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## **Social Capital: The New Driver for Corporate Success in the Knowledge Era**

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### **Abstract**

The evolution of corporate markets from an industrial era to a knowledge era is being played out on the world's stock exchanges. Over the past 10 to 15 years, world markets have experienced unprecedented fluctuations, most recently illustrated by the dotcom boom and bust. Movements in financial performances, yields, earnings, returns on physical assets cannot explain the variations the markets have experienced. Intangible capital is being promoted now as having the largest impact on company valuations in the knowledge era. A growing body of research is targeting a greater understanding of intangible capital. Various concepts for human capital, structural capital, customer capital, external capital, innovation capital, intellectual capital etc. are being put forward as components of intangible capital. Mechanisms like the balanced scorecard and the intangible asset monitor have been developed to assist executives manage the non-financial aspects of their businesses. This paper develops an argument for the use of Social Capital as the leading indicator for the management of intangibles. The argument is based on recognition that managing knowledge flows will determine success in the knowledge era, and that leveraging Social Capital is the most appropriate means for managing this. Social Capital is also promoted as a theme for developing heuristics for managing intangibles. The premise being that if a firm is managing its Social Capital well, then all other aspects of intangible capital will naturally follow. Examples are provided on the use of Social Network Analysis techniques for measuring and managing Social Capital at the individual, group and market-place levels.

### **Introduction**

Social Capital as a concept has its roots in the field of sociology, being largely applied to describe organisational effects developed through socially derived connections in the broader communities, societies and cultures (Baker, 2001; Nahapiet and Ghoshal, 1998 ). Traditionally, the context of social capital for private sector firms is seen as their contributions (usually financial) to the communities within which they operate. While often seen as corporate philanthropy, claims have been made that such good corporate citizenship can contribute to improved business performance (Allee, 2000; Roman, Hayibor and Agle, 1999).

The traditional view of Social Capital, as described above, is "industrial era" thinking. Many commentators have argued that we are currently transitioning from the industrial era to a knowledge era (Drucker, 1993; Savage, 1996), where the traditional factors of production of land, labour and capital are being replaced by the creation of value through knowledge. In the knowledge era the boundaries between firms, governments and society at large will become increasingly blurred. In the knowledge era, firms will become embedded within a complex web of interconnections that span markets, governments and communities, rather than simply managing an interface between a private and public sector. In this world the concept of Social Capital can take on a whole new dimension for the "firm".

This paper explores the concepts of Social Capital, as it applies to the corporate sector. The notion of how world markets are migrating from being industrially based to knowledge based is discussed. A relationship is drawn between the concept of Social Capital and the concepts of "Intangibles" and their impact on company valuations. An argument is then put forward for the use of Social Capital as a unifying theme for developing a suite of management heuristics for intangibles. Finally some case study examples of how Social Capital could be measured at the individual, group and marketplace levels, are provided. These examples further illustrate how markets and firms are moving from an

industrial modus operandi to a networked model, further supporting the argument for the use of Social Capital as a unifying concept for managing in the Knowledge Era.

## What is Social Capital?

Definitions for Social Capital are many and varied as the concept broadens from its traditional sociological base to more fully embrace corporate sector activities. There are however a set of common themes that can be drawn from definitions offered by noted authors in the field (Baker, 2001; Nahapiet and Ghoshal, 1998, Putman, 1995; Cohen and Prusak, 2001; World Bank, 2003):

- Strong levels of network/contacts;
- High levels of trust and shared understanding;
- High levels of co-operative action; and
- Operates at individual, group and marketplace level.

Continuing the theme of “corporatising” Social Capital one could look at the traditional societal context for Social Capital through a Corporate lens. The following table provides a corporate interpretation of a traditional context provided by the Australian Bureau of Statistics (ABS, 2000).

