

Knowledge Management Challenges across Nations

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Introduction

Knowledge management is an increasingly important part of organisational strategy (Brint, 2001; Malhotra, 1998; Nasser, 1996) and its potential benefits have been widely discussed (see for example Santosus and Surmacz, 2001; Prichard et al., 2000; von Krogh et al., 2000). This has led to managers in all types of organisations, both private and public sectors, striving to implement knowledge management strategies in their respective organisations. Not only this, but the potential benefits of knowledge management are now being considered as vital in the development of national and international strategies. This paper will, initially, consider why knowledge management is seen as so important in current government terms, exploring some of the current issues in public sector management that could be, and are being, addressed by knowledge management processes.

However, many of these initiatives result in failure, and very expensive ones at that (Smith et al., 2003) so, in order to develop useful knowledge management initiatives, it is important to consider some of the reasons behind these failures and how they might affect nations in similar ways. The paper outlines previous work undertaken by the authors, which developed an organisational model of the social interactions affecting knowledge management outcomes within organisations moving from public to private sectors. This model of 'Social Architecture' is used as a base framework for considering the challenges in place to develop effective knowledge management systems for co-operative nations. The importance of both learning systems and mental models are outlined as issues that need addressing if there is to be successful knowledge management across nations.

The Role of Knowledge Management in Current Organisations

There is no doubt that knowledge management is of critical importance today. However, it is not, in fact, a new area of study. As long ago as 1890, Marshall wrote:

'Capital consists in a great part of knowledge and organisation.... Knowledge is our most powerful engine of production.'

For many years, knowledge management had largely been the preserve of economists. A large literature existed, but was not accessible to the non-specialist reader. Key texts about knowledge appeared in the 1960s and 70s; Machlup (1962), Drucker (1969) and Bell (1973) were particularly influential. However, interest in knowledge management did not significantly increase until the last decade of the century. Now it is accepted that organisations whose people have superior knowledge (greater intellectual capital), and which are able to harness that knowledge, will develop a fundamental source of competitive advantage (De Geus, 1997; Teece et al., 1997; Dees and Picken, 1999) and thus, in recent years, organisations have placed an extremely high value on knowledge. Stewart states that 'Knowledge has become the most important factor in economic life. It is the chief ingredient of what we buy and sell, the raw material with which we work. Intellectual capital... has become the one indispensable asset of corporations' (1997, in Little et al., 2002, 2).

The economist Paul M. Romer (1993) argued that it is discoveries of big ideas (for example, how to make high-temperature superconductors), together with the discovery of millions of little ideas (better ways to sew a shirt), that make persistent economic growth possible. The role of knowledge is to enable combinations of limited physical resources in arrangements that are ever more valuable.

As a result of gaining such a high profile in strategic success, the management of knowledge has become a major preoccupation of organisations. Quintas (in Little et al., 2002, 4) argues that there are six main reasons for this:

- Wealth being demonstrably and increasingly generated from knowledge and intangible assets
- The rediscovery that people are the locus of much organisational knowledge
- Accelerating change in markets, competition, and technology, making continuous learning essential
- The recognition that innovation is key to competitiveness and depends on knowledge creation and application
- The growing importance of cross-boundary knowledge transactions
- Technology limits and potentials: the limits of information systems and the potentials of communications and knowledge technologies.

These issues can be seen to raise some anxieties when current international knowledge management issues are considered.

The Impact of Knowledge Management upon Nations

Wealth is generated from knowledge and intangible assets

Wealth, in a competitive economy, is largely generated by some form of competitive advantage over other nations – whether through better mining and utilisation of physical resources, better utilisation of information, more advanced technology or an ability to make things faster and more cheaply through cheaper labour. In many cases so far (though not all), developed countries have had greater knowledge and intellectual capital, permitting them to develop such competitive advantages faster. This allows them to improve their economies and is the reason why access to education becomes so important. The growth in the Asian economies, particularly China, has been based upon a faster growth in the ability to develop a competitive advantage through the utilization of labour, resources and knowledge acquired through joint ventures and the education of many Chinese overseas.

