

INTANGIBLE ASSETS AND SOCIAL, INTELLECTUAL AND CULTURAL CAPITAL: ORIGINS, FUNCTIONS AND VALUE

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Abstract

Intangible assets form part of the true value of organisations. These assets are produced from various forms of capital other than financial capital, which are located in the intellectual, structural and customer domains of organisations. This paper reports the findings from 15 cases from an empirical study of large UK service organisations to which we applied the concepts of social, intellectual and cultural capital as analytical tools to interpret the data concerned with intangible assets. We explore these forms of capital through identifying their origins and their functions. The paper identifies links between the value of these forms of capital and reports on how this value may be measured with pragmatic measures. The paper also considers the feasibility of aggregating the full value of organisations into their individual national economies. The research has produced two paradoxes relating to the development of intangible assets to test in future research.

Keywords: Intangible assets, intellectual capital, social capital, cultural capital.

Intangible assets and social, intellectual and cultural capital: origins, functions and value.

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Keywords: Intangible assets; intellectual capital; social capital; cultural capital.

Suggested track (s): Knowledge sharing, Managing organizational knowledge and competence

Introduction

Land, labour and capital were the traditional resource inputs of industrial economies from which wealth could be created through manufacturing. In accounting terms these resource inputs were treated as tangible items. In post-industrial enterprises other

kinds of resource inputs have become the sources of value creation. Increasingly, however, the *real* value of organisations is being recognised by stock markets on the basis of both intangible and tangible assets. Paradoxically the same treatment seems not to extend beyond organisations thus the *real* value of national economies continues to be understated. In the next section we unravel some of the threads of this paradox.

Theoretical issues: identifying the threads of inconsistency

Part of the difficulty of agreeing the real value of organisations resides in the lack of any universally agreed measurement model for intellectual capital (IC). This issue is not new and one of the earlier measures to be developed was Tobin's Q. First developed by Nobel Prize winner James Tobin in 1968, this measures the ratio between market value and reposition value of organisational physical assets (Tobin and Golub, 1998).

The lack of a standard method for valuing IC is currently being addressed in both theory and practice by organisations. Rodov and Leliaert (2002) write that moves are under way in both North America, and in Europe, to improve the off-balance-sheet disclosure of intangibles in annual reports. These two authors start from the premise that double-entry accounting is the basis of accounting systems. Double entry assumes that transactions can be identified and tracked and these transactions will be a balance of assets and liabilities accounted for on the basis of historical cost.

Knowledge, however, does not comply with economic laws because historical cost cannot be applied to what people know and exchange with others. If knowledge could be included in accounting procedures then the return on capital employed could be broadened to include the return on intellectual capital employed.

Double entry then does not adequately account for the value of intangible assets. The difference between market and book values might reveal the presence of the hidden value of intangibles, but the difference between market and book values is not equivalent to the value of IC. While the book value of an enterprise is a summation of its tangible assets at historical cost, the organisation's market value also depends on an assessment of its potential for future growth and earnings (Rodov and Leliaert, 2002).

Rodov and Leliaert discuss a number of current approaches to accounting for IC and provide a source, as well as comments, about the benefits and disadvantages in some instances. These approaches are set out below in Table 1.

Table 1. Some current IC valuation methodologies

Model	Attribution	Comment
Invisible balance sheet	Konrad Group (included Karl-Eric Sveiby)	Uses relative and qualitative measures.
Intangible assets monitor	Karl-Eric Sveiby (1997)	Aims to measure intangible assets in a simple fashion.
The balanced score card	Kaplan and Norton (1996)	Provides a means of linking an organisation's past with its present and its future.
Economic value added	Introduced by New York consultants Stern Stewart	Complex and relies on historic cost rather than current valuation.
The IC index		A so-called second generation practice whose purpose is to provide a comprehensive view of value creation in businesses in a single index.
Technology Broker		Claims to represent something of an advance on previous methodologies because it enables monetary value to be attributed to IC.
Return on assets		Calculates the ratio of an organisation's average pre-tax earnings over a 3 to 5 year period. Has the advantage of being comparatively easy to apply and all necessary data are available in an organisation's historical financial records.
Market capitalisation method		Often critiqued as a comparatively crude method because it measures an organisation's IC by simply subtracting its book value from its market value and assumes that the excess must be a market premium, which recognises the value of IC within the organisation.
The direct intellectual capital method		Proceeds by identifying IC components within an organisation and then valuing them.

Like Rodov and Leliaert (2002) above, Ordonez de Pablos (2002) also lists a number of tools for measuring IC, which includes those of Brooking (1996), Sveiby (1997), as well as Kaplan and Norton (1996; 2000). Like other writers on IC measurement Ordonez de Pablos sees the root of the intellectual capital reporting tradition as being in Sweden and includes Edvinsson's Skandia Navigator (1997) in his list.

