Intellectual capital research: a critical examination of the third stage

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Abstract

Purpose – The purpose of this paper is to examine intellectual capital research (ICR) methods and critically analyse how they have been utilised. The data set for this analysis is based on examining IC papers published in specialist IC and important generalist accounting journals from the years 2000 to 2011.

Design/methodology/approach – The basis of the analysis is Alvesson and Deetz's critical management framework of "Insight", "Critique" and "Transformative redefinition" with the goal of widening the discourse about how to research IC. This paper is motivated by Guthrie *et al.*, who identify a third stage of ICR which is "based on a critical and performative analysis of intellectual capital (IC) practices in action".

Findings – This paper argues that there is an increasing performative research agenda however many researchers appear caught in an "evaluatory trap" (Olson *et al.*) whereby the researchers' approach to ICR remains stuck in an ostensive approach (see Mouritsen) that characterises second stage ICR (see Petty and Guthrie). The paper also identifies how many accounting researchers are impacted by a "dominance structure" and suggests that they need to break free from the dominance of "accounting" practice before they can understand and realise the potential of IC.

Research limitations/implications – The implication of this paper for ICR and practice is to create a continued discourse about evolving approaches to ICR so we can continue communicating leading edge, third wave ICR, which develops IC theory in practice and effective IC management through praxis.

Originality/value – From 2004 onwards, Guthrie *et al.* claim the third stage was gaining impetus and thus this paper is novel because it investigates how ICR has transitioned and how ICR might continue to develop.

Keywords IC research, Ostensive vs performative, Third stage ICR, Evaluatory trap, Dominance structure, Intellectual capital, Research methods

Paper type Research paper

1. From the first to third wave of IC research

Intellectual capital research (ICR) has evolved over the past two decades in what Guthrie *et al.* (2012) describe as three distinct stages. The first stage of ICR has its origins in the late 1980s and into the 1990s and according to Petty and Guthrie (2000, p. 155) helped develop a "framework of intellectual capital". Typically, first stage ICR focused on raising awareness of why intellectual capital is important in "creating and

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managing sustainable competitive advantage" (Petty and Guthrie, 2000, p. 155). This recognition was the foundation for IC development. At the same time different guidelines and standards were created to make the invisible IC more visible. In early ICR publications the main argument was "intellectual capital is something significant and should be measured and reported", but with little empirical research provided in support (Petty and Guthrie, 2000, p. 162).

The first stage of ICR is firmly grounded in the work of practitioners in the 1980s and 1990s. For example, Karl-Erik Sveiby "discovered the knowledge organization" while working at Swedish publisher Affärsvärlden Group; Leif Edvinsson is famous for his work at the Swedish insurer Skandia (Edvinsson, 1997). On the other side of the world, in the USA, journalist Thomas Stewart, a writer for *Fortune* magazine popularised the concept of IC through his papers (Stewart and Losee, 1994; Stewart, 1997a) and book (Stewart, 1997b). At the same time the balanced scorecard was also gaining popularity in management circles (Kaplan and Norton, 1992). As Petty and Guthrie (2000, p. 156) declared in "The aim of stage one was to render the invisible visible by creating a discourse that all could engage in. Mission accomplished".

The second stage of ICR can be defined as a stage where approaches to measuring, managing and reporting IC came to the fore and to gather evidence in support of its further development (Petty and Guthrie, 2000, p. 156). During this stage different classifications were created which helped to define and group different methods of IC evaluation (Guthrie *et al.*, 2007; Boedker *et al.*, 2008; Ricceri, 2008). By the mid 2000s more than 50 methods were created which either helped to define IC as a whole or define different elements of IC and the list keeps growing (see Pike and Roos, 2007; Sveiby, 2010).

The first stage of ICR was characterised by the use of "grand theories" to create awareness of IC concepts, being the broad principles about IC that guide management action. As Dumay (2012, p. 4) argues, IC concepts as "grand theories" have been embraced and then under-used and he thus "finds that these grand theories mislead because they cannot be proven empirically. Therefore, managers should attempt to better understand the possible causal relationships between their people, processes and stakeholders (human, structural and relational capital) rather than adopting someone else's mousetrap". For example, the concept of "market-to-book ratios" (Stewart, 1997b) as an IC grand theory is flawed because of problems with fluctuating market values, historical cost accounting and the inability to measure intangibles in dollar terms (Dumay, 2012, p. 8).