The discussions about the migration of workers indicate why there will be a concern if such knowledge is lost. It has been recognised in organisations that to lose knowledge, a concept known by some as ‘knowledge turnover’, is a loss of resource and leads to the need for greater investment. It also provides resources to the competition unless the organisation has managed to harness such resources in some way. The World Bank is an example of an organisation that used extensive interviewing, through story telling, as a tool for capturing field knowledge. Their objective was to retain the experiences, share the lessons learned, expand the bank’s knowledge base and improve operational capability. This was done by capturing on video and audio tape, interviews with retiring staff involved in the bank’s most challenging projects, with a focus on uncovering what the bank did not know. This stresses the need to understand the intangible issues emerging within the organisations.

Similar issues may emerge for countries if they have a negative population growth, with more workers leaving than entering the country (as is happening to Russia for example). Recognition of this was indicated by Thabo Mbeki, the South African President, who called for a reversal in the African “brain drain”, which has seen many African scientists and engineers migrate west. His concern is that the country cannot generate wealth if the key personnel are leaving.

The rediscovery that people are the locus of much organisational knowledge

This idea has already been indicated in the issues of migration above – as the resource that possesses the knowledge that is creating the wealth is the people. Decisions are taken by individuals who need good information in order to be able to make appropriate decisions. In order for the information to become knowledge they also need access to education and shared knowledge from others. Moreover, they need to be within the country. Such a realisation is leading to a change in attitude to some migrant workers.

The importance of cross boundary knowledge transactions is recognised in the west, and forms the very basis of the European Union, with its attempt to break down economic barriers and free members of the Union from cross border tariffs and

restrictions to trade. Nevertheless, fears have arisen about the cost to the taxpayer of integrating poorer economies into the union, the environmental legacy of communism and, perhaps most crucially, the volume of migrants from east to west. According to some, people are worried about the enfranchisement of large, low cost labour pools. This may create a situation where organisations base themselves where labour costs are lowest, and/or encourage economic migrants to move west to drive down labour costs, particularly in industries where there are skill shortages.

However, studies have shown that wealth is generated from the knowledge, skills and competencies of those who seek to migrate west. According to the UK Government, the UK Immigration Service cost £1.7bn in 2002. Another Government Department, the Home Office, estimates that immigrants pay £2.5bn more in taxes than they take in benefits, while HM Treasury figures suggest that they add $\frac{1}{4}$ of one percent to the economic growth of the UK economy. It felt that the reason for this was that most migrants were of an age where they were at their most productive, whilst consuming little in state benefits with their demand on health services being low.

The suggestion is that without the churn of migrant labour there would be a crisis in many sectors of the labour market in the UK. Government research also suggested that foreign earnings can transform communities, where cash earned and sent home is essential to the growth of poor economies, to the development of trade and to supporting international efforts to stabilise the regions from which migrants originate. Thus, nations are now looking at the knowledge content of people and its potential for growth, whilst considering whether the cost of labour is the only issue for competitive advantage.

Accelerating rates of change make continuous learning essential

The rates of change in all aspects of the globe make the need for complex and accurate information and knowledge sharing systems vital. For developing countries, the inability to catch up with on-going change may lead to a widening of the gap and, as a result of recognising this, aid is now being given in the form of knowledge not money. This, however, brings problems of its own in that, in order to remain competitive, there is a limit to how much knowledge will be transferred. This problem can be seen at a micro level within organisations, when individuals have to be prepared to share their knowledge with the organisation, thereby reducing their personal power. When organisations agree to share knowledge, this changes the power relationships (Hanson et al., 2002) and, equally, when nations share knowledge, the power dynamics change.

There is increasing recognition that innovation is key to competitiveness and that 'Innovation is the successful exploitation of new ideas and is a vital ingredient for competitiveness, productivity and social gain within businesses and organisations' London Innovation (2003). For there to be innovation there must be new ideas which emerge from the development and sharing of knowledge. The levels of industrial as well as governmental espionage support an acceptance of the importance of knowledge to the future. It also highlights the fact that, more often than not, knowledge has, historically, been a source of competition rather than collaboration.

At a micro level, in a business context, organisations seek to differentiate themselves from their competitors when seeking competitive advantage in their operating

environment. Nations in the past were no less competitive. Increasingly, businesses are looking at the rate of innovation and, more importantly, the way they manage change within the organisation. Managing organisational change is fundamentally a knowledge management issue, because for there to be change the understandings of the individuals who are to change must be altered in some way. This will occur via communications systems which lead to learning processes and then new knowledge development. Without such new knowledge, change will not emerge. The ease with which communications now take place, as a result of the ubiquitous Internet, helps to speed up the rate of change as competitors can acquire similar knowledge more quickly than before. Moreover, it should be possible to increase the rate of change by harnessing such new forms of communication, thereby improving the knowledge development within the organisations.

