# Theoretical perspectives on intellectual capital: a backward look and a proposal for going forward

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## Abstract

In recent years the intellectual capital literature has exhibited relatively few theoretical contributions, in contrast to the flurry of such work in the period 1996-2003. The purpose of the present paper is to revisit a number of the major theoretical contributions to the intellectual capital field in order to identify where any renewal of theoretical endeavour might be targeted. The greater part of the existing theoretical corpus is found to have a normative quality, something particularly evident in policy-oriented contributions on accounting for intellectual capital. The continued absence of a critical perspective on intellectual capital is identified to be a worrying lacuna, and thereby a valuable space for a further round of theoretical activity.

## 1. Introduction

The emergence of the intellectual capital field in the mid 1990s has produced a voluminous literature that spans a range of disciplines, including accounting where the term 'intangibles' is often used as a synonym for it. Considerable progress in understanding the significance of intellectual capital was soon evident in contributions that were often both incisive and provocative. In retrospect, it appears that like many previous management fashions (Abrahamson and Fairchild, 1999) intellectual capital's appeal began to wane in the early years of the next decade, as scholars moved on the next field. In the case of organisation studies, for example, knowledge management, which overlaps extensively with intellectual capital, has become a widely studied field focusing on the management of knowledge assets (Nanaka and Takeuchi, 1995; Davenport and Prusak, 1997; Mouritsen and Larsen, 2005; Newell, Robertson, Scarbrough and Swan, 2002, 2009). The intellectual capital literature has continued to expand, however, via dedicated outlets including the *Journal of Intellectual Capital*, the *International Journal of Learning and Intellectual Capital* and the *Journal of Human Resource Costing and Accounting*, as well as within the pages of many leading business and management journals, with the *Accounting, Auditing and Accountability Journal* especially important in the accounting discipline.

A large part of the initial intellectual capital literature can usefully be designated as being theoretical in nature, at least as the idea of theory is enrolled within the social rather than the physical sciences. The focus was on understanding and explaining the various facets of the intellectual capital phenomenon, occasionally in something of exaggerated way, with little interest in the derivation of testable hypotheses. Implicit in seminal contributions such as those of Brooking (1997), Edvinsson and Malone (1997), Stewart (1997) and Sveiby (1997a) was a normative emphasis that implored senior management to embrace the challenge of growing their stocks on intellectual capital (assets) in the pursuit of sustainable competitive advantage. An early, influential academic contribution by Mouritsen (1998) demonstrated the merits of intellectual capital as a management technology over that economic value added (EVA), with Mouritsen pursuing his broader interest in the field as the lead investigator on the Danish government's initiative designed to identify how it might

be possible to account for intellectual capital (DATI, 2000; DMSTI, 2003; see also Mouritsen, Larsen and Bukh, 2001a; Bukh, Larsen and Mouritsen, 2001).

The Intellectual Capital Statement approach to reporting intellectual capital growth commended in the Guidelines, and affirmed by the parallel Meritum project, utilised narrative as the foundation for accounting for intellectual capital. As such it provided an alternative to the various scoreboard approaches such as the Skandia Navigator, Intangible Assets Monitor or Ericsson Cockpit Communicator that had been championed several years previously. All in turn offered a means of overcoming the myriad difficulties associated with identifying credible financial valuations for a firm's intellectual capital constituents or the alternative in the form of intellectual capital indices, e.g. Tobin's q or the Value Creation Index. All of these accounting technologies share a practical or policy underpinning, focusing on how best to measure (where necessary), report and/or manage stocks of intellectual capital. In this way they well merit the designation theoretical contributions, as this is used within the context of accounting theory for a stock of similar contributions. In this vein it is also interesting to note an overlap with work in relation to new models for business reporting envisaged as replacing existing corporate or financial reporting models (AICPA, 1994; ICAS, 1999; Upton, 2001; ICAEW, 2003).

The subsequent slowdown in the rate of such theoretical contributions has been admirably compensated for by those of a more empirical nature. The move to studying 'intellectual capital in action' (cf Hopwood, 1983; Miller, 1994) is understandable given that researchers now had a prospectus of issues to explore in detail. Of particular interest are disclosure practices, the extent to which firms are prepared to provide information about their intellectual capital within financial statements, such disclosures still remaining largely a voluntary activity in most countries (Beattie and Thomson, 2010). Many of these studies have been conducted using a content analysis approach, borrowed from research on social and environmental accounting practices, with which they also exhibit some similarities. A common way of framing such enquiries is as being informed by mainstream disclosure theories, particularly legitimacy theory and stakeholder theory. While it might seem somewhat disrespectful to observe, the proliferation of intellectual capital

accounting studies is indicative of the field having moved into the phase that Kuhn (1962) previously designated normal science, with all its attendant sophistication.

Although Mouritsen (1998) identifies intellectual capital as a management technology, it has attracted surprisingly little attention from those working within the critical accounting tradition. Roslender and Fincham (2001) seeks to offer a balanced assessment of the potential of the intellectual capital concept for employees (human capital), which they explore further in a subsequent *Accounting and the Public Interest* paper (Roslender and Fincham, 2004; see also Roslender, 2009). After O'Donnell (2004), a 2006 issue of the *Journal of Intellectual Capital* contained a set of papers on "becoming critical" in respect of intellectual capital, with subsequent contributions from Dumay (2009a,b). A recent issue of *Critical Perspectives on Accounting* partially extended this literature (see Gowthorpe, 2009; Roslender and Stevenson 2009). To date there are no trenchant critiques of intellectual capital to complement those of Munro (1995) on TQM or Armstrong (2002) on activity based management. Whether this is because it is so obviously a divisive management technology remains an interesting question (cf Roslender and Stevenson, 2009).

The need for a renewal of theoretical work within the intellectual capital field is apparent when taking stock of the accumulation of contributions to date. As we have observed above, some of the initial theory was excessively zealous, drawing attention to a seemingly major change in the order of things within the most advanced economies, and by implication those that sought to emulate them. This in turn gave rise within the accounting literature to a number of middle range theoretical contributions on how to take intellectual capital's many components and constituents into account. Surveys of practice are valuable and in due course may lead to new policy initiatives. The absence of much in the way of a critical perspective on intellectual capital accounting in particular is a worrying lacuna, not least because of its potential to pose challenging questions about the broader ramifications of organisations' increased reliance on such assets. The purpose of this paper is to revisit a number of the major theoretical contributions to the intellectual capital field in its initial stages in order to demonstrate their largely normative, policy-oriented emphases that now merit to be complemented by a more critical theoretical

perspective in parallel to the current fashion for positive studies of intellectual capital in action.

The remainder of the paper is structured as follows. In the next section broad ranging insights from what are designated economic perspectives are briefly reviewed. Sections 3 and 4 focus on contributions from strategic and managerial perspectives respectively. In section 5 some of the key insights how it might be possible to measure and report on (account for) intellectual capital are outlined. The paper concludes by identifying a more critical mode of theorising as the way forward and identifies how this is closely associated with the human capital components of intellectual capital and the potential of a self-accounting approach.

