

**INTELLECTUAL CAPITAL IN ACTION:
AUSTRALIAN STUDIES**

Thesis submitted in fulfilment of the requirements of the University of Sydney for the
Degree of Doctor of Philosophy

by

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Statement of Authentication

This thesis is submitted to the University of Sydney in fulfilment of the requirements for the Degree of Doctor of Philosophy by publications. Where the included papers have been co-authored I have attached certificates attesting to my contribution to these papers.

The work presented in this thesis is, to the best of my knowledge and belief, original except as acknowledged in the text. I hereby declare that I have not submitted this material, either in full or in part, for a degree at this or any other institution.

Signature:

A handwritten signature in purple ink, appearing to read 'John C. Dunaway', written in a cursive style.

Date: March 3 2008

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When I first accepted the personal challenge of becoming a doctoral student and faced the enormous task of writing a thesis I did so with a high level of self-confidence. This was because in my previous academic pursuits I was encouraged not only by my teachers, but also by my student peers, to push myself to reach my full academic potential. The theme of life-long learning was heavily promoted and the undertaking of a PhD seemed to be the next logical step along this path. Thus, I have come to believe that this document is part of my learning journey and I eagerly await the next station. But to get to the current station I have had support and encouragement from many people along the way.

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1 IC from a critical perspective

This thesis differs from most contemporary doctoral research projects in that the content is not based on a single body of empirical study. Rather, the empirical content of the thesis is formulated by combining three distinct research projects. Thus, four papers (Dumay and Guthrie, 2007; Dumay and Tull, 2007; Dumay, 2008; Dumay, in review) are utilised in conjunction with an overarching review of Intellectual Capital (IC) theory and practice as found in the contemporary IC literature.

In combining these papers into a coherent piece of work, a critical research perspective, as outlined by Alvesson and Deetz (2000), has been utilised as the theoretical framework. It is important to note here that the term ‘critical’ is used in this thesis not to find fault with the theory and practice of IC but rather to examine and question the application of IC theory into practice. This approach contributes to the IC field knowledge and understanding that narrows the gap between IC theory and practice. Thus, the purpose of section 1 is to discuss the relationship of the theoretical framework to the overarching thesis and this is accomplished in the following three sub-sections. Section 1.1 discusses the critical approach to research, its applicability to the IC field and the desired outcomes of critical research. Section 1.2 outlines the aims of the thesis from a critical perspective, and section 1.3 outlines the contribution of the research and empirical material to the overall thesis.

1.1 Critical research and IC

The concept of, and interest in, IC stems from the wide recognition that knowledge is important to organisations and technology has allowed for greater dissemination of knowledge (Meritum Project, 2002; Unerman *et al.*, 2007). In addition, the development of IC resources is advocated as this helps create value for

organisations, especially since the majority of an organisation's assets are intangibles which cannot be represented in the same manner as land, factories, equipment and cash (Stewart, 1997, p. x). Therefore, the identification and development of an organisation's IC is important, as are insights of IC in action and any impact that this may have.

A common link between the studies in the papers presented in this thesis is that they are based on a 'critical' research approach to IC. Here, 'critical' is about presenting comments and opinions from the detailed analysis of IC in action that allows for the further development of knowledge about IC as a phenomenon.

A 'critical' analysis of IC in action is justified because the development of the concept of IC parallels that of 'critical' theory. Alvesson and Deetz, (2000, p. 14) identify that 'critical' theory was developed as a response to changing social conditions as the result of developments in "science, industrialization and communication/information technologies". Similarly the concept of IC has come into prominence as a result of structural changes in the economy as knowledge, communication and the importance of intangibles have changed the conditions under which organisations now operate (Meritum Project, 2002). These changing societal and organisational conditions have generally been lauded for their positive impacts, especially in Western societies, but the domination of these changes can also have negative impacts (Alvesson and Deetz, 2000), and this view has been acknowledged in the IC literature (see for example Caddy, 2000; Leitner and O'Donnell, 2007).