The growing importance of cross-boundary knowledge transactions

Countries are increasingly aware of a need to share knowledge, in order to encourage knowledge based developments such as their foreign policies, expand their economies, promote sustainable tourism, support their growing multi-national corporations (MNC's), via new laws and different processes, etc. whilst, in certain circumstances, combating MNC's from other countries that have become too strong. While new technology has every potential to increase the speed of learning through cross border knowledge transactions, it is the government factor that often seems to negate this potential. The recent crash of a French charter flight on take off from Sharm el Shiekh in Egypt (December 2003), was by one of six airlines whose safety standards were considered so poor they were banned or restricted in a European country in 2002. Unfortunately, the 133 French passengers were unaware that the plane they were boarding had already failed a Swiss safety check and had been banned from Swiss airspace. Information and the results of safety tests are held on a vast database in France and the Netherlands. National governments know, but passengers and, crucially, even tour operators only find out if a government decides to reveal the information.

However, cross border support can occur. There is an old saying that necessity is the mother of invention so that in times of need people, countries and sometimes coalitions pull together to achieve a common purpose. Such conditions accelerate the rate of innovation, speed up the rate of change and make continuous learning essential. The recent SARS outbreak motivated the international science community to accelerate research and share knowledge around the globe to combat what was, and still is, a serious risk to world health.

Technology limits and potentials

The limits of information systems impact upon the potentials of communications and knowledge technologies. There are two aspects to this, firstly, the cost and functionality of the technology itself and, secondly, the way that it is implemented. The former issue, the costs and limitations of certain technologies, often leads to the developing countries remaining behind unless a different form of help is proposed, as developed nations have greater access to appropriate infrastructures, hardware, software and the intellectual resources to implement such things, as well as more capital to fund such projects. The information is more readily collectable, storable and useable, as there are systems for collection and intellectual capital for interpretation.

The evidence that nations feel information is a vital element to knowledge management is the importance given to gathering data on people (via censuses), tourism, economic issues and so on.

That the second aspect may affect implementation and use of the information is evidenced by the interpretation of the Data Protection Act in the UK, designed to protect the confidentiality of information held on individuals. Basically, the Act states that it is an offence to hold information on an individual for purposes other than those declared and registered with the Data Protection Registrar, an increasingly common piece of legislation in many countries. British police recently admitted to making mistakes in a high profile and sometimes very emotional murder enquiry. The suspect had been known to police and had been logged on file for some time. In the trial, where the suspect was subsequently convicted of the murder of two young girls, it became known that information had not been held on their computer due to “weeding policies”, that meant that details of unproven cases were regularly deleted to comply with the Data Protection Act. They said that their procedures were a genuine attempt to comply with the spirit and the letter of the Data Protection Act. It was stated that under the Act, information could not be retained solely for the purpose of employment vetting, but could only be retained for “policing purposes”.

From these examples, it can clearly be seen that there are increasing pressures for nations to develop and manage knowledge. However, there are other implications here that may explain why knowledge management is so hard for many countries. There is a conflict between the need to develop innovative knowledge as a nation, in order to develop the economy and the need to share knowledge, in order to support many of the elements of their foreign policies. It is a strange dichotomy that, as the supply of knowledge becomes more transient through the internet, migration and international travel, the demand for knowledge increases. As with increased international and political cooperation, there is a greater need to leverage knowledge around the world, so, conversely, there is also increasing pressure to safeguard knowledge, as competition increases in existing and emerging markets.

People of the world are becoming more demanding and complex in their needs and aspirations; as citizens, government departments come under greater public scrutiny to provide better public service; as customers, companies are having to innovate and change with greater agility to differentiate themselves from their competitors whilst, as employees, they need more knowledge to meet the increasingly sophisticated demands of the customer.

Reflection makes it clear that many apparently organisational knowledge management issues have similar importance for the future success of nations. Huge investments have been made in developing complex and comprehensive systems (Interpol, International Red Cross/Crescent, World Bank, UNESCO, UNFCCC for example) designed to give more accurate information about a vast array of aspects within nations. Governments can then use this information to develop knowledgeable solutions to complex problems. With the increase of global strategic alliances, this information and knowledge is being shared in order to respond faster and more appropriately to international events. More developed nations are sharing ideas with currently developing countries, working together to combat terrorism and are developing long-term economic alliances via instruments such as trade agreements. All of these developments are, in effect, knowledge management and the future

success of such ventures will depend upon the success of the processes and knowledge sharing that occurs.