## 2. Economic perspectives

Marr (2007) identifies economists as being prevalent among the authors who first talked about intellectual capital, viewing it as an additional key production factor to be used in the process of the business. During the Industrial Revolution the economy changed fundamentally as countries rapidly developed. The number of businesses increased and greater production ensued, among other reasons, because of the introduction of the division of labour and the continued expansion of the market. At that time businesses were based on tangible assets, such as land, buildings and machinery, which were combined with manual labour to create value. Two centuries later, the New Economy has emerged with a massively expanded service sector, in which tangible assets are no longer so important; the capital-intensive industries that replaced those previously heavily reliant on labour have in turn been replaced by knowledge-based industries and the more educated labour forces required to staff them. Traditional financial measures fail to assess the performance of those businesses increasingly reliant on intangible resources (OECD, 1999)

Businesses operating in every sector have to compete for excellence; not only those that have intangible products, but businesses producing the physical products that are used to supply them (Martínez Ochoa, 1997). Firms require to understand what makes them competitive, because there has been an unnoticed change in the way wealth is created over the last years (PRISM, 2003). Cannon, the Chief Executive of

the UK Management Charter Initiative, argues that we are living in a third industrial revolution where knowledge is what makes the difference among business enterprises (Centre for Business Performance, 2000). Brooking (1997) designates them ‘third millennium enterprises’, adding that providing training to their employees, the know-how, the information technologies and so on, are, these days, very important imperatives for firms, reaching the point that, without them, enterprises would not be able to function effectively. How has the economy arrived at this third industrial revolution? Lev (2003) asserts that it is due to the increased business competition resulting from market globalization, complemented by the development of new information technologies. Firms based on material assets are unable to achieve further economies of scale and therefore are unable to gain competitive advantage with tangible assets alone. To solve this problem, they have used two approaches: to externalize the activities that do not give them competitive advantage, i.e. outsource; and to innovate. Because some forms of intellectual capital can be reproduced and spread at very low incremental costs, knowledge-based businesses can grow quite fast (Sotomayor González and Larrán Jorge, 2005).

Nowadays, it is generally accepted that intellectual capital is a resource (or set of resources) that needs to be well managed. This can be analysed not just from a microeconomic point of view, but also from a macroeconomic perspective. There are many countries that historically achieved their competitive advantage within the manufacturing sector, i.e. Western European countries. Capital-intensive industries are increasingly being moved eastwards, to China, India or in some cases to the new member states of the European Union. Therefore, as Western industries cannot be competitive with enterprises based on tangible assets, they have to invest and specialise in knowledge-based companies. This has led to highly developed European countries, including France, Germany and Italy, transferring large parts of their car production to countries with cheaper labour force such as Poland, Hungary or the Czech Republic, while specialising on the high added value functions such as product and process design and development, which require input from well educated, expensive labour forces.

As observed at the beginning of this section, intellectual capital is considered a production factor alongside the others that have been generally accepted as such, i.e., capital or labour. In an economy that increasingly focuses its attention on maximising value creation capacity, it is important to understand that this additional factor is central to achieving competitive advantage for the firm, its stakeholders and the economy or society in general. Therefore, in macroeconomic terms, developing stocks of intellectual capital is intimately related to the wealth of countries (Augier and Teece, 2005). According to Bontis (2004), "the IC of a nation includes the hidden values of individuals, enterprises, institutions, communities and regions that are current and potential sources for wealth creation" (p14). That is, to create wealth it is necessary that people possess intellectual capital (Bontis, 2004), which is used in companies that, at the same time, create more intellectual capital and value. When grouped together they contribute a major part of the wealth creation activity of the country.

Sustained competitive advantage, value and wealth creation potential should not be forgotten. Consequently, it is vital to invest in research and development in order to maintain the capacity to generate value. The role of venture capital funds is also notable, contributing a "very important channel by which intangible assets are employed and new products and processes brought to market" (Augier and Teece, 2005:7). They provide funding for new enterprise development, thereby enabling entrepreneurs to create and market new products, services or technologies. However, venture funds are usually focused on exploiting intangibles, rather than on creating them; hence, they do not usually invest in businesses that engage in early stage research (Augier and Teece, 2005).

## 3. Strategic perspectives

Strategy permeates the entire organisation, identifying the path that all the firm's departments and functions have to pursue in order to accomplish the objective of creating value. Intellectual capital resources are often performance drivers; hence, there is a causal relationship between those resources and value creation. They require to be interrelated to create more value (Marr, 2005). Intangibles have now become of higher importance, both in value terms and in contribution to growth, than

tangible assets (Lev, 2003). As Brooking (1997) observes, the value of many enterprises no longer resides in their tangible assets, but in their intangibles. The success of a company's strategy is critically dependent on those assets, but the accumulation or depreciation of intellectual capital is also determined by strategy. Therefore, a two-way relationship exists between resources and strategy. When the objectives and the direction the enterprise is going to take are being formulated, it is necessary to take into account the stocks of intangibles within the organisation, and to determine the best way in which they can be deployed to achieve more competitive advantage, as well as how they could be increased and developed, so the enterprise has more resources to work with. Developing intellectual capital stocks also has important consequences for organisational culture (Lynn, 1998). The entire organisation has to be engaged with this project, due to the fact that they are assets that are usually difficult to manage. For Marr, "extracting value from intellectual capital is a much more complicated and risky process than from physical capital" (Marr, 2005: 6).

Itami and Roehl (1991) identified invisible assets as the main source of competitive advantage of the firm. These invisible assets were created in the long-term because of a flow of information between a company and its environment or just inside the company, as the source of competitive advantage. Roos, Roos, Dragonetti and Edvinsson (1997) argued that while this idea accorded importance to information, in the case of intellectual capital it is knowledge that is more important. Although they differ on where importance lies, they affirm the emphasis on the long-term, intellectual capital being acknowledged as an investment made by the firm on a long-term basis. This is closely related to strategy, since when the organisation formulates its strategic plan it has to project how the company is going to perform in the future, and which external factors are going to affect it, always looking at the future and going beyond only short-term decisions. Sveiby and Lloyd (1987) employ the term "know-how" capital to refer to intangible assets. This capital is formed by skills and expertise, and is differentiated between professional know-how, the core knowledge of the company or the business idea, and managerial know-how, which is used to increase the value of the enterprise. In a successful know-how company, there must be professional staff at the core of the business that differentiate the company from its rivals; in addition, there must also be effective managers who organise the firm

and, in this way, increase the company's value. Intellectual capital is therefore more closely associated with value creation (management perspective), rather than with valuation (financial perspective). Consequently, many authors are more interested in visualizing, controlling and managing value creation, than in valuing the assets themselves.

