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Book Reviews

Michael Marien
Director, Global Foresight Books
Fellow, World Academy of Art and Science

Megachange: The World in 2050. The Economist. Edited by Daniel Franklin (Executive Editor and Business Affairs Editor, The Economist) with John Andrews.
London UK: The Economist and Profile Books, 2012, 304p, L15pb.

A broad-ranging survey by past or current *Economist* editors, seeking "to identify and explore the great trends that are transforming the world… (and) how these developments might shape the world in 2050." According to Franklin and Andrews, who also edit the annual *The World In…* Special Issues (e.g., *The World in 2013,* Nov 2012, 162p), the authors "tend to paint a picture of progress, in contrast to much of the predictions industry, which likes to wallow in gloom… (however) they see enormous challenges ahead, from managing climate change and controlling conflicts over scarce resources such as water to feeding 9 billion people by 2050 and coping with the multitude of new security threats...Yet the pages that follow are, on the whole, optimistic. Or, at least confident that with the right policies progress is possible on most fronts." (pp. xiii-xiv)

The 20 chapters are in four parts:

1. People and Relationships

1.1. World Population

Increasing faster than ever before in history, to over 9 billion by 2050, with "astounding" growth in some countries such as Nigeria and declines in others; "of the 2.3 billion increase in the world's population between 2010 and 2050, about half will be in Africa" (p4); this older, larger population will be much more urbanized (nearly 70% by 2050).

1.2. Health

There will be stunning advances in healthcare in coming decades, and many new challenges; "Napoleonic micro-organisms seeking world domination will be helped by an ever more connected world" (p.26); "the question is not whether a new pandemic will emerge, but when and how the world will respond" (p.27); health systems in both rich and poor countries must be strengthened and insurance expanded—but even then tackling problems of aging and chronic and infectious diseases will be difficult.

1.3. Women

Prospects are hard to sum up in a simple formula: women in the rich world have achieved equality in principle and improvements will be at the margins; in the poor countries, nothing much will change until education for both girls and boys improves; in the more advanced

emerging markets, "Women will enjoy exceptional opportunities over the next few decades" (p.49).

1.4. Friendships

In the "social supercloud," social media services reinforce links between people on and off the web; collective intelligence will seem commonplace by 2050, when "we will all be living in what amounts to a socialized state in which our online networks of friends are available to us wherever we are" (p.59); privacy issues will become even more fraught in coming decades, but there has already been a shift toward greater openness online.

1.5. Cultural Revolutions

Globalization and technology will have their cultural impact, but tastes will remain stubbornly local: "what has not happened is the death of cultural distance" (p.63); discusses the art market, cinema, the changing music industry, the news business (gatekeepers vs. media mayhem: "gatekeepers will remain") and the dominance of the English language (expected to remain on top) as half of the world's 7,000 languages are expected to die in the next 100 years.

2. Heaven and Earth

2.1. Religion

Barring the return of a messiah, today's patterns of religious beliefs will continue to be much as they are; Islam has grown from 12.3% of world population in 1900 to 21.1% a century later, due to a population explosion in Muslim countries, and is projected to increase by 28% by 2050, in contrast to 35% for Christianity (about the same level as in 1900); large numbers have abandoned belief in God, with a global total of at least 500 million unbelievers (making it the fourth-largest religious category); atheism and agnosticism are expected to decline, reflecting a rising toleration of religion in China, but, as societies prosper and feelings of vulnerability decline, secularism will flourish.

2.2. Climate Change

"If the drivers of change are largely unabated, the world of 2050 is very likely to be one faced with serious risks on a planetary scale" (p.93); as more developing countries improve their lot, "global emissions are unlikely to fall for decades to come—the best we can realistically hope for is a plateauing of emissions in the 2030s, followed perhaps by a modest decline" (p.98); discusses the foundering of the 2009 Copenhagen summit, coal vs. gas, wet places getting wetter and dry places drier, the growing number of destructive storms, the Arctic region warming twice as fast as the world as a whole, countervailing optimism (CO_2 fertilization, ability of farmers to adapt), the risk-management approach, curbing methane and black carbon soot, and possible technologies to remove CO_2 and reduce sunlight that Earth absorbs.

