

## Futurewatch

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An information service about international perspectives on our futures, prepared by futures scanner, **Jennifer Coote**. Annual dates in last two digits.

### COMMUNICATIONS/TRANSPORT

#### The Human Face of Web 2.0

Millions of participants are engaged in Second Life, the alternative reality created and run by Linden Labs. San Francisco, whose goal was to create a self-governing community where residents would be empowered to act on the things they feel strongly about and adjudicate such disputes. But the hope is in jeopardy as maverick behaviours, not all malicious, are leading to disputes being taken into real-life justice systems, usually over property and profits. Not all virtual entrepreneurs regard their operations as fantasy. There are serious questions about the sexual interactions of child-like avatars, while gambling, formerly widespread in Second Life, but illegal in US reality, has already been shut down. **New Scientist, 1 Sept, 07, pp 28-29.**

**R. Schroeder**, Oxford Internet Institute, *Futures August, 07*, provides an overview of ethical and social issues in shared virtual environments. It is necessary to define what is meant by shared virtual environments (SVEs) in relation to other technologies and media. Current systems and usages will be most relevant to development of SVE ethics, with guidelines for research and development, with suggestions and desirable usages for gaming and socialising.

*Human Relations, April 07*, is devoted to virtuality and emotion, particularly how emotions are constructed, modified or suppressed within such environments, and whether they are poor substitutes for those in reality, or developments in their own right. It seems likely that in virtual environments, more people will confront cultural understanding about their virtual experiences. Instructors in the virtual classroom are challenged in expression of feelings in relation to their students, because emotions play complementary roles in sense making process, especially in highly contentious situations.

**W. Roush**, *Technology Review, July/Aug 07*, delves into the potential for the enormous spread and population of Second Life to overlap with "virtual globes": programmes such as Google Earth, World Wind and Virtual Earth. Along with their digital counterparts Web Maps, these are getting more personal and immersive, where user-created content, such as travel photos, are pinned to specific locations. Within a decade there could be a great Metaverse, in some ways foreseen by the

*Science*, 31 Aug, 07, pp 1178-11179, outlines two reports on information privacy, from the US National Research Council and UK Royal Academy of Engineering. The former includes a recommendation for a Federal Privacy Commissioner, which is likely to prove controversial. The latter, UK report emphasises in light of human rights laws, that organisations maintaining systems that use personal information should be accountable for designing them to ensure privacy. This is in line with the new paradigm developing by which system designers conduct privacy risk assessments and incorporate privacy as a fundamental design parameter.

Technology leaders are responding to research which confirms the rocketing energy demands by data centres and computer systems by collaborating efforts to green IT, such as the Green Grid, *New Scientist*, 5 Jan 08, pp 20-21. This is pioneering more energy efficient systems for data centres. All aspects of computer operations are being scrutinised to improve energy efficiency. In future, computers could adjust their energy use according to their level of activity, though it is not certain that this will be enough to reduce the growing energy demand of the coming decades.

**B. J. Hesse**, *Current History*, May 07, explores the extraordinary proliferation of cell phones in Africa, where growth is faster than anywhere else, from an estimated 63 million in 2003 to 155 million in 2006. The 63% coverage today is likely to reach 85 % by 2010. Service provision is very challenging in chaotic countries, such as the Congo. Infrastructure costs are much greater, maintenance in the rainforest areas is a headache, electricity supply is haphazard, generators gulp fuel, theft is frequent, trained staff is limited because of limited education and AIDS-related absenteeism, corruption, red tape and ever-changing laws are further complications. The service providers, mostly S. African or Arab, are ingenious in both coping with the practical challenges and in the types of services such as incorporating banking services, which are attractive when standard banks are scarce.

The insatiable growth of mobile phones is also affecting the supply of coltran, a heat-conducting mineral essential for cellphones, largely found in the Congo. Highly organised coltran exploitation is rampant in the region as prices surge, and mining spreads the gorilla reserves, threatening these animals.

The spread of the technology is helping to bridge the digital and socio-economic divides, and around the cellphones themselves a host of entrepreneurial services are developing.

### **Knowledge, Open or Protected**

**Wired Shut: Copyright and the Shape of Digital Culture**, T. Gillespie, MIT Press, 07, provides a clear examination of the development and issues involved in the impact of digital culture on copyright law. "The choices made now will help decide whether we will be active participants in our culture and creative users of our technology, or passive recipients content to quietly embrace what is sold to us."

**The Right to Know: Transparency for an Open World**, Ed A. Florini, Colombia Univ Press, examples from a variety of countries and institutions illustrate the ongoing struggles of citizens for improved disclosure in government decision making, corporate conduct and international governmental procedure. Fundamental human rights, improved policy effectiveness and reduction of corruption are assumed

to gain thereby. Powerful forces are opposed:-entrenched habits, protection of privilege, and fear of how newly released information might be used. Making the transparency process work requires hard work from policy makers and citizens.

**Transparency: The Key to Better Governance**, eds C. Hood, D. Heald, O.U.P, 06, offers a diversity of contributions in a comprehensive survey, from origins to problems and solutions. Greater nominal transparency has not proved effective, thwarted partly by the trend to privatisation and outsourcing. See also same Authors, **What Happens When Transparency Meets Blame Avoidance?** *Public Management Review*, Vol9/2 07.

### By the Sea and the Sky

The shipping industry is facing up to the need for greater energy efficiency, *Nature*, 20 Sept 07, pp 272-273, although cargo ships are overall far more energy efficient than land transport and emit an estimated 2.7% of global greenhouse gases. Innovations are squeezing more efficiency out of existing ship designs, together with new ideas such as attaching kite-like sails to ship bows to reduce fuel consumption, or pumping air beneath hulls to provide a floatation cushion, and the possible switch to using natural gas in fuel cells which would reduce harmful emissions.

Maritime engineers are reviving use of electric drives for ships, *The Economist Technology Quarterly*, 8 Dec 07, pp 25-26. Powerful electronics capable of handling huge flows of current and smaller, more powerful electric motors can be integrated into power systems which can both drive the ship and provide its on-board power. Electricity from multiple sources is routed to wherever wanted and at the voltage needed. Both US and UK navies are deploying such vessels, while cargo ships and big cruise liners are likely to be fitted for electric drives.

*The Economist, Survey, Air Travel*, 16 June 07, reports that aircraft are steadily improving in designs to save on energy consumption, utilising better engine design and materials with more efficient flight systems and aerodynamics. Incremental gains mount up. Since aircraft emissions still will account for a large share of carbon emissions budgets, still greater improvement is needed. Electric drives using fuel cells are being considered, as well as radical redesign of the body of the aircraft and the wings.

## ECONOMICS/BUSINESS

### On Economic Ideas

**D. Rodrik, One Economics, Many Recipes: Globalization, Institutions, and Economic Growth**, Princeton Univ. Press, 07, urges policy makers to keep their focus on basic principles rather than on particular policies, because the former can be met by a variety of settings according to the particular country. He offers a framework for diagnosing impediments to growth, which can be adapted according to the particular problems of a given economy. He also argues that international economic growth has not served developing economies well although the growth and poverty reduction in some developing economies is unprecedented. Sustaining growth over time is very difficult to achieve without deep institutional reform.