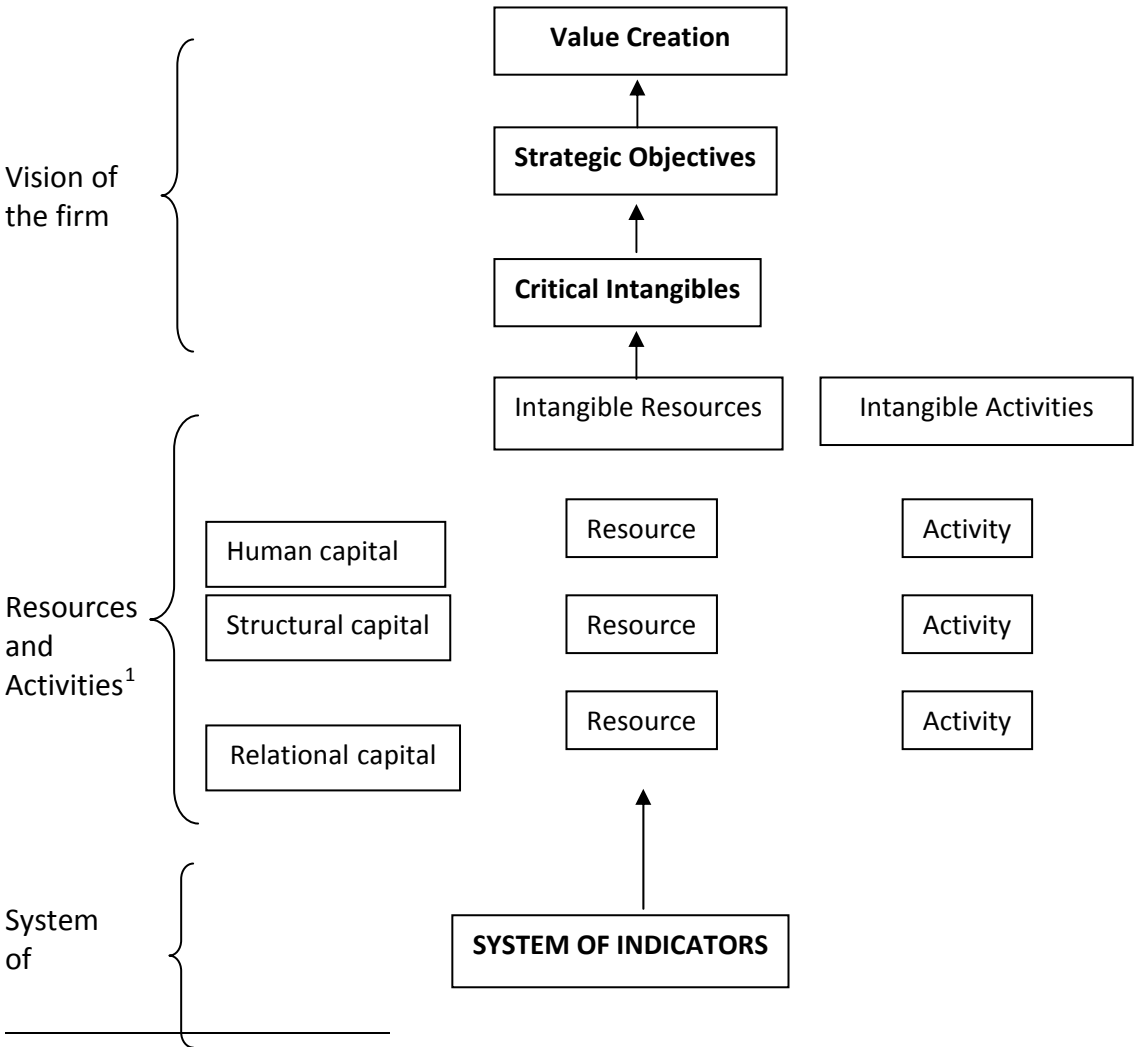
Around the millennium, a number of projects were initiated to identify ways of formulating the strategy of the company in relation to intangibles. In this way, the firm would have a future objective, not just for physical and monetary capital, but also for intellectual capital. These projects are also related to management, because for every strategic action, there is the need for effective management to achieve the set aims. In the European context, the Meritum Project, the Danish intellectual capital guideline initiative, the E*KNOW NET and PRISM were the most influential projects.

*The Meritum Project*

This project was funded by the European Union and carried out by nine research or academic institutions in six different countries (Denmark, Finland, France, Norway, Spain and Sweden), between 1998 and 2001 (Cañibano, Sánchez, García-Ayuso and Chaminade, 2002). The resultant report was also supported by a wide number of state organisations and businesses. The Meritum Project set out to identify guidelines for the identification and generalization of a management system for intellectual capital, as well as to enhance the capacity of accounting statements to provide a better representation of the firm's financial situation. In the absence of good information about intangibles, there is always the possibility to misuse business opportunities; it is possible that managers will not wish to invest in intangibles that could create value, if it is going to imply a deterioration of company's performance, because they think only in terms of expenses rather than of investments in assets.

The Meritum Report begins by defining different concepts, such as intangibles, intellectual capital, intangible resources and so on, in order to ensure that everyone has the same understanding when reading the content of the document. The difference between intangible resources and intangible activities is that intangible resources can be measured at a determined moment, while intangible activities are carried out to acquire or produce internally intangible resources; to retain or improve

those that already exist; and to measure and control them. The intellectual capital management process proposed in the Meritum Report begins with the identification of intangibles. The company must identify the critical intangibles necessary for the achievement of its strategic goals. It has to take into account what are the intangible resources and the intangible activities that must be carried out to maintain and improve those resources. After defining them, the firm has to choose specific indicators to measure each intangible. Finally, the firm has to carry out an evaluation phase, where the company detects the effects of the different activities on the intangible resources. At the conclusion of this process, the firm will be in a position to produce an intellectual capital report in order to communicate the information about the intangibles that are part of its intellectual capital. Figure 1 provides a representation of the report's recommendations.




[1] Human Capital: skills, abilities, creativity and so on related to the employees individually.
Structural Capital: linked with the employees but collectively, because it is achieved when the common knowledge, databases, ways of working, etc. are put together.
Relational Capital: interrelationships between the organisation and third parties outside the firm.

Indicators

Figure 1: The Meritum Project's scheme for the presentation of intellectual capital

Source: Cañibano, Sanchez, Garcia-Ayuso and Charminade. (2002), p. 83.

*The Danish intellectual capital guideline initiative*

Between 1997 and 2000 the Danish Agency for Trade and Industry (DATI) pursued a parallel project on intellectual capital reporting, the result of which was the production of the proposals contained in *A Guideline for Intellectual Capital Statements: A Key to Knowledge Management* (DATI, 2000). Following implementation by around a hundred of companies and public organisations, in 2003 the Danish Ministry of Science, Technology and Innovation produced a revised document entitled *Intellectual Capital Statements – The New Guideline*. Researchers as well as companies, industry organisations, consultants and civil servants took part in formulating this new guideline, with academic leadership provided by Mouritsen from Copenhagen Business School.

Prior to the initiative's launch, many Danish companies had begun to undertake their own initiatives with the objective of successfully managing knowledge. The Danish Guideline sought to systematize and produce a better understanding of these different initiatives and design a tool to generate greater value within a company. It also sought to develop a means of communicating the detail of the value creation process to employees, customers, investors and other stakeholders. This project, like the Meritum Report, provides specific recommendations in the form of an Intellectual Capital Statement composed of a knowledge narrative, management challenges, initiatives and indicators (figure 2). These elements work together and they have to be linked with the words "because" or "therefore", because it ensures that there is always an embedded argument that makes the statement coherent. Initially, companies need to formulate a knowledge narrative, that is, they need to explain what the enterprise's knowledge management ambition is and how value is to be created using the company's knowledge resources. After knowing what the firm needs to do, the management challenges help to organise the initiatives that are necessary to be introduced to achieve its objectives, interrelating them and making

them to act together. Finally, managers have to choose indicators that help them to know whether the initiatives are being launched and whether the management challenges are being met. The final thing that the firm should do is to report all this information; to this end the Guideline proposes producing an external intellectual capital statement. This statement should include all the relevant information that reflects the reality of the company, including both numerical data and a range of complementary visualisations, and should also be readily accessible to all stakeholders.