Learning as Communication in Knowledge Management

So far in this paper we have focussed upon establishing that there is a clear role for knowledge management within the management of nations. If such similarities exist across organisations and nations in the need for knowledge management, then it is likely that there will be similarities with the problems of implementation as well. At this point, therefore, problems with other knowledge management implementations need to be considered. Subsequently, the issues for nations will be evaluated against the model developed.

What is Knowledge Management?

One issue is what knowledge management actually is. Many definitions of knowledge management stress its strategic importance. For example, Malhotra defines it as catering 'to the critical issues of organisational adaption, survival and competence in face of increasingly discontinuous environmental change.... Essentially, it embodies organisational processes that seek synergistic combination of data and information processing capacity of information technologies, and the creative and innovative capacity of human beings' (1997, <http://www.brint.com/interview/maeil.htm>).

Malhotra's definition describes how knowledge management combines technological and human elements, bringing them together so that they can enable the organisation to adapt to change. Davenport and Prusak (1998) place more emphasis on the human dimension, arguing that knowledge management is the mix of framed experiences, values, contextual information and expert insights, that provides a framework for developing and implementing new ideas. Rastogi (2000) stresses the wide range of activities that knowledge management encompasses including acquiring, creating, storing, sharing, diffusing, developing, and deploying knowledge, whilst also indicating that, for there to be knowledge management, these processes must be undertaken by individuals and groups in pursuit of major organisational goals. These moves to a more processual view of knowledge (Newell et al., 2002) indicate that it will be the management of the knowledge workers, rather than the information, which will be crucial for the success of knowledge development and utilization within organisations.

The role of the individual in knowledge management and change

The focus upon the individual becomes more important when the role of learning becomes clear in knowledge development. Research was undertaken within Ordnance Survey when there were problems with implementing a major knowledge management system (Smith et al., 2003). What was established was that the organisational learning required to effect the behaviour changes needed to share knowledge and embed innovation and new ideas was not occurring. This was partly because the communication systems being used were not actively supporting learning and the links between the two ideas had not been clearly made. In figure 1, the links between the two have been made and the importance of closing the loop to ensure that encoded messages are understood is indicated.

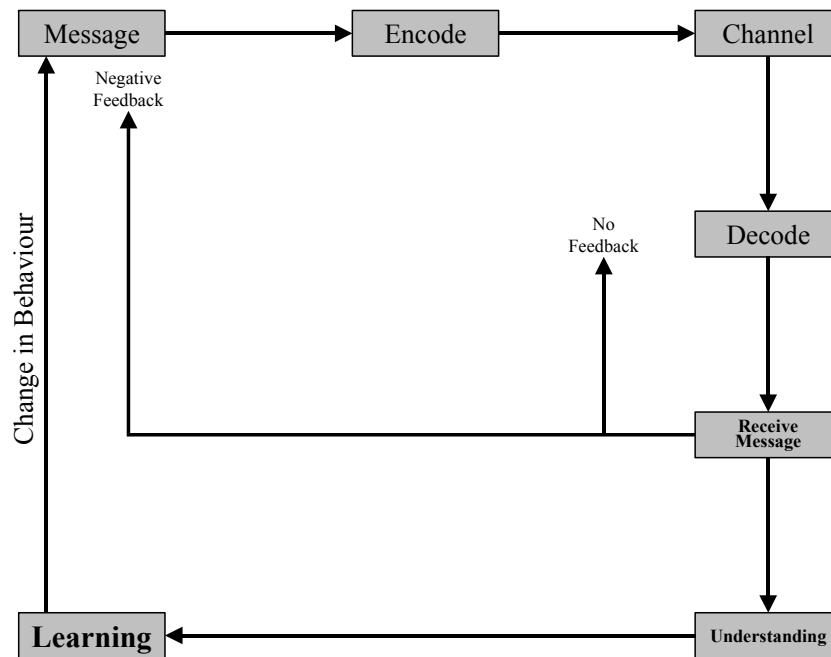


Figure 1: Learning Defined as a Communication Model

Once this was identified, the researchers explored why the encoding was not developing as expected. It became clear that the lack of message understanding was a result of too little attention being given to existing social frameworks and architecture within the organization and too much to the technological changes required (Smith et al., 2003). The organisation was adopting a rational approach to knowledge (Newell, et al., 2002), expecting that information, once sent out, would be received and understood in a logical and linear way. It was thought that by setting up appropriate inputs such as the hardware, the systems for sharing and policies on how things should be done, useful outputs would, of necessity emerge.

