

1 The Countdown Begins

Delta Revolution

Delta. That's the word engineers use to describe change. Change in direction, change in speed, change in volume.

But the volume of changes today is greater than at any time in recent history. We are facing huge and huge numbers of alterations in the geopolitical world, in our social environments, in our personal lives. Face it, our world is changing, and it's changing dramatically.

We all recognize that the world that we are used to is not, in its familiar form, going to be around for much longer. Most of us have yet to really grasp the nature and the true extent of the changes that we are about to experience, and that's because we can only see a few pieces of the jigsaw – the picture is hidden from us.

Moore's Law, for instance, is one piece of this jigsaw of delta. It establishes the principle that the price/performance ratio of computer chips will roughly double every eighteen months. That's a one thousand-fold increase in power every ten years. Look at it another way: The \$1000 laptop you use today is equivalent to the billion-dollar brain of thirty years ago.

Big deal. It still just does email, right? Wrong. Moore's Law (and its bastard child, the Internet) doesn't just mean faster word processing. It means the downfall of the corporation you work for.

Don't believe us? The printing press nearly killed off one of the largest corporations in history – the Catholic Church. At the start of the 16th century, Martin Luther nailed his colors to his church door, fuelled by his revulsion at a money-raising scheme. This initiated a torrent of reform – the virtual atomization of the Church – not because of Luther's zeal but because the printing press had made the Bible available to anyone who could read. The power of the priests had been broken (more on this in chapter 13).

In today's world, the corporation and not the Church is the institution at the center of most of our lives. And the corporate world is now embarking on a reformation of its own. Just like poor Pope Leo X back in 1517, today's CEO's have little real grasp of the magnitude of the threat they face and the extent of the changes to come.

This corporate reformation – like all radical changes – is not 100% predictable, but we can offer you a chance to adapt to the future before it buries you. This reformation also has a name: Atomization.

Our first book (the Atomic Corporation) was published during the first week of September 2001. The horror of the Twin Towers changed our outlook to an even greater extent than we could have ever predicted. Even apart from its geopolitical consequences – increasingly nasty and still unclear - we have seen a crisis of trust along with some of the largest bankruptcies in history. Enron (one of our previous case studies), Arthur Andersen, WorldCom, Marconi and a whole fleet of airlines have all hit the wall.

Since then, we've taken our message to leading corporations and opinion formers all over the world - from BP, Henkel and Prudential in Europe to Coca-Cola, AT&T and American Express in the USA. We have experienced events first-hand that have shaken global confidence and challenged established wisdom. We are more convinced than ever that bloated and unresponsive corporate structures must be taken apart and rebuilt, and that our new atomic framework is the most plausible and compelling future scenario.

This new book is not about theory, atomic or otherwise. Our first book was amply equipped in that department (although we do cover the main points once again in chapter 4). This book is about outcomes. It's time to look at the possible consequences for us as individuals and for the corporate and social structures we work in. And it's time to ask what we have to do when the plane lands.

First, let's talk consequences. We will start this chapter by laying out some predictions on what we think might happen in the next twelve weeks, twelve months and twelve years¹. By the end of this book we hope you can anticipate the many changes that will affect your personal and working lives, and that you will be helping to make our predictions come true.

Don't fear the future. Be a part of it. After all, it's not like you have a choice.

The Next Twelve Weeks

- Through a chance encounter on the World Wide Web you connect with someone you have not heard of or spoken to in twenty years. Despite the passage of time a new level of intimacy emerges between you both, and exciting business possibilities emerge.
- Your son declines a graduate job offer with Shell in preference to a year of world travel. They are not surprised - despite the depressed employment market even the best corporations find it difficult to recruit the best graduates.
- Your father realizes that falls in the stock market means that retirement in his fifties is no longer an option. Instead, he invests all his surplus funds in bricks and mortar, bypassing traditional savings channels.
- An old friend's business unit is de-merged from his parent company. He feels energized by the smaller management team and closer contact with customers and suppliers, and clocks up an eighty-hour week for the first time in his life.
- A leading pharmaceuticals giant announces that it intends to withdraw entirely from R&D activities, currently exceeding two billion dollars of investment a year. Its CEO stresses the need to focus on global marketing and sales in its drive to retain its number one position in the sector and announces alliances with over eighty biotech and drug discovery companies to fill the R&D gap.
- General Electric (GE) opens up its own stock market to trade over one hundred separately quoted companies within its own corporate portfolio. Investors, both institutions and individuals, are encouraged to swap their GE shares for a portfolio of GE securities ranging from power and lighting to finance and professional services.
- AOL-Time Warner, one of the largest mergers in history, throws in the towel and announces its intention to break apart into five separate companies. This ends what many regard as the largest destruction of shareholder value in modern times.