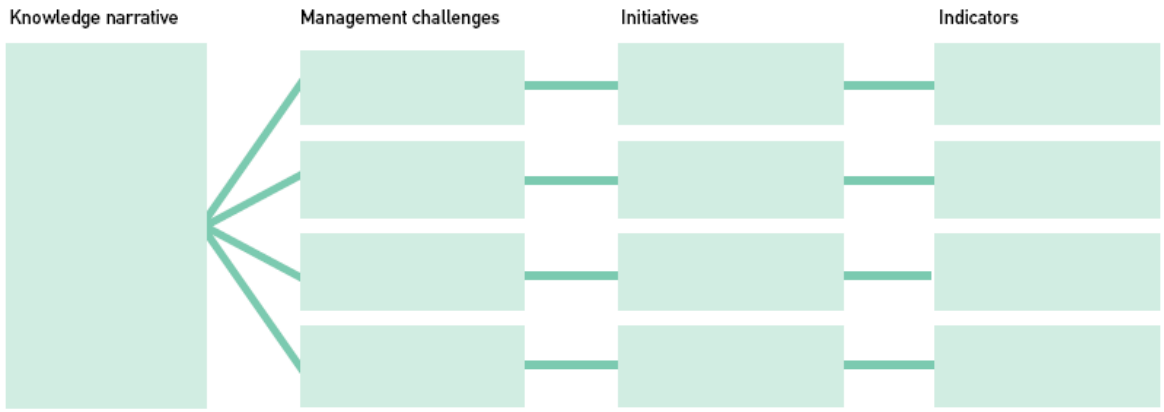



Figure 2: The approach proposed in the new Danish Guideline for reporting on intellectual capital
Source: Danish Ministry of Science, Technology and Innovation (2003), p. 13.

After reviewing the Meritum and Danish projects, Bukh and Johanson (2003) conclude that both are similar in the sense that they provide strategic management tools that may be used to communicate the process of value creation to employees, customers, and other stakeholders. However, there are also some differences between them. The Danish Guideline is more focused on communication with stakeholders because it understands it as a knowledge management activity by itself, which is used to increase the trustworthiness of the management team. Moreover, the Danish Guideline provides a specific methodology and incorporates examples of indicators that can be used, whereas the Meritum Report does not offer a detailed implementation, nor any specific examples of indicators.

*E*KNOW-NET*

Following the conclusion of the Meritum Project, some participants moved on to a new project, again supported by the European Union, the E*KNOW-NET (A European research arena on intangibles). The objective of this project was to create a virtual network to continue investigations in the intellectual capital field and to share the results with the public and promote discussion with the users of the guidelines (Bukh and Johanson, 2003). This project lasted 24 months (to August 2003) and again incorporated contributions from Denmark, Finland, Norway Spain and Sweden, as well as from the United Kingdom.

*PRISM*

In parallel to the E*KNOW-NET, between October 2001 and July 2003 the European Union funded a second project, known as PRISM (Policy-making, Reporting and measuring, Intangibles, Skills development and Management). The project partners were not only business schools and universities but also consulting companies, from the USA as well as Europe. The aim of this project was to provide practical alternatives to traditional approaches to measuring, managing and reporting intangibles. Existing approaches were not believed to be keeping pace with current economic realities, and consequently a major obstacle to achieving “the European Union’s Lisbon objective of becoming the most competitive and knowledge-intensive economy in the world by 2010” (PRISM website). The project drew some conclusions, including that efforts to determine how to measure, manage and report should be focused on intangible assets, and that research on non-accounted for intellectual assets should be left to academics for future studies (PRISM, 2003).

In summary, starting from the firm’s strategy, it is necessary to determine the stocks of intellectual capital currently possessed; and on the basis of this knowledge, it is then possible to decide with some assurance how to develop and manage (or ‘grow’) these.

## 4. Managerial perspectives

Following Edvinsson (1997), Lynn (1998) and Marr (2005) observe that organisations employ three types of capital: physical; financial; and intellectual capital. These capitals combine to form an organisation's resources, and as such need to be well managed. Edvinsson and Malone (1997) explain that intellectual capital increasingly provides the roots of a company's value, being the invisible factors that contribute to create it in the firm, over and above the stock of visible or tangible assets. Brooking (1997) supports this idea, and adds that it is important to provide valuations of stocks of intangible assets, because managers need to identify their most valuable resources. Moreover, knowing how valuable these resources are, it is important to identify how they might be used in the value creation process. When creating value, competitive advantage is achieved with the best use of intangibles (Bontis, 2002). When an organisation's management is not aware of what its intangible assets are, it may miss business opportunities based on these intangible resources, because managers will be making key decisions without taking them into account among their possible variables (Cañibano, Sanchez, Garcia-Ayuso and Charminade, 2002).

From the outset, Edvinsson and Malone (1997) recognised the need for managers to make better use of all the resources at their disposal. One of the first definitions of intellectual capital, which has had much significance and success in the management world, is that provided by these authors. For Edvinsson and Malone, it is the possession of the knowledge, applied experience, organisational technology, customer relationships and professional skills that provide the company with a competitive edge in the market. Having intellectual capital is also important in not-for-profit organisations (e.g., non-governmental organisations, charitable foundations, public health institutions, etc), because although such organisations do not have the same interest in competitive edge, it is important for them to maximise the efficient use of all of their resources. And, although, they do not compete exactly with other organisations, they try to achieve the greatest benefit for their clients from these resources.

Edvinsson (1997) provides an initial classification, dividing intellectual capital into two types: human capital; and structural capital. The first encompasses all the knowledge, skills, abilities, etc, of the employees and the organisation's culture or values. As people can exit the organisation, taking with them their individual stocks of knowledge, whenever they want, this kind of transient capital cannot be owned by the company. Structural capital is composed of databases, organisational structure, patents, brands and so on, as well as any relationships with the customers that may have been built up over time. These intangibles can be owned by the company, in the sense of being the elements of value creating capacity that remain within the organisation when workers leave for home in the evening or indeed exit the organisation forever. In order to visualise the totality of forms of intellectual capital, Edvinsson (1997) developed the Skandia Value Scheme, as in figure 3. In due course, customer capital was renamed relational capital by authors such as Lynn (1998), Bontis (2002) and Cañibano, Sanchez, Garcia-Ayuso and Charminade (2002), on the grounds that it should include not only an organisation's relationships with its customers, but also with any other third parties that are related to the firm.

