Title	Re-engineering Japanese business processes : West meets East and hammer meets confucius
Sub Title	
Author	Drummond, Damon L. Martinsons, Mans G.
Publisher	Society of Business and Commerce, Keio University
Publication year	1997
Jtitle	Keio business review No.35(1997) ,p.1- 25
JaLC DOI	
Abstract	The business process re-engineering (BPR) phenomenon originated in the United States and has recently gained widespread international corporate popularity. Unfortunately, the results of such information technology-enabled change efforts often fall short of expectations. The importance of cultural factors to BPR outcomes and the rising global economic role of Japan create a need to consider this deliberate and radical form of intervention from a cross-cultural perspective. This article examines the meaningfulness of re-engineering in the Japanese cultural context. A number of cultural-sensitive measures are used to examine a set of constructs. The role of management information, the nature of intra-organisational relationships and preferences among organisational development models are considered in order to compose a set of propositions for further research and to provide process change management insights for practitioners. The significance of this considered cultural transformation is discussed in the context of Japanese business process re-engineering.
Notes	
Genre	Journal Article
URL	https://koara.lib.keio.ac.jp/xoonips/modules/xoonips/detail.php?koara_id=AA00260481-19970000-00704557

KEIO BUSINESS REVIEW
No.35, 1997
pp.1-25.

Final version received on 13th October 1997

Re-engineering Japanese Business Processes: West meets East and Hammer meets Confucius

By

Damon L. Drummond

Maris G. Martinsons

Abstract

The business process re-engineering (BPR) phenomenon originated in the United States and has recently gained widespread international corporate popularity. Unfortunately, the results of such information technology-enabled change efforts often fall short of expectations. The importance of cultural factors to BPR outcomes and the rising global economic role of Japan create a need to consider this deliberate and radical form of intervention from a cross-cultural perspective. This article examines the meaningfulness of re-engineering in the Japanese cultural context. A number of cultural-sensitive measures are used to examine a set of constructs. The role of management information, the nature of intra-organisational relationships and preferences among organisational development models are considered in order to compose a set of propositions for further research and to provide process change management insights for practitioners. The significance of this considered cultural transformation is discussed in the context of Japanese business process re-engineering.

Key Words

Business process re-engineering, information technology, business cross-cultural and management process comparisons, Michael Hammer, Confucius, Japan, United States

Introduction

Business Process Re-engineering (BPR) evolved from the experiences of a few United States-based companies in the 1980s. They used information technology (IT) to change their work processes radically. This dramatically improved one or more dimensions of their performance (e.g. costs, quality, cycle times). During the first half of the 1990s, BPR attained an immense level of popularity among American corporate managers who were seeking more dramatic management-led improvements than Total Quality Management (TQM) could provide. Surveys of Western business executives since 1992 have consistently found BPR to be among the most important management tools (see Kinni, 1994; Maglitta, 1995). Meanwhile, *Reengineering the Corporation* (Hammer & Champy, 1993) has been a best-selling business book since its

publication in both the West and Japan.[1]

BPR has been conceptualised in many different and often contradictory ways by its proponents, assailants, and sceptics. For the purposes of this article, BPR is defined as the *radical* redesign of business processes enabled by information technology to achieve *dramatic* improvements in important measures of performance. Re-engineering focuses squarely on the *process*, a "set of logically related tasks performed to achieve a defined business outcome" (Davenport and Short, 1990, p. 4). The organisation is viewed as a collection of *horizontal* processes rather than *vertical* functions. In contrast to much of the traditional management orthodoxy, the use of BPR assumes that rapid and transformational structural changes are both necessary and possible.

However, the efficacy of many long-standing management prescriptions has been questioned as a result of rapid technological advances, a more sophisticated labour force and increasing customer demands for quality and differentiation. For example, advances in information technology (IT) have dramatically altered the economies of production and co-ordination, making it difficult to justify Scientific Management principles (see Taylor, 1911), such as decomposing work into highly specialised tasks and maintaining rigid divisions between managers and workers (Conti & Warner, 1994; Hammer, 1990). An assortment of new theories and practical recommendations have been advanced in an attempt to reverse declining business performance.

The prevailing outlook for change has demanded ever increasing revolutionary solutions. The TQM movement, which was introduced in the 1950s[2] has been identified as a factor of Japan's post-war industrial success and subsequently became popular in the West during the 1980s. This movement advocated incremental and continuous improvements in business processes. Since the early 1990s, TQM has been upstaged by another more radical process-based intervention that has became very fashionable in many Western countries. This new industrial engineering (Davenport & Short, 1990) has been variously called *business process re-engineering* (Hammer, 1990), *core process redesign* (Kaplan & Murdock, 1991), and *(radical) process innovation* (Davenport, 1993a; Martinsons, 1995). The remainder of this article interchangeably uses the term *re-engineering* and the acronym *BPR* to refer to this intervention.

The recent academic and professional literature offers plenty of advice on how to re-engineer an organisation as well as innumerable reports of BPR experiences. Significantly though, these prescriptions and descriptions have almost invariably come from North America or Europe. There has been a notable paucity of both conceptual and empirical study of BPR in non-Western settings. Although most management principles can be widely applied, the sustained divergence of cultural values at the societal level may be expected to influence heavily their success in different contexts (Hofstede, 1993). Indeed, Drummond (1991; 1993), Fukuyama (1995) and Kotkin (1992) are among many who argue that the most important distinctions across the world are now cultural rather than economic or institutional.

Culture is the deepest and most deterministic aspect of human life. Hofstede & Bond (1988) suggest that differences in cultural values are the "ultimate determinants of human organisation and behaviour and thus of economic growth." Shared attributes may either spur or retard socio-economic development. For example, the

[1] In Japan, the book has been translated into Japanese and sold well over a quarter of a million copies.

[2] TQM or Quality Circles was a concept created by Professor W. Edwards Deming of the United States but it was not widely recognised or practised in the U.S. or the West until after its noted success in Japan.

inability of a society to source or adopt technological innovations is highly correlated to its cultural values (Herbig & Miller, 1992; Marien, 1993; Nevis, 1983). Kedia & Bhagat (1988) suggest that the effectiveness of technology transfer is moderated by the receptivity to technological change and differences in entrenched cultural values. Culture relates to both organisations and societies. Societal (or national) culture is largely based on distinction of values whereas organisational culture is confined primarily by distinctive practice (Hofstede, 1991). Even though by definition culture is relatively stable, societal culture is much more difficult (and resistant) to change than organisational culture. An organisation may decide on a new strategic direction or a paradigm for action and its culture will adapt. Similar changes in societies occur far less frequently and typically take a long time (Hofstede, 1980).

DiBella (1993) found that the cultural setting affects both the process and product of management practices. Thus, blind faith in universal management prescriptions naively ignores the role of culture. With the rapid integration of the global economy and the growing role played by East Asia, most significantly the Japanese, there is an increasing demand to understand American management *technologies*, such as re-engineering, in the Japanese business context. This article uses a *derived etic* perspective (Berry, 1969) to theorise about the re-engineering of Japanese business processes. This involves deriving culturally-sensitive measures to tap appropriate constructs by searching for conceptual equivalence among cultures rather than by imposing a single set of cross-cultural measures.

The social psychology, sociology and technology management literature are used to highlight the issues associated with the transfer a methodology or technology such as BPR across societal cultures. Effective technology transfer and assimilation are undeniably affected by economic, institutional and industry-specific factors, but these are beyond the scope of this article. The focus here is on the impact of the differences in the societal culture of the Chinese, Japanese and the Americans on the management of IT-enabled process changes.

The next two sections briefly review the prescriptive and descriptive BPR literature. A *cultural cluster* approach to comparative management (see Robinson, 1978) is then used to outline Confucian-based societal values and resulting management systems that prevail in Japan. Japan is regarded as rather homogenous in cultural make-up. Kogut and Singh (1988) have developed a cultural distance measure which shows the Americans and Japanese at opposite ends of the spectrum. This is consistent with the four dimensions documented by Hofstede (1980) that include contrasts in power-distance, individualism and collectivism for Japanese and Americans. In this context this paper develops a number of specific cross-cultural propositions for further research that consider business process change and its management in the American versus Japanese business contexts. This highlights the important role that societal cultural plays in constraining and shaping what managers can do in making organisational changes.

Re-engineering Prescriptions

Michael Hammer is arguably the leading advocate of *re-engineering*. His extraordinary success in terms of consulting contracts and book sales reflects the sustained

prominence of the BPR phenomenon. Hammer (1990) stresses that organisations should not merely embed their outdated processes in silicon and software. Instead of being constrained by current practices, it is imperative to start over and to re-think the entire business. Re-engineering requires managers to ignore or even destroy the *status quo*, and start with a *clean-slate* in order to fundamentally change way work methods.