The second stage of ICR investigated the impact of IC on financial performance and value creation. On a theoretical level, proponents argue that IC is the value driver leading to greater profitability (Bismuth and Tojo, 2008) and that organisational knowledge is at the crux of competitive advantage (Bontis *et al.*, 1999). However, empirical and case evidence is inconclusive and far from achieving a solid scientific consensus (Dumay, 2012). For example, Riahi-Belkaoui (2003) found a positive relationship between IC and financial performance, while Firer and Williams (2003) examined the relationship between IC and traditional measures of firm performance (ROA, ROE) and failed to find any relationship. Chen *et al.* (2005), using the same methodology, concluded that IC has a significant impact on profitability. Following the resource-based theory (Barney, 1991), Chen *et al.* (2005) argued that IC is a valuable resource for a company's competitive advantage and contributes to the company's financial performance. This view is also shared by Youndt *et al.* (2004), who stated that IC intensive companies are more competitive and thus more successful. However, as Dumay (2012, p. 12) concludes, studies espousing success "are often based on the long term survivors in industry and do not consider those that have gambled and lost. Analysing winners enlightens us to wining strategies while analysing losers enlightens us to losing strategies. Unfortunately they have often been the same strategies, just executed differently".

More recently IC second stage research has continued to focus on developing how intellectual capital is measured and reported and more importantly how the IC taxonomy is defined (Edvinsson and Martin, 2007). As a result several IC reporting research projects have continued to refine measuring and reporting IC since the seminal IC reporting studies of the Meritum Project (2002) and the Danish IC reporting guideline (Mouritsen *et al.*, 2003). For example, in Hong Kong the government has poured substantial resources into the development of IC as evidenced by the establishment of the Intellectual Capital Management Consultancy Programme (see www.ipd.gov.hk/eng/icm.htm). Already this programme has participated in IC research and consultancies with over 500 Chinese SMEs, rivalling the scope and scale of the aforementioned seminal IC projects. In Europe the InCas (Intellectual Capital Statement) Project[1], started in 2007, continues to expand in a similar attempt to get SMEs to measure and report their IC. In Japan the government has also sponsored the creation of IC reporting guidelines specifically to raise awareness of the value of IC to potential investors in firms (Johanson *et al.*, 2006, 2009). This concern with measuring and reporting has also resulted in calls for the regulated disclosure of IC especially for listed companies (Burgman and Roos, 2007; Burgman *et al.*, 2007). Further evidence of this push for regulated disclosures can be found in the even more recent push for Integrated Reporting which is inclusive of a firms IC along with financial, environmental and social reporting (Adams and Simnett, 2011).

During the first and second stages a common terminology of IC developed and different approaches to defining IC were introduced and devoted to explaining what IC is and the difference between IC and intangible assets. For example, some researchers argued that intangible assets are just a part of IC (Roos *et al.*, 1997; Ståhle and Grönroos, 1999; Starovic and Marr, 2003) while some researchers insisted that these two concepts should be treated as synonyms (Brooking, 1996; Lev, 2001; Andriessen, 2004; Lönnqvist and Mettänen, 2005). At the same time while the names used for IC are at times different, they basically refer to: "human capital: the knowledge embedded in people; structural capital: the knowledge embedded in the organization and its systems; and relational capital: the knowledge embedded in customers and other relationships external to the organization" (Guthrie *et al.*, 2012).

What has become abundantly clear during the first and the second stage of ICR is that intangible assets are driving value creation in today's global economy. As noticed by Pike *et al.* (2002, p. 659), "as the business society is developed, the key step in value creation has ascended an intellectual staircase". Second stage IC research also gave life to a dynamic theory of IC, such as the role of IC within value chains and value networks. As a result the dynamics of IC in value creation were also visualised using "value creation maps" (Marr *et al.*, 2004, p. 319) and strategy maps. As a result, the dynamic theory of IC introduces that the roles and effects of different elements of IC are very complex and therefore difficult to predict and forecast (Roos *et al.*, 2005).