¹ These are all hypothetical by the way, and should not be taken as direct criticism of the firms concerned.

The Next Twelve Months

- You are told that, due to the continuing harsh economic climate, your services to a Global 2000 firm are no longer required. You receive a handsome pay-off and the promise of part-time work that never transpires. After a few weeks of personal doubt and uncertainty, you fall into a new and more enjoyable pattern of portfolio employment by deciding what your real competencies are and applying them to the marketplace.
- Ford sells off its premium brand car companies, including Aston Martin, Jaguar, Range Rover and Volvo to the French fashion and perfumes company, LVMH. In an unprecedented bid to return to its core business, it continues to provide manufacturing and logistics services to LVMH, encouraging the new owner to concentrate on brand extensions and product innovation.
- HP-Compaq completes the world's largest outsourcing deal with a Taiwan industrial consortium. It transfers all manufacturing and supply chain tasks to its Eastern partner in return for a 25% share of the new global manufacturing platform and a sign-on bonus of five billion dollars cash to cover the asset value. Its workforce is reduced from 140,000 to less than 40,000 worldwide.
- Affected by the downturn in Merger and Acquisition activity, Goldman Sachs decides to spin off all activities in this area and forms a joint venture with leading accountants, Deloitte & Touche. The new entity takes equity positions in each of its M&A activities and draws on capital funds from a variety of investment banks.
- Nedcor, a relatively unknown South African bank, bids for and wins the outsourcing of Lloyds TSB's core transaction processing platform, effectively gutting its retail operations. The deal takes the form of a new global vehicle based in the South Africa's low wage economy that is soon touting for similar business from the leading retail banks in Europe and the USA.
- After almost fifteen years of relocation planning and deliberation, HSBC decides to abandon its new thirty-story building in Canary Wharf in favor of smaller offices co-located with its business interests. As well as creating better connections to customers, this avoids the vulnerability of thousands of workers concentrated in one building.
- BP makes an unprecedented announcement – it intends to spin off its global retail operations and to concentrate on oil exploration and production. McDonalds registers interest in acquiring more than 30,000 filling stations – expanding its own footprint by a factor of two.
- Private equity house KKR is launched onto the New York stock exchange and becomes the second most valued stock after Microsoft. Its principals each become wealthier than Bill Gates and Larry Ellison put together.

And the next twelve years?

- The average employment contract for staff working in California will come down from its current duration of eighteen months to less than thirty days – or one working month. The concept of permanent employment will be consigned to the annals of the history books.
- Upwardly mobile professionals appoint personal agents to manage their careers. In return, agents take a share of annual wages and stock options as their fee. Other service companies

step in to take charge of domestic obligations such as house cleaning, financial administration and holiday planning.

- The first trillionaire is crowned. He has amassed his fortune in just under ten years as a result of applying intelligent agent technology to web-based search engines – his corporation finds what you need on the Internet. A PhD from Stanford University in 2003, he had no immediate expectations of making money from his research thesis. He is rapidly overtaken by the main investor of a biotech company that is the first to gain approval for a drug that arrests aging. Neither of these corporations employs more than fifty people.
- Will Smith, film star and singer, becomes the first black president of the United States, where public appeal and charisma are recognized as the essential differentiating qualities of a successful politician. In the UK the Conservative Party, bereft of personalities, slips into quiet obscurity.
- Educationalists abandon fact-based learning in favor of discovery and experience. Virtual Reality becomes as commonplace as personal computers in classrooms all over the USA and Europe.
- The most eminent consultancy firm in the world (you know who we mean) closes after the partners refuse to provide any more working capital to keep the firm alive. The only saleable asset will be the research institute that generates more than sufficient equity funds to finance all existing partner pensions.
- A global account team working for IBM undertakes a leveraged buy-out, raising over one billion dollars to purchase its profitable current customer relationship. This team consists of no more than twenty staff and exploits its new asset by forming multiple relationships with IT, HR and Finance service providers.
- Device-to-device traffic exceeds for the first time all other traffic across the World Wide Web. Much of our personal communication is delegated to software agents embedded in our hand-held terminals, laptops, clothes and other intelligent devices.
- Governments impose crippling taxes on organizations of five hundred or more people to discourage inefficiencies in their economic systems. They will also consider introducing laws to limit the size of government departments to fewer than two hundred staff as a means of convincing the electorate that they are serious about delivering value-for-money services.
- Of all the professions and degree courses, Digital Arts becomes the most popular and highly remunerated of all careers in the Western World. Companies such as Cambridge and Harvard vie with each other to offer such training, but Thames Valley – once rated the worst UK University¹ - excels above all of these worthy institutions having been first in the field.

