euros for oil. "Remember back in 1973, OPEC countries quadrupled the price of their oil and tied it to the US dollar. Over the years, this flooded the world with 'petro-dollars', which were recycled through banks as loans. The US dollar reigned as the world's de facto reserve currency."

In today's different world, she sees a scenario that "holds many curved balls for the USA". Countries that formerly held mostly US dollars in their currency reserves may begin to diversify into euros, where they perceive less-risky fundamentals – Europe's trade surplus, higher rates of savings, less-risky foreign commitments, etc.

"Many countries oppose US military 'unilateralism', the Iraq war (which many believe was always about oil and breaking OPEC's grip) as well as US bully tactics at the UN, trashing treaties on global climate, the ABM, chemical and biological weapons, the criminal court, etc. Their best non-violent protest strategy was correct portfolio diversification, exchanging some of their dollar reserves into euros."

A report from the Middle East suggests Al Qaeda has been thinking along the same lines. In an interview with the Al-Jazeera Network, Al Qaeda's third in command, Mohammed Al-Asuqf, talked of plans to destabilise US currency.

"The American economy is an economy of false appearances," said Dr Al-Asuqf. "There is no real economic balast... The American GDP is something around \$10 trillion, of which 1% represents agriculture and 24% represents industry. Therefore, 75% of the American GDP is service and most of this is financial speculation. For those who understand economics, it's enough to say that the USA acts like a huge 'dot.com', and dollars, strictly speaking, are its shares.

"When a business is just a service provider and doesn't produce any durable goods, the value of its shares depends on its credibility. Which is to say that if the credibility of the USA were shaken, its shares (the dollar)

would fall with incredible rapidity and the entire American economy would begin to collapse."

How does Al Qaeda plan to shock the American economy to the point of collapse?

"By provoking a deficit of between \$50 and \$70 trillion dollars, the equivalent of the US GDP for 5 to 7 years."

Henry Liu, chairman of Liu Investment in New York, confirms Al Qaeda's reasoning in an article about the rising power of the Chinese yuan.

"China must look beyond its current myopic effort to join a collapsing global market economy..."

"The Mundell-Fleming thesis, for which economist Robert Mundell won the 1999 Nobel Prize, states that in international finance, a government has the choice between (1) stable exchange rates, (2) capital mobility and (3) policy autonomy... With unregulated global markets, a government can have only two of those three options," he wrote. "Through dollar hegemony, the United States is the only country that has managed to defy the Mundell-Fleming thesis. For more than a decade, the US has kept the dollar significantly above its real economic value, attracted capital account surpluses and exercised unilateral policy autonomy within a globalized system dictated by dollar hegemony. The reasons for this are complex but the single most important reason is that all major commodities, most notably oil, are denominated in dollars, mostly as an extension of superpower geopolitics. This fact is the anchor for dollar hegemony. Thus dollar hegemony makes possible US finance hegemony, which makes possible US exceptionalism and unilateralism."

But all this could change, and it needn't be done by Al Qaeda.

"The Chinese economy is at a point where it also can defy the Mundell-Fleming thesis and free itself from dollar hegemony. China has the power to make the yuan an alternative reserve currency in world trade by simply denominating all Chinese exports in yuan. This sovereign action can be taken unilaterally at any time of China's choosing. All the Chinese government has

to do is to announce that as of, say, October 1, all Chinese exports must be paid for in yuan, making it illegal for Chinese exporters to accept payment in any other currencies. This will set off a frantic scramble by importers of Chinese goods around the world to buy yuan, making the yuan a preferred currency with ready market demand.

As a global currency, the yuan could also be used to pay for oil. And there would be other major shifts.