Moving from an organisational to a national level, Allee (2000; 2002) redefines value creation in organisations so that the worth of a transaction is expressed as tangible, or intangible goods, or services, knowledge, or benefits that are desirable, or useful to recipients so that they are prepared to return a fair price in exchange. Allee wants value creation measured in terms of intangibles like intellectual, social and cultural capital and she wants this basis of value creation to encompass both organisations and national economies. The indications, at the organisational level at least, are that current international accounting practices are going to constrain her aspirations.

The impending introduction in 2005 of accounting practices enshrined in International Accounting Standard 38, which will apply to listed companies operating in the European Union, will prevent intangibles being recognised on balance sheets unless their costs can be reliably measured (Starovic and Marr, 2002). Consequently intellectual capital, along with other intangible value drivers such as social and cultural capital, is only likely to be recognised as an expense and not as an asset, as it is not amenable to direct measurement and control.

What Allee advocates is a macro-economic value creation in which business enterprises and other organisations are not disconnected from stakeholder groups in the wider environment in which they operate. The intangible assets underpinning Allee's case for a macro-economic vision derive from intellectual capital, social capital and cultural capital. To ignore this connection, she argues, is to perpetrate macro-economic under-valuation.

Intellectual capital

While we are mindful of Allee's (2000) argument the focus of our research remains confined to the enterprise level in the private, public and voluntary sectors of the UK economy. Our work, though, continues to be informed by the distinction between tangible and intangible assets. One of our primary concerns continues to be with valuing intellectual capital where, according to Starovic and Marr (2002), the evident shortcoming of evaluation models is that they lack practical and widespread testing and

thus do not enable comparisons to be made between one business and another, between business sectors, or between countries.

Intellectual capital is conceptualised in the literature by many writers including Zhou and Fink (2003), Ordonez de Pablos (2002), and Sullivan and Sullivan (2000), as a combination of customer capital, organisational capital and human capital. According to the Meritum¹ guidelines the latter of these, human capital, serves as a collective term for an organisation's core competences, the skills and knowledge, which the enterprise draws on to create and innovate in order to remain competitive. Here we agree with Stewart (2001), Carneiro (2000) and Bowonder and Miyake (1999), that intellectual capital is a strategic issue and knowledge management is an operational issue. This means that intellectual capital is underpinned by knowledge management (KM) activities, while knowledge management is driven by an organisation's strategic development of its intellectual capital.

Lei (1997) argues that the knowledge base that lays the foundation of an organisation's core competence is comprised of easily replaced domain knowledge and the less easily replaced knowledge of how work is carried out. We label this first form of knowledge *fluid knowledge* (Coakes, Bradburn and Sugden 2003) because it is capable of flowing around an organisation. This can be achieved even more effectively when the organisation's social and technical systems are linked by means of information and communication technologies (ICT).

We characterise the second form of knowledge as *sticky* knowledge because it is inseparable from knowing how work is carried out and it is related to the processes undertaken. The signifiers *fluid* and *sticky* are to us more appropriate for this application than the descriptors *explicit* and *tacit* (Nonaka and Takeuchi, 1995) so frequently encountered in the KM and IC literatures. Sticky knowledge is glued onto the experiences of individuals and may remain unarticulated formally, but it is characterised by being difficult to replace (Hildreth, Kimble and Wright 2000). As Chuang-Tzu says (Watson 1964) 'Knowing what it is that man does, he uses the knowledge of what he knows to help out the knowledge of what he doesn't know' (p73). The replacement of such knowledge is problematic because it is not easily surfaced in order for it to be codified, stored, or transmitted. It is cumulative to personal experience and thus unique to the individual's understanding and it resides in the *socio* domain of the organisation's sociotechnical system. Its best form of transfer from individual to individual tends to be through story-telling and in the practice of communities.

¹ Measuring intangibles to understand and improve innovation management.

Social capital

The concept of social capital bridges the domains of sociology and economics (Adam and RonCevic, 2003) and its utility relies on the extent to which it will map onto economic thinking. The World Bank Group defines social capital as the norms and networks that enable collective action. In addition the term social capital indicates the nature of different types of relationships with others and in the business context may be regarded as a factor of production (Schmid and Robinson, 1995). Nahapiet and Ghoshal (2000), state that social capital influences the development of IC and thereby impacts the economic performance of organisations. Consequently social capital can impact not only economic transactions, but also production, loyalty and risk taking.

In our empirical work we have noted that the issue of trust surfaces as a key element in the relationships within communities of practice, especially where such communities are networked by means of ICT. Social capital serves to improve both the efficiency and effectiveness of knowledge distribution. Such transactions enable knowledge to be re-purposed (Nahapiet and Ghoshal, 2000) and we could speculate that such re-purposing might stimulate creativity within an organisation. Thus social capital can be a proxy measure of the quality of the relationships between members of these communities where knowledge is generated, shared, transferred and exploited. Ng (2001) provides an account of the failure to network via ICT caused by lack of trust and a consequent unwillingness to risk communicating and sharing knowledge with an unknown other.