Thomas Davenport (1993b) views such (radical) process innovation as a synthesis of the process management approach, which has been commonly used in Japan for several decades, and the Western management focus for dramatic improvement. Building upon this perspective, incremental approaches, such as TQM, may complement more radical interventions, such as re-engineering. The latter promises quicker rewards but entails greater risk and organisational trauma. Davenport readily admits that BPR is more of an art than a science; the individual components discussed in his highly prescriptive book (Davenport, 1993a) do not constitute a formal methodology. Nevertheless, it is possible to examine the nature of re-engineering by drawing on relevant prescriptive advice and practical experiences.

Based on the dictum "don't automate, obliterate" (Hammer, 1990), managers must determine what they want their organisation to be and do, identify what their current (and potential) customers' value, and then design and implement a business model that best meets these needs. The work to be done should define the organisation rather than *vice versa*. Specific BPR aims may include reduced costs, enhanced flexibility, faster response, improved productivity and/or higher quality products and services.

The value of each process is considered. Rather than merely asking how current processes can be streamlined, it is necessary to step further back, question the purpose of each process and, if a process actually is necessary, ask what is the best way to do it. The generic goal is to ensure that organisational resources, such as materials, labour and data, are effectively transformed into products, services and information, which are distinctly valued by internal or external customers.

The re-engineering effort concentrates on the performance dimensions that are most rewarded in the business environment. Often the primary goal of a process or group of processes will be modified, for example from cost-efficiency to timeliness. It is common to reduce dramatically both the number of people involved in the process and the *hand-offs* between them. The rationale is that each hand-off is a potential source of miscommunication and delay. Process improvements, especially those based on the innovative use of IT, are particularly important sources of differentiation in non-manufacturing industries. Individual service firms are less likely to benefit from proprietary access to financial capital, raw materials or human capital.

With BPR, both the physical and informational dimensions of the process are considered. In fact, Hammer (1990, p. 110) argues that the growing power of computers and telecommunications makes it possible to subsume the information-processing work into the activities that produce the information. There is a recognition that the organisational role of IT is not limited to facilitating management control and increasing the efficiency of fragmented tasks. Based on its constantly declining cost and improved functionality, IT can increasingly be used to drive business transformation by integrating and improving the processes that deliver products and services.

According to Hammer & Champy (1993), top management is responsible for presenting a compelling BPR vision and overseeing its implementation. Senior ex-

ecutives must spark the organisational change effort and create an environment that is conducive to its success. Process teams with members from assorted levels of the existing hierarchy, appointed to focus on specific business processes. Processes are redesigned by considering what customers value and how the combination of people and technology may be best deployed. The process teams subsequently help to implement the *new* ways of doing business.

Re-engineering is based on an assumption that competitiveness can be increased by doing things differently (making operational changes) as well as by doing different things (formulating and implementing new strategies). It fits the definition of *large-scale organisational change* offered by Ledford et al. (1991) as a lasting change in the character (design and processes) of an organisation that significantly affects its performance. As shown in Table 1, processes re-engineering represents a large scale, broad scope and rapid pace of change in contrast to the incremental process improvements that are often associated with TQM and popularised by the post-war Japanese management *Kaizen* (continuous improvement[3]) practices (see Imai, 1986).

Table 1. Process Improvement versus Process Re-engineering

	Process Improvement (*Kaizen*)	**Process Re-engineering**
Underlying philosophy	Maintain harmony	Disrupt the status quo
Starting point	Existing processes	Begin anew (Clean slate)
Nature of change	Incremental adaptation and adjustment of existing system	**Radical** restructuring and transformation of system
Pace of change	Slow and ongoing	Rapid and completed within a short time frame
Scale of effort	Moderate	Large
Scope of change	Narrow	Broad
Risks and rewards	Moderate	Major
Frequency of change	Continuous	Discrete/periodic

Adapted from: Davenport (1993); Drummond (1991); Martinsons (1995).

The deliberate nature of re-engineering is also consistent with organisational development (OD) models, whereby managers explicitly *create* change. The OD tradition includes many normative frameworks for change in order to raise organisational effectiveness and stakeholder well-being (Porras & Robertson, 1987). Planned interventions are used to move from an undesirable current state to a more desirable future state. According to the classic Lewin (1947, p. 34) model, the change process consists of three stages:

- **unfreezing** a present equilibrium state to create a climate for change
- **moving** from the initial state to a new end state
- **refreezing** once the desired end state has been reached to create a relatively permanent new state.

[3] Japanese terminology translated into English.

The *desired* post-BPR organisation is based on a small set of value-adding processes rather than a command-and-control hierarchy. These processes are likely to cross the traditional vertical boundaries between business functions. For example, a new product development *process* may span the research and development, engineering, marketing and manufacturing *functions* of a firm. Ideally, an individual or a small team will perform all the tasks that make up a process. Alternatively, multidisciplinary groups will co-ordinate their cross-functional activities. The common result is a flat and clustered organisation with high levels of lateral communication.

Such radical organisational changes must have the commitment of the whole organisation in terms of both understanding and active participation (Cummings & Huse, 1989). Genuine re-engineering is not possible without empowered management practices, which delegate decision-making responsibilities and provide increased information access to lower organisational levels (Bowen & Lawler, 1992).

Dramatic improvements in process completion times, customised services and other business performance dimensions are unlikely if key operational decisions cannot be effectively made by those who are closest to the action. Process teams and individual workers must have the skills and self-confidence to accept responsibility. They must also have the power and information to initiate and regulate their own work behaviours. The effective use of timely and comprehensive data from advanced IT applications will enable them to deliver customer-valued products and services.

Most of the prescriptive BPR literature also recommends that employees be allowed to redesign *their* processes consistent with the way in which they *interpret* the management-outlined workflows. The sense of accomplishment from doing meaningful work can then serve as a complement to financial incentives as a motivating force for organisational members. A recent meta-analysis report (Wagner, 1994) indicates that participatory management practices have statistically significant positive effects on both performance and satisfaction. This is consistent with earlier research that showed that greater user involvement is correlated with MIS implementation success (Ives & Olsen, 1984).

Empowered process management and wide information access are consistent with the low power distance and strong individualism found in America (Hofstede, 1980). Meanwhile, the BPR ideology is consistent with a belief that organisational performance can be improved through the application of scientific principles. The emphasis on inductive thinking and rational problem-solving reinforces a well-established tradition of management science in the U.S. corporate world (Hsu, 1970). More generally, re-engineering fits with the American psyche of bold and progressive initiatives (Grist, 1994).

Re-engineering in Practice

Reports from the U.S. indicate that the most successful re-engineering initiatives explicitly aimed to improve specific performance measures, solicited expertise from a wide range of people, and created high levels of support and commitment among those responsible for implementation (Bashein et al., 1994; Cooper, 1995; Leth, 1994). However, as more and more organisations attempt to alter their workflows radically, the tremendous pain and expense that accompanies genuine re-engineering efforts

has also become increasingly apparent. Most of the impressive BPR claims in the professional literature appear to overlook conveniently the perspiration of implementation that must follow the inspiration of design.

Recent United States surveys indicate that more than half of all completed BPR projects have produced an unsatisfactory result (King, 1994; Moad, 1993; Bashein et al., 1994). This does not include the countless numbers of undocumented BPR efforts that have been abandoned. Some of these partial or total failures have occurred because people who should have been involved were not, or because critically needed resources were not available. More often, the radical nature of proposed changes has overwhelmed these involved (see Leth, 1994; Reger et al., 1994). Simply stated, re-engineering did not fit the existing organisational culture.

Many managers have failed to create the sense of urgency in leadership that is needed to initiate re-engineering successfully. Others have failed to make the cultural changes needed to institutionalise the redesigned processes. Workers have also resisted change and some have wallowed in prolonged death rites for the old system rather than embracing new opportunities. Anecdotal reports also highlight the temporary nature of both the employee motivation that stems from BPR awareness campaigns and the enhanced co-operation that is derived from team-building exercises. Even the results of BPR within a single firm can vary. An initial project in one firm slashed operating costs, cut product prices and facilitated business growth at three times the industry average. However, a follow-on effort failed because of waning managerial support and the absence of a clear focus.

In Japanese the written *kanji* characters for "crisis" are composed of two parts—one signifying "danger" and the other "opportunity". The implication is that an opportunity can only be seized by taking some risks. This rationale is certainly true for re-engineering (see Hammer & Champy, 1993). Despite the formidable obstacles and the mixed results reported in North America and Europe, firms in Japan have initiated re-engineering projects.