2.3. War and the Military

Problems of failing states and jihadist terrorism are likely to be with us for a very long time; tensions will continue to rise between Shia and Sunni Muslims; cyber-warfare bestows disproportionate power on weaker states and "many of the technical developments in progress lend themselves to asymmetric approaches to warfare" (p.119); the greatest danger in

the early 21st century continues to be use of nuclear weapons—the possibility of a regional nuclear war will grow exponentially unless proliferation can be slowed and then reversed.

2.4. Democracy and Governance

The story of democracy to 2050 will be a paradoxical mixture: "those who do not have it will gain more of it; those that do have it will see it shrink" (p.126); "democracy" is a misleading and vague term that easily becomes a fig leaf for misgovernment and manipulation; "in the decades to 2050, a crucial question is whether the rule of law spreads and deepens" (p.134), but the rule of law is not in itself a sufficient condition for democracy.

"By 2050, China's GDP will be 80% more than America's."

2.5. Taming Leviathan

"One nightmarish vision of the state in 2050 is that of a Leviathan felled by its own weight as it struggles with the rising social burden of an older society" (p138); projections for some 30 advanced countries show age-related public spending rising by around 10% of GDP between 2010 and 2050, with health making up half of the increase; as aging pushes up the ratio of pensioners to workers, the state in 2050 will concentrate on ensuring minimum benefits while expecting the better-off to provide more for themselves.

3. Economy and Business

3.1. The Age of Emerging Markets

A new order has taken shape in the past 40 years, where developing countries have made their peace with capitalism, and now seek to attract foreign investment rather than expropriate it; by 2050, China's GDP will be 80% more than America's, and other members of the G7 will be surpassed by India, Brazil, Russia, Indonesia, and Mexico; over the next four decades, today's upstart economies will prosper, age, and slow down: even a desperately poor economy like Bangladesh can look forward to an improved standard of living.

3.2. Globalization and the Asian Century

Globalization is the integration of markets across the world, and many of the forces that underpin it remain powerful; the global business landscape in the next few decades will be characterized by greater caution and tighter regulation; the book discusses three scenarios of "controlled globalization" (a significantly less open world than once seemed likely), "globalization in retreat" (protectionist sentiment thriving in a climate of insecurity) and "globalization sunk" (a turning away, with "disastrous" consequences for growth); the share of world's real GDP accounted for by North America and Western Europe will fall from 40% in 2010 to 21% in 2050, while China's share will increase from 13.6% in 2010 to 20% in 2050.

3.3. Inequality: The Great Levelling

The gap between rich and poor countries will be far narrower in 2050; "in countries where income gaps are already wide, such as America and China, they are likely to stabilize or even narrow over the coming decades" (p.182); "the narrowing of disparities between countries will be greater than any widening of disparities within countries" and, as a result, overall global income inequality "will fall, probably rather sharply" (p.183).

3.4. Disruptive Innovation

Schumpeter's notion of capitalism as a "perennial gale of creative destruction" is quite relevant to the 21st century; the Internet has turbo-charged the globalization process, and capital markets are adding to the turbulence, injecting ever more uncertainty; "this turbulence will become far more dramatic in coming years" as the Internet revolution goes into 'warp speed' (p.195); the coming decades will see the biggest revolution in manufacturing since mass production, due to 3-D printing, the "internet of things," and advances in robotics; the emerging world will become a "cauldron of innovation" and set the pace in "frugal innovation" that cuts the cost of products dramatically.

3.5. Market Momentum

On various cycles in bond markets, the price-earnings ratio, demography, the price-earnings ratio, and interest rates conclude that "it is implausible that commodity prices can keep rising for 40 years: at some point either new sources of supply will be found or demand will collapse" (p.214).

4. Knowledge and Progress

4.1. Science

Chemistry is exhausted and "the future belongs to biology" (p.219); biology will link up the fields of nanoscience and information science, and fill in the genetic stamp album similar to filling in the species on Earth; astronomy may make its greatest contribution to the field of biology: by 2050 it should be clear whether life is abundant in the universe.

