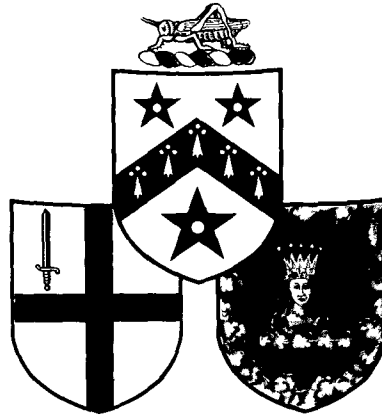


G R E S H A M
COLLEGE



YESTERDAY'S EDUCATION
FOR TOMORROW'S BUSINESS

Lecture 1

THE CABBAGE PATCH KID

by

PROFESSOR TOM CANNON CIM FInstEx FRSA FCIM
Mercers' School Memorial Professor of Commerce

6 November 1996

Gresham College was established in 1597 under the Will of the Elizabethan financier Sir Thomas Gresham, who nominated the Corporation of the City of London and the Worshipful Company of Mercers to be his Trustees. They manage the Estate through the Joint Grand Gresham Committee. The College has been maintained in various forms since the foundation. The one continuing activity (excepting the period 1939-45) has been the annual appointment of seven distinguished academics "sufficiently learned to reade the lectures of divyntyte, astronomy, musicke, and geometry" (appointed by the Corporation), "meete to reade the lectures of lawe, phissicke, and rethoricke", (appointed by the Mercers' Company). From the 16th century the Gresham Professors have given free public lectures in the City. A Mercers' School Memorial Chair of Commerce has been added to the seven 'ancient' Chairs.

The College was formally reconstituted as an independent foundation in 1984. The Governing Body, with nominations from the City Corporation, the Mercers' Company, the Gresham Professors and the City University, reports to the Joint Grand Gresham Committee. Its objectives are to sponsor innovative research and to supplement and complement existing facilities in higher education. It does not award degrees and diplomas, rather it is an active collaborator with institutions of higher education, learned societies and professional bodies.

Gresham College, Barnard's Inn Hall, Holborn, London EC1N 2HH
Tel no. 0171 831 0575 Fax no. 0171 831 5208

YESTERDAY'S EDUCATION FOR TOMORROW'S BUSINESS

**Tom Cannon:
Mercers' School Memorial Professor of Commerce
at Gresham College**

In a previous Gresham College lecture¹, Howard Davies, then Director General of the CBI and, now, Deputy Governor of the Bank of England used verses penned by John Betjeman to characterise two views of the business world. The first describes the young executive:

"I am a young executive. No cuffs than mine are cleaner;
I have a slimline briefcase and I use the firm's Cortina.
You ask me what it is I do. Well actually, you know,
I am partly a liaison man and partly PRO
Essentially I integrate the current export drive
and basically I am viable from 10 o'clock til 5".

The second describes the city worker as:

"Young men who wear on office stools
The ties of minor public schools
Each learning how to be a sinner
And tell a good one after dinner,
And so discover it is rather
Fun to go one more than father".

Mr Davies used these verses to draw out the gap between the two groups that illustrates the divide between the industry and the city in the UK.

¹ Davies, H. (1993) *The City and Manufacturing Industry* Gresham College Special Lecture, Gresham College, London

The verses, however, provide insights that are more central to today's theme that much of the education provided about business is either inadequate or inappropriate. If education was ever education about or for business, it has been overtaken by changes that have transformed the nature and pattern of business activity not only in the UK but across the world. The Cortina has gone, so too has the office stool. Changes in technologies and markets symbolise deeper changes in business and economic processes and symbols².

Relevance Lost?

The contribution of business education to these changes is not simply to reflect the new environment. The managerial revolution³ of the last hundred years was rooted in the Business Schools of North America and the Fachhochschulen of Germany. The former codified management practice and framed the shift to specialisation that characterised management over the last century. The Fachhochschulen integrated technical and commercial competence to a degree never achieved previously. Serious questions now exist about key aspects of this inheritance. The head of one major Business School described business education as "false pearls before real swine". This description highlights two themes that will recur in this analysis. These are first the nature of the knowledge and understanding that lies at the heart of education for business. The second is the ethics and values that underpin this knowledge.