Japanese Business Process Re-engineering

After the Second World War, Japan began to rebuild itself and looked outside for models to solve its industrial and economic problems. During this embryonic period, Japan embraced the American-conceived idea of TQM. This has been cited widely as probably the single most significant factor that led to Japan's post-war economic success (see Fruin, 1992; McMillan, 1985). Since the end of the 1980s, Japan has been experiencing its worst post-war economic recession. Japanese companies have been frantically seeking methods to reduce their costs. Again, as in the 1950s, Japan has looked to the West for solutions to its internal difficulties. BPR at the beginning of the 1990s was dubbed the American revival technique and the Japanese identified it as a plausible response in their own economic milieu. In a 1994 survey of Japanese senior enterprise managers, over 74 per cent responded that some aspect of BPR had been discussed and of these 28 per cent had implemented BPR into their plans. One of Nissan Motor's U.S. director's is quoted as saying, "*...in five years...the Japanese won't only be the highest quality people, but they will re-engineer and become the most efficient as well*" (Alter, 1994). This type of suggestion may be considered rather repugnant by

many in a Japanese society where long-term employment and incremental and consensual change has been the societal norm. Nevertheless, BPR has caught the imagination of many Japanese managers as a necessary tool to restructure towards future success.

Internationally listed companies such as Fujitsu, Japanese Finance Corporation for Small Business, NEC, Odakyu, Osaka Gas, Sharp Electronics, Kao, Matsushita Electric, Furukawa Electric, Kawasaki Steel, Sumitomo Credit, Ryoshoku Trading and Seiko-Epson are amongst those who have publicised their re-engineering efforts. The following are some Japanese examples of re-engineering practices adopted: Sumitomo Credit Services re-engineered its customer complaint service process. The company avoided layoffs by focusing its re-engineering on only a few departments. Kawasaki Steel re-engineered its sales and administrative organisation and expects to reduce its white-collar workforce from 3,000 in 1994 to 2,100 by 1998. Ryoshoku Trading, a major food distributor, re-engineered its logistics process. It now relies on a sophisticated IT network that replaced numerous staff members. Seiko-Epson, who employed a company wide engineering network, has changed its product developmental processes to create new innovative products such as replaceable laptop computer displays. Seiko-Epson is also making use of IT technologies to lower costs, reduce production cycle times and track consumer trends.

In Japan the application of BPR has been quite different to that in the West. Japanese organisations have used this fashionable acronym as a model and applied it chiefly to review and improve *human* efficiency in selected parts of the business. For example, Furukawa Electric and Matsushita have both re-engineered their order entry management processes to enable more efficient product distribution. This re-engineered system is similar to the renowned JIT assembly part supply system that Japanese firms have been using for several years but it has now been re-engineered and applied to distribution networks including the trading houses, and in some cases direct retailers as well. This means that those retailers are now connected through a computer-based information system that enables inventory levels to be reduced substantially and the timely delivery of the most popular products.

One prerequisite of BPR is the use of Information Technology (IT). It is widely agreed, that IT is a primary tool in re-engineering. Further, inefficient operations are the most obvious targets for BPR applications. An area of Japanese inefficiency that is self-evident to any Westerner visiting a typical Japanese office is the low use of personal computers and IT. Given that Japan is typically quick to embrace new technologies and is the world's leading electronics manufacturer, this is surprising. However, it is due to several factors. First, the complexity of Japanese character writing system has limited the possibility for offices to use typewritten letters for many years. The use of type characters has become feasible only in the last decade with the introduction of word processors that print in a dot-matrix format. Therefore, most senior managers and secretaries are keyboard illiterate. This illiteracy is then compounded by the conservative nature of change in most organisations which tends to preserve existing work practices even when new technologies are introduced. The low saturation of IT in Japan is also a result of cultural resistance to this type of technology. This resistance could inhibit the effective implementation of BPR although there are signs of changing attitudes as the country emerges from its longest post-war recession (see Boyd, 1994; Teresko, 1994).

Information Technology

A successful IT-enabled process change effort could benefit many organisations in Japan. The appreciated value of the yen and the bursting of the bubble economy have resulted in significant financial losses for many firms and have retarded Japan's growth since the late 1980s. Japanese firms have been looking at BPR as an alternative solution to increase their productivity levels. Therefore, it can be seen that many businesses in the region have and will be forced to modernise in order to cope with increasing international competition and the rapidly-rising costs of key inputs, such as labour and land. Whereas regional economic growth in the past has come from higher input levels – more people, more education and more capital (see Krugman, 1994; Rohwer, 1996), there is now an emerging imperative to raise productivity and achieve management breakthroughs.

Given this context and the potential benefits of re-engineering, there is a need to specifically consider its suitability in the Japanese business environment. Cummings & Huse (1989) insist that the planning of an organisational change cannot ignore the context in which it is to be implemented while Markus (1983) has demonstrated the importance of considering the intended setting for a new technology. Re-engineering has been marketed as a panacea for organisational solutions but as Monteleone (1995) points out, it can be disastrous if not planned carefully and implemented correctly which must include planning for the cultural context.

BPR presumes that corporate structures and business processes govern organisational behaviour rather than the reverse (Conti & Warner, 1994). This implies that structural changes will lead to behavioural changes. However, behavioural norms constitute a tremendous obstacle to effective changes in both systems and structures. The capability of an organisation to adopt new business methods and to assimilate specific technologies will depend upon an assortment of social, economic and political factors as well as the interplay between them (Ein-Dor et al., 1993). Among the most important of these factors will be the existing cultural and work values.

Social Values and the Japanese Management Systems

An influential social value across East Asia and in Japan is the Confucian value system. Kong Fu Ze, who was later referred to as Confucius by Jesuit missionaries, lived between 551 and 479 BC. In contrast to the Buddhists and the Taoists, who sought to withdraw from the world, he and his followers advocated action and intervention (Munro, 1969). Confucianism was instrumental in creating the basis for the greater part of East Asian civilisation that was the most prosperous on earth for well over 1000 years. In Japan, Confucianism is still regarded as important but is has been mixed with Shintoism, Taoism, Buddhism, Christianity and many other minor religions. Most Japanese practice a portfolio of religions and are very pragmatic in their attitudes. This is described as *Nihonkyo* (Japanese styled religion), and defined as a unique sublimely shared and pragmatically diverse Japanese religion (Drummond, 1991). Nevertheless, Confucianism still plays a significant role in guiding Japanese social behaviour. Further, despite its political diversity over the last century, the cultural context of Japan has retained a remarkable homogeneity.

Confucianism considers it self-evident that all men are born *unequal* (see Bond, 1986). The bases for this inequality include achievement, wealth and moral example. Uneven power distributions are both prevalent and accepted. In contrast to a Western

preoccupation with individual freedom, Japanese culture stresses social order through harmony. In Japan, this is achieved through mutual and socially-earned personal respect. Indeed, in both societies, individuals are very sensitive to their position in the social structure. Social stability is also perceived to hinge on maintaining the overall social status quo, especially in the business environment. Hofstede (1980) empirically confirmed these differences, finding that Japanese social groups have much higher levels of power distance than their counterparts in the United States. Table 2 highlights some of the salient differences between American, Chinese and Japanese business cultures.

Table 2. American and Japanese Business Cultures Comparison

	American	Japanese
Philosophy of work	Protestant work ethic	Confucian with *Nihonkyo* ethos
- of decision making	Inductive thinking	Holistic thinking
	Rationality	Intuition and experience
Orientation	Domestic world orientation	International outlook
Relationship to environment	Belief that man can control nature Problem solving orientation	Belief that man is nature Pragmatic orientation
Attitudes to change	Encourage progressive initiatives	Preserve tradition while incrementally adding the new elements
Uncertainty avoidance	Seek to reduce uncertainty but certain levels acceptable	Uncertainty intolerant
Power distance	Low power distance	High power distance
Social order	Rule of law	Rule of society
Primary basis for trust	Systemic trust	Inter-personal-group trust
Nature of communications	Explicit communications, low context	Implicit communications, high context
	Function-oriented expression	Relationship-oriented expression
Basic social unit	Individual	Group (Society orientated) Shared identity
Enterprise theme	Enterprise profits supreme	Social and personal credibility vital
Information flow	Diversified information networks	Strong multi-layered networks

Based on: Drummond (1991, 1993); Hofstede & Bond (1988); Martinsons (1993).

Further, the Japanese have a high collectivism score (Hofstede, 1980). This can be attributed to another fundamental Confucian assumption—that man exists primarily in relationship to others, the Japanese deem the family as being an essential

component but who are taught from an early age that the preservation of the society is vitally important.

As discussed in the next sections, the prevailing culture has strongly influenced the contemporary management systems[4] of the Japanese.