4.2. Space Exploration

The future of space for the coming decade will closely resemble the present reality of information gathering and intelligence, but China has ambitions of an unmanned sampling mission to the moon in 2017 and a manned mission by 2025; the promises from the 1960s of untold commercial opportunities (e.g. zero-gravity manufacturing) have proved overblown.

4.3. The Internet as The Web of Knowledge

Society has been transformed by the Internet in a very short time, and faster change lies ahead as the technology improves at an accelerating pace, and emphasis shifts from the technology itself to the way it is used; the growth of information will accelerate, and we will struggle with a surfeit; according to IDC research, "the quantity of stored information in the world doubles about every two years" (p.243); "by 2020, the amount of information that needs to be actively managed is expected to grow 50-fold" (p.244); "hence it is understandable that information overload if a very real phenomenon of our times…we are being more and more swamped…(but) the tools to help us handle it are improving" (p.246).

4.4. Telecoms: The Death of Distance

Cheap talk is only the beginning, and video calls on Skype, Google, or Apple's iChat are not sufficiently reliable; Cisco and HP are developing "telepresence" technology which eventually will make its way into living room TV sets; "whereas ever cheaper voice calls and ever better video communication clearly bring people closer, it is mobile technology that truly knits them together" (p.257); mobile technology will bring the world's excluded closer to the global mainstream and make markets more efficient; in coming decades, more and more

services will create an ever denser web of communications; but "it may be that technology creates a new type of distance between people" and this activity is changing our brains for the worse (p.263).

4.5. Pessimists Dismissed

Conclusion by Matt Ridley, author of **The Rational Optimist: How Prosperity Evolves** (2010) and former US editor of *The Economist,* states that "by far the sharpest lesson to draw from past forecasts is that planetary pessimism is usually wrong; the field of futurology is littered with cataclysmic prognostications that failed" (p.265); the reason that predictions of doom were wrong and will be wrong again in 2050 are that bad things are always much more newsworthy than good things, and that all scare stories assume a static response; many goods and services will be cheaper in the next 40 years (probably including energy via natural gas and solar power; old-fashioned renewables like wind, wood, and water cannot compete on price and need too much land); moreover, the world in 2050 will be "a time of extensive ecological restoration" with many re-wilded areas.

In sum, editor Daniel Franklin sees a world that will certainly be more urban, considerably older, and more African (accounting for half of the world's extra 2.3 billion people), although "much of this change will come with wrenching upheaval." Still, *"there is every chance that the world in 2050 will be richer, healthier, more connected, more sustainable, more productive, more innovative, better educated, with less inequality between rich and poor and between men and women, and with more opportunity for billions of people."* (p.xiv; italics added).

Comment

A sophisticated defense of capitalism, globalization, and free markets, driven by high technology. "Sustainability" is not mentioned, other than the passing reference on p.xiv, cited above. The overview of scores of trends is quite good, especially the chapters on culture, religion, warfare, and democracy. Unlike the relatively simplistic techno-enthusiasm of Silicon Valley's over-the-top Singularity University (Diamandis and Kotler, **Abundance: The Future Is Better Than You Think;** GFB Book of the Month, Aug 2012), many problems are discussed, albeit too briefly in most instances, with the expectation that R&D and rising levels of education "will offset barriers to growth such as unemployment, corruption, environmental degradation, and social tensions arising from income inequalities." (p.180) The Economist's explanation of less inequality ahead is not convincing. Another instance of what might be called upscale naivete is identification of information overload as a serious problem, but then moving on to briefly say that "the tools to help us handle it are improving" (p.246), not considering that the infoglut problem may well be outdistancing any tools. There are some similarities here to the **Global Trends 2030** report of the National Intelligence Council (GFB Book of the Month, Feb 2013), which is less overtly "optimistic" but also downplays many serious issues and possibilities.