According to Guthrie *et al.* (2012) a third stage of ICR is emerging and is characterised by research critically examining IC in practice, devoted to the managerial implications of how to use IC in managing a company. Guthrie *et al.* (2012) argue that the ICR third stage began with the 2004 special edition of *JIC* entitled "IC at the crossroads – theory and research" (Chatzkel, 2004; Marr and Chatzkel, 2004). The development of this stage progressed with Mouritsen's (2006) paper "Problematising intellectual capital research: Ostensive versus performative IC" and continued to develop in 2009 with the special edition of *Critical Perspectives in Accounting* (*CPA*) (Vol. 20 No. 7) called "Critical perspectives on intellectual capital" (Mouritsen and Roslender, 2009; Roslender and Stevenson, 2009). Critical ICR papers were also written by Dumay (2009a, b), Cuganesan and Dumay (2009) and Roslender (2009). So while second stage ICR is predominately devoted to evaluating IC's influence on financial outcomes, third stage ICR focuses on the deeper managerial implications of managing IC in all types of organisations and can be classified as bottom-up research as opposed to top-down. Thus, the third stage considers value is not just monetary but incorporates worth and importance of the products and services to customers and other stakeholders (Dumay, 2009a, p. 195). In this case all evaluation methods of IC become just tools for managers of companies who are more concerned with real implications of IC management for value creation than just pure IC measurement. Thus as Guthrie *et al.* (2012) recently concluded "the third stage was starting to gain considerable impetus and it will be interesting to see how it develops over the coming years".

2. An emerging third stage alongside an "evaluatory trap"

The empirical basis of this paper builds upon the analysis of ICR literature begun by Guthrie *et al.* (2012), expanding the discussion of the third wave of ICR from a critical perspective. To do so Alvesson and Deetz's (2000, pp. 17-20) outcomes framework of critical management research of insight, critique[2] and transformative redefinition is utilised. Put simply, insight helps develop understanding; critique examines the good and the bad; while transformative redefinition identifies new skills required to move forward and assists in the development of discourse about a particular phenomenon. Thus, in this section the critical management research framework is used to argue that many IC researchers are stuck in an evaluatory trap (Olson *et al.*, 2001), continuing to develop second stage, top-down ostensive ICR rather than critical, bottom up, third stage ICR. Adapting the evaluatory trap argument of Olson *et al.* (2001) to the concept of IC it is argued that the continual promotion of second stage ostensive ICR towards creating economic value, combined with the lack of comprehensive empirical evidence to support the impact of IC on financial performance and value creation, is generating a vicious cycle of research attempting to find the ultimate all encompassing framework for developing IC. Thus the purpose of examining ICR is to critically analyse it has been utilised especially from the perspective of contrasting ostensive vs performative approaches to ICR.

2.1 Insights into contemporary approaches to ICR

The data used for the analysis incorporates the original data set from Guthrie *et al.* (2012) plus the continued analysis of IC papers published in 2010 and 2011 in specialist and generalist accounting journals. The journals used were selected by Guthrie *et al.* (2012) because they are committed to publishing interdisciplinary accounting research and have in the past published in the area of IC (see Guthrie and Murthy, 2009, p. 129). The research follows the same methodology as Guthrie *et al.* (2012) classifying the papers according to their schema. However, for the purpose of this paper only three categories from their schema were used as outlined in Table I. Additionally, the alternate grouping of

Table I.
Classification system for analysing IC papers

	Alternate grouping
A. Jurisdiction	
A1. Supra-national/international/comparative – general	Ostensive
A1.1. Supra-national/international/comparative – industry	Ostensive
A1.2. Supra-national/international/comparative – organisational	Performative
A2. National – general	Ostensive
A2.1. National – industry	Ostensive
A2.2. National – organisational	Performative
A3. One organisation	Performative
E. Research methods	
E1. Case/field study/interviews	Empirical
E2. Content analysis/historical analysis	Empirical
E3. Survey/questionnaire/other empirical	Empirical
E4. Commentary/normative/policy	Normative
E5. Theoretical: literature review	Normative
F. IC frameworks and models	
F0. No model proposed	
F1.0. Applies or considers previous models	
F1.1. Proposes a new model	

ostensive and performative was added to the "Jurisdiction" category as shown in the left hand column of Table I.