The analysis of both is as relevant to the education for and about business provided in schools as it is for the business education supplied by University

² Johnson, H.T. (1992) *Relevance Regained: From Top Down Control to Bottom-up Empowerment* New York, The Free Press

³ Chandler, A.A. (1977) *The Visible Hand: The Managerial Revolution in American Business* Cambridge, Mass., Harvard University Press

Business Schools and in-company programmes. Central to this analysis is the argument that this education should reflect the business environment facing business today and tomorrow not the world of yesterday. The underlying assumption is that the business world of the late 1990's and early twenty first century is fundamentally different to the business world experienced during most of the twentieth century. There is a new economic, industrial and business paradigm in which the conditions and requirements of success are fundamentally different from those in the past.

The kind of questions asked by workers, managers and business leaders from Akron, Ohio to Zjer jiang in China and from Birmingham, England to Yokohama, Japan show surprising similarities. They ask;

- How do I deliver more for less?
- How can I build on my core skills and strengths while constantly adapting my capabilities or re-engineering my business?
- Can I survive in the short term while preparing for the long term?
- How do I think global and act local?
- Why is it that whatever I achieve, I remain dissatisfied and under stress?
- Can I satisfy the financial expectations of my stockholders while meeting my social responsibilities?

People across the world sense that fundamental changes are occurring in the business world. Typically, they feel a mixture of dissatisfaction and anticipation at the changes and the social, economic and commercial responses.

Their dissatisfaction comes from awareness that the old solutions do not work any more. IBM, ICI and GM are typical of the giants that learned to dance but then found that the music has changed. They are struggling to fit the old steps into the new tune. IBM failed to understand how quickly the catch-

phrase - no-one was ever sacked for buying IBM - could turn against them. CEOs started asking whether IBM's were being bought because they were the safest machines or the best machines. ICI found that its committee structure changed from being a source of stability and strength into a barrier to change. General Motors had built fifty years of success on the dedication of its cohorts of organisational men. They were organised into a managerial bureaucracy that could mobilise massive resources against known goals. When goals and solutions are unknown or misread, the very capacity of large enterprises to wield massive resources leads to the proliferation of problems.

Their anticipation comes from the successes that are achieved. Adventure capitalists like Richard Branson at Virgin and Paul Fulton at Sara Lee have redefined their industries to their advantage. Others, merchant venturers like Jack Welch at General Electric and Allan Sheppard at GrandMet, redefine their corporations to get ahead. New generation entrepreneurs like Anita Roddick have wedded business success to new approaches to governance and business responsibility. At firms like Shell, resources are invested in codifying approaches to environmental management that allow financial control to be wedded to social responsibility. These successes are not confined to the rich North. Innovative approaches are as likely to emerge in Tata Industries of India as in ABB of Sweden. They have, however, learned the same lesson that the US military learned after the Vietnam war. This lesson is that: "the determined effort to fight the war with the approaches and techniques of the last conflict was the surest explanation of defeat despite the resource and logistics advantages available to us."

Lecture 1

The Cabbage Patch Kid

The last few years have seen a ferment of opportunities and ideas in the business world. This is vividly illustrated in the speed with which fashions in thinking about business change. Sticking to your last is no sooner understood than it is overtake by the search for competitive advantage. Time based competition soon gets dated in the battle for re-engineering. The focus on core competences and capabilities struggles to answer the question - is it possible to shrink to greatness.

This turmoil - in ideas, markets and technologies - has parallels in the history of business and in other fields of human endeavour. Turmoil of this kind characterises revolutionary change when one set of ideas and certainties are overtaken by a new set. In effect, one paradigm or way of thinking and working is giving way to another. It occurred at the end of the nineteenth century when the British industrial paradigm of the small, personal, manufacturer/trader was overwhelmed by the corporatist, managerial revolution that emerged in the USA and Germany. British corporations and the British management system could not compete in world markets against the ability of US firms like Standard Oil, Armco and later General Motors or their German equivalents like Bayer and Mercedes Benz.