For an entirely different look at the decades ahead, see **2052: A Global Forecast for the Next Forty Years** (GFB Book of the Month, July 2012), a report to the Club of Rome by Jørgen Randers, one of the original *"The Limits to Growth"* authors in 1972, who views the necessary transition to sustainability as bringing "the end of uncontrolled capitalism" and "the end of economic growth." Or consider Al Gore's lengthy and well-researched book on

The Future: Six Drivers of Global Change (GFB Book of the Month, April 2013), which looks at the global economy and new technology, while also voicing the author's worries about environmental and resource threats. These profound differences should be debated at length and in public. Unfortunately, this is unlikely.

Yet another very different view of the global future is provided by two Australian futurists, reviewed below, with a sharply contrasting methodology.

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Futurevision: Scenarios for the World in 2040. Richard Watson (founder, What's Next website; co-founder, Futures House Europe) and Oliver Freeman (co-founder and lead scenario planner, Neville Freeman Agency).

Melbourne, Australia: Scribe, Nov 2012, 330p, AU$29.95pb.

Two experienced futurists note that the future is not what it used to be, and there is now a high degree of volatility in everything. *"Our aim is to prevent people from getting the future seriously wrong."* (p.6) The authors seek to challenge fundamental assumptions and reframe viewpoints, by alerting individuals and organizations to a broad range of longer term questions, expectations, and decisions. It is misleading to analyze trends to predict the future, because trends must be lined up with discontinuities, counter-trends, anomalies, and wildcards. "The only rigorous way to deal with a future so uneven and disjointed is to create a set of alternative futures that cover a number of possibilities."(p.5) Four highly detailed Worldview Scenarios are presented, as regards what the world in 2040 might be like, based on the premise that "the world today offers more promise than ever before, but also more threats to our continued existence."(p.1)

1. Imagine: A World of Intelligence

A society where people are fully aware of threats to the future such as climate change, but have an unshakeable belief in the power of science, technology, and free market capitalism to make life better. Science and technology have restored order to the natural world by changing it, with nature under control by synthetic biology, geoengineering, and forests of CO_2-absorbing artificial trees. "It is a mind-blowing new world of technical challenges and radical inventiveness and re-engineering, where everything is connected to everything else." (p.37) Clean technology is booming, especially nano-solar; fusion power is coming online; food and water shortages have been addressed by smart technology. Automation accelerates the pace of everyday life, and industries are turned upside-down by digitalization, virtualization, miniaturization, and ubiquitous connectivity. The Internet is a central feature of life, as well as various robot-human relationships. Overall, life is good.

The Timeline of some 30 events includes widespread investment in shale gas (2016), 95% of payments are mobile or embedded (2023), most homes in Western nations have at least one 3-D printer (2029), computers are 1,000 times as powerful as in 2012 (2030), US fighter jets are completely replaced by unmanned aerial vehicles (2031), commercially farmed insects provide protein in some microwave-ready meals (2032), 85% of homes have three or more robots (2035), the world's fifth largest company is Syn-Bio, Inc. (2037), Google unveils the Space Mirror Project with an estimated cost of US$8 trillion.

2. Please Please Me: A World of Greed

An era of economic growth, free markets, individualism, consumerism, selfishness, and self-indulgence, where people work harder and longer, and where greed and status are key drivers of much human activity. It is a world of money, luxury, displacement, and detachment—for those who can afford it. It celebrates newness, planned obsolescence, over-supply, and over-consumption; a narrowly focused, narcissistic future where everyone is for themselves. Most people see the threats of global warming as largely exaggerated. The transhumanist movement is burgeoning: life is good and we'd like much more of it, so let's slow down or end aging. Charitable donations show a yearly decline, while tax avoidance services rise 10%/year.

The Timeline of some 30 events includes Red Bull as the drink of choice at most company meetings (2022), legal action from disgruntled staff as the major cost for many businesses (2024), 80% of police and healthcare services in most countries are privatized (2028), 25% of people worldwide are obese (2030), the average person sleeps 5.5 hours per night (2032), 67% of US adults are single (2034).

