Winners, losers and the new social order

The environment maketh man … and vice versa. *Jon Herbert* looks at a fast-changing relationship.

There is a theory that, given enough time, dogs and their owners begin to look like each other. Evolution shaped us. However, today, we are tampering with the environment that sustains us. What is the future of this ancient relationship? Can we still be friends?

Until recently, we have taken the environment for granted. Only in the last three decades have we slowly accepted the once far-fetched notion that man can actually affect the world he lives in.

Our response as a species has been sustainability — going green. However, what difference fine-tuning our daily habits can actually make remains unknown. We recycle, turn off lights, buy greener cars — and drive as far as before. Change is good, we say, but not necessarily in our own lives.

Good behaviour

Humans are only just starting to understand the delicate balance through which we can change the environment and the environment changes us.

As a species attributed with dominion, the human race is still struggling to clinch the first global deal to hold back runaway climate change.

Meanwhile, we face the very real prospect that growing numbers of political and economic migrants could be swollen further by millions of equally desperate environmental refugees.

Further ahead still, we are only just beginning to understand the stupendous changes that could redefine employment. Will work still exist? Will want exist? Are we entering a world of plenty in which the data and technology revolution makes everything virtually free?

If that sounds too good to be true, will a fundamental remoulding of society be vital to ensure equal access for all?

Momentous moment

One suggested scenario is that we are approaching the environmental equivalent of a Minsky Moment. This could radically shake up how we think, live and work now, in the future and in the distant future.

Having studied markets in detail, economist Hyman Minsky concluded that "when everything is going smoothly, people take that for granted and start to believe that it's always going to be that way." That mind set shapes human behaviour and makes "a nasty crash inevitable".

To date, UK climate change impacts have been restricted to unseasonably heavy rains, droughts, damaging winter storms and limited sea level rises. Relatively easy to dismiss and ignore. But what if the environmental tail does begin to wag the dog? Could we reach an early tipping point where it becomes very obvious that we are

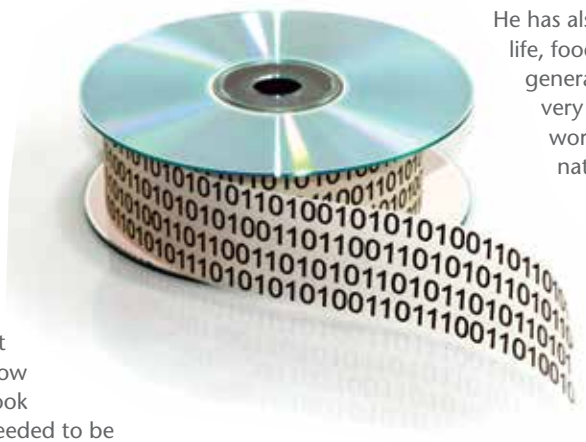
losing control and being forced increasingly to react to events?

Impacting the environment

Our behaviour, and the conscious and subconscious decisions we make affecting the environment, are a primary concern today. Governments are keen to modify human behaviour in terms of pollution, resource and energy use.

Behavioural economics is an expanding field that applies behavioural psychology to improve economic decision-making. To boost conventional public communication campaigns, more sensitive approaches have become popular, such as the "nudge" concept.

The UK Government now uses nudge drip-feed strategies successfully to make us pay our taxes on time and generally act as better citizens. There is a split between "changing minds" and "changing context", the first influencing behaviour and habits, the second altering the orientation of decision-making.



The nudge idea is that small, cumulative changes are easier to achieve than large step-changes. However, the converse argument is that small actions allow people to overlook larger actions needed to be environmentally responsible.

Put another way, the problems we now face may be too large to change simply by adjusting our daily habits and purchasing patterns. Recycling is a very green activity that often involves recycling items we shouldn't have bought in the first place. Clearly, influencing the habits of seven billion people is a major field and behavioural change is an extensive science in itself.

The environment impacting us

Even despite our best endeavours, many people could still be losers. This is where the second part of our relationship with the environment begins to give us an equal and opposite reaction.

If long-term climate predictions do prove to be accurate, some parts of the globe will become arid and inhospitable. This includes areas of the Middle East and Asia. Declining rainfall patterns could force whole populations to move to survive. Could we accommodate this potentially huge demographic shift?

James Lovelock is a pre-eminent scientist who first discovered chlorofluorocarbons (CFCs) in the atmosphere and the Antarctic "ozone hole". When he worked in NASA's Jet Propulsion Laboratory, he formulated the Gaia hypothesis. That supposes that the Earth is a self-regulatory system which enables life to exist on this planet.

He has previously pointed out that in a drying and warming world, the hinterlands of large continents far from any coastline will suffer most acutely from climate change. Island chains in favourable latitudes, such as the UK and Japan, will fare better.

Lovelock has suggested that an almost inevitable fallout will be political and economic policies to counter huge inward flows of migrants. He has also predicted that life, food and prospects in general could become very dull as a warming world puts pressure on natural resources.

His work includes the discovery that planets with life — like the Earth — develop environments that mitigate against climate change. The Earth's surface has been getting warmer since it was formed. However, there is a point where nature cannot fight back any further. His advice has been to enjoy the world while we can because ultimately there is nothing more we can do.

Of late, Lovelock has advocated the development of super mega-cities as our best line of defence.

Although he feels that our negative impact on the planet has been an accident rather than a conspiracy, he now believes that saving the planet from climate change is "beyond our ability", or that of natural systems. Mankind should retreat to comfortable "climate-controlled cities", he says. After all, urban living has become popular because it is so efficient.