In this thesis the term 'critical' is used not to find fault with current thinking about IC but forms a basis from which to examine the contemporary frameworks of IC in

action; thus, the focus is on ‘critique’ rather than ‘criticism’ (Alvesson and Deetz, 2000, p. 8), and recognising the difference between critique and criticism is important. The purpose of critique “is to discuss or comment on something such as a creative work, giving an assessment of its good and bad qualities” (MSN, 2007), while the purpose of criticism is to provide “a spoken or written opinion or judgment of what is wrong or bad about somebody or something” (MSN, 2007).

Hence, by utilising critique in the examination of IC in practice this thesis transcends finding fault with the contemporary theory of IC by offering insights into IC by identifying, challenging (see Alvesson and Deetz, 2000, p. 8) and examining the manner in which IC theory translates into practice. The examination of these contemporary theoretical IC frameworks is important, timely and motivated by the recognition that two decades of management practice and academic research surrounding IC have concentrated on establishing definitions, measures and a proliferation of IC frameworks (Chatzkel, 2004; Sveiby, 2007). At the same time, the IC field suffers from a lack of proliferation in practice as evidenced by the relatively few organisations who systematically disclose their IC (Brennan, 2001; April *et al.*, 2003; Bontis, 2003; Ordóñez de Pablos, 2003; Guthrie *et al.*, 2006; Unerman *et al.*, 2007).

One reason proffered for this is that the measurement, management and reporting of IC is at a crossroads as the creation of contemporary frameworks of IC has only progressed to raise the awareness of IC (Marr and Chatzkel, 2004, pp. 224-5). As Chatzkel (2004, p. 337) explains, in order to move through the crossroads, academics and practitioners:

... must substantially demonstrate the relevance of IC as a working discipline that is useful to organizations to use to gauge and generate significant value and to effectively navigate to achieve

strategic goals. Otherwise, the notion of IC and all its stands for will be seen as merely one more set of very interesting ideas that is continually elusive to grasp and use.

As a result there has been interest in the exploration of a more critical stance towards the research and understanding of IC (O'Donnell *et al.*, 2006, p. 6).

Indeed, past critical IC research has concluded that the potential of IC will not be realised if management continues to force thinking about IC into existing frameworks (Chaharbaghi and Cripps, 2006, p. 29) based on accounting, management control and management of intangibles (Guthrie *et al.*, 2003, pp. 430-1). This thinking is not only advocated for practitioners, but for academic researchers as well, so that new understandings of how IC works and how it is utilised in social and organisational change can be developed (Mouritsen, 2006). Thus, this thesis takes a critical research perspective towards IC with its main objective being to seek understanding and new possibilities of IC in action. But how can this be achieved? To answer this question, the work of Alvesson and Deetz (2000, pp. 17-20), who outline three tasks of critical research – ‘insight’, ‘critique’ and ‘transformative redefinitions’ – is utilised. Each of these tasks is discussed from an IC perspective next.

1.1.1 Insight

According to Alvesson and Deetz (2000, p. 17), the task of ‘insight’ is to demonstrate “our commitment to the hermeneutic, interpretive and ethnographic goals of local understandings closely connected to and appreciative of the lives of real people in real situations”. So, insight from a critical IC perspective involves trying to understand the impact of IC practices on both the people and the organisations they belong to. Thus, the question is not “What is intellectual capital?” but “How is intellectual capital?”

(O'Donnell *et al.*, 2006, p. 7)

One example of taking a changed approach to IC research is posited by Mouritsen (2006), who outlines two approaches to developing IC research: the ostensive and performative perspectives. The ostensive approach is seen to be mainly aligned with the contemporary frameworks of IC in that "... IC elements are connected to value creation and organisational results in one specific way" (Mouritsen, 2006, p. 822). This approach is not in keeping with a critical perspective as it attempts to find a universal 'formula' of IC and value creation, ignoring the specific situation of actors within organisations. The performative approach recognises "that there is no fundamental formula to understanding the role of intellectual capital in organisations and society" (Mouritsen, 2006, p. 823). Here Mouritsen adds to the "How is intellectual capital?" question by espousing that the performative approach provides new answers to the questions of "How does intellectual capital work in firms?", "What is intellectual capital composed of?" and "How is intellectual capital related to value?". Thus, the performative approach is congruent with the critical perspective as it is conducted at an organisational level and allows for the understanding of how actors mobilise IC and how it is connected to the organisation.