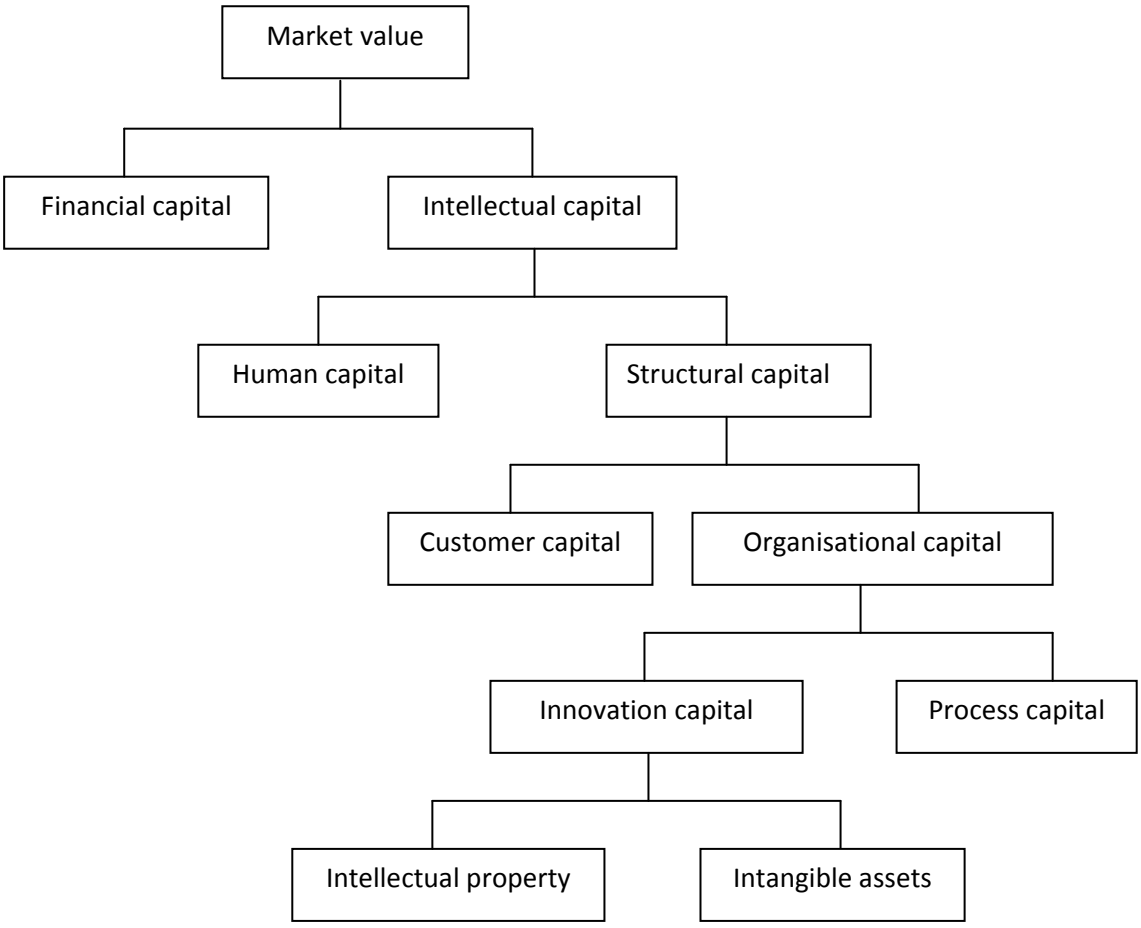


Figure 3: The Skandia Value Scheme

Source: Edvinsson (1997) p52

Roslender and Fincham (2001, 2004) and Hussi and Ahonen (2002) differentiate between primary intellectual capital, which they view as the most important intangibles, and secondary intellectual capital, which are those intangibles created by putting primary intellectual capital to work. In this way, businesses are better able to enhance those intangible assets that are more important for them and to know which could constitute their weaknesses. Hence, this crucial aspect of the management of the organisation will be easier and more efficient. This applies equally in the case of tangible or physical assets, such as very expensive and specific machines for a kind of business; or with financial assets, for example, if the organisation needs further credit, which it negotiates with the bank, or to earn income on any surplus of liquid funds.

The 2003 Danish New Guideline discussed earlier identifies four types of knowledge resources: employees; customers; processes and; technologies (that is, the technological support of the other three knowledge resources). The Guideline is centred on resources, preferring to refer to customer resources instead of relational resources (which would provide a more complete definition, because relational capital includes relationships with other third parties than only customers), while technologies should be within structural capital, because they are used by the organisation and it do not depend on third parties. Van der Meer-Kooistra and Zijlstra (2001) also offer a four-fold taxonomy of intellectual capital, albeit quite different in content: people's formalized or tacit knowledge and experiences; organisational systems and processes; innovation and technologies; and, finally, business relationships. As with the Danish Guideline, technology could be included within structural capital, while innovation could be an interesting fourth component because it is very important for business development.

Because of the transient characteristic of many types of intellectual capital, Lynn (1998) believes that organisations should, wherever possible, convert human and relational capital (temporary capital) into structural capital (permanent capital). Ordoñez de Pablos and Parreño Fernández (2007) arrive at the same conclusion arguing that moving from human capital to relational capital and then to structural capital, the embedded knowledge is more independent of people, being more based in organisational systems, structures and technologies and, thus, potentially rather easier to control. Management, therefore, has to be very careful with structural capital and should examine it in detail, because of its vital role in the value creation process. Edvinsson and Malone (1997) observe that if a tangible asset was used only the 50% of the time, it would normally immediately attract the management's attention; however, since intellectual capital is largely invisible within traditional accountancy, a similar waste of resource would not be so readily noticed. Although structural capital is greater or more visual than human capital, it does not mean that it creates more value, because human capital might be more valuable in terms of value creation. Therefore, if the company wants to be as efficient as possible, it has to continuously monitor its stock of resources and use them in the best way.

Although both researchers and managers have been talking extensively about intellectual capital for a decade or more, contributors such as Salinas (2007) or Marr (2007) conclude that people still do not fully understand what it encompasses. There is no globally accepted definition or taxonomy of intellectual capital. Although it is fully appreciated that intellectual capital can provide substantial competitive advantage, managers do not as yet understand exactly what it is and how it works. This may be particularly so in the context of how investments in human capital impacts on the operation of a business (Holland and Johanson, 2003). Initially many managers thought that reporting on intellectual capital was pointless, not least because they could not understand it. Hannington (2006) asserts that companies should know the existing correlation among different intangibles. Focusing on corporate reputation, he argues that it is important to understand the correlation among diverse intangibles and reputation, thereby enhancing reputation management, and in due course its measurement. Companies seek to share knowledge and provide information to their various stakeholders; in order to incorporate information on intellectual capital, they need redesign their information

and reporting systems (García-Ayuso, 2003). Starting with revising business strategy, and according greater importance to intellectual capital within it, management's success must then be documented by means of measurements and reports, i.e. through the mechanism of accounting for it.

## 5. Accounting perspectives

As befits the importance claimed for intellectual capital, there have been numerous insights on the issues involved in accounting for it. For Brooking (1997) the development of an appropriate monetary unit of measurement is necessary in order to calculate the success and the growth of stocks of intellectual capital. In this way she embraces the traditional (monetary) valuation perspective that has served financial accounting and reporting so well for generations. When confronted with contemporary examples of intellectual capital such as corporate reputation, that is, how customers, investors, employees, suppliers, analysts, the public, the media or regulatory bodies see the company, the capacity to be in a position to provide credible, reliable information has a potentially deep impact in the business opportunities and in the ability to attract the resources to finance those opportunities (Hannington, 2006). The contested history of attempts to establish such valuations for intangible assets, and not least goodwill, did not auger well for the "new goodwill" as Roslender and Fincham (2001) designated intellectual capital.