Trust is a concept everybody understands at some personal level, but most people will have trouble enunciating a specific definition of the concept. Trust can be defined as the willingness of a party to be vulnerable to the actions of another party, based on the expectation that the other will perform a particular action important to the trustor (Mayer, Davis and Schoorman, 1995).

The word 'trust' has etymological roots in the Scandinavian word 'trausti' (Websters 1986) which relates to an agreement or pact made between parties. Whilst there are a number of meanings offered in the dictionary for the current usage of the word, certain elements are common. In particular it implies an assured attitude towards the other party in the agreement which may rely on past evidence or experience, knowledge of the other party, affection, or admiration or respect for that party. There is also an implication that both parties in the trusting relationship are confident in the character of the other through past experience perhaps, or faith or hope in the future relationship. There is a reliance on the integrity of the other party.

Just as every person has his or her own way of deciding issues of trust, every role a person plays will also have its own understanding of trust based on the specific goals and priorities of that role. Empathy is good for times that call for compassion and care, but in matters of trust it can be hard to see things from another's point of view. Trust means different things to different people, to different roles, and in different scenarios.

Trust can mean such things as the following:

Do I believe that what someone says is true and factual?

Do I believe that a person's goals and/or priorities match mine?

The path people take to a level of trust can vary greatly, because some people work from the premise that trust must be earned, and some from the premise that trust is assumed but can be lost.

Ratnasingham (1998) says that trust is to a large extent dependent upon participants' co-presence in time and space and their ability to make use of the entire human bandwidth (sight, hearing, smell, taste and touch). This means that there are a number of trust issues relating to sharing across technology. Do you, for instance, trust the potential recipients of your knowledge? Do you trust the information/knowledge received? Do you need to know the *owner* of that information/knowledge in order to trust that information/knowledge? How will the use of incorrect information/knowledge affect your own worth/reputation?

Without trust there may not be reciprocity. Blanchard and Horan (2000) note that the exchange of information and knowledge in organisations takes place in both informal and formal settings. They refer to these settings as the off-line and on-line modes of social capital. An equal exchange is necessary for trust to be rewarded and to be built on. Parties to these exchanges trust that shared knowledge will not be used for gain or misuse/abuse. Thus ethical and value aspects are also important.

Trust is fostered in organisations by the relevant social and cultural environments. Some organisations have seen knowledge management as a means to foster staff retention yet few have achieved this. Often this is related back to the organisational culture that is encountered and its social interactions and recognised etiquette of behaviour. Without suitable rewards and support for knowledge sharing it may not happen, or may happen despite the organisation. The organisation needs to be a Learning Organisation with knowledge champions and 'T'-shaped managers (Hansen and Oetinger, 2001).

Cultural capital

Cultural capital is an idea strongly associated with the French sociologist Pierre Bourdieu (1986), but for organisations Hales (2001) defines organisational culture as the values, beliefs and behavioural norms shared by individuals in an organisation. Illyas and Jashapara (2003:501) regard cultural capital as a dimension of social capital. These two researchers argue that culture is not resident in an individual's mind. However, based on empirical work with Fire Services in the United Kingdom and in Denmark (Bradburn, 1997; 2001) our evidence is that organisational culture is very much in the heads of people. Our view is supported by Soley and Pandya (2003), who state that culture is an individual's acquisition of values and attributes shared by members of a group. In the words of Burnett Tylor (1871, as quoted in the Encyclopaedia Britannica 1987: 925) 'Culture ... is that complex whole which includes knowledge, belief, art, morals, law, custom and any other capabilities and habits acquired by man as a member of society.' Society is considered here as the organisational society within which the human-being acquires their capabilities and habits. It also includes those material objects, artefacts, tools and techniques, such as the information systems in an organisation that might be used as an integral part of the cultural behaviour.

Thus culture is acquired through a process of identification and internalisation and the values, attitudes, beliefs, assumptions and expectations associated with the culture become deeply embedded and influence cognitive and affective behaviours. Social capital, on the other hand, is an external system predicated on relationships between individuals.

From our recent study (2001-2002) we view organisational culture as the source of cultural capital in organisations. Bourdieu (1986) argued that class differences in cultural capital are rooted in network differences and this may assist in explaining qualitative differences in the effectiveness of communities of practice observed in our recent empirical work. In differentiating between data, information and knowledge Coakes and Sugden (2003) argue that organisational knowledge relies on an organisation's cultural capital because of its social construction. Its added value is generated from an intra-organisational process of sharing, which itself is reliant on an organisation's cultural paradigm.

In our survey (2001-2002) we investigated aspects of cultural paradigms. When asked to identify organisational values *trust* was frequently mentioned along with *honesty*, *openness*, *sharing* and *team working* as the ideals guiding workplace activity. Our

construct of *trust* is one in which individuals are both trusting and trusted in their transactions with others. Thus members of teams and communities of practice have confidence in other members, rely on them, and are trusted by them to discharge obligations, share knowledge and engage in collaborative working without fear of consequences.