Organisational Structures

The Japanese management style is also based on family attitudes, mutual respect and trust. Management acts benevolently towards the employees in return for their undivided loyalty. Participative group approaches to management are most successful. Both related family members and non-related members are given similar opportunities to advance in the business. In a survey of Japanese middle managers asking "to whom does the business belong?" the overwhelming response was to, "the shareholders, managers and employees in unison" (see Drummond, 1991). The typical large Japanese business is perceived to belong to the society in general.

Japanese enterprises generally concentrate on a single line of business and when diversifying into new product lines that are found to be successful, small satellite businesses are often spun-off from the parent firm and are allowed to operate separately while maintaining strong personnel and financial links with the parent. This pattern has often developed into *Keiretsu* groups.

Japanese managers have a generalist background and are professionally trained from within the firm in line with the long-term career employment culture. Similarly, Japanese industrial policy has existed since the 1950s, to ensure that there is a constant dialogue and understanding between the government and business leaders. The societal expectation is that economic and political power is generally shared amongst all stakeholders and that actions taken respect the public good as being of vital and supreme importance. Further, implicit and informal information sharing is a critical part of the culture and, likewise, decision making is a shared responsibility in many cases involving all employees in an organisation. Rather than decision making being referred to as hierarchical and top-down (as in the West) or bottom-up (commonly associated with Japan), it is in practice most often found to be U-shaped in character. In this situation, ideas are suggested by top management, which are then passed down through the ranks to all those who may be most affected or will have to operationalise the concept later. As this happens, plans are made for the successful adoption of the idea and are modified according to objective opinion. The developed plans are then referred back up through the structure for final amendments and approval. However, if a consensus is not reached on all significant aspects, the plan may be repeatedly, redirected through the process until all parties are satisfied. At this point the plan is operationalised very quickly. This pattern is depicted in Figure 1.

One aspect to note is the time taken to achieve or operationalise decisions made. In Figure 1 it is possible to see that, even though clear decisions can be made and directed much earlier in the top-down style, there are very often many implementation difficulties encountered due to unforeseen or unplanned contingencies. For example, employee resistance, insufficient skills, hardware incapacity, etc. This invariably means that the decision has to be modified or operational planning

[4]Child (1981) found that macro-level organisational variables, such as structure and technology, are becoming less different across cultures over time, while micro-level variables, such as management and employee behaviour, continue to retain their cultural identity.

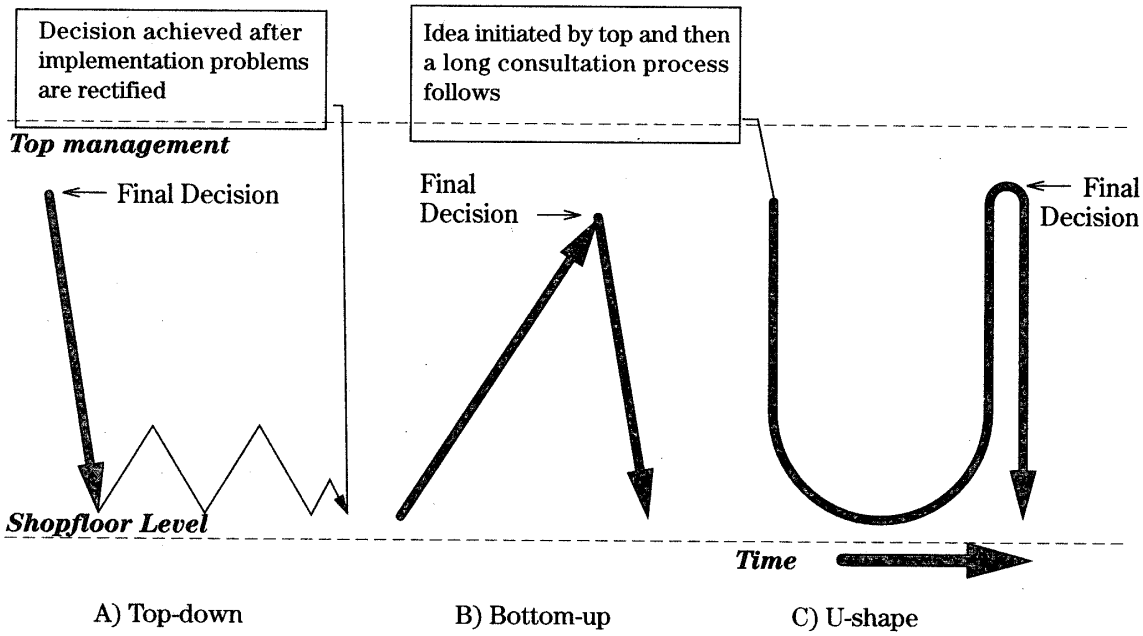

Figure 1. Decision Making Styles

processes have to be changed to achieve the desired goal. Therefore full effective implementation may be delayed. This top-down decision style may take as long as the U-style planning process to operationalise. The Japanese generally do not have structured, sophisticated or highly integrated information system, therefore promoting broad discussions and involvement of as many interested parties as possible to create a comprehensive plan.

Planning Systems

Americans tend to perceive operational problems as situations to be solved or opportunities for improvement. This has led to the development of elaborate planning systems which employ quantitative methods such as modelling and analysis. The Japanese have a number of formalised planning processes that are widely used as evidenced by such practices as industrial policy at the national level and decision making and TQM at the enterprise level. Involvement of as many appropriate interested parties as possible is the societal doctrine. Hofstede (1980) has also found that uncertainty avoidance is more important to Japanese than the Americans. This context leads to the first proposition.

〈Proposition 1〉 Japanese businesses more often initiate a formal process planning and design than their American counterparts.

Organisational Power

Organisational power and control largely reside in the ability to share or withhold information. Coombs et al. (1992) discuss the intimate link between information with power-knowledge relations while Feenberg (1990) contends that IT has a fundamentally ambivalent potentiality. Taken together, their logic implies that IT can be an instrument of liberation *or* of repression. Depending on the way IT is

applied, it can reinforce management control or promote employee empowerment. Shani and Sena (1994) further this argument, suggesting that the same information technology may have differing effects on systems integration, work design and organisational structure.

Two prominent BPR cases highlight one dimension of the creative tension between the forces of centralisation, which aim to improve efficiency and co-ordination, and those of decentralisation, which promote autonomy and flexibility. Asea Brown Boveri removed several layers of management and halved its product development times by breaking up into hundreds of mini-companies. Conversely, Texas Instruments surmounted the problems of functional and geographic fragmentation, and dramatically reduced its cycle times by establishing a world-wide 'virtual factory', processing orders through a central *reservation* system.

Confucius perceived success to be contingent on adhering to the ideals and examples of those who came before. The Japanese respect the past and wholeheartedly adopt a Confucian belief that real success is based upon the ability to maintain traditions while adding something new. It is useful to draw an analogy to the act of adding layers of wrapping paper to a gift. With each layer the appearance may change but the inner essence is preserved.[5] The Japanese have changed outwardly while maintaining respect for traditions and culture that has existed for generations.

However, the Japanese encourage information sharing to the extent that everyone has a similar mutual understanding of issues. Similar to the Chinese, ambiguous statements are common but a shared cultural heritage enables the real underlying message in these statements to be understood (see Drummond 1991; Hall and Hall, 1987).

As a result, the authors suggest that,

〈Proposition 2〉 Japanese businesses will find it comparatively more difficult to ignore the status quo and incorporate clean-slate thinking than their American counterparts.

The Japanese share a high reliance on personal and verbal forms of intra-organisational communication (Hall & Hall, 1987). Theoretically, a computer-based information system that promotes *equal* information access will reduce the discretionary power of those in charge. However, such an information system would fail to convey the richness of meaning which is important in the highly contextual Japanese culture. Expressions in the 'high-context' culture will be full of nuance rather than take the form of clearly espoused feelings (Smith and Bond, 1993).

This highlights the need to consider the context within which social phenomena are manifested and interpreted. Different actors will ascribe different meanings to information (Sahay et al., 1994). Information is also a common bargaining chip in business negotiations. Social encounters, both outside and inside the workplace, are generally viewed by Japanese in terms of exchanging resources. Rather than being shared, key information is brokered. Japanese business transactions are based largely on personal trust and mutual respect (Shimizu, 1990, Drummond, 1991). Since past

[5] Drummond (1991) explains this as the *Kimono effect* where the Japanese changed their outer Kimono clothing to give a totally different appearance to others while the real personality or character of the person inside does not change. For example, the Japanese began to wear morning suits and bowler hats in the 1800s. Individuals attempted to mimic and become like Westerners, without changing their understanding or character of the person at all.

reputations and verbal commitments are more important than formal documents, there is little need to *record* the complete terms of the agreement in a database. More generally, the Japanese see little value in codifying data into a simplified form (as required in a computerised database), where context is lost. Japanese enterprises have comparatively less documentation and less diffusion of information than similar-sized American counterparts (Westwood, 1995; Drummond, 1991, p. 316).