British industries and firms that entered the late 1880's as world leaders failed to appreciate the depth of the change in the industrial world that was caused by the new industrial revolution. They adopted new technologies but did not recognise the need to change their thinking to tap the real potential of the new machines and ways of working. These British managers were steeped in the batch production that characterised industries like textiles. They lacked proper qualifications and believed managers were born not made. This fitted conveniently into a deferential culture. New ideas equated to new threats.

Little wonder that they could not compete with the new highly qualified US and German managers who saw properly organised science and technology as an opportunity not a threat. Education, training and development in the USA and Germany reflected the needs of the new managers and the new industries. The Business Schools in the USA and the Fachhochschulen in Germany symbolised this link between training and performance. The new corporation men might be grey but they knew their subject. The new corporations adopted the new ideas about markets, research and development and business organisations. This allowed them to develop global positions in the richest markets.

The Secret of Their Success

At the heart of the managerial paradigm of the twentieth century lay the search for control. Managers and corporations wanted to bend technologies, markets, thinking - even communities - to their will. The secret of General Motors success lay in the superb management control systems designed and developed by Alfred P. Sloan. In the vast corporate empires, people knew where they stood. They could probably find themselves somewhere on an organisation chart. They spoke a common language probably developed at Wharton or some other business school. They shared values that they knew were superior to those available anywhere else. Once they knew their goals they could mobilise vast resources to achieve them.

They reached the zenith of their achievements in projects like delivering the vast arsenal required to win World War 2 or putting a man on the moon. The solutions were known - more tanks, aircraft and ships or getting enough thrust into the Apollo rocket to get the payload to the moon and back. The twentieth century manager could manage to resources to deliver the goods when answers were known. Its greatest failure occurred when the problem was recognised but the answer was not known. President Nixon tried to match Kennedy's promise about manned space flight. He promised a cure for

cancer within a decade but all the resources in the world cannot get you to a destination - if you do not know where it is.

Now, this managerial paradigm is collapsing under the same kinds of pressures that destroyed the nineteenth century systems of management. The rise and fall of IBM symbolises both the strength of the old system and its inherent weakness. IBM successfully fitted the new information technologies into the old production systems - it used the systems and structures of the mass production and Fordist age to build its success. It succeeded - to a point.

It failed, however, to see the logic of its own situation - ignoring the implications of the software revolution and the changes in the marketplace. It had the chance to be the first virtual organisation. It was capable of using its technologies and market power to breakdown the barriers between organisation and strategy, between its internal and external operations and between its reservoirs of information and expertise and the creation of a learning organisation.

IBM's problems are not unique. Proximity to the technologies that drive change does not guarantee either an ability to integrate the underlying assumptions of the new technology or a capacity to adapt to the implications of the new environment. Education, itself, faces the same problems. Universities, for example, may assume that their involvement in learning makes them learning organisations. This belief hardly seems valid given their resistance to change and reluctance to integrate their own lessons into their operations. Adaptation is the challenge facing organisations that strive to succeed during a revolution and come out ahead. The track record is not good. In the past, new enterprises - not changed existing organisations - have dominated the future. The question facing existing ventures is whether they can adapt to the patterns that are evolving.

Ways Forward

The ways forward are already emerging. They can be seen in the success of those firms that have faced up to the risks involved in change and built responses based on current reality not wishful thinking or easy options. Change is endemic today. Technologies, markets and organisations are more dynamic than at any time in history. Products based on an innovative technology can emerge, gain global prominence and virtually disappear in a few years. This is as true for Cabbage Patch Dolls as it is for laser disks, integrated software systems like Lotus Symphony and semi manipulable, robotic arms.

Technology life cycles are shrinking in response to the push of innovation and the pull of market demand. Radio and film took forty years to move from innovations to mature products, but the portable telephone took a mere four years to shift from being an exciting novelty to a public nuisance. Technology push increases as the science base expands with more PhD students, larger research establishments and growth in Research and Development expenditure.