Where trust is not established as a precursor to working in online communities then sharing and collaborating may be less probable because individuals are more risk averse. Ng (2001), McCabe (2001), and Rzoska (2001) have reported on aspects of this phenomenon. With some of our cases the need to establish trust as a basis on which on-line and off-line relationships could be promoted had been accepted by members of the communities concerned. The importance of contiguity highlighted respectively by Ng, McCabe and Rzoska above had been recognised and various means had been employed in order to bring members of communities together in face-to-face situations, which served as opportunities for the establishment of mutual trust. These events included conferences, seminars, meetings and brain storming sessions in addition to a range of social occasions.

Methods

Our research interests in the KM field led us to want to identify and explore any linkages there may have been between the concepts of knowledge management, the learning organisation and organisational culture from the perspective of KM practitioners. We began with a review of KM literature, which we conducted during the first Quarter of 2001. Drawing on the discourses in this literature our working definition of knowledge management became: *Any process or practice of creating, acquiring, capturing, sharing and using knowledge, wherever it resides, to enhance learning and performance in organisations.* Subsequently, to guide our study, we synthesised the following research question: *Is KM destined for inevitable failure in those enterprises whose organisational culture is averse to change and thus resistant to new ways of working and of learning from the outcomes of new working practices?*

In 2001/ 2002 we set out to try to answer this research question through an empirical investigation of the UK service sector. This sector comprises a combination of private, public and voluntary organisations. We employed mixed methods of research in order to generate both quantitative and qualitative data. We commenced with a survey, which we followed up with semi-structured interviews, drawing on a database of KM practitioners for our sampling frame. We mailed a self-completion questionnaire to 621 KM practitioners in 332 large service organisations throughout the United Kingdom.

The European Commission (EC) defines micro, small, medium and large enterprises exclusively by employment, rather than a multiplicity of criteria. For the purpose of this study we adopted the EC's definition of the large enterprise - one that employs 500 or more persons. In our study the organisations consisted of airlines, financial services, both central and local government, healthcare, higher education, insurance, legal services, management consulting and media enterprises.

Our survey instrument was a questionnaire comprising 26 variables intended to generate both quantitative and qualitative data. While three questions related to length of service, length of involvement with KM and KM activities in the organisation, the remaining 22 variables consisted of statements to which recipients were asked to respond on a seven point Likert scale.

An empirical study that investigates the reality of a present-day phenomenon is a case study according to Yin (1994), but the case study strategy also relies on multiple sources of evidence with data needing to converge through a process of triangulation. Patton (1987) differentiated between a case study and a case on the basis of a lack of triangulation. Without triangulation a case becomes a unit of enquiry such as an individual. Accordingly, our evidence relates to cases, as opposed to case studies, because it is drawn from one individual in one organisation. We thus regard our KM practitioners and their differing organisational contexts as cases. Follow-up interviews (semi-structured with a pre-designed protocol) and an email survey were conducted in 2003 with a number of these organisations in order to enrich the data collected for the case development and ensure triangulation across time.

Results

We received a 6.6 per cent response to our survey (N=41). Of our 41 respondents, 20 agreed to an interview at a later stage. This level of response to the survey was disappointing and it caused us to question the value of the data emanating from a small sample. We considered the implication for any findings, but decided that we should not abandon our study. We believe our methodology was rigorous, but we recognise that our sample size weakens the quality of the science and the value of our results.

Defining a correlation coefficient of +/-0.50 to +/-0.74 as moderate and above +/-0.75 as strong we found 272 sets of correlations between the pairs of variables we analysed in this range. We reported some initial findings from this stage of our study to the international conference of the Information Resources Management Association (IRMA) in Seattle in 2002 (Bradburn, Coakes & Sugden 2002).

Among the results reported there were four categories of the most frequently listed organisational values in our sample of 41 respondents, which guided the way they worked. These are ranked in Table 2 below:

Table 2. Occurrence of organisational values

Value	Frequency
Honesty and integrity	8
Team working	7
Customer focus	7
Transparency and openness	6

In addition to the express values published by the organisations our respondents also identified a number of key beliefs embedded within the culture of their respective organisation. These beliefs demonstrated how things were done in each of these organisations. Apart from a strong concern for *excellence* (N=15) in these organisational cultures beliefs in *social networks* (N=8) as well as *customer* and *employee relationships* (N=10) were clearly articulated.

Following our paper to the IRMA conference we moved onto the second stage in our research. Here we conducted semi-structured interviews ranging across 22 variables with 15 of the 20 respondents referred to above. The interviews were taped and transcribed for textual analysis using NUD*IST©. We would have liked to present the findings from all of our interviews in more detail, but space does not permit this here. However, as argued below the analysis and conclusions developed are also applicable more broadly across the cases. We would also argue that qualitative research such as that described here can be considered as reliable, if not replicable, if it is methodologically sound and robust through the instruments used.

We have chosen to present here two interviews from the same organisation in some detail and to summarise the findings from the remaining interviews. Our more detailed findings are reported below in the cases from the Charity organisation.

