



## **The Forces of Change**

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### **Abstract**

The world is in flux. Assumptions comfortably held for fifteen years, and in some cases fifty years, and the structures built upon them, are under great challenge, if not being completely swept away.

The major new forces of change, all of which interact with each other, include:

- geo-political realignment
- the globalisation agenda and consequent changing patterns of international competition and trade
- the new demographics
- changing organisational structures for doing business
- new technologies, and
- changing social values.

The presentation will conclude by engaging participants in what it will mean for them, their families and for project management.

The world is in flux if not at least in some parts, chaos. The end of the cold war, far from producing universal harmony, has witnessed the "break-up of states, the intensification of tribal, ethnic and religious conflict, the emergence of international criminal mafias, refugees multiplying into the tens of millions, the proliferation of nuclear and other weapons of mass destruction, the spread of terrorism, and the prevalence of massacres and ethnic cleansing".<sup>1</sup>

The unimaginable destruction of the Twin Towers of the World Trade Centre in New York has produced a US Government committed to pre-emptive military engagement around the world - a harbinger of what many see as a new imperialism.

Globalisation has led to remarkable increase in the levels of world trade, productivity and capital formation and flows. It has seen real reductions in the cost of international travel, by the order of 75%, and telecommunications by a staggering factor of 1000. But at the same time, it has increased inequality, with wealth increasingly concentrated in a few percent of the population in the industrialised countries, and the number of people living in poverty increasing by 100 million in the last decade of the twentieth century, and the global economy continues to stagnate.

Dramatically reduced fertility rates, together with increased life expectancy, are leading to projections of very severe population decline in most Western nations over the next fifty years, with the marked exception of the US. In contrast, the Third World population will grow by 3-4 billion.

Traditional structures of both public and private organisations are seen to be increasingly incapable of addressing rapid change, high uncertainty and greater complexity and inter-connectedness.

New technologies offer the prospect in the very near future of

- genetic defect diagnosis and repair of the human foetus,
- genetically enhanced individuals (eg. athletes)
- computer embedded in almost every manufactures device,
- machines the size of molecules to construct and repair human tissues,
- health treatment tailored to the specific individual genetic makeup, and
- smart materials with capabilities such as memory and self-repair.

In an era of greatly increased wealth for most we are witnessing higher levels of pessimism and dissatisfaction, longer working hours, breakdown of family and community life leading to high divorce rates, violence, drug taking and crime.

Finally, even the assumptions we traditionally bring to thinking about the future, combining a belief in an underlying rational structure, the resistance of much historical tradition to change, and occasional capricious acts of those with power is under challenge. The recent growth in both the understanding of and the ability to produce emergent phenomena has introduced the reality of 'organised complexity' in which complex and frequently unpredictable capabilities emerge from the interaction of simple entities or systems.

Let us examine those major forces of change in some more detail.

## **Geo-political Realignment**

Huntington, in his much published book addressing the re-making of world order after the end of the Cold War, has agreed that we now exist in a multi-polar, multi-civilisational world. The promised harmony of the 'end of history' has not been delivered. The world cannot be characterised by an 'us and them' model, because there is a great variety of different 'thems'. Nor does the atomistic interaction of the 190-odd nation states, each bent on its own survival through economic and military power explain what we are seeing emerge, and while there is a very high level of chaos, the world is not totally without order.

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<sup>1</sup> S. Huntington, *The Clash of Civilisations and the Remaking of World Order*, 1998, p.35

Rather, the future is being shaped by a clash of civilisations - predominately Western, Muslim and Chinese. This clash is the greatest threat to world peace. At the same time "an international order based on civilisations is the surest safeguard against world war."<sup>2</sup>

While this model may capture some features of the current world, it is apparent that various elements of those civilisations, most visibly the Western, are showing signs of unravelling.

The U S policy stance of multilateralism appears to be driving towards a 'with us or against us' model, which many Western nations, particularly in Europe, find unacceptable.