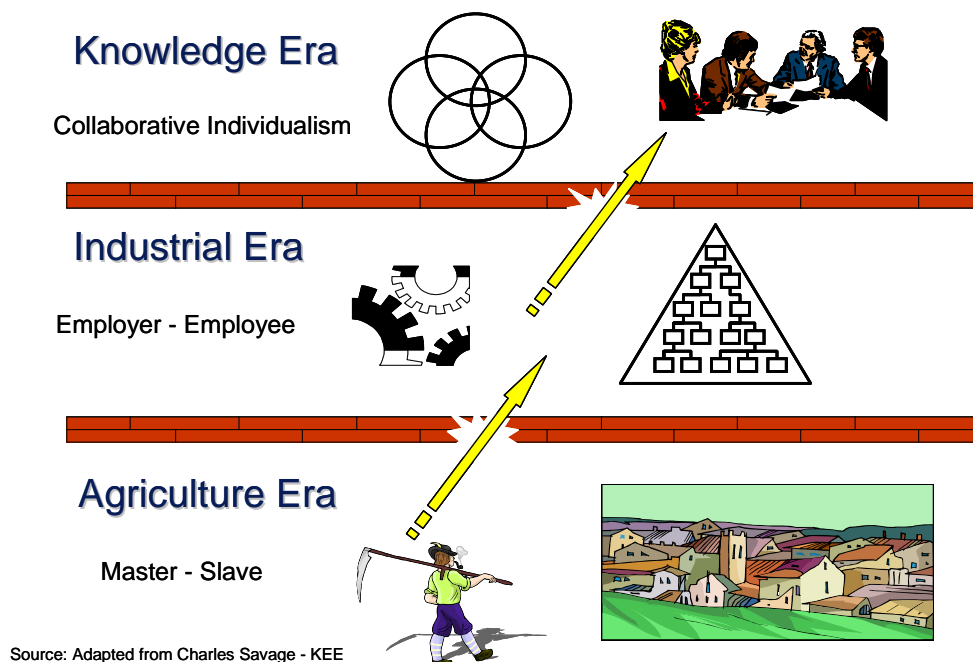
Traditional Societal Context	Potential Corporate Context
Social Networks and Support Structures	Communities of Practice, Industry bodies
Empowerment and Community Participation	Membership of Communities of Practice or Industry bodies
Civic and Political Involvement	“Bottom up” initiatives; Industrial body initiatives.
Trust in People and Social Institutions	Trust in Management. Trust in Community leadership
Tolerance of Diversity	Cross functional teams, cross industry initiatives
Altruism and Philanthropy	Investment in local communities, environment etc.

**Table 1 – Traditional verses corporate context for Social Capital**

One can see that a corporate context can be easily aligned with the tradition context for Social Capital. One could add that the corporate context for Social Capital when presented this way looks like a list of modern management “best practices”, strengthening the argument for Social Capital as a leading focus for corporate success.

## Social Capital, Intangibles and the Knowledge Era

Charles Savage in his book on Fifth Generation Management (Savage, 1996) describes the transition to the knowledge era as a continuum of our evolution from initially the Agricultural Era through to the Industrial Era and now the Knowledge Era (see Figure 1). Other writers on the knowledge era have chosen to use a human analogy to emphasise the organic and adaptive nature of firms and markets operating in the knowledge era (de Geus , 1997; Dawson, 2003).



Source: Adapted from Charles Savage - KEE

**Figure 1 – Knowledge Era Transition**

While there is much support for the view that we are now in the knowledge era, this view is far from universal. The artefacts of the industrial age still surround us and traditional industrial age management methods are still proving effective. So what evidence is there that we are actually in transition to a different era? Perhaps the most tangible evidence can be seen by looking at the world's stock markets and Fortune 500 lists. Over the past 10 to 15 years, industrial companies are overwhelmingly being replaced by knowledge based service companies on these lists. Intangible, rather than physical assets now largely determine shareholder returns.

Looking at the top 10 stocks by market valuation on the Australian Stock Market as an illustrative example (Figure 2), one can see clear evidence of the demise of the industrially based firms. In fact the two survivors on the list, BHP Billiton and Rio Tinto are both diversified mining companies which have had to grow to being in the top 3 of diversified resources companies world wide, to retain their places in the Australian top 10.