Hence the task of insight is to focus on the phenomenon of IC and to report on the experiences of IC in action rather than continuing to develop theories of IC. After over 20 years there is still no commonly accepted definition of what IC is (Abdolmohammadi, 2005; Abeysekera, 2006; O'Donnell *et al.*, 2006). Thus developing insights into IC practice may contribute more than trying to develop a global 'framework', the proliferation of which seems to be already abundant (see

Sveiby, 2007).

1.1.2 Critique

The objective of critique “is to counteract the dominance of taken-for-granted goals, ideas, ideologies and discourses which put their imprints on management and organization phenomena” (Alvesson and Deetz, 2000, p. 18). A critique of IC is important as it can be argued that one of the problems of the contemporary field of IC is that the ideas and terminology that have been developed are the result of traditional management thinking, and the contemporary field of IC is heavily influenced by these traditional ideals. The most prominent of these relates to the term ‘intellectual capital’, that is, the terminology itself leads to a misunderstanding of the nature of IC. The word ‘capital’ implies that knowledge is some form of material wealth that can be managed in the same way as physical assets, and that investing in these assets leads to the creation and possession of knowledge, resulting in more wealth, both of which are empirically unproven (Newman as quoted in Chaharbaghi and Cripps, 2006, p. 42).

The proliferation of contemporary IC frameworks which attempted to ascribe a dollar value to IC or create the balance sheets of IC in the format of ‘scorecards’ provides ample evidence of this thinking (see Sveiby, 2007) and shows how traditional accounting theory has influenced the development of IC theory. The subsequent unwillingness of the practitioner and academic community to universally adopt any of these frameworks, coupled with the fact that many of the contemporary frameworks do not offer a radically different view of valuing or measuring IC, continues to bind the IC field to traditional accounting and performance management ideals. Additionally, the continued dominance of old managerial ideals has led to the misuse

of IC. Sveiby (2007) outlines examples of IC being used as either a management control tool or for enhancing an organisation's public relations and demonstrates how this has had negative consequences for organisations.

Utilising critique offers the opportunity to research the theory and practice of IC at an organisational level. The researcher can therefore become involved with the researched, opening up a discourse between the two, so that the privileged understandings of IC from the perspective of the researcher and the researched can be combined and brought forward. The result of this discourse increases the understanding of the dynamics of IC in practice, rather than developing more theoretical views from a distance (see also O'Donnell *et al.*, 2006, p. 6).

1.1.3 Transformative redefinition

The last task of the critical perspective “is the development of critical, managerially relevant knowledge and practical understandings that enable change and provide skills for new ways of operating” (Alvesson and Deetz, 2000, p. 19). This task is especially important to the objective of managing an organisation's IC as there are inherent contradictions in the espoused benefits of IC and the reality of organisational practices. For example, as Mouritsen (2006, p. 835-6) points out, organisations are more likely to invest in human capital when they are ‘in the black’ and to reduce the number of employees when they are ‘in the red’. This contradicts the espoused benefits of human capital which, by the logic and argument of the IC theory, advocates the need to invest in employees, as investments in human capital and other forms of IC are required for the long-term financial success of the organisation. These and other contradictions will continue to evolve from ongoing research into IC, but

should be taken as opportunities to develop insights that influence future management practices (see Alvesson and Deetz, 2000, p. 20)

As identified earlier, these contradictions can in part explain the lack of take-up of IC in practice. This can be evidenced by a number of organisations that have taken on-board IC management practices, lauded their benefits and then quietly withdrawn from them, especially when the going gets tough or when they lose interest in the concept. For example, the Swedish insurer Skandia (see Skandia, 1994; 1995; 1996; 1998) was a leading example of an organisation that espoused the benefits of IC, only to shrink away from it when the bottom fell out of its share price in the new millennium (Dumay, 2008). Thus, IC is not a concept that translates automatically into beneficial organisational outcomes. The changes and the benefits that accrue from managing IC are more likely to be developed “in an ongoing struggle including much practice and frequent false starts” (Alvesson and Deetz, 2000, p. 20).