As a result, the authors assert that,

〈Proposition 3〉 Japanese businesses will find it comparatively more difficult to construct formal business process models than their American counterparts.

Many Japanese businesses *have* installed computers, but their primary role is to monitor and control rather than to co-ordinate or decentralise (Drummond, 1991). They support a narrow form of bureaucracy, which is often managed as a 'virtual' fiefdom. Negotiated *laws* and programmed *algorithms* are considered to be rigid, artificial, and insensitive to changing circumstances. Moreover, adversarial judicial systems are less able to maintain social harmony than approaches that involve bargaining and mediation. Thus, the *rule of society* in Japan, where established group norms prevail, are preferred to the *rule of law* which prevails in America (Drummond, 1991).

This leads to *personal* rather than *professional* performance appraisal and reward systems. Many Japanese superiors subjectively assess their subordinates largely in terms of loyalty and obedience rather than tangible or explicit results. In Japan the focus on *circumstances* rather than *contracts* is deemed to provide the best basis for personnel evaluation. Indeed, objective performance appraisals in Japanese business are frequently precluded by the lack of defined job responsibilities or job sharing. Tasks are often allocated to the group to be achieved as a team effort. Thus, the relationship between individual contributions and rewards is muddled (Drummond, 1991). Following this their reliance on subjective decisions and preference for intuition rather than analysis, the writers' suggest that,

〈Proposition 4〉 Japanese businesses will find it comparatively more difficult to implement the process-based performance appraisal and reward systems than their American counterparts.

Business Relationships and Responsibilities

Taylor (1911) and his followers in the Scientific Management movement perceived the productivity problem to be a matter of ignorance on the part of those in charge. He believed that the application of scientific methods, rather than trial and error approaches, could increase productivity without entailing greater human effort. Although Confucianism stresses the futility of using scientific means to control or alter nature, a key principle of scientific management – that the conception and execution of work remain distinctly separated – is omni-present in the Japanese mindset.

In Japanese business, those in senior positions are obligated to look after their subordinates, who reciprocate by obeying their bosses (Bond, 1986). Decisional prerogatives are firmly concentrated at the top of the organisation. It is considered inappropriate to question or probe superiors. Instead of openly airing differences,

discrete and diplomatic efforts are made to preserve harmony.

Confucianism stresses the importance of duties and obedience within a highly ritualised society. In Japan those in authority are expected to look after their subordinates. Employees reciprocate with their loyalty to the firm. This conduct is based upon the the cultural principle of give-and-take has existed since the 16th Century Edo-period (see Fujimori, 1993; Mito, 1994, p. 62). This give-and-take relationship is regarded as long term and binding and means that both the managers and employees have a responsibility to each other beyond that of a employer-employee relationship. This is reflected in the way that sensitive corporate decision making is always embarked upon with consensus of all internal stakeholders (e.g., managers and employees and associates in unison) especially during low growth or recessionary economic periods (see Drummond, 1991).

As a result, the writers' suggest,

〈Proposition 5〉 Japanese businesses will find it comparatively more difficult to initiate radical process changes than their American counterparts.

As illustrated, participative management is the norm in modern day Japanese business. Participative management is also consistent with the strong American beliefs in democracy and individual expression (see Erez, 1992) even though its appearance is not always found in practice.

A highly participative management style also requires organisational members to trust and co-operate with one another. Fukuyama (1995) reports that in Germany, Japan and the United States, there are healthy endowments of social capital. In Germany and Japan there is also a high degree of spontaneous sociability enables non-kin to trust each other and effectively combine their work efforts in assorted organisational forms.

In Japan, it has also been shown that if the substance of the change is agreed upon,[6]

〈Proposition 6〉 Japanese businesses will find it comparatively easier to successfully implement the (decided) radical process changes than their American counterparts.

Japan has recently been experiencing its worst recession since the Second World War. BPR has been fashionably introduced as the *art* of restructuring and improving productivity but there too it has been subject to cultural interpretation. The introduction of BPR in many firms has meant the closer re-examination of functional process and some redefinition to improve efficiency. It has not, as advocated by Hammer, returned to the core of the business and attempted to create a new business process model based on the new process model which fits with its environment.

Therefore, the authors believe if genuine BPR is introduced,

〈Proposition 7〉 Japanese businesses will experience comparatively more cognitive dissonance from radical process changes than their American counterparts.

[6]This means, in general terms, that a consensus of opinion is reached by all parties to be affected.

Models of Organisational Development and Change

The revolutionary transformations associated with BPR conflict with the frequent need to preserve the existing social order. As a result, Japanese BPR by definition will face strong cultural resistance. There are also concerns about the impact on unemployment if re-engineering is widely utilised. This environment makes it even more difficult to achieve BPR success, especially since Japanese generally favour an incremental (*Kaizen*) rather than a radical change model.

Culture can significantly constrain organisational development, leading to differing mechanisms for facilitating the integration of new *technologies* (Hofstede, 1993; Smith and Bond, 1993). Indeed, the very fundamentals of OD are inconsistent with the shared values of many societies (Jaegar, 1986). The Lewin (1947) model implies definite starting and ending points to the organisational change process. Subsequent alterations tend to be *quasi-stationary*, akin to the relatively constant flow of river water. With such a linear and discontinuous model, which has a pre-determined destination, it is imperative to set *and* achieve specific goals.

In contrast, the Confucian-derived model of change is cyclical and continuous (Marshak, 1993). Movement and tranquillity are considered to be complementary, and occur in a constant ebb and flow, without reaching a specific or stable end state. This gives rise to a subtle balance between the essence of *Confucian dynamism* (Hofstede and Bond, 1988). Although Hammer (1990) has argued for the radical and rapid transformation of business processes, the feasibility of such interventions is questionable in Japanese business culture.

Indeed, Japanese BPR has avoided the extremity and the radical and disruptive character associated with American BPR. It has been adopted on a selected and piece-meal basis in easily identified human related inefficiencies and it has not been used for a review of the organisation as a whole or for a review of the essence of the firm. In fact, the writers suggest that in reality Japanese BPR is actually another management-authored incremental (continuous) improvement of the TQM system fashionably re-labelled and with a more top-down approach. A conspicuous area of BPR application has been related to the much overdue introduction of IT processes. Thus, it can be argued that,

〈Proposition 8〉 Japanese businesses will be comparatively less likely to use radical and disruptive forms of process change than their American counterparts.

Western models of change imply substantial periods of stability punctuated by periodic adaptations (Meyer et al., 1990). As the pace of external change accelerates, and high levels of environmental turbulence become permanent, change models based on discrete trigger events are increasingly detached from business reality. In a narrower sense, this also highlights the dangers of merely empowering a new form of Scientific Management. Too many BPR initiatives utilise a start-and-stop change model to institutionalise a new business process model without enabling subsequent modifications.

Indeed, consistent with the population ecology perspective (Hannan & Freeman, 1984), major (and hence disruptive) changes may impair rather than improve the

survival of the organisation. Instead of disrupting the existing system, Confucius considered it important to maintain a harmonious coexistence with the environment. A balanced and continual approach to change is adopted as necessary. Organisational change is a chronic rather than periodic process. This model is much more compatible with *logical incrementalism* (Quinn, 1980) and continuous improvement than with the radical and disruptive change that is endemic to BPR.

However, Hammer (1990) emphasises the importance of creating a dis-equilibrium in order to achieve dramatic performance improvements. The use of phrases such as "if it isn't broken, break it" and "don't fix it, rebuild it" also implies a *machine* metaphor for the organisation. This is consistent with the dominant tone of Western business prescriptions, such as the application of military strategies, which emphasise ruthless, win-lose competition. There is little room for the collaboration or relationship-oriented harmony that are endemic to Eastern cultures (see Hofstede and Bond, 1988).

In sharp contrast to this perspective, Confucianism is based on maintaining a universal equilibrium. Moreover, a central tenet of Taoism is to cultivate harmony between man and nature in order to avoid misfortune. Further to this, Japan is an interwoven mix of Confucianism, Taoism, Shintoism, Christianity and Buddhism that align man more as a part of nature and its delicate balance. These values contribute to Japanese managers focusing on avoiding circumstances that may lead to a catastrophic future, or as Hofstede has observed, "uncertainty avoidance" (1980), even as their American counterparts endeavour to create a better future (Bond, 1986). This also results in Japanese businesses being more concerned with long-term survival than short-term results. Quick answer, *panic* measures are less likely to be taken. In this context, it does not make sense to *obliterate* the existing way of doing things. Following from this,

〈Proposition 9〉 Japanese businesses will be comparatively less likely to rapidly implement radical process change than their American counterparts.