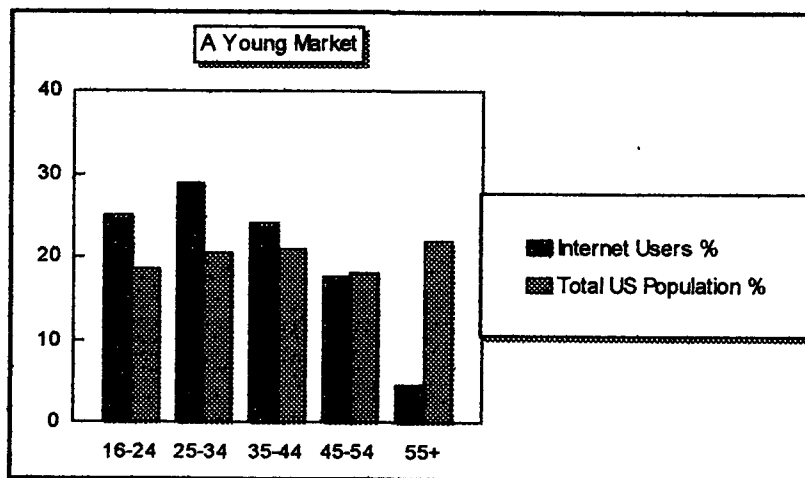
Markets show no sign of being satiated. Consumers, especially those with disposable incomes, expect a constant flow of new products and services. Surveys of industrial and retail buyers consistently show that they expect to be more innovative. They anticipate more innovation from their suppliers with shorter lead times and more features. The same demands and pressures exist in the public sector with constant demands for new products or services in sectors as diverse as defence and education.

The success of the internet symbolises several aspects of these changes. The dramatic growth in internet usage is posing a major dilemma for telecommunications companies. Surging demand for access makes it hard for service providers to keep up with demand. There are, already, claims that the Californian telecommunications system will not be able to meet demand by 1999. Simultaneously, there is evidence that new access systems and

product innovations will transform usage - probably to the disadvantage of the telecommunications companies that are currently benefiting from internet use.

File Transfers and Power Transfers

The internet market itself provides a paradox for business. Superficially the market is very attractive. It is concentrated among high value customers who are younger, more likely to be better educated and richer than the rest of the population. Research by Booz, Allen and Hamilton highlights the strength of internet use among younger sectors of the population.



The attractiveness of the market is increased by the high median household salaries that is over half as much again as the average for the US population - \$66,700 versus \$42,400. In part this reflects the high terminal education age of internet users. Over eighty per cent of internet users in the USA have college degrees. This sharply contrasts with the average for the US population of thirty-three per cent. Despite the appeal of the internet market, no-one - apart from internet service providers - have managed to use it effectively as a marketing tool.

Organisations are obliged to adapt to these changes or fail to meet the needs of their shareholders, clients, employees or communities. The fierce debate about the ways to manage successfully in the contemporary environment reflects the wider environmental turbulence. The focus on core competences

or the pressure to re-engineer are symptoms of the effort to get control of the business while facing turbulence in the wider environment.

Organisations and their managers are expected to reinvent themselves to cope with change while holding onto their core competences and capabilities to sustain themselves and keep ahead of their rivals⁴. In this environment, successful innovators do not merely adopt new technologies, they adapt their business and work practices to new technologies. They seek technologies that allow them to jump generation gaps in products, processes and services⁵. The current wave of technological development has the capability to change the rules of business. Information technology, for example, allows consumers to play a more direct and immediate role in product and service development, design and delivery. Mass customisation can deliver products to buyers at prices that were once seen as intimately linked with mass production and the economies of scale. A new economics of specificity and change is emerging to rival the established economics of scale or stability.