## 1989

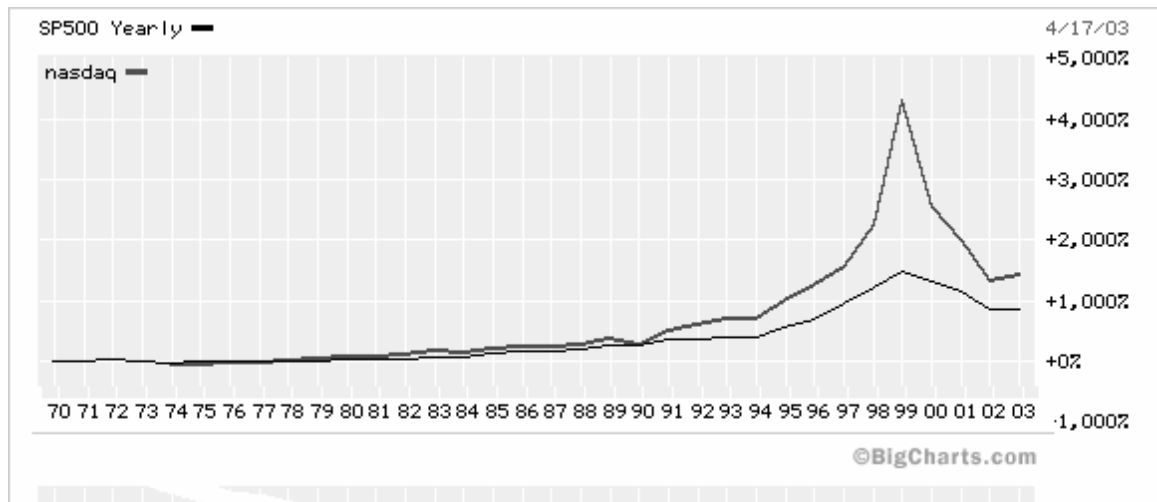
**BHP**  
**BTR Nylex**  
**NAB**  
**CRA**  
**Westpac**  
**Western Mining Corp**  
**Elders IXL**  
**ANZ**  
**News Corporation Inc.**  
**Coles Myer Limited**

## 2003

**News Corporation**  
**NAB**  
**BHP Billiton**  
**Commonwealth Bank**  
**Telstra**  
**Westpac**  
**ANZ**  
**AMP**  
**Rio Tinto Limited**  
**Woolworths**