It was a very important lesson that this did not occur because the ‘soft’ human aspects of the processes were preventing the understanding and sharing of the information in an effective way, as well as preventing knowledge developing from the communication and learning processes. Once the company and the researchers were aware of the failure of the rational processes, clarity was sought on what was preventing organised knowledge development. Analysis led to the development of a model of social architecture, which was used as a framework for analysis of knowledge management implementation issues.

Change managers have to gain a thorough understanding of the business environment, the organisation and its culture. Knowing the employees capability to respond is critical in deciding whether the changes can be coped with and how they might be handled. This requires planning and the setting of clear strategic objectives; communicating at all levels so that both the organisation and its people have a clear idea of where it is going and why.

Implementing change initiatives is managed by establishing a change programme, led by a manager empowered as change champion to make things happen. Where

possible individuals in the workplace who come forward with innovative ideas will themselves be encouraged to act as change champions within their own reference group and are supported by the change management team who act on a consultancy basis to support the individual.

The Role of Social Architecture in Knowledge Management

Originally the term ‘social architecture’ was coined as a form of architecture intended for use by the mass of people as social beings and was a reaction against architecture concerned with form and style supposedly for the dominant members of society (English Heritage, 2001). Increasingly, it is now being seen as very important when discussing the design and relationships within organisations (see for example General Electric, 2001), when stressing the role of community in architecture (Batteau, 1996) and when designing new organisational structures (Jacobs, 2001).

Bennis (1997) considers social architecture when discussing the requirements for effective self-managing teams, implying that the relationships within the organisations will potentially support or destroy the teams. Kelley (1987) employs the term when discussing the issues of connectivity within organisations. He outlines social architecture as the social system which is one of the five key areas of connectivity that can be managed, in order to improve the IT effectiveness within the organisation. Morden (1997) uses the term when determining the elements of visionary leadership. He outlines Kay’s (1993) definition of architecture as being the network of relational contacts within and around the enterprise, since these relationships will affect both trust and communication.

It was the idea of social architecture affecting interpersonal relationships, structures, leadership, communication and, therefore, the successful passing on (or not) of messages, that was of interest to the researchers in Ordnance Survey. Knowledge Management is fundamentally about transferring information in such a way that the user can both understand and use the meaning of the transfer in some way (Elkjaer, 2000; Klein and Myers, 1999).

What is important is that an awareness of social architecture may permit an organisation to attain a level of self-analysis that is not achieved through more traditional routes. The real advantage appears to be a recognition of the issues that are affecting the outputs of the system. An analysis of the current situation led to a model of issues currently affecting the implementation of knowledge management within Ordnance Survey. Some may argue that this is an analysis of the ‘soft’ systems within the organisation (Checkland, 1999; Mabey et al., 1998) and to a certain extent this is true. There is a network of relationships which are affected by such filters as feelings and individual interest at all times (see figure 2).