3. Dear Prudence: A World of Temperance

People are alarmed about the health of the planet and the pervasive influence of materialism and individualism: they seek a future of sustainability and switching things off, buying fewer things, seeking to reconnect locally with simpler pleasures of life. It is a world where many things go backwards, where ethics and reputation really count again, and collaborative consumption has blossomed. As lives become more balanced and "less is more," most people are happy. Big-box out-of-town retail sites are largely empty now, or dug up to grow food. Organic farming is back, and fair-trade values are prominent. Society as a whole has become more self-sufficient and resilient, picking up on ideas of Edward Bellamy's **Looking Backward** (1988) and Ivan Illich's **Tools for Conviviality** (1973). Left-ish and center-left political parties gain ground, as well as community and town-hall meetings. Slow is the new fast, and local production and consumption bring purpose to people's lives. Adding carbon pricing to items means that almost everything has become more expensive, but the upside is less waste. Congestion charges in cities are ubiquitous, with a boom in public transport systems. The overall lesson is that "society moves in giant circles." (p.128)

The Timeline of some 30 possible events includes profit caps imposed on major banks and limits to corporate bonus payments (2012), Greece exits the Eurozone (2013), ratings.com allows users to assess the environmental impact of services (2018), the US government announces full transparency targets for all companies (2020), the US adopts a flat annual tax charge of 1% of total wealth (2022), the EU limits the working week to 22 hours (2023), sale of imported bottled water is banned globally (2028), all consumer products have ethical ratings and carbon and oil labels (2030), church attendance rises to record levels (2034), membership of cooperatives is up 900% over two decades (2039).

4. Helter Skelter: A World of Fear

A world where a series of unexpected events creates a general sense of fear and fragility, and people turn their backs on the notion of a single global economy. People worldwide rediscover an angry appetite for parochialism, protectionism, and regulation. It is a society

of anchorless institutions and rudderless young people; of mutual distrust and disillusionment; a world running on emptiness, where global politics drifts to the right, and nationalism and tribalism re-emerge. There is a rise in gated communities and home security products, anti-immigration rhetoric and narrow national self-interest, and a general decline in health due to increased smoking, drinking, and drug-taking. The vicious circle of physical and psychological damage explains how young and old alike tipped from being anxious into a state of full-blown anger, with a desire for physical destruction.

"The over-riding questions are what changes are likely, what changes deserve to be promoted or restricted, and what changes are desirable – and for whom."

The Timeline of some 30 possible events includes a heatwave across the US and Europe that kills some 600,000 people (2015), flooding destroys half of the world's wheat crops (2020), 25% of adults worldwide take anti-anxiety medication (2029), the global airline industry and thus the travel industry collapse (2031), pirates block the Strait of Hormuz which sends the price of oil to $600 per barrel (2036), inflation hits 16% (2039).

After presenting the four scenarios, the second half of the book describes the role of foresight in "taming the crystal ball" and the four stages in the scenario-planning QUEST (developing framing questions, examining environmental influences, building scenario worlds, and creating transformational strategies). An Epilogue adds *"Ten Game-Changers for 2040,"* including a Second American Civil War, oil rising to $300 a barrel in 2035 and $500 a barrel after the Strait of Hormuz is closed, a bird-flu pandemic killing 500 million people worldwide, the Moon becomes a colony of China in 2040, users of the Internet abandon it in droves due to serious problems of viruses and censorship, water is the new oil as half of the world's population lives in highly water-stressed regions (notably China and India), and energy becomes almost free due to breakthroughs in new technologies (synthetic biology, fusion technology, nanotechnology, etc.)

5. Comment

These Worldview Scenarios are written in informal style, especially contrasted to the sober style of *The Economist,* which pretty much confines its vision to the first scenario of successful technology. Watson and Freeman provide numerous wild cards, possible game-changers, and imaginary events for a lively read that makes a sharp contrast to **Megachange.** Along with the **NIC's Global Trends 2030** report and Al Gore's six drivers of the future, there is shared agreement, however, of more and more change in coming decades.

The over-riding questions are what changes are likely, what changes deserve to be promoted or restricted, and what changes are desirable—and for whom. As these book selections make abundantly clear, we have yet to make much of any progress in attaining any consensus on any of these important questions. Is it worth trying to do so, somehow?

Author Contact Information
Email: mmarien@twcny.rr.com