In his search for a relationship between religious beliefs and economic behaviour, Max Weber (1951) classified Confucianism as a world-affirming, cosmo-centric tradition. While Christianity distances itself from the secular world and takes a theo-centric perspective, East Asian religions and philosophies such as Confucianism affirm the real world and the unity of man with the universe. Constant change takes place in accordance with the laws of nature, and everything in the world is perceived to be relative and interrelated.

Marshak (1993) has noted the similarities between the Lewin model of organisational change and Newtonian physics, whereby the application of directed forces results in the movement of an entity. From such a perspective, the Confucian-based model of cyclical, dynamic and inter-connected change can then be considered akin to the "new" physics, which challenges traditional scientific principles.

In the West, individual people (A, B, C) are encouraged to do different things and many creative and multi-directional efforts result. Unfortunately, many not so talented or recognised people (D, E and F) are set aside as societal misfits. In contrast, in Japan, the emphasis in upon community within the society. This means members of groups work together, sometimes in inefficient ways, but, they are *all* working together, in a common direction, resulting in an overall substantive and positive

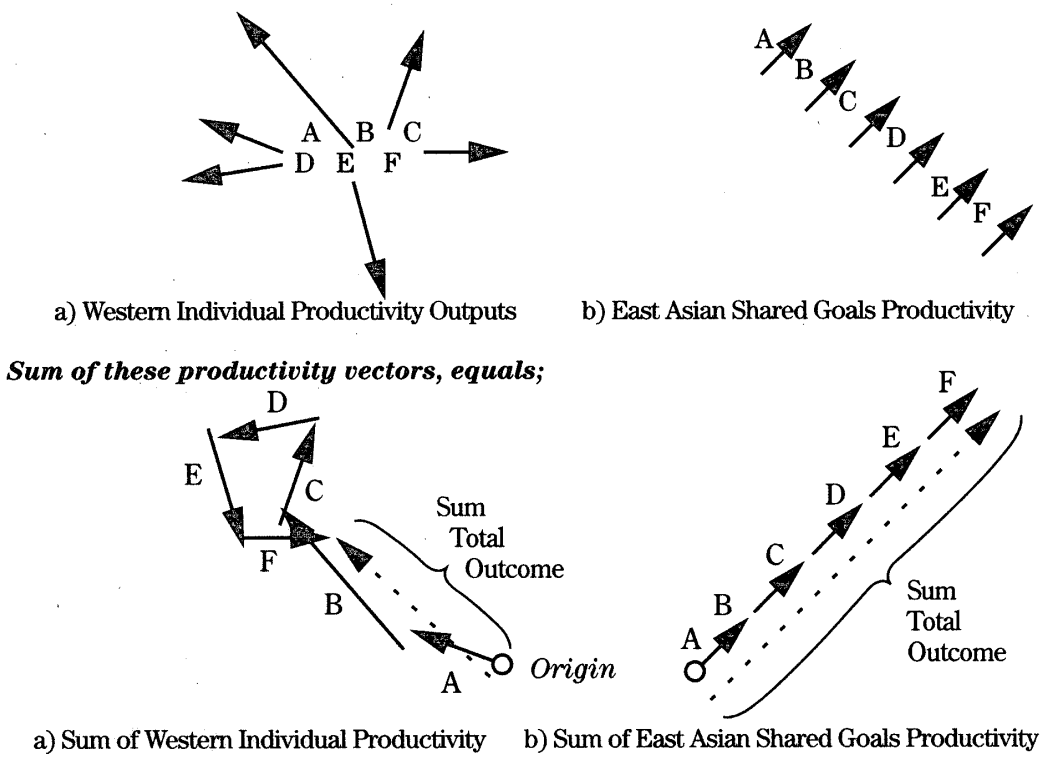

Figure 2. Cultural Leadership Vector Analysis

outcomes. This is illustrated in Figure 2 above as a productivity vector analysis showing the relative individual productivity ratings and total positive outcomes comparing the two systems.

In Japanese society, there are few social outcasts and therefore a reduced need for high taxes to support unemployment or welfare benefits to redistribute wealth. However, in BPR, the emphasis would be to identify the best performing people (assets) working in the direction the firm wishes to pursue. Other contributions would be undervalued and possibly disposed of, thus improving the enterprise's productivity.

The Japanese typically perceive their organisations to have permeable and fluid boundaries interconnected with the surrounding society (see Drummond, 1991; Fujimori, 1993). This limits the ability of a single business to make the deep and extensive unilateral changes associated with BPR. Even in the local free market economy, there is an abundance of industry cartels and inter-organisational networks. Thus, the posit,

〈Proposition 10〉 Japanese businesses will be comparatively less able to unilaterally implement radical process changes than their American counterparts.

In contrast to the transformative thinking, which is inherent in the Protestant (work) ethic, the Confucian ethic exhorts people to adjust to their environment. In fact, the *Doctrine of the Mean* (quoted in Chan, 1963, p. 98) includes the passage "Equilibrium is the great foundation of the world, and harmony its universal path. When equilibrium and harmony are realised to the highest degree, Heaven and Earth will attain their proper order and all things will flourish". Significantly, the Taoist philosophy, which stems from the writings of Lao Zi, places an even greater emphasis

on the need for man to follow rather oppose or manipulate the natural order (see Chan, 1963; Fung, 1948). Japanese Shintoism suggests an anthropomorphism where there is no clear distinction between living organisms and inanimate objects. For example, Japanese personify production machinery with popular singers names and pin-up pictures so they assume a humanistic quality of life (Hayashi, 1988, p. 139). This is a unique aspect of Japanese culture.

In such a context, business changes emerge from a continuing process of action and learning as an organisation addresses a series of environmental issues (Quinn, 1980). Radical interventions that challenge or undermine the *status quo* will be perceived to invite significant negative repercussions. A revolutionary change would only be justified if the existing system was grossly out of harmony. This situation occurred in Japan at the end of the Tokugawa period where the feudal class system was not in harmony with the monumental events and external influences that were impacting upon Japan.

Even today, rapid and major environmental changes are considered to be extraordinarily rare. In the absence of an organisational *coup d'etat*, the fear of losing face or disturbing the benevolent relationships that are inherent would dissuade a Japanese business leader from initiating radical change. Subordinates would interpret a decision to take such *drastic measures* as a signal that the organisation has been grossly mismanaged in the recent past. This would severely compromise the dignity, respect and prestige of the organisational leader (Bond, 1986).

Conclusions and Implications

Technological possibilities, evolving market demands and adverse economic conditions have combined to make re-engineering very popular in the last few years. Business consultants have successfully promoted this concept to Western managers and have sparked an enormous amount of interest in BPR in Japan. The facts are that in Japan very few re-engineering efforts have been successfully completed. Some have lacked the authoritarian leadership that exists in the American business culture. Many others have failed because they are markedly out of step with the prevailing culture of those who are directly affected by it.

As the BPR concept matures and evolves, it is hoped that the IT-enabled process change initiatives will move beyond the *machine* metaphor, and be undertaken in a more holistic and humane manner (see Taylor & Williams, 1994). Managers will be asked not only to revise their current business model but also to facilitate on-going modifications to cope with unrelenting environmental changes. In some cases this has been shown to be a successful approach in reducing costs but at the expense of morale and momentum (Zack, 1995; Kiely, 1995). Hammer (1990) and others have taken an uncompromising either-or stance with respect to BPR. However, it must be recognised that even a radical design can be incrementally implemented. If (and this is a significant *if*) large numbers of Japanese managers communities do deem BPR to be viable, their cultural values are likely to lead them to apply it in an adapted and less radical form.

As Japanese managers come to face more dynamic and hostile business environments, they can certainly learn from the experiences of their American counterparts and from each other. The principles and results of re-engineering will enrich their

knowledge base. Japanese managers will have a growing need to be familiar with new technologies, and consider how to apply them beneficially. Japan will also face the need to adjust and modify its position continually as the leading economy of Asia. However, the preceding discussion has highlighted the importance of cultural heritage in determining future actions. Decisions for or against a particular technological intervention cannot be effectively made without thoroughly considering the implementation context. Expected BPR rewards must be weighed against the risks, especially those related to the need to *challenge* and *disturb* existing norms and attitudes.

Japanese cultures contain values which support continuous adjustment to environmental changes. However, the neo-Confucian tradition constrains the planning, design and implementation of more radical business process changes. BPR will require tremendous and unprecedented changes in the fundamental values of Japan. For example, with re-engineering, a culture that stresses deference to superiors and deep respect for age and experience must accommodate the technical knowledge, creativity and energy of the younger generation who typically hold lower-level positions (Hammer & Champy, 1993).