> "Lovelock suggests that we should give up 'vainglorious attempts to save the world'"

In his book *A Rough Ride to the Future*, he suggests that we should now be "strengthening our defences and making a sustainable retreat", adding, "We should give up vainglorious attempts to save the world."

Brave new world?

Trying to imagine life in those futuristic mega-cities introduces the third area where our environmental relationship is affected not only by changing climate but also by startling advances in technology. Developments such as big data are morphing our perception of the world, revealing deep trends in the environment that were undetectable previously.

Remote detectors now warn of perilous situations before they become catastrophic. Machine-to-machine (M2M) technology allows us to deploy cost-effective dormant sensors that only "phone in" when, for example, dangerously high flood water levels rise in remote parts of a watershed.

The internet-of-things goes one step further. It enables us to connect to our environment through networks of "intelligent" devices programmed to make smart decisions based on the information they exchange. Their involvement can be subjective, depending on the outcome we want.

In short, everything is connected with, and responds "intelligently" to, everything else. The result is huge productivity and efficiency gains; conversely, artificial intelligence (AI) may create far-reaching risks that we are less than comfortable with.

Some experts argue that we are approaching a pivotal point that could change society fundamentally. The answer lies in the confluence of AI derived from big data and smart devices, many of which we choose to carry in our pockets. It is estimated that by 2020, 50 billion smart devices will be in use.

AI's growing sophistication is predicted to have both positive and negative implications. For example, theoretical physicist Stephen Hawking warns that AI could "take off on its own" and even "spell the end of the human race".

There could be conflict. Speaking at the 2014 World Economic Forum in Davos, Google executive chairman, Eric Schmidt predicted a race between computers and people over the next quarter of a century. Microsoft co-founder Bill Gates supports this view, saying that he can't understand why more people are not worried about AI's impact on jobs.

The University of Cambridge has opened a Centre for the Study of Existential Risk. Funded by the co-founder of Skype, Jaan Tallinn, it studies risks to the human species, with a specific AI focus. The University of Oxford's Humanities Institute has published a study of threats that could destroy the world. It rates the chances of Armageddon caused by AI at 10%.

Chairman of the board

Last year, the venture capital company, Deep Knowledge Ventures, appointed a predictive algorithm called Vital to its board of directors. Vital is able to make reliable recommendations about the development of drugs for age-related diseases. It has full voting rights but doesn't take a salary!

Not only business executives are reaching their use-by dates. Computers can now make certain types of medical diagnosis more accurately than doctors; robots are replacing surgeons in the operating theatre.

Lawyers are another vulnerable species. Software is now better able to predict the outcome of complex patent lawsuits than experienced litigators. Teachers, accountants, librarians, share price analysts, parole board members — and writers — are now prime targets for algorithm replacement.

What was previously called high-level reasoning is proving to be easily replaced by computers. As Canadian cognitive scientist, Steven Pinker, puts it, "the hard problems are easy and easy problems hard". If you are a painter or decorator, chef or gardener, your job is more likely to be safe, according to Pinker.

However, not all unskilled jobs are safe either, as factory and warehouse workers are discovering. The human factor is now all but eliminated from the shopping chain.

Yet future job security and income levels are likely to be tied to the ability to work well with AI machines. It has been suggested that tomorrow's social order could represent a new form of feudalism, where those who can't work with the new machines have little option but to provide menial personal services.

It is also a world where major Silicon Valley names — Google, Facebook and Amazon — are expected to be out-and-out winners. All have already invested heavily in AI and the robot economy. Google alone has a $500 billion market capitalisation but employs just 50,000 humans.

What isn't clear, however, is who the consumers in this brave new world might be — if consumers are needed at all. Robots don't buy things; they create no demand side. Meanwhile, what will the majority of excluded humanity "do" to all day?

All things bright and beautiful

So where is the upside? The next technological revolution is unlikely to be like past step-changes where old jobs were destroyed but new one created. This time, the aim is to create technology capable of making judgments and decisions that are far more sophisticated than human-beings can ever make, even with the benefit of training and education.

Quite simply, technology is on course to outpace the human brain. And there is no reason why this should not apply equally to composing music or writing romantic novels. AI can be as emotional and empathetic as people — or appear to be so if programmed appropriately.

It is argued that humans lost the physical battle of labour versus engines but won the mental war. Now we might be losing that too. Could we win by being more creative than machines? The long-term answer may well be no. Computers will be quite capable of producing sonatas "rife with emotional complexity and deep textures".

This is where the real dilemma comes in. The upshot may be that we can look forward to a new period of unprecedented abundance where the costs of living are negligible based on sustainable energy and natural resource usage.

People will be free to focus on the arts and culture, philosophy, exploration and adventure, according to their taste. However, because of huge income disparities, not everyone will be in a position to enjoy the new wealth without some radical form of future income redistribution.

The irony might be that the enterprise system is best able to produce an era of abundance. However, a new version of capitalism may be needed that focuses on more than the old-fashioned idea of efficient production at the expense of lesser skilled workers. If this is the case, then it shouldn't be beyond the wit of modern man.

Homo sapiens sapiens — a sub-group of Homo sapiens which in Latin means "man who knows" — has good reason to be optimistic if we grasp the significance of what we are about to do. In the interim, we may want to keep our finger firmly on the Start and Stop buttons. ■

Jon Herbert has been a Director of ISYS International. He is a former communications manager and investment advisor. He has written on environmental issues for many years.