The purpose here is not to re-analyse the work of Guthrie *et al.* (2012) but to build on their finding of the emergence of the third stage of ICR. Thus, this paper is concerned with presenting evidence to either support or question their finding. Here, Guthrie *et al.* (2012) argue that IC accounting research is maturing and provide as evidence the narrowing gap between proposing new IC frameworks vs the use of existing frameworks. As shown in Figure 1 there has been a further narrowing of the gap

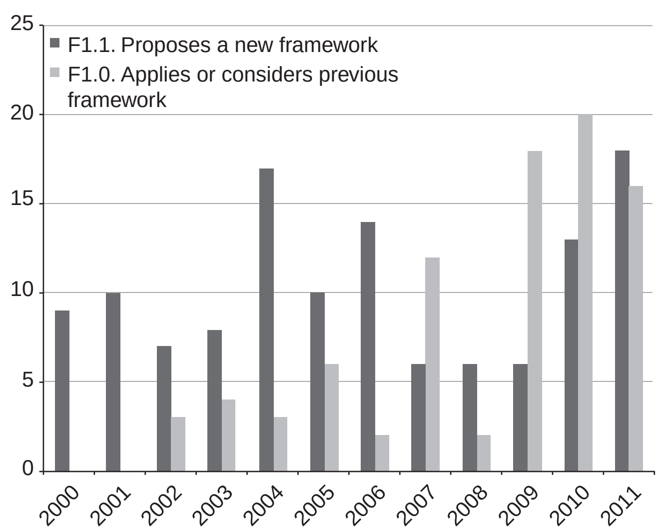

Figure 1.
Developing new vs considering existing IC frameworks 2000-2011

alongside an increase in the number of papers both proposing new IC frameworks and using existing frameworks.

Guthrie *et al.* (2012) also argue that there is a continued growing trend away from first stage contributions due to the growing number of empirical vs normative papers published. The further analysis as shown in Figure 2 confirms the trend is continuing. However, the odd spike in normative papers in 2009 is attributed to five papers (Gowthorpe, 2009; Mårtensson, 2009; McPhail, 2009; Nielsen and Madsen, 2009; Roslender and Stevenson, 2009) published in the 2009 CPA special edition identified earlier. Further evidence of normative critical papers are Dumay (2009b) and Ståhle *et al.* (2011). Thus, it is not possible to conclude that all normative papers are first stage ICR and not part of the third stage of ICR. In contrast the third stage of ICR needs to be established and these papers serve the same purpose as the first stage normative papers – they are consciousness raising papers communicating the importance of recognising and understanding the potential for critical evaluation of IC as an important management concept (see Petty and Guthrie, 2000, pp. 155-6).

Guthrie *et al.* (2012) outline that another essential aspect of the third wave is empirically researching IC practices inside organisations. Here the further research findings support an emerging third stage of ICR as evidenced by the steady increase in the trend towards empirical research aimed at the organisational level, based on three organisational categories under the "Jurisdiction" heading in Table I, as shown in Figure 3. However, this remains low compared to the number of papers published, with approximately 30 per cent of papers published in 2010 and 2011 meeting these criteria. This provides evidence that third stage ICR is continuously emerging but, it is thus argued, the third stage has yet to reach a point where it is the predominate mode of research.

The output of this organisational approach to ICR is interesting because of the converging trend in 2010 and 2011 between proposing new IC frameworks vs the use of existing frameworks as highlighted previously in Figure 1. To analyse the output of research the organisational approach to research by classifying the organisational approach has been simplified from Figure 3 as bottom up, "performative" research and the remaining categories of the "Jurisdiction" heading in Table II as top down, "ostensive" research (see Mouritsen, 2006, p. 822). This was then cross-referenced with

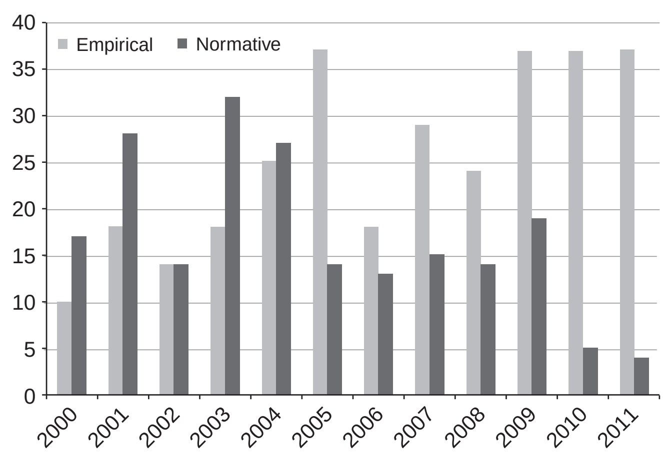

Figure 2.
Empirical vs normative ICA papers (2000-2011)