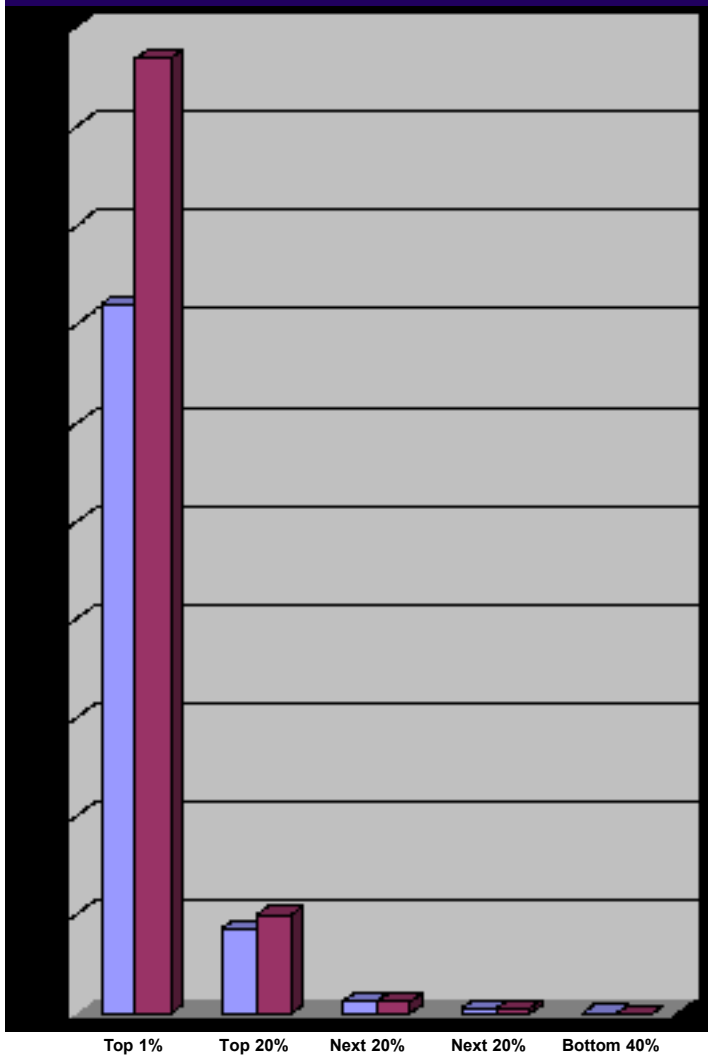
"China (including Hong Kong) exported more than \$463 billion (7.3 per cent of world exports) in 2000 and imported about \$428 billion, yielding a trade surplus of around \$35 billion. If all Chinese exports are paid in yuan, China will have no need to hold foreign reserves, which currently stand at more than \$200 billion. And if the Hong Kong dollar is pegged to the yuan instead of the dollar, Hong Kong's \$100 billion foreign-exchange reserves can also be freed for domestic restructuring and development."

The Asia-Pacific trade system, with its now-wounded tigers, "has been structured to serve markets outside of Asia", wrote Henry Liu. "All the trade surpluses accumulated by the Asian economies have ended up financing the US debt bubble, which is not even good for the US economy in the long run. Cheap imports allow the US to keep domestic wages low and contribute to a rising disparity of both income and wealth... consumer purchasing power comes increasingly from capital gain rather than rising wages. The result is that when the equity bubble of inflated price-earning ratio finally bursts, wages are too low to keep the economy from crashing."

Looking into the future, he anticipates a resurgence of Asian world leadership. "The Chinese economy will move quickly up the trade-value chain... will inevitably be a major global player in the knowledge industries... Even in the US, a high percentage of scientists are of Chinese ethnicity.... Asian economies will find in China an alternative trading partner to the US.... The rise in living standards in all of Asia will change the path of history, restoring Asia as a centre of advanced civilization, putting an end to two centuries of Western economic and cultural imperialism."

Shaping this new world order, he says, is a task for China. "China must look beyond its current myopic effort to join a collapsing global market economy and provide a model of national domestic development in which foreign trade is reassigned to its proper place in the economy from its current all-consuming priority. The first step in that direction is for China to free itself from dollar hegemony."

FAMILY NET WORTH IN THE USA



These statistics show the average net worth of families in the US by fifths -- that is, by 20th percentiles. The statistics come from Federal Reserve Data as analyzed by Edward Wolff, NYU economics professor. The blue line in each graph shows that particular fifth's net worth in 1983; the red line shows that fifth's net worth in 1997, 14 years later.

The rich get richer....

One in every 125 Americans is a millionaire, reflecting a growth rate not seen since the late 1990s, at the peak of the stockmarket bubble. Brokerage firm Merrill Lynch & Co., in a study compiled with the Caggemini Group, report that the number of millionaires in the US was up 14 per cent and that the US and Canada together added more new millionaires last year than Europe, Asia, Latin America and the Middle East combined. In those two countries, the number of people with financial assets of more than \$US30m (\$43m) had reached 30,000. A similar study by Caggemini in 2002 found that more than half of the high-net-worth individuals in the US were "new money", or self-made millionaires. Inherited money is declining as a share of wealth in the US accounting for fewer than 20 per cent of high-net-worth individuals in 2002. The gap between rich and poor has become even greater than before, with the wealthiest 1 per cent in the US controlling more than a third of the nation's wealth. In 2001, according to economics professor Edward Wolff of New York University, the wealthiest 5 per cent in the US controlled 59.2 per cent of the nation's wealth, little changed from the 60.3 per cent in 1995. In Australia an extra 12,000 people passed the \$US1m mark last year: for the first time, this country ranks in the top ten nations in the world. India and China continued to set the pace for wealth creation in Asia, with the number of high-net-worth individuals going up 8.4 per cent including increases in South Korea, Thailand and Indonesia. China reported 11.8 per cent growth and India 21.9 per cent.