The Charitable Organisation's cases

In the voluntary sector organisation our two respondents were co-located in the same headquarters building where there is a staff of around 500. One of our cases was interviewed in the first round of our study; the other was interviewed in a follow-up

round in July 2003. Owing to confidentiality agreements with our two respondents we are unable to name them, or the Charity for which they work.

We can report that this organisation is a multinational Charity operating in several developing countries. Its healthcare aims are to improve existing health services; to reduce sickness from water-borne diseases through the provision of safe and clean supplies of water; and to provide training in community based public health. Organisational values are underpinned by 10 basic human rights. These values guide and influence the efforts of the Charity's workforce and shape the organisational culture in the workplace.

Some of the Charity's efforts are directed towards highlighting the linkages between poverty, suffering and health, affirming that human life is of equal value no matter where people live. The Charity regards the existence of poverty in a resource rich world as an affront and strives to redress the balance between rich and poor nations through the transfer of resources from the former to the latter.

According to the Charity's Information Manager the organisation utilises KM to leverage the IC it has aggregated. In the organisational context KM is concerned principally with surfacing and capturing sticky knowledge, then exploiting it, and motivating colleagues to share their experience and learning from projects. Central to the Charity's KM function is a continuous concern for how intellectual capital can be stored and how it can be made as widely accessible as possible. Fluid knowledge is critically important to their communities of professionals, who are enthusiastic about sharing good practice and learning from one another.

The Charity's KM project was rolled out in May 2000. Subsequent evaluation revealed the extent of the problem of connectivity in Africa that prevented a number of groups from having access to the Internet. Despite these specific local constraints the Internet is enabling experiences from different healthcare initiatives to be fed into a global community of practice (CoP). In this CoP different health workers on different continents are using the Internet to communicate and share their sticky knowledge.

The Charity's Intranet has existed for more than four years at the time of writing. There are currently hundreds of pages on multiple sites and the biggest problem is organising content and having it well indexed. Indexing requires a comprehensive meta-tagging system in order to cross-reference material. One outcome of cross-referencing is that frequently asked questions can be posted on the Intranet, which improves

organisational efficiency by shortening learning cycles and enhancing knowledge sharing.

In these last four years KM has become a way of working. It is now embedded in the Charity's organisational culture. There is a KM reference group meeting every two months over lunch where someone gives a prepared talk. On other occasions there may be a general discussion during which different people will table different issues. As a result a local CoP emerged, but instead of healthcare this community of practice is concerned with knowledge management practices.

Lunchtime talks on specific themes are a way of getting people to start talking about their own experiences and knowledge in the field. These events are open to anyone to attend and to contribute their sticky knowledge. Whatever sticky knowledge surfaces in these sessions is captured manually and then posted on the Intranet. The discussions in these meetings, along with questions and interventions, are thereby available to multiple communities of practice.

The implementation of KM is driving organisational change. The Charity has been deploying some of its intellectual capital to the development of lobbying and advocacy functions. Through these functions it aims to change situations at the grass roots. The organisation also aims to change policies at the world political level by making countries, and multilateral organisations, recognise that change needs to occur both from the top down and from the bottom up. Accordingly much advocacy work is informed and based on grass roots work with projects overseas.

The benefits of electronic networking enable the organisation to collaborate much more closely with other like-minded charities. Policy initiatives are fed from intra-agency and inter-agency collaborations directly to a team, whose role is to lobby the World Bank, the IMF (International Monetary Fund), and the United Nations. KM and its enabling technologies are providing greater opportunities for collaboration and interaction between different countries to address issues and problems important to them.

Our interview with the Charity's Health Policy Advisor (HPA) provided an insight into the HIV/AIDS strategy out of which an international CoP has been formed. This CoP comprises both specialists and non-specialists in HIV/AIDS. Through access to ICT - enabled networks members are able to share knowledge in either real time or in asynchronous correspondence.

According to our HPA respondent the Charity's investment in information and communication technologies is assisting with a situation where "...an expert, or non-expert, in one country may be doing something very good, but it stays there unless somebody goes and visits. By creating horizontal communication channels rather than hub and spoke - from the Centre to country offices - we're enhancing the way people talk to each other."

"At the Centre", she told us, "we just have a facilitating role to make them talk to each other and share their learning, good or bad. We encourage them to share the problems, share the good things, and share the frustrations. And together, based on learning from other people, we can avoid everyone reinventing the wheel in their own way."

Social networks facilitated by ICT are thus being formed and trust encouraged in order that tacit and sticky knowledge can be shared. However, when we explored the development of an organisational memory, as a component of IC, within charities more widely (though a literature search etc.), we found that voluntary organisations are not generally effective in capturing the learning outcomes of projects. In the case of this Charity though, the KM function has been successfully addressed through the application of ICT. This has been achieved through project partners working with the Charity. These partner organisations assume responsibility for the front line operations during which they create and maintain multiple electronic folders containing knowledge about the project from inception to termination. These folders constitute a repository of (fluid) knowledge. They add to overall organisational memory and can be searched repeatedly to develop best practice in healthcare interventions.