Within our atomic view of the world, these predictions are all entirely plausible. But hold on, here. That kind of change requires nothing less than the rethinking of management science. Where did *that* delta come from?

Welcome to the 2% World

Consider the economic pressures acting on your corporation. With inflation at its lowest point in fifty years (under 2% in many developed economies) and interest rates approaching zero, corporations are really under the microscope. Stocks should be more attractive than fixed-interest investments, but stock markets everywhere are down the pan. Many of the world's largest corporations have seen their share prices halved and halved again.

Why? According to the doyenne of the UK fund management community, Nicola Horlick, in such a low inflation world corporations have nowhere to hide. And even Warren Buffett said recently "You don't know who's swimming naked until the tide goes out".

The usual remedies are clearly not working. Traditional corporate restructuring programs are as effective as re-arranging the deckchairs on the Titanic. Acquisitions, once a popular mechanism to provide the illusion of growth, are increasingly seen as a very bad idea (we'll have more to say on that in chapter 10) and ambitious IT programs look like spent measures. Firms who make their living supporting these remedies – consultancies, investment banks and IT service organizations – are slashing their workforces.

In the 2% world, there's nowhere to hide. To improve margins, corporations are undertaking ever more ruthless cost reduction exercises. Some have adopted strenuous outsourcing regimes to rid themselves of excess corporate fat, and in return are receiving generous pay-outs from business-hungry IT service organizations. And in lame-duck sectors, such as media and telecommunications, even more extreme measures are underway. Here, CEOs have run up huge debts to buy (comparatively) worthless assets and corporations are preparing to conduct 'fire' sales to meet their stringent debt-repayments. And that's your money they've thrown away.

For the large majority of remaining corporate giants, the task of balancing the needs of all stakeholders has never been more difficult. Bloated marketing departments make a last ditch attempt to create consumer demand for their products. Employees are tired of being abused and deceived by false promises, and shareholders are voting daily with their feet as they move the majority of their savings out of the equities market.

The Changing Customer

The failing corporation has yet to take account of a much more powerful change taking place around it – the nature of its customers. Consumers and business customers are entirely comfortable with using Internet-based portals to compare prices for goods and services from thousands of suppliers across the world. Already nearly a billion individuals are connected to the World Wide Web, comparing products and sharing new experiences. If you're not the best, we already know about it. If your profitability is based on information asymmetry – you know something we do not – you can kiss it goodbye. We know what the other guy is paying!

At the same time, there is no longer a corporate safety net to protect us through our careers. We are reaching a transactional economy where jobs will last for months rather than years. Nor can governments any longer afford to guarantee employment, welfare, pensions or lifelong learning. Each one of us has to take on absolute responsibility for our livelihoods and personal situations, leaving countless opportunities for new forms of personal services – from financial and career counseling to the basic outsourcing of domestic tasks.

Even more dramatic events are unfolding as the Millennium generation leaves school and sets out into the world. According to Malcolm Gladwell, author of 'The Tipping Point', this community has broken apart from its parent's generation to become infinitely more diverse and independentⁱⁱ. It connects together to form an almost indivisible network of consciousness through constant waves of text messages and mobile calls, and can create new fashions and fads at lightening speed. Comprehending and exploiting this affluent segment of consumer activity has never been more difficult for global companies run by forty- and fifty-year-olds.

Those forty- and fifty-year-olds think that a computer is just a better sort of typewriter (does anybody still make typewriters?). They think that advertising is worthwhile. *They just don't get it.*

In little over a quarter of a century since the dawn of the digital revolution - which according to the Intel Museum in Santa Clara began in 1974 with the invention of the first microprocessor - nearly six billion such devices have been built. That's one for every member of the human race. We can comfortably predict that by 2020 there will be almost a trillion intelligent devices connecting every element of our day-to-day existence, from cars and personal computers to refrigerators and hearing aids.

Embedded intelligence and a corresponding rise in powerful communication systems that connect us together (humans and machines) will have a transformational effect on the way we live our lives. Interaction will become infinitely more important than the 'stuff' that dominates most of our lives today. In the next five to ten years we will enter a new world of information intimacy that is interdependent and ephemeral. In chapter 2 we talk about the move beyond today's verbal exchanges to the more visual and virtual realities of tomorrow (a picture is, after all, worth a thousand words).