...and the rest want to clear debt

There are signs Australians are facing up to the task of paying off their growing mountain of debt, reports Matt Wade in the *Sydney Morning Herald*. "When asked what would be the best thing to do with new savings, a survey found more wanted to repay debts than any alternative." The ING-Melbourne Institute household savings report for the June quarter reported debt reduction was favoured by 27 per cent of respondents compared with a quarter who preferred buying property. Reserve Bank figures show household debt has ballooned to a record \$679 bn -- double the 1999 figure.

HOW TO FEED 33 MILLION HUNGRY CHILDREN

Every night, 33 million African children go to bed hungry. Two hundred million people -- almost 1 in 4 Africans -- are undernourished. But a new report commissioned by UN Secretary-General Kofi Annan, at last offers some hope of resolving the African agony with a practical approach. Key to its appeal is the fact that the report was written mostly by Africans, and it calls for local farmers to be put at the heart of decision-making on which projects to pursue. Instead of the "green revolution" of the west, says the report, what is needed is a series of "rainbow evolutions" that will upgrade the continent's diverse agricultural systems. Just days after the report was launched, South Africa's Chief Rabbi, Cyril Harris, told a Sydney audience that while the world's attention was on the war against terror, the growing gulf between the developed northern hemisphere and the developing south could be much more perilous.

A burden or a resource?

Hard on the heels of a story about the growing numbers of frail and elderly people needing care at home comes another that tells us that old people may hold the key to human civilisation.

By 2031, almost 600,000 frail older people in Australia may not have family or friends able to provide high-level care for them, according to projections by the National Centre for Social and Economic Modelling at the University of Canberra (*SMH 11 06 04*). Their number will increase by 160 per cent, but the number of available unpaid carers would rise by only 57 per cent, says the report.

Meanwhile, US researchers claim to have found evidence that groups in which old people survived were more successful in allowing other people to live into old age. They studied 768 different fossils dating back as far as 3 million years and found the proportion of older to young adults increased over time. "In the Upper Paleolithic that proportion just skyrocketed." Perhaps around this time people started to turn and take care of the weak and the old, and in turn benefited from their help and experience, they concluded. (*New Scientist 10 07 04*)

Learning from pigs

From Venezuela's proposal to barter oil for imports, to a Missouri college that takes a creative approach to helping families foot the bill, we are seeing a growing willingness to consider alternatives to formal currencies.

For example, as the stumbling US economy dragged down the small farm towns surrounding the college in Missouri, its president responded with an offer to barter. Now, reports the local Sun Journal, he is trading a liberal arts education for any commodity the dining hall can use. A year later, six families had swapped their swine for scholarships, trading hogs for classes in business or education. Defiance College in Ohio is cutting tuition for top students who pledge to spend several hours a week doing volunteer work, while at another University in Missouri, students who cheer on the college's sports teams get a hefty discount.

A Massachusetts University offers a free fifth year of education to all who maintain a B+ average or higher as undergraduates. La Roche College in Pittsburgh trades scholarships for catered meals, construction work, advertising and any number of other services through the Green Apple Barter Service – and it doesn't have to be a direct exchange.

Your body and mine: Microsoft's new network

Microsoft Corporation has been granted exclusive rights to use the human body as a computer network. Apart from raising deep questions about who has the right to grant such rights, the patent will also trigger questions about the safety of sending small electrical currents continuously through the body.

Microsoft envisages a future where people's skin will be used instead of wires to connect a range of portable electronic devices, such as watches, audio players, personal data assistants and mobile phones. It predicts "a whole new class of wearable devices", perhaps including "earrings which can be used to measure the person's pulse rate or even deliver sound to the ear via a phone worn on the person's belt".

The patent predicts an area of skin could act as a keypad, with people tapping on their arms to transmit commands. (*SMH 08 07 04*)

Top ten public health achievements of 20C

In a world of increasing threats to humanity, it may be reassuring to remember some of its more important successes.

The Center for Disease Control and Prevention in the United States lists the following as the Ten Great Public Health Achievements of the twentieth century.

- Vaccination
- Motor vehicle safety
- Safer workplaces
- Control of Infectious diseases
- Decline in deaths from coronary heart disease and stroke
- Safer and healthier foods
- Healthier mothers and babies
- Family planning
- Fluoridation of drinking water
- Recognition of tobacco use as a health hazard.

More information at www.cdc.gov.