The value of intangible assets: intellectual, social and cultural capital:

summarised findings

In our study we noted that KM was embedded in our private sector cases and in some instances had become woven into the fabric of business processes. Where our private sector organisations were more homogeneous with respect to KM, our public and voluntary sector cases displayed more heterogeneity in respect of KM.

The two cases we have reported on above demonstrate that the Charity is a knowledge intensive organisation. In our study more than 90 per cent of our respondents identified their organisations as knowledge intensive. Measuring knowledge activity would not seem to be dependent upon knowledge activity. In a curious irony we found that the one organisation that was the least knowledge intensive was also the one consistently

measuring both the growth and the use of its organisational knowledge. This telecommunications equipment manufacturer had been measuring the growth of its marketing knowledge repository from internal and external sources since 1998. It had also maintained usage figures for its research services and for its Intranet portal.

Among the management consultancies in our sample measuring knowledge activity was patchy. One organisation claimed to have the ability to measure, but did not do so preferring instead to focus on encouraging the use of its knowledge channel. Our second consultancy measured the number of submissions made to various knowledge repositories. It had also found one particular metric misleading. In this instance visits to its *Infopacks* did not accurately reflect their use. It had been discovered that local copies of these files were being taken meaning that subsequent use could not be monitored. The third consultancy had instituted key performance indicators for measuring knowledge activity. Our respondent here was able to tell us that within four months of the organisation's knowledge network going live 60 per cent of its 6,500 UK staff was logging on at least once per week and 90 per cent were logging on at least once per month. On one particular day the UK knowledge portal had received 42,000 visits and then it crashed!

The police service we studied had found no effective way of evaluating the use of its gathered intelligence. One of our hospitals had had a hit counter on its knowledge database, but when this repository had migrated to a new file server the counter function had been lost and had never been re-instated. In one of the public sector organisations the ultimate driver of knowledge activity was central Government through its funding of projects. Each time funding was allocated the organisation produced new reports. On these occasions traffic on the electronic knowledge channel increased and ultimately the knowledge repository was augmented by the content of the new reports produced. Thus gains in organisational knowledge could be indexed to increases in the repository and were a function of Government funding decisions.

The metrics in the construction company were related to issues of its technical service news distributed via its Intranet. Certain pages were pre-selected for the monitoring of visits. The organisation also used telephone enquiries to its technical helpline as both quantitative and qualitative measures. Among the least active organisations was one of the banks where our respondent considered the lack of measures as a significant oversight. She pointed out that there had been a substantial allocation of resources to KM and the development of IC yet there were no data concerning how much use might be being made of knowledge assets, or who might be using them. The other bank had

a crude system of measuring changes in its knowledge database according to how many new documents were added in a particular time period. Unfortunately, not all of its knowledge repository was in digital form; part of it remained a paper-based system. Consequently the reliability of any measurement remained questionable.

The most managerial approach brought to our notice was being tested in one of the public service organisations. This involved the use of the balanced scorecard (Kaplan and Norton 2000), which might have been considered an over sophisticated, over complex, approach. However, given that this instrument is essentially designed to measure the implementation over time of business strategy, if KM usage were to be included as an element then using this technique for measurement purposes might have been appropriate.

The most pragmatic approach to measuring the value of intangible assets was used by the Charity organisation we discussed above. When project engineers sink new boreholes in order to provide a village with fresh water they always site the wellhead in a secure location close to the inhabitants and their dwellings. This practice has been shown to reduce attacks on women in the community, who are invariably the collectors and carriers of water. In this context the value of intellectual capital can be measured in terms of the decrease in incidences of the physical assault, sexual abuse and even the murder of local women.

Conclusions

When we probed beneath the overarching categories that we had employed in our exploration of values and beliefs, in addition to honesty and integrity, transparency and openness, we also found responses such as: *trust*; *respect*; *ethics*; *sharing*; *equity*; *collaboration*; *communication*; *mutual dependency* and *learning*. Content analysis of the semi-structured interviews conducted with our respondents led us to conclude that a *trust* infrastructure had not been much developed in the public and voluntary sector organisations and that as a consequence communities of practice had largely not germinated and ultimately KM was failing to flourish in most of these particular organisational environments

The conclusions we were able to draw from our two Charity cases were that organisational values help to provide a context in which cultural, social and human capital can develop. Unfortunately, our data are limited and thus they do not have full transferability. Although we are therefore unable to generalise we can perhaps regard our results as an indicator of the importance of intellectual, social and cultural capital

acting with other forms of capital in order to deliver effective healthcare solutions in the developing world.

From the data in our other interviews we came to recognise that the development of IC through KM may be in trouble in some of the organisations we were investigating, especially, but not exclusively, in the public sector. At the centre of the cultural frameworks we explored with our respondents were paradigms consisting of attitudes, beliefs and values that seemed to be deeply embedded and highly resistant to change.