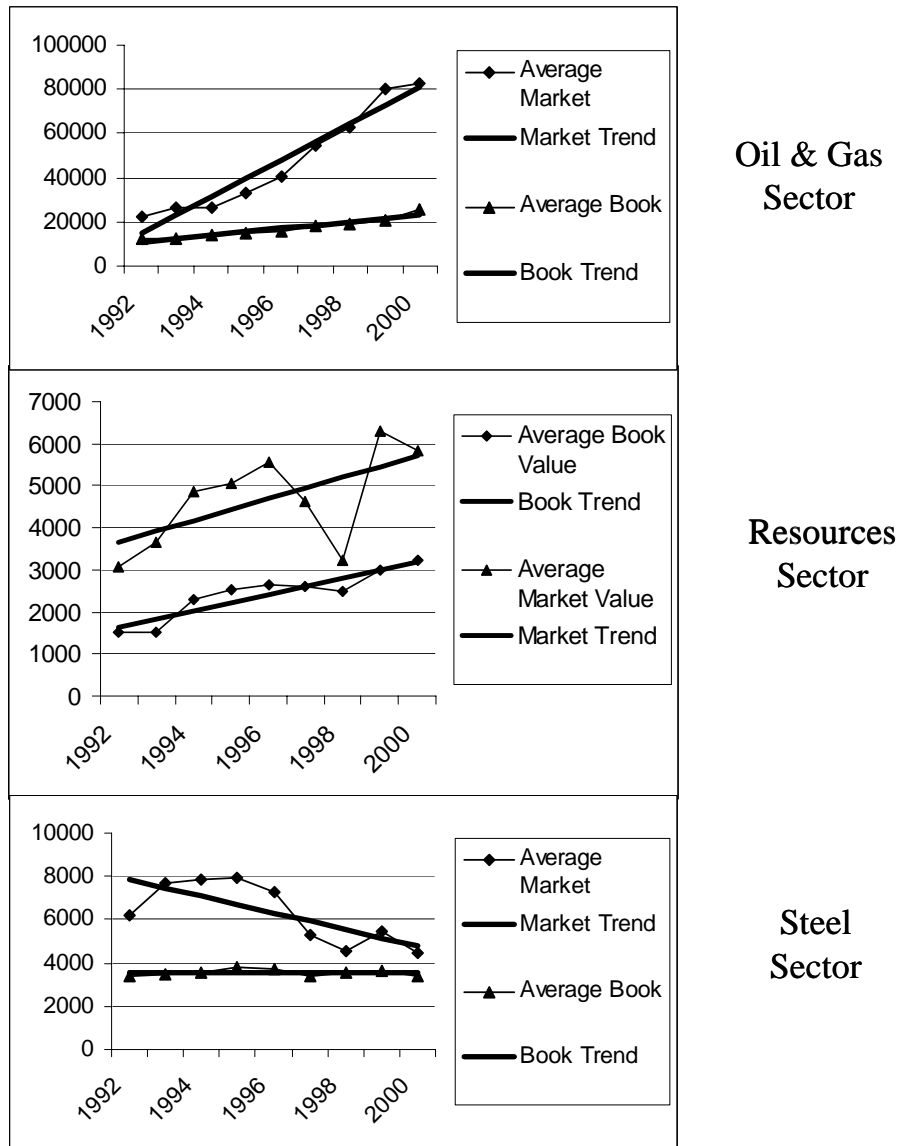
**Table 2 - Top 10 Stocks on the Australian Stock Exchange, by Market Valuation**

It is also clearly evident from the market valuation of the global stock markets that there has been a notable change over the past 10 to 15 years. Figure 2 tracks the movement in the S&P500 and nasdaq indices over the past 30+ years. While earnings and book valuations have grown modestly over the past 30 years, market values have both exploded and retracted in the past 5 years alone. The impact of intangibles and the market's inability to value them are clearly providing a roller coaster ride for shareholders, the extent that has not been seen before. Is this evidence of a growing transition from an industrial era to a knowledge era?



**Figure 2 – S&P500 and nasdaq Indices since 1970.**

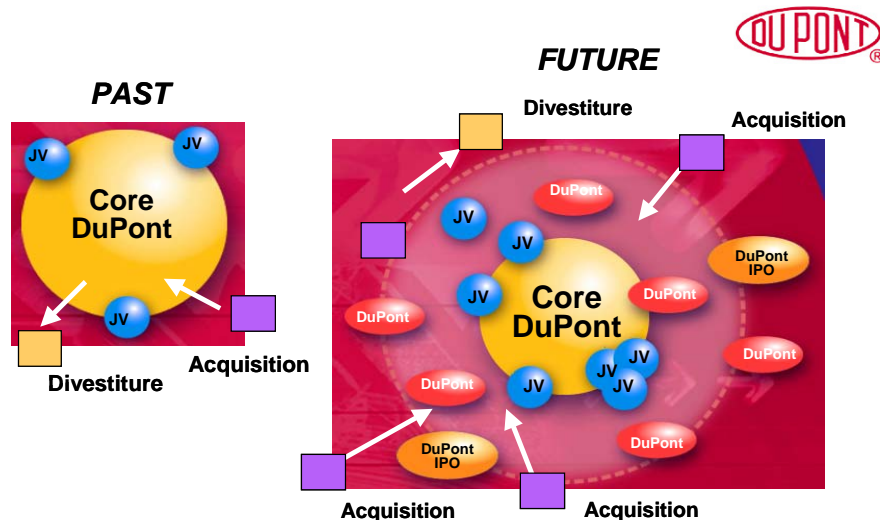
One can see from Figure 2 that the high technology stocks as represented in the nasdaq had experienced the largest swings, but it also apparent that industrial stocks are also being impacted to a greater degree by intangibles than ever before. Figure 3 provides an illustration of the differing fortunes of industrial sectors of Resources, Steel and Petroleum.