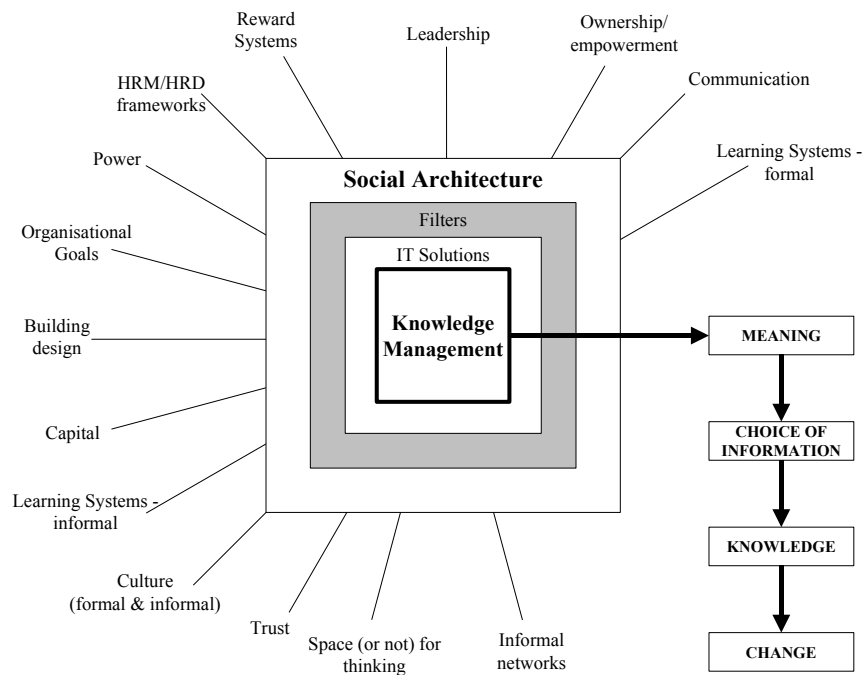


Figure 2: A Preliminary Model of Organisational Social Architecture

All communications models show filtering and ‘background noise’ as key elements in the success (or not) of message and understanding transfer. By rethinking learning as being framed by the social architecture, it can be seen that it will be acting as a filtering system (figure 2) for the learning system. This is because the social architecture frames the mental models used by the individuals to frame their world. Mental models are cited as providing the link between collectives and individuals as they proffer a context for the interpretation and understanding of new information (Kim, 1993; Doyle Conner et al., 1994; Dixon, 1997; Swaab et al., 2002; Hill and Levenhagen, 1995). It is argued that all new knowledge develops from the basis of the mental models already in place, therefore, any knowledge new to a nation or organisation will be interpreted in terms of what is already understood and accepted by the individuals within it. What matters about this is that, in effect, the filtering that occurs closes down the nation to some ideas, as the mental models prevent open acceptance of them (Lee-Kelley and Blackman, 2003) and (Blackman and Henderson, 2003).

For example, emotions at work have always been acknowledged to have an impact but, increasingly, it is seen that they will seriously affect the effectiveness of the outputs of any system (Clutterbuck and Megginson, 1999; Weisinger, 2000). They will always affect the potential receiver and will change over time. Translating this into the terms of nations, already held views may prevent new ideas about other nations becoming accepted because, in effect, the nation cannot think, only its members and leaders can. At a macro level, a Government’s effectiveness in office is usually governed by how well it communicates with its electorate. As with organisations, a government’s ability to manage knowledge, domestically or

internationally, will be influenced by the social architecture of the communities they seek to influence and their ability to develop an acceptance of the change within the individual mindsets. An example of the importance of developing this understanding and agreement was seen in the UK when the government wished to introduce genetically modified crops. Initially, in support of such crops, they had to give way to public pressure and set up an enquiry into their impact on the environment, when it became clear that the mental models held by individuals were strongly antagonistic. If the government is to influence a change, it must first be able to enter the bounded rationality of individuals (Simon, 1991) and recognise it, in order to then be able to develop communication systems that will enable the knowledge to grow. To do this they will need to understand what are the barriers to entering and changing the views currently in use.

What is being shown here is nothing dramatically new but, if used as an analytical tool for considering the potential problems of knowledge development, acquisition and management across nations, the model will show that certain serious issues have to be overcome before knowledge management can be successfully implemented across nations. All of the elements could be analysed but a few will be taken as examples: National Goals, Culture, Power, Trust and National Infrastructure. For each of these, the reasons why learning and knowledge may be prevented from emerging, despite knowledge management systems being implemented, will be explored.

National Goals

Some might argue that the problems of national goals are one of the biggest reasons why knowledge sharing across national boundaries will be so difficult. Countries that are in competition for trade and wealth need to co-operate in relationships with other countries. Often traditional rivals need to work together against traditional friends. Many of the problems faced by the European Union are made more complex because some of the countries (particularly France and England as an example) have to overcome many years of competition in order to work together. This links with the issues of culture outlined below.

When developed countries offer knowledge aid (as opposed to only financial resources), to developing countries there are likely to be successful outcomes only if both sides feel that they are benefiting as nations. The literature that is useful to explore here is that of corporate strategic alliances. Many such alliances have been failing and poorly matched goals have often been cited as reasons why. Firstly, there is not enough commonality of goals present and so one company believes it is being taken advantage of (Hanson et al., 2002). This has been seen with some joint ventures in developing countries, where the larger, incoming company was considered to be demanding too much (the Beijing Jeep/Chrysler venture could be seen as an example of this).