The NHS (National Health Service) Trusts were characterised as notoriously bureaucratic and consequently very hierarchical and populated by individuals who were very rule orientated. In other the public service organisations too, there were resonances of an old public management ethos and associated cultural barriers that affected enterprise level funding decisions so that over time these organisations had become patchworks of individual initiatives. These organisations were also strongly bureaucratic and required attitudes and ideas to be changed before KM could become part of the culture. Changing the culture seemed an overwhelming prospect to some of our respondents, which reinforced our perceptions that these organisational cultures may be highly resistant to new ideas.

The cultures in private sector organisations were more accepting of KM because the central paradigms were more open to change. In these organisational cultures, we concluded, there was often a strong sense of community and belief in the value of sharing. Silo cultures buttressing knowledge protectionism were not evident except in the case of one of the banks where the various Divisions could see no benefit in exchanging knowledge. Some of the differences between the two sectors may have been due to commercial imperatives and to Human Resource management practices.

One of the management consultancies claimed that its managers made sure KM made a return on the resources invested in it, but there was no explanation of how this was done. The only organisation getting near to measuring its KM benefits was the police service, which included in its annual report how much had been invested in the development of its IT enabled knowledge systems together with a list of the benefits which had flowed from its investment decision.

We set out to explore a paradox involving the development of intangible assets in organisations. From our findings we conclude that organisations value these assets, but many seem to lack the will, or the expertise, to measure and report their value. The data we gathered in our study, suggested that few organisations attempted any

investment and return analysis in support of the perceived benefits accruing from investment in intangible assets. This inertia may have arisen from the confusion about a standard method for measuring the value of intangibles. If there are disconnections of this kind at the enterprise level then we cannot be sanguine about the possibility of reporting real value at the national level and Allee's hopes in this context are likely to remain aspirational.

Finally, we conclude that we have encountered not one, but two, paradoxes here and that as a result we may have the basis of an hypothesis that we can test through empirical research on a future occasion.

References

Journal articles:

Adam, F., RonCevic, B. (2003): Social capital: Recent debates and research trends, *Social Science Information*, 42, 02, 155-183.

Allee, Verna. (2000): The value evolution: addressing larger implications of an intellectual capital and intangibles perspective, *Journal of Intellectual Capital*, 01, 01, 17-32.

Bowonder, B., Miyake, T. (1999): Japanese LCD industry: competing through knowledge management, *Creativity and Innovation Management*, (UK), 08, 02, 77-100.

Carneiro, A. (2000): How does knowledge management influence innovation and competitiveness? *Journal of Knowledge Management*, 04, 02, 87-98.

Edvinsson, Leif. (1997): Developing intellectual capital at Skandia, *Long Range Planning*, 30, 03, 366-373.

Hansen, M.T., Oetinger von B. (2001): Introducing T-Shaped Managers: Knowledge Management's Next Generation, *Harvard Business Review*, March, 107-116.

Hildreth, P., Kimble, C., Wright, P. (2000): Communities of practice in the distributed international environment, *MCB Journal of Knowledge Management*, 04, 01. 27-38

Lei, D.T. (1997): Competence-building, technology fusion and competitive advantage: the key rules of organizational learning and strategic alliances, *International Journal of Technology Management*, 14, 02/03/04, 208-237.

Mayer, R.C., Davis, J.H., Schoorman, F.D. (1995): An Integrative Model of Organisational Trust, *Academy of Management Review*, 20, 03, 709-715.

Ng, K-C. (2001): Using e-mail to foster collaboration in distance learning, *Open Learning*, 16, 02, 192-200.

Ordonez de Pablos, Patricia. (2002): Evidence of intellectual capital measurement from Asia, Europe and the Middle East, *Journal of Intellectual Capital*, 03, 03, 287-302.

Ratnasingham, P. (1998): The importance of trust in Electronic Commerce, *Internet Research: Electronic Networking Applications and Policy*, 08, 04, 313-321.

Rodov, I., Leliaert, P. (2002): FiMIAM: financial method of intangible assets measurement, *Journal of Intellectual Capital*, 3, 323-336.

Schmid, Allan., Robinson, L. (1995): Applications of social capital theory, *Journal of Agriculture and Applied Economics*, 27. 59-66

Sullivan, P.H Jr., Sullivan, P.H Sr. (2000): Valuing intangibles companies: an intellectual capital approach, *Journal of Intellectual Capital*, 01, 04, 328-340.

Zhou, A.F., Fink, D. (2003): The intellectual capital web: a systematic linking of intellectual capital and knowledge management, *Journal of Intellectual Capital*, 04, 01, 34-48.

Books:

Allee, Verna. (2002): *The Future of Knowledge: Increasing Prosperity through Value Networks*, Newton MA, Butterworth-Heinemann.

Burnett Tylor, Edward (1871) in *Encyclopaedia Britannica Macropaedia* (1987) Vol 16, (15th edition) Chicago, Encyclopaedia Britannica.

