

Eco-bots in your future

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Journal of Futures Studies

May 2001, Vol 5, No. 4

Middle-men in history have been smart. Very smart. In European history, by not being vested in the manorial system, they became the traders, moving goods back and forth between estates. In the Islamic world, the traveler was the trader. As a follower of the prophet, they sought virtue and profits. Arriving in a new city, they were treated with respect. While telling grand tales of other lands, they made sure to trade. New products were introduced and the traveler made enough to move on to the next town, or if he was brave enough like Ibn Battuta to the next civilization.

The middle man had access to information others didn't. He could buy low and sell high. His profits were not contested by others as he lived on the edges of civilization. Taking risks – pirates, diseases – led to wealth. Eventually, his mode of earning became civilization itself and the modern world, the world capitalist system was born.

A turning point

We are now likely at another turning point in history. While claims of a new economy are perhaps a bit too grand – and certainly the collapse of the .com world in the last year reinforce this – markets are changing. The smartness of the middle-man is being transferred. Intelligence is being democratized, even if ownership of wealth remains incredibly skewed with 368 individuals owning 50% of the world's wealth; three owning as much as 48 of the poorest countries.

More information about products is now available and accessible. Whether from investigative reporting or the globalization of news or from the internet, information about product safety is even reaching remote Pakistani villages.

Standards continue to dramatically evolve. Initially they were about functionality – does it work. Next, issues of price, aesthetics (how good does it look) became dominant. Most recently has not been the product per se but what identity the product gives to the purchaser – the postmodern turn. Not does the t-shirt keep me warm, nor its price and fit but what it says on it, how it represents me to myself and others. What identity it gives me. This last phase has had two demographic groups buying. The first have been identity unsettled baby boomers. The second have been colonized big city third world youth, looking to be seen as American, as globally hip, instead of structurally poor.

But a new phase is starting. These are products whose sales depend on meeting the demands of the rights generation, those who have grown up in the context of UN declarations and conferences – the emerging global civil society, mediating the emerging global markets and global government structures. These claims to increased inclusiveness include the rights of environment, women, children and labor. What this means is that a product has to be effective, look good and have a competitive price/quality ratio and as well it must also be made in conditions in which children are not exploited, the environment not ruined and the hiring practices of the corporation making them considered fair are representative (equal opportunity to women and others disadvantaged). The Pakistani carpet company that figures this out and markets through the web will have an incredible

comparative advantage. And if it shares the wealth with its laborers, its product will be unmatched, as workers will have far more incentives than survival or a job. International nongovernmental organizations will jump to promote the ethical product, and slowly and surely, Pakistani carpet exports will expand and Pakistani culture will benefit, leading over time to increased tourism, not to mention an economic revolution.

Bottom lines

From a business view, at heart this is about expanding what is counted and what counts. From being concerned about the triple bottom line – profit, society and environment – the fourth bottom line of the future has slowly become important. The perceived impact of a product on future generations must be factored into any development equation. Monsanto's executives found this out quite quickly. In an article in the April 1999 issue of *The Futurist*, Robert Shapiro proclaimed that genetic food modification would solve the world's food problems. A few weeks later the gm food protest began in Europe and serious questions of side-effects came to be publically asked. Consumers voted with their dollars not just in terms of products they bought but the shares they purchased as well. The stock tumbled, and irrespective of the science involved, the dangers were seen as too great for most, partly for the present but largely for the risk to future generations. The precautionary principle prevailed. Shapiro, as with Shell, listened to his strategic planners and not those whose futures were being directly affected.

Shell has become so concerned about the impact of current policies on future generations that following the suggestion of Darren Schmidt of the Department of Primary Industries (in Kingooy Australia, amazingly) they keep an open/empty seat at meetings that represents the ghost of future generations. Since future generations cannot speak, the seat becomes the voice of the future, reminding strategic planners that all decisions must speak to the future. Thus even Shell, indirectly responsible for the tragedy that has been Nigeria, has begun to find ways for others to speak. This is not only smart politically but smart in terms of forecasting. It is always the variable outside of one's paradigm that has the biggest impact on organizational futures, finding novel ways to access information outside of one's own box – outside of strategic planning - can only lead to smarter and wiser policies.

But while the Nigerian villager still has to depend on others for her voice, those in OECD nations have quickly become information-rich, have the possibility to empower themselves. With very little effort web searches allow one to discern which products have been made in fair conditions and which in more circumspect conditions.

Always-on computers

And these are early days yet. As we move to always-on, wearable computers, that monitor our heart rate, our calories, our spending patterns, that learn about us from us, we will enter into smarter relationship with our spending selves, with the part of us that thinks: I shop, therefore I am. Should I eat the extra chocolate bar, won't be just a question of conscience but one where there will be immediate data as to the chocolate's impact on my emotions, my weight and, this is crucial, where the chocolate bar was made. Already in Germany, fair trade/social justice stores stock candy bars made by local cooperatives from South America where profits stay in the community, where

workers are the owners. Of course, they still don't taste as delicious as Cadbury but the producers have understood that social conscience is marketable.