Thus, where countries are going to work together, the usual analysis systems for strategic alliances need to be applied, which consider if both sides are likely to benefit and if so, in what way. Without a perception of mutual benefit there is unlikely to be knowledge sharing. Each side will expect the other to begin the process and, in effect, neither will be prepared to lead. Problems with this were seen in the 1970's when there were calls for disarmament – nobody wanted to begin the process. Goals, like

relationships, change over time and so one element of successful knowledge management across nations has to be a regular review of the reasons for needing to share. This analysis is a fundamental part of developing new understandings of the current contexts of why and what to share.

Culture

A second, very strongly given argument for why strategic alliances fail is that the cultures do not fit together and so the companies fail either to work well together or even to understand each other. There are two critical issues reflecting culture: firstly, the issue of how culture behaves in terms of a mental model affecting the interpretation of messages and, secondly, how the development of a strong national culture includes views about the other nations themselves.

National cultures have long been established as having differences (Hofstede, 1980 and 2001; Trompenaars and Hampden-Turner, 1998) and these differences affect the way that messages and information are both encoded and understood. Culture becomes a part of the way in which individuals decode messages, as they influence the way in which individuals see the world. Culture becomes a form of mental model (Blackman and Henderson, 2003) and, as a result, it is part of the communication filtration system identified earlier. Information shared between nations may be interpreted in very different ways, the understandings built up will differ and so the knowledge developed may not be the same. This may, over time, lead to a series of misunderstandings which lead to a break down of communication. It is vital, therefore, that the cultural filters are really considered and the reality of the 'here and now' is explored.

An example within a team framework was seen when an inter-disciplinary research team was set up across five different nations in order to share knowledge, in the hope of hastening a very important scientific breakthrough which would benefit the world as a whole. The team considered itself to have a clear picture of its goals (reflecting the issues discussed above) and to have a shared understanding of the task in hand. As a result there was little team development undertaken and instead of the 'Forming', 'Storming', 'Norming' and 'Performing' model indicated by Tuckman (1965), the team apparently went almost immediately to 'Performing'.

However, within a year the team had very serious problems. The leaders who had emerged were very unpopular and the team was no longer functioning in a coherent or productive way. Knowledge was not only not being shared; it was becoming obvious that things being shared were actively misleading. Analysis led to three aspects becoming apparent: firstly, the apparently clear goals were not actually commonly understood; secondly, the cultural differences of the team were leading to serious differences in their understanding of the same bits of information, communication and team behaviours and, thirdly, the leaders had been self-selected and the team now was not happy with the power differentials. To get the team back on track, serious cultural analysis had to occur and the team had to be taken through all the stages of the Tuckman model in a managed way. Only then did performance that involved real knowledge development and sharing occur. This micro example should act as a salutary lesson for macro examples in organisations or nations alike.

It must be remembered that cultures develop from stories, rituals, and language (Robbins, 2000) and these, in the case of national cultures, have been developing over a very long period of time. It is, therefore, very hard to overcome many years of history and accept new ideas from countries that have not been trusted over centuries. It is, for example, very hard for the US and Russia to work together as there is such a long history of mistrust, which permeates not only the political regimes but also the populations of the countries they are representing.

Power

It is a truism that knowledge is power. For many countries, the idea of sharing information is extremely alien as it is considered that this will give power to rivals. Expert power comes from intellectual property and to share this with historic rivals is very hard to do. This has been clearly seen in the 'war against terrorism' where countries, historically not at ease with each other, have had to work together. The biggest problem is always that the conflict between power and trust makes knowledge management extremely difficult. As indicated earlier, in economic terms knowledge is regarded as a resource to be competed over and yet, in the current global economy, this may no longer be true. Unless there is a 'balance of power' with all parties feeling safe within the relationship, knowledge will not be developed or shared.

Trust

As can be seen from the above three sections there are serious issues to be overcome if nations are to trust each other over periods of time. The arms war emerged as each country wished to have the ability to overcome its rivals and neighbours. Despite much evidence (see for example Senge, 1990) which demonstrated that such a war would not make the world safer, the war continued with each side saying the others should disarm first. The patent lack of trust made changing the scenario very difficult, and meant that any message sent was automatically doubted and explored for deceit. The mental model was one where the other countries could not be trusted, believing that their words would be different from their actions. Developing encoding systems to overcome such negative decoding systems would prove extremely difficult. Part of the difficulty may be that there is an assumption that individuals are ready to accept new ideas as they are presented to them, but the concept of single loop doubting becomes important here (Blackman and Henderson, 2004). In figure 3 it can be seen that a difference must be perceived if there is to be a change in the mental models in place and, therefore, an opportunity for new knowledge.