Europe itself is displaying considerable tension, between expansion of the European Community into Eastern Europe, with consequent costs and risks, and division, with regard to the relationship with the U S.

The superstructure of international organisations developed over the past fifty years, such as the United Nations, the International Court, the World Trade Organisation, and the International Labour Organisation, are all facing reductions in power and influence in the face of determined uni- and bi-lateral initiatives.

Asian developments are shaped by the emergence of China, the continuing economic stagnation of Japan, and the potential for large scale nuclear conflict between India and Pakistan.

All of those forces will powerfully reshape, in as yet unpredictable ways, the economic standing and prospects, the national security, the business climate, and the well being of Australia and Australians.

## **Globalisation**

As indicated above, the globalisation drive over the past twenty years has resulted in

- greatly increased flows of trade and capital,
- the creation of global brands,
- the removal of many natural and government -contrived protection for business,
- sustainable levels of concentration in most industry sectors,
- economic growth,
- increased productivity and competition, and
- integration of national and global economics.

However there are a number of factors indicating that this phase may be part of a cycle, as has previously occurred, and which may now be coming to a close.

These indicators include:-

- increased protectionist measures, particularly in the U S and Europe,
- the growth of bi-and tri-lateral as opposed to multi-lateral free trade agreements,
- the intensity of popular opposition to globalisation
- concerns over the environmental degradation resulting from increased economic activity,
- the dot-com and technology sharemarket collapse,
- prolonged stagnation in the world economy,
- community resistance to the takeover of national assets and icons by international (ie other national) companies, and
- loss of confidence in the corporate sector resulting from huge payments unrelated to performance, corruption, fraud and robber baron ethics.

Economic performance and company strategy over the next 10-15 years will be strongly shaped by the way in which the globalisation agenda is played out.

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<sup>2</sup> Huntington, p.13.

## Demographics

### *Demography is destiny- Auguste Comte*

The makeup of the population is being transformed by the twin forces of extended longevity, resulting from improved nutrition, public health and medical care, and declining fertility, itself the result of technological advances and social changes in the role of women.

As a result, national populations of the industrial nations are projected to decline and age dramatically over the rest of the 21<sup>st</sup> century. For example:

- Italy's population will decline from 100 million today to 20 million by 2100
- Japan's population will fall almost 50% to 55 million
- Australia's population will stabilise around 23 million in 2050
- In 1950 the developed world accounted for 25% of the world's population; by 2050 it will be less than 10%
- In 2050, the population of the Philippines will be greater than that of any European nation, including Russia

Japan has the most rapidly ageing population in the world. The consequences are most dramatically reflected by the island of Oshima, in which:

- the population has declined from 20,600 in 1945 to 5,500 in 2000;
- octogenarians outnumber teenagers by more than three to one;
- half the population is over 65;
- the baker, the paper-girl and the taxi driver are all over 80.

The marked exception in the industrialised world to this trend is the US, where the fertility rate has been rising, particularly in the Hispanic, and to a lesser extent, Afro-American communities. As a result the population projections are for an increase from 280 million today to more than 400 million by 2050. Thus, among other things, the US, alone among the industrialised nations, can look to an expanding domestic economy.

Not only will the population distribution change, but also the make-up of families, which will narrow and lengthen. "If the trends in those countries with the lowest fertility rates - Italy for example - continue, then within two generations more than three in every five children will have neither brothers nor sisters, nor aunts, uncles or cousins".<sup>3</sup> An indication of the challenge for the future may be already apparent in concerns over the values and behaviour of China's 'little princes' resulting from the one child policy.

The implications for the socialising and educational functions of the family are obvious. Broader impacts may be on:

- the composition of the labour-force
- the notion of retirement
- the tax-base
- superannuation and pensions
- the cost of health care and health insurance
- the loss of creativity and vitality in the economy
- the decline of key markets (eg youth market).

Clearly, changing demographics are going to be a major force of change over the next fifty years.

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<sup>3</sup> Professor Ashley Goldsworthy, 'Moving Towards a Different World', KCA Knowledge Economy Conference, Sydney, 11 November 2002, p.3.