Honey, I shrunk the future

"Again and again, economic theory gives us opaque and technical reasons to do the obviously wrong thing... Cloaked in the language of scientific objectivity, economic arguments have repeatedly played a partisan role," write Frank Ackerman and Lisa Heinzerling in their book *Priceless: On Knowing the Price of Everything and the Value of Nothing*. To say that life, health and nature are priceless is not to say that we should spend an infinite amount of money to protect them. But current cost-benefit methods are "incoherent", and a different way of thinking and deciding is required, they say. Of special interest, writes *Future Survey* in its review of the book, is Chapter 8, *Honey I Shrunk the Future*, playing off the 1989 comedy film where an inventor accidentally shrinks his children. "In the world of public policy, much the same thing is happening to concerns about the future." Economic analysts are using discounting to render concerns about the future all but invisible. Cost-benefit analysis routinely uses the present value of future benefits, which has a dramatic shrinking effect on the perceived value of regulations that save lives or protect the environment in the future. Can we unshrink the future and undo the damage that has been done?

Signals in the noise

Disney Goofy to Pass on Fahrenheit 911

Most companies scoff at the notion of a social contract. Doing the "right thing", they claim, will cost them money. But The Walt Disney Co's decision to block its Miramax Films unit from distributing the Michael Moore political documentary Fahrenheit 911 set a different precedent. This time, the company did the wrong thing, and it cost them money. Now Wall Street can join progressive groups in trying to figure out why. Disney claimed that it was too partisan a project to release during a Presidential election cycle.

www.commondreams.org 08 07 04 1212

Australia tops UN list of ecstasy users

The danger posed by synthetic drugs (amphetamine-type stimulants or ATS) is real and growing, warns the UN Office on Crime and Drugs, as cultural barriers against drug abuse have been weakened in family, work and leisure settings. "Abuse is spreading regardless of age, gender, nationality or income: 40 million people -- 1.0% of the world population -- are affected." Australia has the highest levels of ecstasy abuse worldwide, and ranks second after Thailand in meth abuse in 2001.

UN Global Survey 2003 September 03 1213

The Pathological Pursuit of Profit and Power

Today, corporations govern our lives. They dictate the decisions of their supposed overseers in government, and control domains of society once in the public sphere. Despite today's claims of corporate social responsibility, the corporation has not changed, writes Joel Bakan, Professor of Law at the University of British Columbia. The challenge for now is to find ways to control the corporation, subject it to democratic constraints.

The Corporation: the pathological... Viking Canada 1214

Coal and bio-energy get hot

The *Wall Street Journal* reports a \$72bn investment in new coal plants in the US (01 04 2004), amid a flurry of reports about the depletion of mid-East oil reserves at a faster rate than expected. At the same time, a number of "savvy" firms are diversifying away from fossil fuels, understanding that the fossil-fuel era will come to an end. Running out of oil will not be fun, writes physics professor David Goodstein in his book, *Out of Gas*.

Williams Inference Center May 2004 1215

Women and ambition

It's no surprise women fail to soar when the cost of blowing their own trumpet is so high, writes Anna Fels. Early aspirations often do not translate into achievement later in life, because a lack of affirmation of accomplishments combined with threats to women's sexual identity inevitably lead to demoralisation

AFR BOSS June 04 1216

We incorporated

Organizations are not just places where people have jobs. They are our neighbourhoods, our communities. They are where we join with other people to make a difference for ourselves and others. If we think of them only as the places where we have jobs, we not only lose the opportunity for meaning, but we endanger the planet. What went on in companies like Enron and MCI was unquestionably sinister and probably illegal, but more telling are subtler organisational transactions and human encounters that don't break the rules per se, yet expose our ethical underbelly.

Fast Company 04 07 04 1217

Insurers warn of greenhouse threat

Australia's largest general insurance group says climate change is real and has joined scientists and environmentalists to take urgent action. The Insurance Australia Group has signed on as a founding member of the Australian Climate Group, along with seven international scientists and the WorldWide Fund for Nature.

The Australian 28 06 04 1218

The rising cost of global warming

Nearly half of the world's top 500 companies believe climate change poses either a risk or an opportunity to their business, according to the Carbon Disclosure Project, which was established by institutional investors managing a total of \$US10 trillion, to find out how the companies they have invested in are mitigating climate change risk and maximising profit opportunities.

Australian Financial Review 08 06 04 1219

1000-year planning for perspective

One thousand-year planning reduces threats to the long-term survival of humanity and other life, says Bruce E. Tonn. A secondary motive is to improve the quality of all life on earth over the long term. "Without holistic, integrated and future-oriented proactive actions, the health of Spaceship Earth will only be protected and nurtured over the long-term by chance."

Future Survey June 2004 1220