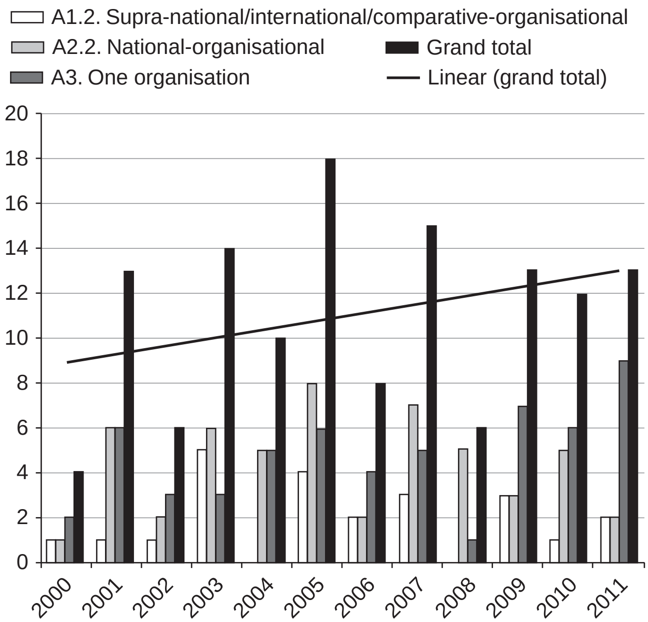

Figure 3.
Empirical ICR focusing on organisations

Table II.
Outputs of ostensive and performative ICR 2009-2011

Ostensive/performative	IC frameworks and models	2009	2010	2011	Total
Ostensive	Applies or considers previous model	13	12	12	37
	Proposes a new model	5	11	14	30
Performative	Applies or considers previous model	5	8	4	17
	Proposes a new model	1	2	4	7

research output, examining whether or not a new framework was proposed for the most recently published research (2009-2011). From the ostensive perspective the published research continues to look for a new overarching IC framework, while the performative approach has predominately settled in to accepting and utilising the frameworks and models already in use, despite some "performative" researchers continuing to propose new IC frameworks or models. As can be seen in Table II there is a small but growing trend from 2009 (1) to 2011 (4) for "performative" research to propose new IC frameworks alongside a similar trend for "ostensive" research output from 2009 (5) to 2011 (14).

The results in Figures 1-3 and Table II cause us to argue that current ICR practice is still predominately stuck in the second stage of ICR even though third stage performative ICR is on the increase. However, it is interesting to find that the outcome of recent performative research still proposes new frameworks and has, in fact, increased slightly because the performative research approach claims that "it is impossible in principle to define the list of properties that would be typical of life in a society" (Mouritsen, 2006, p. 822), yet proposing new IC frameworks appears to fly in the face of the claim. This outcome causes further investigation into the reason performative research seeks to propose new IC frameworks or models.

2.2 Critique – an "evaluatory trap"?

As disclosed above, the call for new IC frameworks and models continues unabated despite the emergence of a third stage of critical performative ICR. The wide diversity and continued development of IC frameworks and models has been an open topic for discussion among academics and practitioners. There is no doubt the proliferation of different frameworks, which some authors claim to number over 100 (Pike and Roos, 2007), causes confusion about what is the right framework to apply in any given situation because "one size doesn't fit all" (Ghemawat, 2002, p. 71). Thus as the economy continuously develops it would be expected that new models continually evolve from an ostensive perspective.

Here it is argued that the predominance of second stage ICR is based upon the mistaken belief that managing and disclosing IC creates value and that this value will result in greater profits and increased value of company securities (see Bismuth and Tojo, 2008, p. 242), or in the case of some public sector and not-for-profit organisations, social and utility value as well. However, as Dumay (2012) argues, accepting grand theories such as these is dangerous because they are empirically unproven. Thus, relying on the use of ostensive models for measuring, managing and reporting IC may lead to an "evaluatory trap" whereby the residing misplaced belief of the second wave of ICR that measuring, managing and reporting IC is causally linked to creating value causes IC researchers to continually create or improve on the plethora of frameworks and models already in use.