The new information and communication technologies will allow instant and direct feedback on our behavior, spending patterns. Hopefully this will confront the mismatch between our behavior and what we know is best. For example, a Harvard School of Public Health study shows that by avoiding smoking, eating low-fat diets and exercising regularly we can cut the chances of developing heart disease by 82% (www.latimes.com, November 9, 1999). Yet no more than 2% of the 84,000 women studied – the women were nurses and other health professionals who are aware of sound health principles – follow such a regime. Among the main reasons we do not is that the impact of daily health decisions, the little decisions we make all day - eat the fried chips or the fruit bowl; have the full-fat ice-cream or the low fat alternative; salad or fried chicken; walk or take the car – have no immediate consequences. Would we still act against our best interest if we instantly knew the impact of our consumption patterns on our heart? If information on was instantly and directly available?

Of course, we might turn off our health web-bot, or interpret the data in clever ways, or wait until the web-bot starting screaming in our ears – no more fatty foods, exercise now. Food is one issue that the state will most likely only provide more information and not provide specific sanctions but cars and other technologies may get far more regulatory attention. Passing a certain speed limit might issue a warning – as already available now – but also a voice message giving the latest data on accidents and fatalities that occur from speeding. While futurist Jim Dator's suggestion of having the exhaust feedback into the air-conditioning system (a true feedback system) may go too far, knowing the likely impact on car emissions on the environment might change one's behavior. We could instantly know the footprint we are leaving on the Earth. The footprint is the amount of land and other resources needed to sustain a particular lifestyle. These are currently aggregate figures, for example, an average Canadian needs 10.3 acres of farmland, forest, mines and dumps to support his or her lifestyle while an Indian needs only 1 acre. With green web-bots or eco-bots one could know one's own footprint, and, thus influence markets in ways that lead to a smaller footprint, thus creating a market for products that created sustainable futures.

Eco-fascism or Clean technologies ahead?

This green internet world may seem overly controlled, indeed, eco-fascist to many but it would quickly in a very real way accelerate the policy discussion of how to create sustainable technologies. More information might help us fund and use clean technologies (defined by European Commission as technologies that improve the ecological efficiency of production, that is, without diminishing the quality or volume of the product they use less raw materials, energy and other natural resources - *Foresight*, www.camfordpublishing.com)

At a simple level, Bechtel corporations computers have already generated a list of best matches for a report for a planned Eco-industrial Park where companies use each others waste just as in nature. Writes the Green Institute: "Imagine an industrial part which all the products are designed in environmentally friendly ways. Not only that, but the businesses are organized so that the waste produced by one company can be used as raw material by another." (*Creative Speculations*, Institute for Social Innovations, 1999)

By making markets smarter, consumers are more likely to make wiser choices. The middle-man who has held on to this information is not needed, indeed, the market begins to become transparent, with full information on all types of impacts (not just on environmental) easy to calculate. Smart markets help us create the type of futures we desire.

But they also do something else. Capitalism works through imperfect information, buying low and selling high. Proximity to natural resources and skills (individual and social capital) as well as accumulate capital are of course also crucial. Globalization – automation, distance insensitivity, reduction of the welfare state and other subsidies, the expansion of corporatization - and Virtualization (the expansion of the financial services) help large corporations spread. But this process of Westernization and development also paradoxically allows the Bangalore software engineer to gain markets previously impossible, at elite levels it creates a far more even playing field. But it also challenges capitalism itself. Global competition and smarter markets may mean that labour can finally be as fluid as capital. While capital is free to roam through the globe in search of the most profitable sites (investment or the quick buck), labor has been restricted by the vagaries of the inter-state system, meaning only desirable immigrations can travel. But now labour everywhere can use the Net's distance insensitivity to travel and enter markets previously inaccessible. Even the OECD passport office cannot stop that.

If globalization is the current stage of capitalism, and the rise of global civil and cultural society (the international non-governmental organizations concerned about rights) the response, the next phase of world capitalism may well be a worker's revolution. Not fought on the streets but on the net, through perfect information, transparency, through our collective conscience. Of course, the web is still slow, eco-bots are still being developed but the technological processes are already in process, and our desires for a better society will move the process along.

Net futures

But with everybody doing business on the net, will profits keep on shrinking as customers and markets keep on getting smarter? Will the internet fundamentally transform capitalism, creating a world bazaar where goods and services are matched perfectly according to need? No monopolies, no government feather-bedding? Is this the end of corporate capitalism and state socialism, and the beginning of a global people's market – a giant ebay for all?

Or will real power go from the middle-man to the internet, those who own the pipes, the service providers and the content, those at the centre of the world knowledge economy?

Even if this latest attempt to transform capitalism, making it more attentive to human needs fails, after the net there will be nano-technology, the manipulation of matter at the molecular level, allowing the creation of any product, food, shelter we need. With scarcity technologically resolved, we can get onto the other big issues – how to govern ourselves, how to love, and how to challenge our perceived limitations.

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