There is merit in analysing the accounting informed definition that Nomen (2005) provides for intangible assets. He defines these as assets which do not exhibit physical properties or legal disposal, attributes which in turn can seriously restrict their perceived utility. He then points out that some material assets impose restrictions upon production; for example, only a finite number of houses can be built on a piece of land. By contrast, in the case of intangible assets such as a patent for producing pills, there is no limit on the number of pills that can be produced. This is because production is restricted by causes not linked to the asset (Nomen, 2005). For some authors intellectual capital is not just an asset in the balance sheet, since it is also linked to balance sheet liabilities. In an early influential contribution, Edvinsson and Malone (1997) observe that intellectual capital is a debt issue and

therefore, it has to be managed in the same way as equity and they represent it as in figure 4.

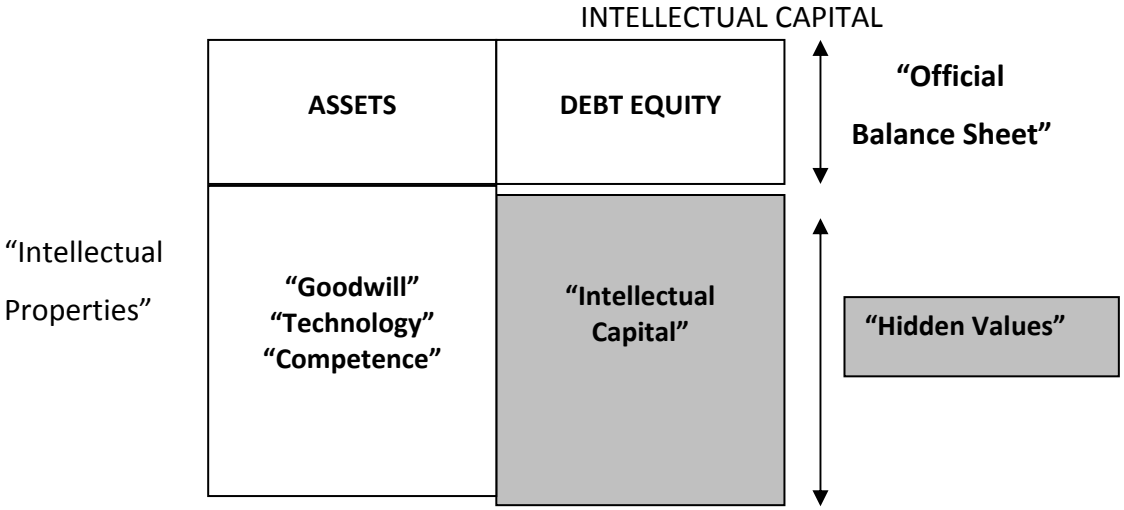



Figure 4: The balance sheet exteriorising intellectual capital

Source: Edvinsson and Malone (1997), p. 43.

Rodríguez Antón (2005) agrees with Edvinsson and Malone, arguing that we should not simply talk about intangible assets. The other side of the balance sheet also requires to be taken into account. In this way he defines intellectual capital as the difference between the intangible assets and the intangible liabilities of a business. He provides a number of examples of intangible liabilities; for instance, to have a surfeit of employees with entrepreneurial spirit or a largely inflexible organisational model that does not strengthen learning. In order to account them as liabilities, a company requires to know the average for the sector. If a business is below average, that part would be accounted as a liability and if it is above average it would be accounted for as an asset, because in principle the business would only get competitive advantage if it is above average (see also Caddy, 2000).

Any lack of visibility of intellectual capital within accounts results in information asymmetries in favour of those who have privileged access to that information, because they work within the organisation. It is unknown data for those who are not involved in the management of the company. As a result, a management team might report unusually positive performances, while competitors report losses (Cañibano,

Sanchez, Garcia-Ayuso and Charminade, 2002; Andriessen, 2004a,b; Ramírez Corcoles, 2007). This is related to the agency problem. When companies grow, their owners have to delegate the decisions of the company to salaried managers. Thus, the objectives of the management team and those of the owners might differ and managers would be mainly worried about achieving their own objectives (Gómez-Bezares, 2004). Furthermore, as Andriessen (2004) comments, when a company values and reports its intangible assets, its capacity for raising capital increases. If those companies that provide finance only have the information provided through traditional accounting practices, they might not risk lending funds to firms with low levels of tangible assets; nevertheless, if they had access to a further information set, incorporating intellectual capital, they might now view any perceived risk as acceptable. According to Cañibano, Sanchez, Garcia-Ayuso and Charminade (2002), ignorance of intellectual capital causes investors to have doubts about what can happen in the future and to vary the price of shares. Furthermore, a company with low levels of tangible assets has a lower capacity to guarantee debts (Sotomayor González and Larrán Jorge, 2005). This may again cause investors to think that the company has a high level of risk and, thus, they might not invest in it, making it difficult for the business to access this kind of financing. Hofmann (2005) says that the cost of capital is too high for knowledge-intensive companies. Therefore, by displaying their invisible assets, firms might manage to reduce the risk of investing in them and, in turn, the rate of return required by stakeholders (Sveiby, 1997b). Even so, although book values of intangible assets are reported, perceived difficulties in respect of their ready liquidation causes investors and, in particular, creditors to be distrustful even if the levels of the tangible assets are also low.

The need for information about the rapidly escalating stocks of intellectual capital organisations possessed, and the realisation that it was unlikely that it would be possible to meet that need using financial valuations, resulted in the advocacy of a many new accounting approaches (Andriessen, 2004a,b). It was quickly apparent that in this context, accounting encompasses two complementary activities: measurement and reporting. Monetary valuations are the archetypal measurement metric associated with accounting, while the balance sheet has traditionally provided the vehicle for reporting the aggregated valuations of tangible together with some intangible assets. Denied the former in the case of intellectual capital, the latter was

of little use for such purposes. These new approaches might usefully be categorised into three generic types: alternative hard number metrics; scoreboards populated by sets of softer indicators; and narrative accounts of intellectual capital growth in which indicators performed a largely supplementary role.

The use of alternative hard number metrics in the context of financial reporting had become relatively commonplace by the mid 1990s as a consequence of the importation of finance metrics such as earnings per share or dividend yield into its discourse. This was extended in the early 1990s with the emergence of value base management metrics such as Economic Value Added, economic profit and net free cash flows. Within the intellectual capital field two of the early metrics were Tobins q and the market to book ratio, both of which had originated in the finance literature (Andriessen, 2004b). New metrics were soon evident. The Intellectual Capital Index, the Knowledge Capital metrics and Cap Gemini's Value Creation Index. All provided a means of demonstrating the growth in a business's stocks of intellectual capital in a single, readily understandable way, one that might be combined with other similar metrics in an external report to shareholders and the capital markets alike.