Tectonic Shifts

This is, in turn, is linked with movements in the ground rules of competition. The characteristics of successful organisations have evolved from the giant, multi product, multi-functional organisation to more tightly focused but flexible ventures that built themselves around the capabilities of their people. In these organisations; hierarchies, authority and control are less importance than involvement, ownership and creativity. *The Economist* recently linked "these tectonic shifts and a tsunami of transformation" with "the end of the old economic order." This analysis may be reflected in the academic or popular

⁴ Goss, T., Pascale, R. and Athos,A. (1993) 'The Reinvention Roller Coaster: Risking the Present for a Powerful Future' November-December

⁵ Iansiti, M.(1993) 'Real World R&D: Jumping the Product Generation Gap' Harvard Business review May-June

texts quoted by *The Economist* like "*The End of Affluence, The End of Work, The Death of Inflation, The Death of Competition, The End of Geography, The Death of Money ... The Death of Economics*" or even my own *Welcome to the Revolution*.

Education for Business and Business Education remain locked into traditional assumptions. These include beliefs about the nature of exchange in markets, optimal organisational form and size, the role(s) of the individual and people, organisational and market boundaries, planning, careers, the primary means of production and sources of competitive advantage etc. that have increasing difficulty in reflecting contemporary reality.

Issue	Old Assumptions	New Propositions
Nature of Exchange	Supplier led and specified	User/consumer led and specified
Organisational Form	Structured and hierarchical	Flexible and non hierarchical
Control Systems	Tightly defined from top	Loosely specified from bottom
Size	Large and unitary structures	Small and federal
Organisational Boundaries	Defined to maximise internal efficiency	Defined to maximise external effectiveness
Market Boundaries	Clear and sustained	Blurred and dynamic
Planning	External and formal	Internal and informal
Careers	Long term and defined	Short term and undefined
Leadership	Professional	Entrepreneurial
Priorities	Growth and control	Sustainability and opportunity

The fit or, more often, the failure to fit between the organisational form, management expectations and market needs create many of the paradoxes that dominate business life today. The notion of continuous discontinuity has an increasing role in the analysis of contemporary business but scarcely figures in education for business. This is despite discontinuity's ever more pervasive impact on business issues. The internet is an especially potent symbol of the way in which a technological innovation can blur into a social

development and, then, in a business form or marketplace. Features of each of these stages plays a part in shaping a new form of business environment.

Continuous Discontinuity

The notion of continuous discontinuity encompasses the principle of continuity that underlies the assumptions of many highly effective organisations. They establish and maintain an on-going partnership with all their employees, the community and the wider society. According to Frankfurt Allgemeine, Germany's Meile, a medium sized but profitable producer of premium washing machines "manufacturers as many components as possible, preferably within a small region with firmly rooted workers." They share this desire for continuity with Britain's Marks and Spencer. It establishes long term relations with its major clothing suppliers. Some go back to the origins of the stores group early in this century when manufacturers like the Dewhurst Group supported its early development. These relationships have parallels with the Japanese Kieretsu and the Korean Chaebol systems of commercial relationships. These networks are an integral part of the successful development of global giants like Mitsubishi and Samsung. Continuity is not enough to explain the success of these firms.

They avoid the sterility and rigidity often linked with continuity by building in innovation and its associated discontinuities. Innovation might be technical. Smaller German companies like Meile have an outstanding record for technological innovation despite placing a premium on continuity. They achieve this by adopting an integrated approach to innovation. This approach weds their expertise with that of their suppliers and customers through partnership development. At Marks and Spencer, the trust created between the firm and its suppliers encourages them to initiate new developments that open new market opportunities for Marks and Spencer. In Japan, large customers like Toyota support their suppliers in their search for innovative ideas in production, processing even sourcing.

An American Tale

Anglo-US corporations from both sides of the Atlantic remain locked into old style separated, almost adversarial ways of thinking and managing. These had a role when demand generally exceeded supply. Products were homogeneous and technological solutions outweighed human inputs in determining price/output relations. This contrasts with the needs of the new environment in which supply exceeds demand, product differential is the key to success and adding value through people is the key source of production advantage. Anglo-US firms face serious difficulties competing with a Japanese system in which "actual consumer demand", "pulled" the product through the factory. Therefore, the long standardised production runs beloved by Ford, Nuffield and Sloan were replaced. The final assembly line in modern car factories sees wagons, two-door hatchbacks, and four door sedans with red, beige and white bodies, with left-hand and right-hand steering wheel, with a variety of transmissions, engines and options, rolled one after the other along the line "seemingly at random" in response to customer orders flowing on computer printout into the factory from dealers⁶."