Do you remember your last visit to an electrical retailer to buy a digital camera or music center? The breadth of choice has never appeared more extensive or dynamic. What Sony brings out this week, Canon, JVC and Philips will improve on the next. In essence the world has become a giant copying machine, producing ever more intricate and attractive products to tempt us into buying. But have these suppliers really understood our latent needs?

It's not just the death of information asymmetry. The nature of what we want is undergoing radical change. Many of us have acquired as much 'stuff' as we could ever need. The next generation is more interested in life experiences than product – knowing, doing, and being rather than buying.

The Unchanging Corporation

Faced with the onslaught of improved connectivity, powerful new economic winds and the changing desires of the consumer, are corporations scrambling to respond?

No, of course not. Most large corporations are caught in a spiral of inward-facing programs aimed at staying alive rather than moving forward. True, they are trying to get sleeker and slimmer. They have re-engineered themselves, they've installed massive enterprise-wide computer systems, and they've paid fortunes to management consultants to stay ahead of the pack. But all they have managed to achieve is equality with their major competitors – it's a zero sum game. They have missed the big prize because they have been focusing on internal processes and information instead of grasping the prizes across the entire supply chain, from raw materials out to the end consumer.

The external prizes are not just around increased intimacy with the customer. New trading mechanisms such as electronic marketplaces and portals mean radical reductions in the cost of doing business, and that necessarily undermines the need to be big (more on this in chapter 3). Like most revolutions, the effects of the Internet will be greater than we expected, but will take longer to appear. We used to believe that the clarion calls of e-business would bring down the walls of the corporation on their own, but something got there first: Outsourcing.

The business of 'transformational' outsourcing is exploding. The IT service sector, deprived of lucrative systems integration and consulting contracts, has seized on radical corporate restructuring as its salvation. Companies in this sector offer to buy non-core assets such as finance, HR and IT from traditional corporations and perform an accelerated slimming regime on the body parts – a sort of corporate liposuction. Billion dollar cash advances have been offered by the services sector, to the delight of the soon-to-be former owners. This is a vast transfer of assets from the 'old' to the 'new' economy with many surprising effects. As we'll tell you in

chapter 9, the outcome is a dis-integration of the corporation as so aptly described by John Hagel in his Harvard Business Review Articleⁱⁱⁱ, 'Unbundling the Corporation', leaving behind a much-diminished set of core activities and piles of much-needed cash.

Checkpoint - A Combination of Causes

These are some of the dramatic forces challenging today's corporations. These cumbersome entities are facing a huge delta and it's time for them to respond, but most are still too centered on their products and internal functions. They cannot recognize how the needs of all their stakeholders are changing – from the consumer who is being empowered by the effect of greater choice and price transparency, to the investor and employee who want improved returns on their financial and intellectual capital.

First and foremost, large corporations need to become more agile. But you can't be big and agile at the same time - the internal cost of movement is too high - so fragmentation is looking more and more attractive. Smaller corporations are more responsive to consumer needs as well as being more innovative. Increasing connectivity means that the old economies of scale are disappearing fast. And let's not overlook the force of the push from inside – from the CEO who needs to do something, no matter how radical, to deliver results to institutional shareholders. We have some ideas for him in chapter 8.

Taken together, these forces present a fundamental challenge to the structures of today's mega-corporations. It's not the first time the business world has undergone major upheaval – after all, the only corporation in the top one hundred list of 1900 that would see in the new Millennium was General Electric – but we think this revolutionary cycle will be nasty, brutal and short.

Consequences - The Atomic View

Businesses have to make a fundamental choice between scale and agility. Already companies as diverse as General Electric and Nike have made this choice, as we will see in chapter 5.

In essence, we believe the businesses of today will explode into different atomic components. Some will be extremely small and adaptive. Others will continue to strive for scale and scope advantage, but often at an unacceptable price. We will see a polarization of structures into what Gill Ringland describes^{iv} as "the Coral Reef populated by brightly colored and diverse aquatic life, and the Deep Blue Sea populated by large creatures of the deep".

Let's look more closely at the new atomic types that will emerge.

The engines of the new economy will be small, knowledge-intensive 'smart companies' that create a constant stream of innovative new offerings. In the pharmaceutical sector we already see several thousand research-driven biotech companies exclusively pursuing product innovation. The 'smart companies' will connect to the market through other distinct entities – 'customer managers' who understand the particular desires of the consumer, and 'webspinners' who create new types of business-to-business networks and derive value from their peer-to-peer interactions. Together such atoms will assemble the bundles of goods and services required to meet each customer's individual needs.