From the outset, however, there was evidence of greater adventure, initially in the form of a number of scoreboard approaches, the most iconic of which was the Skandia Navigator, commended in Edvinsson (1997). Edvinsson argued that although it might be possible to explore the "hidden value" a business's stocks of intellectual capital using the Skandia Value Scheme, computing that value in the traditional way was both very problematic and potentially irrelevant. Instead he believed that some means of visualising the growth of the stocks of intellectual capital was preferable, hence the Navigator model, encompassing five aspects: which are, envisaged as a house. Within each of the five spaces so created, Edvinsson challenged the profession to identify company-specific indicators, which in total presented an account of intellectual capital assets, and more crucially its growth over time (see also Mouritsen, Larsen and Bukh, 2001b). The overlap with Kaplan and Norton's Balanced Scorecard model, initially formulated to report the plethora of new management accounting information, is immediately obvious, although it was not until some years later that they began to make reference to its utility for reporting intangibles (Kaplan and Norton, 1992. 1993, 1996, 2001). A third model, the

Intangible Assets Monitor (Sveiby, 1997a,b), provides an alternative option. Also devised in Sweden, most notably in association with Celemi, an educational consultancy, the Monitor combines metrics from four perspectives, etc, etc. Further variations on the same foundation were the Cockpit Communicator devised at Ericsson (Lovingsson, Dell'Ortro and Baladi, 2000), and the Value Chain Scoreboard, which required the identification of 11 key performance indicators loosely associated with the underpinning value creation theme (Lev, 2003) . All of these approaches are conceived of as additional, stand alone reports that complement, or at least supplement, the conventional set of financial statements.

The move to narrative based intellectual capital accounts was soon evident. The most widely known was the result of the Danish government initiative that began in 1997 and in 2000 resulted in the publication of *A Guideline for Intellectual Capital Statements: A Key to Knowledge Management*, which was discussed in section three above. This was superceded in 2003 by the "New Guideline" that employed the four element process model: knowledge narrative; management challenges; initiatives; and indicators (as in figure 2 above). As mentioned earlier, an output of the Meritum Project was an alternative narrative based approach in the form of an Intellectual Capital Report. The incorporation of sets of indicators within both approaches demonstrates that narrative intellectual capital accountings privilege narrative over numbers, and as a consequence sit at the opposite end of a continuum to, say, those scoreboard approaches such as the Intangible Assets Monitor that tend to use narrative as a secondary tactic in communicating intellectual capital growth.

In their 2001 paper, Roslender and Fincham suggest that there may be a case for developing the narrative approach in a more radical way. A key implication of their use of the distinction between primary intellectual capital (human capital) and secondary intellectual capital, is that it is the former that creates value creation and delivery capacity in the form of the latter. This being the case, Roslender and Fincham champion the idea of human capital (people) articulating their own stories about the creation and delivery of valuation through the mechanism of self-accounts, which they observe free people from the accounts created on their behalf by the accountancy profession. Largely untypical of contributors to the intellectual capital

literature, they draw their motivations from the critical accounting literature, arguing that these self-accounts are a further example of enabling accounting interventions, with their emancipatory potentials (see also Roslender and Fincham, 2004). In a further contribution (Fincham and Roslender, 2003), they are at pains to emphasise that they envisage intellectual capital self-accounts as forming an element of a comprehensive set of intellectual capital information alongside more conventional narratives, scoreboards of company specific indicators and any relevant harder numbers, all of which are conceived of as a subset of a twenty first century Business Reporting paradigm (AICPA, 1994; ICAS, 1999; Upton, 2001; ICAEW, 2003).

The above are all formal ways of accounting for intellectual capital, suggestions as to how it might be possible for businesses to provide information about the growth of their stocks of intellectual capital to stakeholders. Many, however, are likely to remain reluctant to publish such information, fearing that it may have the result of exposing the company in two different ways. In the first place, for many firms nowadays these assets are part of their core business; therefore, disclosing too much about them might reveal the company's competitive advantage (Hofmann, 2005). They may prefer to withhold this information from competitors until they are required to disclose it (Holland and Johanson, 2003). Thus, very few companies report on their customers, their customers' views about the company, their perceived competitors or their own image. Secondly, intellectual capital reporting might not only expose the bases of competitive advantage but may provide clues as to a firm's weaknesses. Revealing information of this sort might provide problems for managers, not only because their competitors can act or perform better, but also with internal stakeholders, who now realise that, in fact, the business is not performing quite as well as they thought it was. Fortunately, perhaps, there continues to be very little requirement to disclose information on intellectual capital, resulting in it being largely a voluntary activity (Beattie and Thomson, 2010)

As a consequence, those organisations that do decide to make such information available are able to decide what is disclosed and how it is communicated. The history of social and environmental accounting developments has admirably demonstrated how such unregulated accounting spaces can be populated to the benefit of those whose motivations might not withstand rigorous scrutiny. As a

consequence a decade on from the identification of the Intellectual Capital Statement approach, arguably the most progressive innovation, the terrain of intellectual capital disclosures remains patchy and consequently very amenable to empirical studies, which have multiplied since that time.

## 6. Discussion: The way forward

The preceding pages demonstrate that during the past fifteen years or so we have come to understand what intellectual capital encompasses and what makes it such an important category of business asset in the present era. This latter importance dictates that it is vital for senior managements to view intellectual capital in a strategic way if they wish to maximise the benefits that these assets can bring to their organisations, and to manage them effectively. From a specifically accounting standpoint, the challenge has been to identify appropriate ways of measuring and, perhaps more importantly, report the success with which stocks of intellectual capital have been grown over time. In this context there are strong indications that it is unlikely that accounting, as it has traditionally been recognised, is capable of meeting these new challenges. At the very least it seems as though it is desirable to employ a well-crafted combination of narrative and numbers in order to take intellectual capital into account.

The greater part of the literature reviewed above evidences a distinctly *normative* quality, something that is particularly apparent in the intellectual capital accounting subset. Here the emphasis is essentially policy or practice oriented, focusing on the exploration of various alternative ways of identifying, measuring and reporting the growth of stocks of intellectual capital during an accounting period. As we have intimated on several occasions, much of this literature was already in place by the early years of the present decade, and as it has tailed off it has been replaced by an increase in the number of papers that are more focused on “intellectual capital in action”. Here the principal interest is in how business and other enterprises are actually approaching accounting for their stocks of intellectual capital (or intangibles). The normative emphasis of the earlier theoretical literature is thus exchanged for a *positive* emphasis, in some cases analytical but more frequently descriptive. A popular topic for enquiry is the pattern of disclosure practice, as between human,

customer and structural capital (e.g, Abeysekera, 2006; Striukova, Unerman and Guthrie, 2008), together intellectual capital disclosures in the context of initial public offerings (e.g, Bukh, Nielsen, Gormsen and Mouritsen, 2005; Rimmel, Nielsen and Yosano, 2009).

As we mentioned in our introductory comments, there has been only a limited literature to date that merits the designation *critical.* This is despite Mouritsen's provocative 1998 description of intellectual capital (and Economic Value Added) as a management technology. Following their earlier critical commentary in 2001, Roslender and Fincham (2004) discusses similar contributions by Yakhlef and Salzer-Morling (2000) and Thorbjorsen and Mouritsen (2003), before offering their own thoughts on how it might be possible to fashion intellectual capital in a more progressive way, *inter alia* through the medium of self-accounting as this has been identified at the end of the previous section (see also Roslender 2009). Even within this narrow set of papers it is possible to identify differences in perspective. Yakhlef and Salzer-Morling adopt a Foucauldian perspective, one which Roslender and Dillard (2003) would dispute is actually critical, a designation they would reserve for work that is informed by the Marxist tradition of social theory and social philosophy, and particularly Critical Theory, which Roslender and Fincham (2004) exemplifies. By contrast, the Thorbjorsen and Mouritsen paper combines elements of interpretivism and institutional theory in an effort to understand how the employee is accounted for in the context of Intellectual Capital Statements. In the subsequent collections of explicitly critical papers on intellectual capital published in the *Journal of Intellectual Capital* (2006) and *Critical Perspectives on Accounting* (2009), contributions informed by Marxist theories remain in the minority.