Hales, Colin. (2001): *Managing Through Organization* (2nd edition), London, Thomson Learning Business Press.

Johnson, Gerry., Scholes, Kevan. (1993): *Exploring Corporate Strategy* (3rd edition), Hemel Hempstead (UK), Prentice Hall Europe.

Kaplan, R.S., Norton, D.P. (1996): *The Balanced Scorecard: Translating Strategy into Action*, Boston, Harvard Business School Press.

Kaplan, R.S., Norton, D.P. (2000): *The Strategy Focused Organization: How Balanced Scorecard Companies Thrive in the New Business Environment*, Boston, Harvard Business School.

Lehaney, B., Jack, G., Clarke, S., Coakes, Elayne. (2003): *Beyond Knowledge Management*, Hershey, IRM Press.

Nonaka, I., Takeuchi, H. (1995): *The Knowledge-Creating Company: How Japanese Companies Create the Dynamics of Innovation*, Oxford, Oxford University Press.

Patton, M.Q. (1987): *How to Use Qualitative Methods in Evaluation*, Newbury Park (CA), Sage.

Stewart, Thomas. (2001): *The Wealth of Knowledge*, London, Nicholas Brealey.

Sveiby, Karl-Eric. (1997): *The New Organizational Wealth: Managing and Measuring Knowledge-Based Assets*, San Francisco, Berrett-Koehler Publishers,

Tobin, J., Golub, S.S. (1998): *Money, Credit and Capital*, Irwin/McGraw-Hill.

Watson, Burton., (1964) *Chuang-Tzu Basic Writings* NY, Columbia University Press.

Websters (1986) 3rd *New International Unabridged Dictionary*, Springfield Mass, Merriam-Webster

Yin, R.K. (1994): *Case Study Research: Design and Methods*, Thousand Oaks (CA), Sage.

Book chapters:

Blanchard, Anita., Horan, Tom. (2000): Virtual communities and social capital in: *Knowledge and Social Capital*, Eric Lesser (Ed), Oxford and Boston, Butterworth-Heinemann, 159-178.

Bourdieu, Pierre. (1986): The forms of capital, in: *Handbook of theory and research for the sociology of education*, Richardson, J.G (Ed), New York, Greenwood, 241-258.

Bradburn Anton, Coakes Elayne and Sugden Gill., (2002) 'Searching for linkages between knowledge management, learning organisation and organisational culture within large service enterprises in the United Kingdom: what KM practitioners say'. In Khosrow-Pour M. (ed) *Issues and Trends of Information Technology Management in Contemporary Organisations* Hershey: Idea Group Publishing IRMA 2002 Seattle May vol 2 pp928-930

Nahapiet, Janine., Ghoshal, Sumantra. (2000): Social capital and the organizational advantage in: Knowledge and Social Capital, Eric Lesser (Ed), Oxford and Boston, Butterworth-Heinemann, 119-157.

Conference proceedings:

Coakes, Elayne., Bradburn, Anton A., Sugden, Gill. (2003): Managing and Leveraging Knowledge for Organisational Advantage, paper to the Knowledge Management Aston Conference, Aston University, Birmingham, UK.

Illyas, Mohd. I., Jashapara, Ashok. (2003): Social capital: re-interpreting the cultural and political dynamics of knowledge sharing, proceedings of the Fourth European Conference on Knowledge Management, Fergal McGrath and Dan Remenyi (Eds), 19-19 September, Oriel College, Oxford University.

McCabe, L.L. (2001): Principals – last of the e-learners, Newport Pagnell (UK), conference proceedings of the British Educational Management and Administration Society.

Rzoska, A. (2001): Head teacher professional development using e-learning, Newport Pagnell (UK), conference proceedings of the British Educational Management and Administration Society.

Soley, Martin., Pandya, Kaushik, V. (2003): Culture as an issue in knowledge sharing: A means of competitive advantage, proceedings of the Fourth European Conference on Knowledge Management, Fergal McGrath and Dan Remenyi (Eds), 19-19 September, Oriel College, Oxford University.

Electronic references:

Coakes, Elayne., Sugden, Gill. (2003), Knowledge Management – A Review. Available: <http://www.orsoc.org.uk/about/topic/projects/kmwebfiles/article1.htm>

Meritum [measuring intangibles to understand and improve innovation management]. Available: www.fek.su.se/home/bic/meritum

Starovic, Danka., Marr, Bernard. (2002): Understanding corporate value: managing and reporting intellectual capital, Cranfield School of Management and the Chartered Institute of Management Accountants. Available: <http://www.cimaglobal.com>

World Bank Group. Available: www.worldbank.org/poverty/scapital

Unpublished references

Bradburn, Anton. (1997): Changing states, dissertation submitted for the award of a Master's degree in Business Administration to South Bank University, London.

Bradburn, Anton. (2001): Strategic management styles in Fire Services: An Anglo-Danish comparison 1995-2000, thesis submitted for the award of Doctor of Philosophy to South Bank University, London.