Most of these atoms will consist of tens or hundreds, rather than thousands, of employees and they will resemble the sorts of high-tech boutiques to be found in the world's most developed economies such as California's Silicon Valley. They may be biotech companies or specialist retailers but in all cases, speed and agility will be their passport to successful survival. The

analogy with the brightly colored fish in Gill Ringland's 'Coral Reef' scenario is an appropriate metaphor to describe such entities.

At the other end of the scale, we have the global platforms that enable these small and innovative atoms to serve world markets. Someone still needs to manufacture detergents, grow the food and refine the crude oil. 'Asset platforms' will deliver global economies of scope and scale in areas such as manufacturing and transport, while 'service platforms' will manage process-related activities like human resource management, information systems, procurement and financial control across a variety of sectors. We liken these to the whales and other enormous fish to be found at the bottom of the 'Deep Blue Sea'.

In a truly global economy specific regions of the world will take on particular platform activities – reflecting local skills and wage levels. Taiwan has already become the global manufacturing hub for electronics production. China is rapidly emerging as a multi-purpose manufacturing platform. Now India is on course to be the world's largest hub for IT and related business process activities – making it a global service platform. The West will increasingly 'off-shore' its manufacturing and back office activities to such hubs.

The recent boom in business process outsourcing and third party manufacturing and logistics confirms the trend towards a separation between design and operation. Those companies that excel in design must be 'smart' – small, agile and innovative – while those that wish to excel in operations must be large, stable and efficient. As the speed and intensity of economic and technological development continues to accelerate, so will this separation increase – a message that many of the integrated IT service organizations appear to have missed.

Holding all these atomic entities together into a virtual corporation is the 'portfolio owner' – an atom that acts on behalf of the investor, holding equity in the atomic corporations that it has spawned or bought. The global corporations of the future will be small but powerful portfolio owners with elaborate sets of cross holdings, where access rather than ownership becomes the operating paradigm. Private equity companies such as KKR in the USA already adopt this approach, acting as investment banks rather than operators. As the hundred top executives of one of the world's most successful companies, BP, decamp from their corporate head office in the City of London to a smaller venue in the West End, we see a real-life example of the portfolio owner mentality.

These atoms may be individually small and incomplete, but they can combine together into value networks, or molecules, that are powerful, fast and immensely flexible, and still manage to fully meet their customer expectations. Value networks rather than mega-corps will compete together in the future for customer attention. The small particles comprising these networks will be our atomic entities, each flourishing in the more dynamic and richly connected environment. In later chapters we will see exactly how and from where these atomic entities emerge, but for now you may just have to take it on trust – the atomic economy will work.

The Structure of the Book

Part One – Causes

In the next two chapters we explain why atomization is not only desirable but inevitable. We look at the forces that are reshaping corporate structures and corporations' relationships with their armies of stakeholders – from customers and shareholders to employees and suppliers.

Part Two – Collapse

Chapter 4 sets out the core of our atomic theory – what corporations will look like in a truly connected economy and how will they co-exist. As well as describing and giving examples of the atoms, we look at how they form the economic units of tomorrow – molecules.

Part Three – Consequences

Having laid out the underlying theory we progress to the principal consequences in the next three chapters. We look then at how the individual – you the reader - will be able to adapt and flourish in this new environment and what options are open to today's over-sized corporations. We also describe how entire industries will evolve to cope with corporate atomization and how traditional sector boundaries might blur and eventually collapse.

Part Four – Changes

The broad consequences are interesting to understand, but most of us want to know how these will affect our day-to-day jobs and responsibilities as well as our domestic and social environments. This is the section where we describe the impact of our Atomic Theory on the key elements of corporate life, from mergers and acquisitions to outsourcing and organizational design. We also take a look at the IT services sector, where many of our readers are working today. Finally, we provide a field guide to atomization with two methods for spotting hidden atoms.

Part Five – Corporate Re-formation

Atomization is not *entirely* new. The Sixteenth Century saw the break-up of the largest multinational corporation of the day – the Catholic Church, caused by drivers similar to many of those we've talked about in this first chapter. We end our journey with a call to arms for those in large corporations and for those who are thinking about their careers. Interesting times are ahead for us all.

Now read on.....

ⁱ Thames Valley University was rated 123rd out of 123 entries in the Sunday Times University League Table September 15, 2002.

ⁱⁱ The Tipping Point: How Little Things Can Make a Big Difference", by Malcolm Gladwell. February, 2002. Abacus Press; ISBN: 0349113467

ⁱⁱⁱ John Hagel III and Marc Singer, "Unbundling the Corporation", Harvard Business Review, March-April 1999 p133 et seq.

^{iv} "Scenario Planning: Managing for the Future", Gill Ringland. October 1997, John Wiley; ISBN: 047197790X