Given the accomplishments of interdisciplinary research across the spectrum of business and management disciplines in the past thirty years, there is much to commend the study of intellectual capital in such a non-technical way. The resultant increase in self-awareness regarding the various technologies of business and management holds out the promise of a more enlightened enactment thereof. At the same time, however, it is important to recognise that enlightenment is always a matter of degree. In some cases it may result in only a modest discomfort on the part of the individual about the broader implications about what they are involved in, or at

best the necessity to ‘have the debate’ about prospective activities. Beyond this it may become more problematic as individuals find themselves debating whether they should take action to avoid becoming caught up in improper activities, and at the extreme remove themselves from the situation, often at a high personal cost. On some occasions it may be possible to subtly disrupt programmes, thereby translating opposition into (heroic) failure.

These observations apply with equal force in the case of any interdisciplinary insights. In the case of those researchers who embrace an explicitly Marxist theoretical foundation to their interdisciplinary studies there is considerably less equivocation about the necessity to strive to link knowledge to change, in the form of social betterment, whenever possible. In the case of accountancy, the stance advanced in Cooper and Sherer (1984) remains instructive, particularly when compared with the lack of engagement with practice evident in the case of many other perspectives accorded the designation of critical accounting (Roslender and Dillard, 2003). For those who seek critical knowledge of this sort, the underlying objective is to use that knowledge for the purposes of promoting a more progressive interface between accountancy and the society in which it is embedded, and which simultaneously is shaped by it and which it shapes.

The purpose of self-accounting, as it was identified in the previous section, like the distinction between primary and secondary intellectual capital that underpins it, is to privilege human capital over the other forms of intellectual capital that are asserted to be the consequence of the creativity that characterises human capital (Roslender and Fincham, 2001, 2004; Roslender, 2009). The rationale regarding releasing people from other people’s accounts is a similarly social philosophically driven idea, with an emancipatory intent. While self-accounts can be identified as constituting only a further set of accounts to be incorporated into a wide ranging Business Report, because they are so clearly a radical departure from what is normally recognised as an account, including the form of narratives that are commended within the Intellectual Capital Statement approach, they are envisaged as playing a major role in telling the story of intellectual capital within the organisation.

From a critical perspective it is possible to recognise that even with the best intentions, there is a high likelihood that progressive intellectual capital reporting, which accords primacy to human capital, may see it lost in a mass of information. This being so, a possible alternative strategy might be to include some aspects of human capital reporting within a Social Report that is accorded equal status with any Financial Report or Operating Report. The concept of accounting to society is by no means a new or even a novel one, dating back until the 1960s. With the evolution of accounting since that time there has been an expansion of possible content of such reports. Social responsibility statements, environmental and sustainability reports and more recently ethical disclosures might usefully be enhanced by the development of human capital reports, which would encompass the sort of self-accounts described above. A variation on the same model might be a report designed for employees rather than a general readership, with greater emphasis on those issues deemed to be of more relevance to active rather than passive stakeholders. In many respects this would be a combination of the employee and employment reports that were canvassed in the UK in the mid 1970s (ASSC, 1975). As far as possible it would be desirable for such Social Reports to evidence a distinctly reflexive emphasis, consistent the principles of auto-critique that have also emanated from the contemporary Marxist canon.

An interesting and highly relevant development that might be also popularised has recently been evident in Scandinavia in the form of Health Statements (Ahonen and Grojer, 2005; Johanson and Cederqvist, 2005; Mouritsen and Johanson, 2005; Bjurstrom, 2007; Holmgren and Martensson, 2010). Although still very much in their infancy, there has been some evidence of attempts to construct such accounts in the form of mini-Intellectual Capital Statements, combining numbers and narrative. There are indications that the high levels of sickness absence that co-date the emergence of such Health Statements are now in significant decline to and that this costly problem has been overcome. Less optimistically, the possible emergence of new forms of “presenteeism”, which result in very sick people continuing to come to their work (Hemp, 2004; Nielsen, Hussi, Schunder-Tatzber, Roslender and Ahonen, 2007; Bockerman and Laukkenen, 2010), may have the effect of masking the extent of this downturn, particularly at a time of a global economic slowdown. Consequently, the Health Statement approach merits further development. It

possesses the potential to bring together a range of relevant information, including patterns of sickness absence, indicators of the growth of employee health and wellbeing, targets for sustained improvement, details of occupational health interventions, including health education, 'healthy organisation' initiatives, etc. Many of these contents lend themselves to enhancement via the promotion of a further round of self-accounts, which would encourage employees to report and reflect upon their own individual journeys to improved personal health and wellbeing, an opportunity that is open to all categories of employee.

A final issue is how is what is being advocated as a valuable way of moving the intellectual capital field forward, essentially by emphasising the primacy of the human capital component, is actually little more than an attempt to return to the largely discredited and defunct accounting for people project? At its inception, in the guise of human asset accounting (Hermanson, 1963, 1964), the reason why accountants accepted the need to 'put people on the balance sheet' was because they were becoming increasingly important assets, and that a balance sheet that excluded them was flawed, something Paton had recognised as early as 1922. Echoes of this assertion are very evident in the early intellectual capital literature, albeit without any privileging of human capital. Flamholtz's reformulation of accounting for people in the form of human resource accounting sought to abandon the former's financial accounting and reporting emphasis in favour one more akin to managerial accounting (Flamholtz, 1974a,b; see also Brummet, Flamholtz and Pyle, 1968). In many ways what Flamholtz was advocating was closer to human resource management than managerial accounting, although his inability to free himself of the constraints of the cost and value calculus derived from financial accounting, resulted in this project never fully realising its full potential, something reflected in the field's spectacular collapse in the later 1970s.

The subsequent exploration of a third approach to accounting for people developed in Sweden from the early 1980s, human resource costing and accounting, proved a little more ambitious, substituting the hard numbers of utility analysis for those of financial accounting and reporting, and the income statement for the balance sheet. More significantly, perhaps, it provided a space for two of its principal exponents, Grojer and Johanson, to think through some of the key issues involved in accounting

for a very much broader range of assets, now designated intellectual capital and/or intangibles, the great majority of which were not readily visualised using a financial valuation approach (Grojer and Johanson, 1998). As we noted in the previous section, intellectual capital was now to be accounted for using sets of organisation specific indicators chosen because of their relevance to the challenges associated with managing such assets rather than comparability with other enterprises. In due course these were complemented by an increased use of narrative in combination with numbers.

The identification of the potential merits of a critical (theoretical) perspective on accounting for intellectual capital, which privileges its human capital component and the mode of self-accounting, is intended to encourage a renewal of theoretical focus in the intellectual capital field. Initially attention is drawn to a relative dearth of critical contributions, of whatever origins, in this field, clearly something of a lost opportunity given the demonstrable merits of such work across the business and management disciplines. Beyond this is the advocacy of a position that privileges human capital over the other forms of intellectual capital, on the grounds that it is people (=employees) that constitute the source of all value within the value creation and delivery processes of the present, past and all future ‘ages’. This has significant implications for how enterprises employ and grow their stocks of human capital. And from an accounting perspective there is the question of whether self-accounting, an intervention firmly underpinned by the two previous theoretical positions, can deliver the insights that are claimed for it.

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