## Changing Organisational Structures

The firm, as we know it, is essentially an invention of the nineteenth century. In essence it is an organisational form directed to the acquisition and transformation of resources - material, capital and human, to achieve desired objectives. Its form was progressively codified to provide the basis for both legal and trust-based transactions in the market-place.

Throughout the twentieth century, the range of capabilities a firm required to operate effectively multiplied, to include such varied functions as:

- treasury
- accounting
- sales
- marketing
- distribution
- manufacturing
- customer service
- legal matters
- planning
- risk management
- building management
- occupational health and safety
- travel
- catering
- childcare
- cleaning.

However, the complexity and cost of effectively managing and delivering these varied services, together with the pressures of increased competition, have become such that companies have moved to out-source non-core functions (i.e. functions that are not central to the business or dealing with key assets) to other firms. The way was led by obvious non-core functions such as cleaning and catering, and was followed and reinforced by the outsourcing of IT (information technology) requirements. This shifts the management responsibility from service delivery to selection and oversight of contractors.

In the past five years, two themes have emerged which together are pushing the outsourcing model much further. The first of these concerns just what constitutes core functions. For example research and development (R&D) and innovation to develop new products and business processes were traditionally considered essential to perform in-house, in order to maximise the benefits and ensure commercial secrecy. However, recently there has been a strong trend to outsource these functions to specialist research institutions such as universities, and to manage the learning and secrecy issues through a mix of contractual and cooperative mechanisms. Hence the push for 'open innovation'.

The second theme addresses the need for organisations to operate in and respond to an environment marked by very rapid change, extreme uncertainty, high and often unquantifiable risk, complexity, discontinuity and disruptive technologies. Under these circumstances, established structure and practice may constitute a major barrier to the recognition and implementation of change. In situations of such uncertainty, the ability to respond quickly, to possess agility, becomes crucial. As Bill Gates says, 'Microsoft is only ever 6 months from extinction.'

This form reaches its extreme in the virtual corporation, in which all activities are conducted by contractors, against targets set and monitored by a Board. An important variant involves obtaining access to key resources by the formation of an alliance with another organisation, typically managed through an MoU.

Organisational forms will continue to mutate and evolve to address this challenging environment.

## **New Technologies**

The vast investment in R&D in the public and private sector is leading to a wide range of dramatic new technology developments. Indeed, the injection of increased knowledge into products, markets and business processes has become so central to economic activity that the phrase 'knowledge economy' has been coined and achieved wide usage.

Another flow-on is the emergence of knowledge management as a key organisational capability concerned with knowledge identification, acquisition, validation, adaptation, application and storage.

A very long list of powerful new technologies could be developed. It would include, under four generic headings:

### ***Genomics***

- diagnosis and repair of genetic defects
- genetic screening
- gene-based identification and security
- personalised health care systems

### ***Nanotechnology***

- molecular diagnosis machines
- molecular tissue repair
- molecular semi-conductor chip manufacture
- molecular detection and control systems

### ***IT***

- biological computers
- self-learning software
- artificial intelligence
- embedded computers
- simulation/visualisation

### ***Materials***

- intelligent materials
- high strength, low weight composites
- reactive, self-destructing plastics

There are other as yet unimagined technologies that offer the potential of threat and opportunity. The central challenge remains to extract the economic value of knowledge and technology by finding a market application.

## **Some Implications for Project Management**

As each of these forces of change impacts on the business environment, project management will have to adapt, and take the new factors into account. The traditional six components of project management may need adaptation, or new ones may need to be added.

Perhaps the biggest challenge for project management may arise via the organising concept of the project. While it may appear that there will always be 'projects' to manage, the extent of the transformation of the nature and management of the firm could suggest a similar level of changes.

At the very least the nature of project management could increasingly shift towards the identification, assembly and application of geographically and intellectually diverse resources appropriate to achieve an agreed objective.

As to the consequences of these forces of change for you, your career, and your family, I invite you to speculate. What if ...?