**Figure 3 – Intangible value trends for selected Industrial Sectors**

One can see from Figure 3 that intangible values as measured by the ratio of market to book values has grown modestly in the Resources sector, grown strongly in the Petroleum sector and actually reduced in the Steel sector.

Looking more closely at how the nature of firms has been changing, we are now seeing firms involved in many more joint ventures, alliances and partnerships. Outsourcing and co-opetition is making it increasingly difficult to identify the firm boundaries. The following figure illustrates this transition for a traditional industrial firm, Dupont.



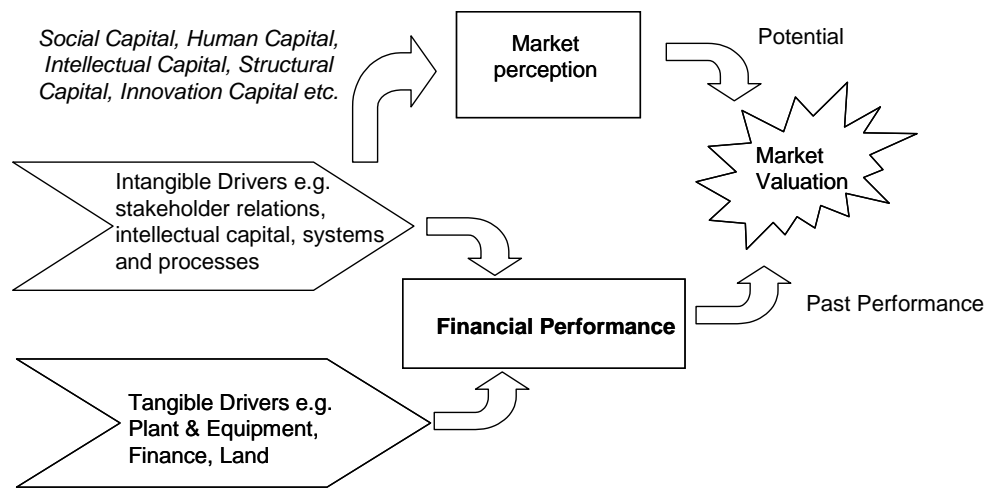
**Figure 3 - The Changing Business Model at Dupont (source: John Taylor, Dupont)**

The increasing importance of intangibles was initially identified by Swedish researcher Karl-Erik Sveiby in his work on “Company Knowhow” (Sveiby and Risling, 1986). Since this time a plethora of literature has been published in support of new methods for measuring and managing intangibles (Sveiby, 1997; Edvinson and Malone, 1997; Lev, 2001; Johanson et al, 1999). From Sveiby’s Intangible Asset Monitor (Sveiby, 1997) and Kaplan and Norton’s Balanced Scorecard (Kaplan and Norton, 1996), increasingly sophisticated scorecards have been built (Wall and Doerflinger, 1999; Liebowitz and Suen, 2000; Moutson et al, 2000). Intangible Capital has been decomposed into intellectual capital, structural capital, human capital, customer capital, innovation capital, external capital, stakeholder capital, knowledge capital....and the list goes on. Clearly many of these concepts are interdependent and difficult to measure and operationalise. As an adjunct to the traditional balance sheet or profit and loss statement, they may eventually become useful analytical tools. However, in order to operationalise these concepts, a suite of simplifying intangible asset management heuristics need to be developed.

The literature to date has been very much focussed on expanding the concept of intangibles into ever increasing sub-components. Very little research has addressed the need to now reduce this suite to the smaller set of heuristics that managers will need, to manage intangibles on a day-to-day basis.

## Why Lead with Social Capital?

The following conceptual framework is offered to provide a basis for thinking about the impact of intangibles on market valuations.