In order to progress the critical agenda on IC, managers will need to learn new skills (Alvesson and Deetz, 2000, p. 20) that will enable them to better understand the evolving insights and critiques of IC. By utilising these new skills better decisions about how IC can be utilised in a particular organisation can be made.

1.2 Thesis aims

In light of the critical stance taken in relation to IC, *the main objective of this thesis is to investigate and examine several contemporary IC theories and how they are utilised in practice*. In particular, the four papers (Dumay and Guthrie, 2007; Dumay and Tull, 2007; Dumay, 2008; Dumay, in review) that comprise the empirical content of this thesis question particular aspects of IC, so that understandings of the IC

concept can be developed, leading to the main research question of “How does IC in action influence organisations?”. This is, in part, answered by the four papers. In answering this question a number of other aims have been identified as having relevance to the overall thesis, and these are detailed next.

IC’s contribution to the creation of wealth in organisations has been well established for over 100 years (for instance, see Veblen, 1904, p. 154), and previously the development of intangibles was premised under the guise of other management fields such as ‘Human Resource Management’ (Ordóñez de Pablos, 2003). But the term ‘intellectual capital’ has now become synonymic for a management framework under which human, relational and internal (intangible) resources are identified and managed within an organisation. Thus *the second aim of this thesis is to investigate the theory and practice of IC as a management phenomenon*. In order to do this, a brief review of contemporary IC theory and practice is presented in section 3

The third aim of this thesis is to examine the relevance of IC disclosure and its effect on the value of a firm. The concept of IC is often referred to as the difference between the market and book value of a firm and this value is influenced by the development of a firm’s IC. Thus, if a firm is to attain a higher or fairer market value for its securities, then it is essential for the firm to disclose its IC. But the empirical evidence in literature is scant and the most popular forms of disclosure, through annual reports or separate IC statements, are questioned for both their relevance and timeliness. **Paper 1** (Dumay and Tull, 2007) addresses this issue by presenting an empirical study which examines a potential alternative method of IC disclosure by way of price sensitive announcements to the Australian stock exchange (ASX).

The fourth aim of this thesis is to examine the impact of the implementation of IC practice in a public sector organisation. The concept of IC is not only important to listed firms, but to public sector organisations, even though the concept of ‘value’ is substantially different in each. By questioning the impact of IC or change within organisations and by demonstrating that there can be some positive (and potentially negative) outcomes, the view that IC is just another ‘management fad’ can also be addressed. **Papers 2 and 3** (Dumay and Guthrie, 2007; Dumay, 2008) address this aim by utilising empirical data from research into the impact of IC at the NSW Department of Lands (Lands).

The final aim of this thesis is to examine the role of IC measurement in action in a particular organisation. Owing to the proliferation of IC measurement frameworks already in existence, attempting to create another framework may be seen as a fruitless task particularly considering the number of calls in the IC literature to understand the dynamics of IC and value creation. From this perspective, the investigation of an alternative way of understanding IC measurement systems offers insights into how a different approach to measuring IC within a particular organisational context can aid in reducing the ambiguity of how IC resources interact and create value. **Paper 4** (Dumay, in review) addresses this aim by utilising empirical data from research that sought to identify the IC resources that created value in a leading Australian financial institution.

1.3 Contributions of the review of IC theory, IC practice and papers in the thesis

To address the main objective of this thesis, a review of IC theory and practice and the four papers are presented. The four papers contain empirical evidence which contributes to the literature on IC by examining the possibilities for IC in action within specific organisational contexts, providing insights into how IC impacts organisations. This is not done by examining outcomes such as profitability, but by understanding *how* IC penetrates organisations and examining the application of contemporary frameworks of IC in the field. These impacts can be viewed from both internal and external perspectives (see van der Meer-Kooistra and Zijlstra, 2001). This approach is in contrast to the main body of extant IC research, which is discussed in the following review of IC theory and practice, on how IC should be accounted for. Table 1 presents the aims of this thesis by publication and provides an outline of the four papers. This is followed by a précis of each.

Table 1: Thesis aims and papers

Aim 1: To investigate the theory and practice of IC as a management phenomenon

Section 3: Review of IC theory and practice.