Japanese business leaders have traditionally used their positions of benevolent respect to achieve directly or indirectly behavioural changes in their subordinates. This is evidenced by the existence of 'give-and-take relationships'. Managers in the future will have to demonstrate an ability to balance these relationships with innovation and inspire fundamental changes in the attitudes and beliefs of their organisational members to successfully implement BPR. The difficulty of achieving such a cultural change is evident in the former Soviet Union, where there is large-scale *unlearning* of the socialist values that were introduced only a few decades ago. However, it is not something which Japan is not unfamiliar with its experiences from both the Meiji Restoration and post Second World War.

The innovative use of IT, which is an integral part of many process changes, would also represent a quantum leap from the limited use of personal computers in most Japanese businesses. Nevertheless, Japan is ever increasing its management's exposure to various types of systems. The technology push makes such progress critical in order to maintain or raise economic competitiveness levels and living standards. The authors believe that in the information age, the success of Japan and other East Asian countries businesses is contingent on their abilities to assimilate modern technologies and values into their indigenous cultures. In this respect, Japan has had a great deal of success in the last forty years and can serve as a regional role model.

As the Japanese economy tries to respond to the recession it is in, its managers will have to work hard to pre-empt the crises that have driven their American counterparts to embrace re-engineering. It will be essential to find ways of fostering greater productivity, flexibility and satisfaction in their work environments. Many of these concepts are undeniably a threat to local traditions, such as strong communities in order to maintain the family social enterprise systems. However, other alternatives may be even less attractive.

The propositions developed in this article, and summarised in Table 3, imply that Japanese business process changes will substantially differ from the native American re-engineering concept. As Japanese business processes are modified, it has been

Table 3. Summary of Propositions Related to Japanese Business Process Re-engineering

Japanese businesses will;

- **more** often initiate a formal process planning and design
- find it comparatively **more** difficult to ignore the status quo and use clean-slate thinking
- find it comparatively **more** difficult to construct formal business process models
- find it comparatively **more** difficult to implement process-based performance & reward systems
- find it comparatively **more** difficult to initiate radical process changes
- find it comparatively **less** difficult to successfully implement (decided) radical process changes
- experience comparatively **more** cognitive dissonance as a result of radical process change
- be **less** likely to use radical or disruptive forms of process change
- be **less** likely to rapidly implement radical process changes
- be **less** able to unilaterally implement radical process changes

...than their American counterparts

shown that it is important to reward the dedication and loyalty of those who become process owners. Positive reinforcement will be an important means of support for workers who do take independent actions and managers who inspire cultural transformations rather than merely mandating behavioural changes.

There is a universal need to recognise the importance of and be sensitive to the existing culture when considering the potential introduction of a new practice, such as re-engineering. The value of business process changes, which promote information sharing and authority delegation, may be limited in situations where information is the predominant source of power. A cultural heritage that values harmony and stability will favour evolutionary rather than evolutionary organisational change. Strategically planned interventions that consciously and discretely create dis-equilibrium will face severe difficulties in social environments which stress the importance of maintaining harmony and balance.

Acknowledgements

The authors are grateful to the Pacific Rim Institute for Studies of Management (PRISM) Senior Executive Roundtable for their insights on the BPR phenomenon. The constructive and often persuasive comments provided by Paul Hempel, Sunny H.T. Ho, Mitsuru Miyagawa, Sadao Sakakibara, K.K. Tse, C.S. Tseng and Thomas Wyatt contributed to the development of the ideas presented here. The title for this article was inspired by Robert Marshak.

References

Alter, A.E. (1994). Japan Inc. embraces change, *Computerworld*, March, pp. 24–25.

Bashein, B.J., Markus, M.L. & Riley, P. (1994). Business Re-engineering: Preconditions for BPR success, *Information Systems Management*, Vol. 11 (No. 2), pp. 7–13.

Berry, J.W. (1969). On cross-cultural compatibility, *International Journal of Psychology*, 4: 119-128.

Bond, M.H. (1986). *The psychology of the Chinese people*, Hong Kong: Oxford University Press.

Bond, M.H. and Hwang, K.K. (1986). The social psychology of the Chinese people, In. M.H. Bond (Ed.) *The psychology of the Chinese people*, Hong Kong: Oxford University Press, pp. 213-266.

Bowen, D. & Lawler, E. (1992). The empowerment of service workers: What, why, how, and when?, *Sloan Management Review*, Vol. 33 (No. 1), pp. 31-39.

Boyd, J. (1994). Re-engineering...Japanese style, *Informationweek*, Iss. 504, pp. 38-46.

Burn, J.M. (1995). The new cultural revolution: The impact of EDI on Asia, *Journal of Global Information Management*, Vol. 3 (No. 4), pp. 16-23.

Chan, T.W. (Trans. and Ed.) (1963). *A sourcebook in Chinese philosophy*, Princeton, NJ: Princeton University Press.

Chen, L. (1995). From hierarchy to high performance in China: Progress and prospects, *Journal of Management Systems*, Vol. 7, No. 3, pp. 11-26.

Child, J. (1981). Culture, contingency and capitalism in the cross-national study of organisations, in L.L. Cummings and B.M. Staw (Eds.) *Research in Organisational Behavior*, Vol. 3, Greenwich, CN: JAI Press, pp. 303-356.

Conti, R.F. & Warner, M. (1994). Taylorism, teams and technology in reengineering work-organisation, *New Technology, Work & Employment*, Vol. 9 (No. 2, pp. 93-102).

Coombs, R., Knights, D. & Willmott, H.C. (1992). Culture, control and competition: Towards a conceptual framework for the study of information technology in organisations, *Organisation Studies*, Vol. 13 (No. 1), pp. 51-72.

Cooper, R. & Markus, M.L. (1995). Human Re-engineering, *Sloan Management Review*, Summer, pp. 39-50.

Cummings, T.C. & Huse, E.F. (1989). *Organisational development and change*, New York: West Publishing.

Davenport, T.H. (1993a). *Process innovation: Reengineering work through information technology*, Boston: Harvard Business School Press.

Davenport, T.H. (1993b). Need radical innovation and continuous improvement?: Integrate process reengineering and TQM, *Planning Review*, Vol. 21 (No. 3), pp. 6-12.

Davenport, T.H. & Short, J.E. (1990). The new industrial engineering: Information technology and business redesign, *Sloan Management Review*, Vol. 31 (No. 4), p. 12.

DiBella, A. (1993). The role of assumptions in implementing management practices across cultural boundaries, *Journal of Applied Behavioral Science*, Vol. 29, pp. 311-327.

Drummond, D.L. (1991). *An Australian and Japanese Management Comparison*, Unpublished doctoral thesis, Keio University, Tokyo.

Drummond, D.L. (1993). A Model for Comparative Management and its Application to Australia and Japan, *Keio Business Review*, No. 29, pp. 145-157.

Ein-Dor, P., Segev. E. & Orgad, M. (1993). The effect of national culture on IS: Implications for international information systems, *Journal of Global Information Management*, Vol. 1 (No. 1), pp. 33-44.

Erez (1992). Nationality and work role interactions, *Journal of Business Venturing.*, Vol. 8, pp. 499-512.

Feenberg, A. (1990). Post-industrial discourses, *Theory & Society*, Vol. 19 (No. 6), pp. 709-737.

Festinger, L. (1957). *The theory of cognitive dissonance*, Stanford, CA: Stanford University Press.

Fruin, W.M., (1992). *The Japanese Enterprise System – Competitive Strategies and Cooperative Structures*, Clarendon Press, Oxford.

Fujimori, M. (1993). Uchi Society, *Keio Business Review*, Vol. 30, pp. 1-9.

Fukuyama, F. (1995). Social capital and the global economy, *Foreign Affairs*, Vol. 74, (No. 5), September/October, pp. 89-103.

Fukuda, K.J. (1987). Chinese management: From the first emperor to Deng Xiaoping, *Leadership and Organisational Development Journal*, Vol. 8 (No. 1), pp. 29-32.

Fung, Y.L. (1948). *A short history of Chinese philosophy*, New York: Free Press.

Grist, K. (1994). Reengineering history: social resonance and business process reengineering, *Organisation*, Vol. 1 (No. 1), pp. 182-201.

Hall, E.T., Hall, M.R. (1987). *Hidden Differences: Doing Business With the Japanese*, Doubleday, N.Y.

Hammer, M. (1990). Reengineering work: don't automate, obliterate, *Harvard Business Review*, Vol. 68 (No. 4), pp. 104-112.

Hammer, M. & Champy, J.A. (1993). *Reengineering the corporation: A manifesto for business Revolution*, New York: Harper-Collins.