**Figure 4 – Conceptual Framework**

Performance drivers can largely be divided into the traditional physical assets a firm has available to it and the intangible assets it can apply or leverage. Both asset forms contribute to the eventual financial performance of the firm. The historical financial performance of the firm will make a contribution to the firm’s market valuation. The second input to a firm’s market valuation is the market’s perception of what might happen in the future i.e. the firm’s potential performance. This perception is driven by intangibles, which have been variously described as Social Capital, Human Capital, Structural Capital, Innovation Capital etc.. There is anecdotal evidence that intangibles are becoming the dominant factor in market valuations. Being able to clearly describe and articulate which intangible factors have most impact on market valuations is a key aspect of intangibles research to date.

In supporting managers manage the non-financial aspects of their businesses, various intangible asset scorecards have been developed. Perhaps the best known are the Balanced Scorecard (Kaplan and Norton, 1996), and the Intangible Asset Monitor (Sveiby, 1997). Both scorecard methods attempt to decompose non-financial factors into component parts and then provide a suite of measures for on-going monitoring. For retrospective analysis of performance these tools provide a valuable analytical aid. However, to make the management of intangibles a pragmatic reality, a simpler conceptual theme, or set of heuristics is required to guide today’s executives. In the financial world, heuristics like “cash is king”, “sweating your (physical) assets”, “look after your pennies and the pounds will look after themselves”, need some equivalents in the intangible world. The following table provides a list of key intangible elements and the perceptions that they invoke.

<b>Intangible Element</b>	<b>Perception</b>
<b>Human Capital</b>	<b>Competency</b>
<b>Intellectual Capital</b>	<b>Patents</b>
<b>Internal Capital</b>	<b>Systems and Processes</b>
<b>External Capital</b>	<b>Brand</b>
<b>Social Capital</b>	<b>Trustful Relationships</b>

**Table 3 – Intangible elements and the perceptions they invoke**

Looking at each factor individually, an argument could be made to select any of them as the leading indicator for intangibles performance. For example, one could argue that if a firm has high human capital i.e. highly skilled and experienced staff, then they will build intellectual capital, design and operate great internal processes and work effectively with suppliers, partners and customers. A counter argument might be that just because you have highly skilled people, it doesn't necessarily follow that they are great collaborators or that they have the natural ability to put their knowledge to work to create new intellectual capital. Each factor will have its pros and cons as a leading indicator. The argument for selecting Social Capital as the leading indicator is based on the author's perception that it has more pros and less cons than the other major themes. In supporting this argument one could argue that to be recognized as having excellent social capital one would need to:

- Be successful in searching for competent people to co-operate with, both internally and externally (human capital);
- Select collaborators on the basis of the intellectual capital that can be exchanged;
- Have built a reputation for excellent internal processes (internal capital) and seek out those with similarly strong internal process to collaborate with; and
- Achieved a good brand and market reputation to attract the right sort of collaborations (external capital).