Aim 2: To examine the relevance of IC disclosure and its effect on the value of a firm

Paper 1: Dumay, J. and Tull, J. (2007), “Intellectual capital disclosure and price sensitive Australian stock exchange announcements”, *Journal of Intellectual Capital*, Vol 8 No 2, pp. 236-55¹

Aim 3: To examine the impact of the implementation of IC practices in a public sector organisation

Paper 2: Dumay, J. and Guthrie, J. (2007), “Disturbance and implementation of IC practice: A public sector organisation perspective”, *Journal of Human Resource Costing and Accounting*, Vol 11 No 2, pp. 104-21.

Paper 3: Dumay, J. (2008), “Narrative disclosure of intellectual capital: A structural analysis”, *Management Research News*, Vol 31 No. 7.

Aim 4: To examine the role IC measurement in action in a particular organisation

Paper 4: Dumay, J. (in review), “Intellectual capital measurement: A critical approach”, *Journal of Intellectual Capital*.

Paper 1 examines the relevance of the reporting of IC in annual reports and stand alone IC reports and the subsequent impact on the share price of the firm. The paper examines an alternative way by which firms can disclose their IC to external stakeholders who have an influence on their share price. It presents a method by

¹ This paper received a “Highly Commended Paper” award in the Journal of Intellectual Capital Awards for Excellence 2007.

which firms can disseminate IC information in a more frequent and immediate manner without making stakeholders wait until the publication of formal company annual reports or external IC reports. The paper supports empirically the use of an alternative way of disclosing IC to the market that can have an impact on share price.

Papers 2 and 3 examine the impact of change within a public sector organisation.

Paper 2 discusses how environmental change can be a catalyst for the take-up of IC by an organisation. In particular, it uses Laughlin's (1991) 'colonizing' model of organisational change to understand the catalyst for change, in this case an ageing workforce, and the resultant formation of an accounting of IC. In utilising the 'colonization' model of change the paper allows a look inside the 'black box' of IC, examining how IC was constructed by narrative and discourse within the organisation over two years. In this particular case IC was not a fad, the adoption of it not voluntary, requiring the commitment of some of the organisation's members to push through change. The adoption of IC was influenced by the commitment of senior organisation members in a top down approach, and it showed how management thinking changed from a short-term financial focus to a longer-term non-financial view.

Paper 3 builds on the findings of **Paper 2** to investigate the manner and impact of IC disclosure. To frame the discussion, elements of Giddens's (1976; 1984) 'structuration' theory and narrative theory (Weick and Browning, 1986; Czarniawska, 1998) are used to analyse change from within the organisation. The paper examines how an espoused need for change resulted in the implementation of IC practice and the subsequent narrative disclosure of IC. As a result, the concept of IC has, through the use of narrative, penetrated into the organisation and impacted on its social

structure.

Paper 4 investigates *how* IC can be represented by considering the role of organisational actors and by examining the suitability of contemporary IC measurement frameworks. The case study utilises research inspired by complexity theory (see Snowden and Boone, 2007, p.71) in an attempt to understand the complex and fluid nature of IC (see Cuganesan, 2005) and how it relates to value creation in the case study organisation. The examination of how IC is constructed at the case study organisation suggests that measuring IC does impact organisations; that insights, critique and transformative redefinitions (change in praxis) of IC are possible, suggesting that the traditional frameworks used to manage, measure and report IC need to be transformed, and that the one-size-fits-all approach to IC taken to date is unsatisfactory.

But the ultimate contribution of this thesis is to offer an overarching critical examination of IC theory and practice to the extent that it engenders a discourse between academics and practitioners that enables change. This change is not change for the sake of change, but rather change that is based on the critique of both theory and practice so that in the end IC practices have beneficial impact on organisations by means of the evolving way that IC theory is implemented into organisations, the results of which engender further evolution of theory.

This thesis by publication is divided into a further three sections. Section 2 justifies the methods employed. Section 3 provides an overarching critical review of IC theory and practice and outlines the development of the research problem to be addressed. Section 4 presents a concluding discussion of the papers (which are presented

Appendix 2, 3, 4 and 5) from a critical perspective, identifies the limitations of the thesis and outlines potential areas for future research.