The division of labour to produce homogenous products was the great US contribution to mass production. Litterer describes how it gave US producers massive advantages over their European rivals;

"The skill and knowledge of the Europeans ... was the equal and sometimes the superior of that of the Americans. The difference was in how this technical knowledge and skill was used. The European manufacturer used it to make a product. The American manufacturer used it to make a process for making a product⁷."

⁶ Locke, R. (1996) *The Collapse of the American Management Mystique* Oxford, Oxford University Press

⁷ Litterer, J. A. (1961) "Systematic Management: The Search for Order and Integration" *Business History Review*, Spring

Scientific management was at the heart of this American approach. Job analysis, work measurement, time and motion were all developed to enhance this process of making product. They achieved this by breaking down work into its component parts, reallocating this work among workers who stopped being skilled operatives and became machine minders.

In this way, a fundamental change took place in the contract between workers and management during the second industrial revolution in North America. During the first industrial revolution the direct control by management of the industrial workforce was very limited. In key sectors like railway construction, ship-building, mining even textile production, management's direct role in the production process was very limited. Controls were largely exercised through internal or external subcontractors. Sometimes their relationship was indirectly with the employer through contractors. Elsewhere, the relationship was mediated through crafts or craft unions and guilds. They retained their position through "a jungle of restrictive practices" that did nothing to improve output but did sustain the worker's sense of control over his job. The Taylorite⁸ "scientific management" revolution transformed this.

Self Help

It is no coincidence that Taylor's works soon overtook those of Samuel Smiles in popularity among the new factory owners and managers. Samuel Smiles emphasised the importance of Self Help for an industrial workforce that still retained some control over its work practice. Taylor sought to eradicate this control and transfer authority over the means, form and volume of output to managers and owners. It is intriguing to read of the sustained popularity of Smiles work in Japan well into this century after its translation by Masanao Natkamura. His ideas have a greater consonance with the

⁸ Taylor, F.W. (1911) *Scientific Management* New York, Harper

Japanese faith in a highly integrated and motivated workforce that retains considerable control over its work.

This Japanese pattern of management has many parallels with the approach adopted in Germany. In Germany, the notion of co-determination is well established. Co-determination in its broadest sense expressed the belief that workers and management share in determining the direction of the enterprise and its operations. The commitment had two parallel effects that together sustained the commitment to integrated working practices. First, co-determination makes firms reluctant to engage in large scale reductions in labour. As it's hard to dispose of labour, the incentive is to focus the companies' activities in those areas of business that are less vulnerable to competition.

For much of German industry this means lower volume, higher value, technically complex products and services where quality of labour is more important than price. The second effect is that co-determination reinforces the importance of technical expertise (*Fachkompetenz*) at the expense of administrative expertise. Managers gain status from technical expertise that can be aligned against the worker's expertise not a separated administrative expertise. Simon⁹ describes how successful German companies rate "industry specific qualifications highly ... Of the 250 member workforce at Aqua Signal, world leader in ship-lighting systems, 50 are engineers. At Hauni/Korber the more than 1,500 engineers on its payroll represent almost one in four employees."

In a sense, this emphasis on integration harks back to the previous industrial revolution with its notions of craft and technical skill. Its key relevance for the current revolution lies in the bridge it offers to new technologies and markets. The new technologies provide flexibility and adaptability. The new markets are built around customer expectations of value and the fit of products and

⁹ Simon. H. (1996) *Hidden Champions* Cambridge, Mass., Harvard Business School Press

services to their needs. The integrated company, dedicated to tapping these technologies and satisfying these needs, provides the way forward during this revolution.

A Framework for Development

Education for business will need to shift focus while acknowledging the impact of change and the collapse of traditional economic relations. It is evident that neither the fragmented workforce nor the separated management are required by the dominant technologies nor do they suit today's markets. Rigid and mechanical technologies and information systems were hard to separate from rigid and mechanistic organisations. Fluid and flexible technologies and information systems should not be separated from flexible and organic management structures.