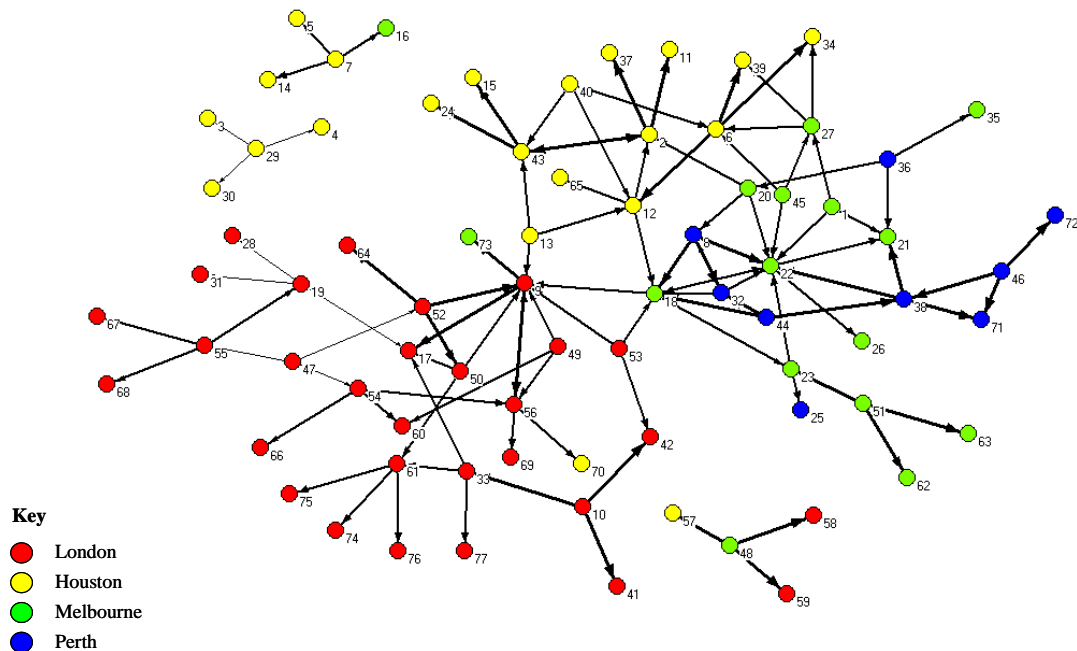
There are detracting views on promoting Social Capital as a leading theme. Typically these criticisms relate to highly cohesive groups becoming blind to diverse opinions, and therefore limiting the potential for new innovations i.e. innovation capital (Florida et al, 2002; Cohen and Prusak, 2001; Locke, 1999). These are fair comments when related to groups within firms or even communities in the general public. However, if we look back at the common definition for Social Capital it also defines that it must operate at the *individual and group levels*. One could argue that for innovation to succeed, the "innovators" would need excellent Social Capital skills at both the individual, then group levels to be able to shepherd a new invention through to a successful innovation. As such, a highly cohesive group that appears to be not open to engaging in diverse conversations and promoting innovation could be seen, by definition, as having a lower level of social capital. Of course the degree of cohesiveness of a particular network can be entirely contextual. A study of structural and relational embeddedness in the Steel and Semiconductor industries (Rowly, Behrens and Krackhardt, 2000) illustrates that for highly dynamic industries, where continuous and radical innovations are the norm, the structure of the networks will be more exploratory, reaching out to more diverse groups and having far less redundant links than say a Steel industry network. In the Steel industry the networks are more closed with many redundant links as companies concentrate on perfecting common practices i.e. exploiting rather than exploring innovations. The networks for the Semi-conductor and Steel industries will structurally be quite different, but one could argue that excellent companies in either industry are exhibiting high levels of Social Capital.

An additional counter argument could be made relating to the observations that in today's market place, successful firms need to be more collaborative than their industrially focused predecessors. It is rare that one would see a firm recognized for its innovation, not also recognized for its Social Capital in the market place e.g. Xerox, HP, 3M, etc.. While the above arguments could be seen as purely manipulating definitions, it is perhaps the trends to a more networked and collaborative market place and the fluidity of knowledge flows compared to physical flows which provide the strongest arguments for leading with Social Capital.

## **New Methods for Measuring Social Capital**

While there has been many attempts at measuring Social Capital in a social science context, i.e. Social capital within communities, developing countries etc..(ABS, 2000; Spellerberg, 2001; World Bank, 2003), very few attempts have been related to the corporate world. One technique that has had its genesis in social science but is rapidly finding use in the corporate world is Social Network Analysis (SNA). Typically SNA involves surveying individuals on who they collaborate and share information and knowledge with. This data can then be used to generate a sociogram showing who is connected to whom. SNA statistical methods can be used to analyse the characteristics of the network, quickly

identifying its weak and strong points. Several indices can then be developed to provide a proxy measure of the social capital that exists within the network. An example of a sociogram is provided in Figure 5.