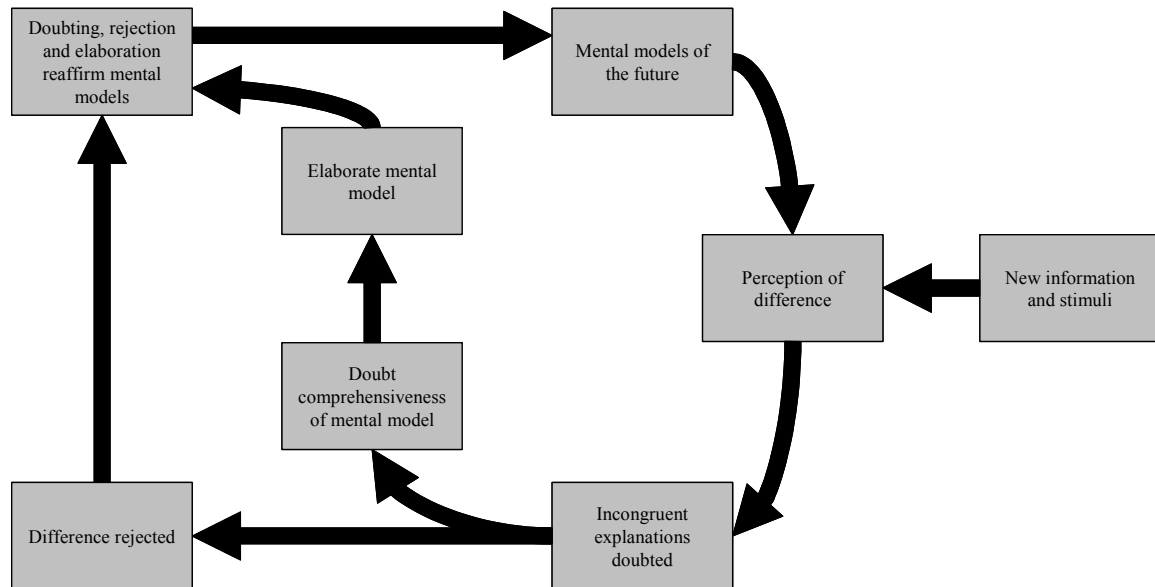


Figure 3: Single loop doubting

Lack of trust may lead to the source of the information, the context or the relevance being doubted, leading to the difference being rejected before it has the opportunity to be developed. Nations must be aware of the possibility of the knowledge development systems becoming semi-closed in this way, thereby reducing the effectiveness of the knowledge development. It is a human tendency to doubt and any excuse for a lack of trust will trigger the doubting mechanisms.

National Infrastructure

When looking at the elements affecting knowledge management within nations, the state of the current technology, combined with the potentiality to implement it successfully, was considered. The location of the knowledge, the ability to develop or access it, as well as the possibilities for analysing it all becomes important here. As indicated in the Ordnance Survey example earlier (Smith et al., 2003), any knowledge management systems will be of no use when those who have access to them fail to perceive their usefulness.

The lessons learnt at the micro level must be transferred to the macro level. It is very tempting for nations to want to develop their own systems, since it is perceived that they will provide competitive advantage, but the costs may be prohibitive, the system too long in the developing and the outputs not really those desired. However, off the shelf systems may be a problem, as they do not really achieve the desired outcomes. There is no point in setting up complex web sites if no-one has access to them for example. Overall, a realistic analysis of the required outputs, against the possible inputs is the order of the day.

Conclusions

What becomes clear from the analysis above is that, whilst knowledge management is extremely important for Nations if they are going to compete and survive in the 21st century, it is going to be very difficult for countries to maximise the benefits they gain from knowledge management processes, unless they spend a considerable time analysing their real context and preparing for the outcomes they desire. Use of the 'Social Architecture' model should enable countries to consider their preparedness to be able to undertake knowledge management with other nations. It will be apparent that the situation will be different for each country and an analysis will need to be pursued in order to identify the issues in each case.

Some may justifiably argue that this is common sense. However, judging by the many, very expensive mistakes made by large organisations run by extremely well educated people, there is no reason to believe that nations will automatically be different. The focus of knowledge systems development needs to be upon the context and the desired outputs, not the inputs possible within the systems.

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