This shifts the responsibility of management away from detailed specification of tasks and tight control to leadership based on understanding the capabilities of the enterprise. Values gain special importance as they provide the means of integrating the venture at the lowest cost to the greatest effect. Warren Bennis former University President comments that (traditional) "organisations are by their nature bureaucratic, with a mind set of control, order and prediction. In more stable times, when manpower resources were channelled to make stovepipes or steel these techniques worked well. Now we are moving towards organisations that are more like temporary systems, networks or clusters. The mind set of these organisations will be alignment, creativity and empowerment."

Each of the processes identified by Bennis - alignment, creativity and empowerment - requires a higher level of understanding of the capabilities and competences of the organisation than the control and ordering tasks under traditional structures. This is especially true if managers expect to predict - with any degree of accuracy - the likely results of their actions. The failure to align the capabilities of the organisation to the needs of the environment is the best available explanation of the problems of Sony at

CBS, Marks and Spencer at Brooks Bros, Imperial Group at Howard Johnson and a host of other problem purchases.

This failure to align capabilities and needs is equally evident in organic developments. The failure of the EMI body scanner shows how a technological success can turn into a market failure when the capabilities of the firm and the needs of the market are out of synch. EMI had few of the capabilities required to open up the US market for its product or defend its interests when Jimmy Carter imposed barriers to its development. General Motors' spectacular failures at its Hamtramck showed that its old skill at buying its way out of a hole worked well when the solution followed a well worn route. This approach was counter productive when the need to think was as important as the need to spend. The Mercury Division of Cable and Wireless learned the same lessons in the UK when it tried to win market share by matching the policies and capabilities of its giant rival BT.

One More Time

Alignment is not the neat of straightforward process implied by some writers. It involves in-depth understanding of the enterprise and its people - inside and outside the organisation. It demands a willingness to look beyond the obvious features of the firm's past successes into the real reasons for their success. Corporations enjoy repeating past successes - even if the world has changed and they turn into modern failures. Kodak have responded to virtually every change in the camera market by relaunching the Brownie in some form or other. These re-packaging exercises - The Instamatic, The Disc camera even its 35mm single use camera - won shrinking shares of a smaller(in real terms) market. In the process, Kodak moved from being a leader and innovator with the Brownie to a follower with the 35mm single use camera.

The capacity to break the mould and identify new ways forward is closely identified with the notion of continuous discontinuity. Continuity is important but is a platform for development not a trap or easy option. The ability to

manage discontinuity must be integrated into existing or revised control and operations. This allows the enterprise to focus on the opportunities inherent in change and the value of effective innovation. The ability to manage change and innovation cannot be confined to the product and process aspects of the organisation. It must extend into the heartland of the enterprise through its mission, values and culture. Issues like fairness in the workplace, the avoidance of gender or ethnic bias are heartland issues not peripheral topics.

There is some evidence¹⁰ that organisations with a strong gender bias or that fail to create real opportunities for women are more likely to be locked into the old style Taylorite rigidities. Research on women owned or managed business suggests that they are more likely to adopt open, integrated and consensus approaches to organisation and business development¹¹. The gender bias is a major problem for European businesses. Women constitute 41 per cent of the labour pool, but less than 15 per cent of the managerial labour pool and only 1 per cent of main board directors.

The business benefits of a stronger female role in decision making positions is clearly articulated by Roger Young, Director General of Britain's Institute of Management. He notes that "female ways of managing - consensus decisions, the ability to handle several projects at a time and strong interpersonal skills - will be even more appropriate in the next millennium." Consensus decision making is especially important in rapidly changing industries where the inability to establish a firm framework for consensus inhibits progress and creativity. The key question is - do we have yesterday's business education - preoccupied with control, resource exploitation and market power for tomorrow's business environment dominated by change, sustainability and partnership?

¹⁰ Hakim, C. (1979) "Occupational Segregation" Department of Employment, Research Paper No 9, London

¹¹ Carter, S. And Cannon, T. (1992) *Women as Entrepreneurs* London, Academic Press