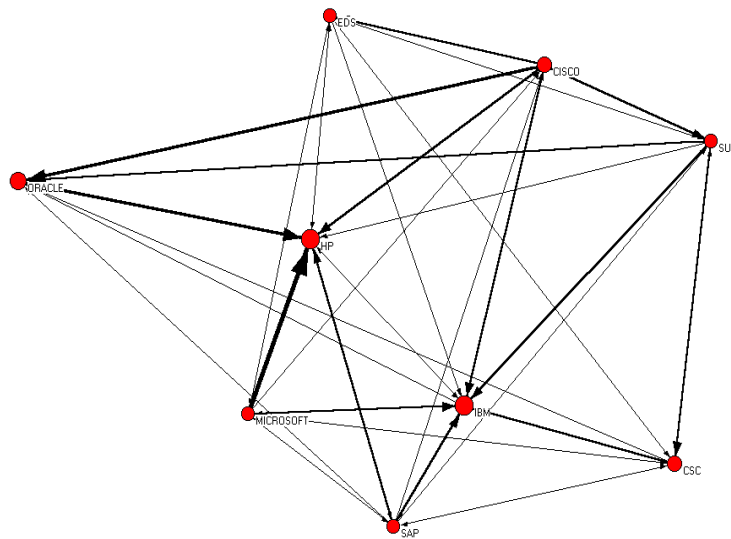
**Figure 5 – Example Sociogram** (*Pajek mapping software used*)

One can see from the sociogram who is connected to whom. It also clearly shows those who play important broking roles in the network. At the group level one can see for example how well networked the London office is with the Melbourne office. An individual's Social Capital could be measured by the number of nominations they receive (called input degrees). The Social Capital of the overall network could be measured by a network density measure like the ratio of Nodes to Links.

If we move up to the market place level, we can start to look at Social Capital from the perspective of alliance activities (Koka and Prescott, 2002). Laurent (Laurent, 2002) has developed a sociogram of the major computer services companies using data “mined” from company web sites and the Internet. One can see from the map in Figure 6 that IBM and HP, being the dominant suppliers of computer hardware and services, occupy a central position in the network. One can see how SNA measures could be used to identify key players in the market place. These techniques could provide an insight into the characteristics of a particular market place. If the network representation of a market place is seen to be highly connected, with many redundant links, one could assume that it might be difficult for a new player to break into the market. Conversely, if network representation of the marketplace appears more open and exploratory in nature, there will be opportunities for new entrants to become part of, and perhaps influence the network / market.

Electronic usage based proxy measures for Social Capital are now being developed to overcome the need to conduct time consuming and expensive SNA surveys. In many instances these proxies, like discussion group activity, on-line communities and even e-mail traffic are proving to be reasonably good approximations to the true human networks (Lock Lee, 2003; Guimera et al, 2002; Boudourides, Mavrikakis and Vasileiadou, 2002).

While these examples are preliminary in nature, its is clear that Social Capital metrics will start to emerge to support corporate executives in making decisions relating to intangibles and improving shareholder value.



**Figure 6 - Inferred relationships between Computer Services Companies**  
*(Pajek mapping software used)*

## Summary

This paper has introduced the concept of Social Capital as it might apply to the Corporate sector, in support of increasing shareholder value through the prudent management of intangibles. It has been argued that as world markets evolve from an industrial era into a knowledge era, the management of intangibles will become increasingly important in assuring market valuations, and hence maximizing shareholder value. The historical large and dynamic movement of share prices on world markets over the past 10 to 15 years is being attributed to a poor understanding of the effect of intangibles like human competence, intellectual capital, brands and Social Capital. While it is acknowledged that developments in balanced scorecards and intangible asset monitors will provide powerful analytical aides to reviewing non-financial performance, what is missing is the simple heuristics that managers rely on for day-to-day activities. These heuristics exist in financial management, they don't in intangible management.

To assist managers develop such heuristics, an argument has been made for the use of Social Capital as the basis for developing management heuristics. It is argued that a leading focus on developing trustful networks at the individual, group and market levels will create an assurance that other intangible factors such as human competence, internal processes, innovation and intellectual capital will also be well catered for.

Finally some examples of emerging measurement techniques for Social Capital, based on SNA were provided. The examples illustrated how Social Capital might be measured at the individual, group and market levels.

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