Hannan, M.T. & Freeman, J. (1984). The population ecology of organisations, *American Journal of Sociology*, Vol. 82, pp. 929-964.

Hanrahan, C. (1995). Reengineering hits Asia, *World Executive's Digest*, September, pp. 16-18.

Hayashi, S. (1988). *Culture and Management in Japan*, University of Tokyo Press.

Herbig, P.A. & Miller, J.C. (1992). Culture and technology, *Journal of Global Marketing*, Vol. 6 (No. 3), pp. 75-104.

Hofstede, G. (1980). *Culture's consequences: International differences in work-related values*, London: Sage.

Hofstede, G. (1991). *Cultures and Organisations: Software of the Mind.* London: McGraw-Hill.

Hofstede, G. (1993). Cultural constraints on management theories, *Academy of Management Executive*, Vol. 7 (No. 1), pp. 81-94.

Hofstede, G. and Bond, M.H. (1988). The Confucian connection: From cultural roots to economic growth, *Organisational Dynamics*, Vol. 16 (No. 4), pp. 4-21.

Hsu, F.L.K. (1970). *Americans and Chinese: Purpose and fulfilment in great civilisations*, New York: Natural History Press.

Imai, M. (1986). *Kaizen: The key to Japanese competitive success*, Random, N.Y.

Ives, B. & Olsen, M.H. (1984). User involvement and MIS success: A review of research, *Management Science*, Vol. 30, pp. 586-603.

Jaegar, A.M. (1986). Organisational development and national culture: Where's the fit?, *Academy of Management Review*, Vol. 11 (No. 1), pp. 178-190.

Kaplan, R.B. & Murdock, L. (1991). Core process redesign, *McKinsey Quarterly*, Vol. 91 (No. 2), pp. 27-43.

Kedia, B.L. & Bhagat, R.S. (1988). Cultural constraints on the transfer of technology across nations: Implications for research in international and comparative management, *Academy of Management Review*, Vol. 13, pp. 559-571.

Khoong, C.M. (1996). Culture-sensitive, strategy-level reengineering, *INFOR*, vol. 34, pp. 43-56.

Kiely, T., (1995). Re-engineering: it doesn't have to be all or nothing, *Harvard Business Review*, Nov-Dec 1995, Vol. 73, No. 6, p. 16.

King, J. (1994). Re-engineering slammed, *Computerworld*, Vol. 28 (No. 24), pp. 1,14.

Kinni, T.B. (1994). The re-engineering rage, *Industry week*, Vol. 243, (No. 3), pp. 11-14.

Kogut, B. & Singh, H. (1988). The effect of national culture on the choice of mad, *Journal of International Business Studies*, Vol. 19 (no. 3), pp. 411-432.

Kotkin, J., (1992). *Tribes: How race, religion and identity determine success in the new global economy*, Random, N.Y.

Krugman, P. (1994). The myth of Asia's miracle, *Foreign Affairs*, Vol. 73 (No. 6), pp. 62-78.

Ledford, G.E., Mohrman, S.A., Mohrman, A.M. & Lawler, E.E. (1991). The phenomenon of large-scale organisational change, In A.M. Mohrman & Associates (Eds.), *Large-scale Organisational Change*, San Francisco: Jossey-Boss.

Leth, S.A. (1994). Critical success factors for re-engineering business processes, *National Productivity Review*, Vol. 13 (No. 4), pp. 557-568.

Leung, K. and Lind, E.A. (1986). Procedural justice and culture, *Journal of Personality and Social Personality*, Vol. 50, pp. 1134-1140.

Lewin, K. (1947). Frontiers in group dynamics, *Human Relations*, Vol. 1 (No. 1), pp. 5-41.
Maglitta, J. (1995). Revamp champs, *Computerworld*, Vol. 29 (No. 41), pp. S32-S34.
Marien, M. (1993). Cultural trends, troubles and transformations, *Futures*, Vol. 25 (No. 4), pp. 414-430.
Markus, M.L. (1983). Power, politics and MIS implementation, *Communications of the ACM*, Vol. 26, pp. 430-444.
Marshak, R.J. (1993). Lewin meets Confucius: A review of the OD model of change, *Journal of Applied Behavioral Science*, Vol. 29, pp. 393-415.
Martinsons, M.G. (1993). *Why Chinese managers will not use MIS*, Pacific Rim Institute for Studies of Management, Hong Kong & Vancouver.
Martinsons, M.G. (1995). Radical process innovation using information technology: The theory, the practice and the future of re-engineering, *International Journal of Information Management*, Vol. 15, pp. 253-269.
Martinsons, M.G. & Hempel, P.S. (1995). Chinese management systems: historical and cross-cultural perspectives, *Journal of Management Systems*, Vol. 7 (No. 1), pp. 1-11.
McMillan, C.J., (1985). *The Japanese Industrial System*, de Gruyter, NY.
Meyer, A., Brooks, G. & Goes, J. (1990). Environmental jolts and industry revolutions: Organisational responses to discontinuous change, *Strategic Management Journal*, Vol. 11, pp. 93-110.
Mito, T. (1994). *Iye Toshiteno Nihon Shakai*, (Japanese Society as the *Iye*), Tokyo: Yukihaku.
Moad, J. (1993). Does reengineering really work?, *Datamation*, Vol. 39 (No. 15), pp. 22-28.
Monteleone, F. (1995). Step carefully, then go for the gusto, *Computerworld*, May 29, Vol. 29, No. 22, p. 35.
Munro, D.J. (1969). *The concept of man in early China*, Stanford, CA: Stanford University Press.
Nevis, E.C. (1983). Cultural assumptions and productivity: The United States and China, *Sloan Management Review*, Vol. 24 (No. 3), pp. 17-29.
Porras, J. & Robertson, P. (1987). Organisational development theory: A typology and evaluation, In R. Woodman W. Pasmore (Eds.), *Research in Organisational Change and Development*, Vol. 1, pp. 47-83.
Quinn, J.B. (1980). *Strategies for change: Logical incrementalism*, Homewood, IL: Irwin.
Quinn, J.B. (1992). *The intelligent enterprise: A knowledge and service paradigm for industry*, New York: Free Press.
Redding, S.G. (1990). *The spirit of Chinese capitalism*, New York: DeGruyter.
Reger, R.K., Mullane, J.V., Gustafson, L.T., DeMarie, S.M. (1994). Creating Earthquakes to Change Organisational Mind-sets, *Academy of Management Executive*, Vol. 8, pp. 31-46.
Robinson, R.D. (1978). *International business management—A guide to decision making*, 2nd edition, Hinsdale, IL: Dryden.
Rohwer, J. (1996). Asia on the Brink, *Across the Board*, Vol. 33, No. 1, pp. 23-27.
Sahay, S., Palit, M. & Robey, D. (1994). A relativist approach to studying the social construction of information technology, *European Journal of Information Systems*, Vol. 3 (No. 4), pp. 248-258.
Shani, A.B. and Sena, J.A. (1994). Information technology and the integration of change, *Journal of Applied Behavioral Science*, Vol. 30, pp. 247-270.
Shimizu, R., (1990). *The Japanese Business Success Factors*, 1989, Chikura Shobo.
Smith, P.B. and Bond, M.H. (1993). *Social psychology across cultures: Analysis and perspectives*, Boston: Allyn & Bacon.
Taylor, F.W. (1911). *Principles of scientific management*, New York: Harper and Brother.
Taylor, J.A. & Williams, H. (1994). The transformation game: Information systems and process innovation in organisations, *New Technology, Work & Employment*, Vol. 9 (No. 1), pp. 54-65.
Teresko, J. (1994). Japan: Reengineering vs. Tradition, *Industry Week*, Vol. 243, Iss: 16, pp. 62-70.

Tricker, R.I. (1988). Information resource management: A cross-cultural perspective, *Information & Management*, Vol. 15, pp. 37-46.

Tse, K.K. (1995). Reengineering: Asian vs. Western Experience, *World Executive's Digest*, November, p. 3.

Wagner, J.A. (1994). Participation's effects on performance and satisfaction: A reconsideration of the research evidence, *Academy of Management Review*, Vol. 19, pp. 312-330.

Weber, M. (1951). *The religion of China*, New York: Free Press.

Westwood, R.I. (1995). Culture, information and MIS; The U. S. and East Asia compared, *Journal of Management Systems*, 7(1), 29-44.

Zack, Jeffrey, (1995). Re-engineering, however defined, is growing, changing, *American Banker*, Vol. 160, No. 130, pp. 12-15.

Zhong, J.A. (1989). Perceptions of job characteristics and satisfaction, *Chinese Journal of Applied Psychology*, Vol. 4 (No. 2), pp. 14-21 (in Chinese).