This can, in part, be blamed on the popular use of management fads and fashions such as the balanced scorecard (Kaplan and Norton, 1992), which have returned their authors much fame and fortune. The trap IC researchers and practitioners fall into is the continued use and incremental evolution of models based on grand theories that prevent us from experimenting with third stage ICR (Olson *et al.*, 2001). The result may be that researchers and practitioners are "flogging a dead horse" of second stage ICR frameworks and models rather than investing money in yearlings (new third stage ICR) with potential.

As can be seen in Table II, the past two years has seen an increase in the number of published papers proposing new frameworks and models. An example of developing a model from the ostensive evaluatory trap perspective is Adams and Simnett (2011), who outline Integrated Reporting as a new reporting paradigm emphasising the enhanced disclosure of the financial and non-financial value drivers for today's organisations. They argue that Integrated Reporting "is poised to be a mainstream reporting evolution and represents an opportunity for improving transparency, governance and decision making for organisations of all types. This, in turn, will improve the decision making of long-term investors and funders" (Adams and Simnett, 2011, p. 293) Here, the authors adapt the Integrated Reporting model to fit the "not-for-profit sector". However, the call for new and improved reporting methods to include disclosure of intangibles is not new and can be traced back for several decades (see Jenkins, 1994). Integrated Reporting appears to be another attempt at delivering on this call in the same way as the Danish (Mouritsen *et al.*, 2003) and Meritum Project (2002) IC guidelines answered the call for more disclosure of IC. However, the take-up of these "new" reporting models has been sparse (Dumay, 2009b).

The evaluatory trap can be further evidenced in the conclusions to the multitude of IC papers based on content analysis of company annual reports or other types of disclosures such as prospectuses. One of the first of these types of papers was written by Guthrie and Petty (2000, p. 249), who concluded that "key components of intellectual capital are not reported within a consistent framework when reported at all" and outlined that "the next major step is either to refine the reporting models in use or to develop new models". At the time that Guthrie and Petty (2000) wrote their paper this would have been a valid argument and in essence this step was taken with the research projects that produced the Danish (Mouritsen *et al.*, 2003) and Meritum Project (2002) IC guidelines.

However, since the publication of these guidelines there has been a steady stream of papers utilising content analysis to investigate IC disclosures and they continue to find that there is still a paucity of IC disclosure combined with inconsistent approaches to what little IC companies do disclose. For example, Yi and Davey (2010, pp. 341-2) outline in their study of Chinese firms that "the extent and quality of IC disclosure among (mainland) Chinese companies is low" and "owing to the lack of generally-accepted framework for IC reporting, further work needs to be done in the area of developing an IC disclosure model that is applicable to the Chinese (mainland) environment". Thus researchers keep calling for new frameworks when in reality the available ones do not seem to be used.

Another evaluatory trap researchers fall into is that of the drivers of value creation and their role within an integrative IC management system. For example, Jhunjhunwala (2009) present an integrated approach to understanding and monitoring intangible assets and they argue these are the key value drivers of an organisation. With the help of three different examples, the author examines the cause-and-effect relationship among different intangibles, mapping them to organisational success. The topic of the role of IC in the value creation process is also captured in other papers such as Córcoles *et al.* (2011), who argue for the need for universities to include information on IC in their accounting information systems. They argue this information is needed for stakeholders in order to make the right managerial decisions and create value. Additionally, Vafaei *et al.* (2011) examines whether or not listed companies' disclosure of IC is value-relevant in share markets. The question of IC's moderating role in the value-relevance of reported earnings and equity following the adoption of international financial reporting standards (IFRS) is also discussed.

However, as Dumay (2012) identifies, we are still not at a point where it can be declared that managing IC leads to greater profitability because of the "inability to make causal links between IC and value creation". Taking the Jhunjhunwala (2009) paper as an example, the author builds on the grand theory of value creation (Bismuth and Tojo, 2008, p. 242) by positing that value creation for shareholders in the hotel industry is based on the following causal links (Jhunjhunwala, 2009, p. 214):

> The more the employee satisfaction and motivation, the better will be their behaviour and attitude towards customers and towards work leading to higher customer satisfaction, which in turn will increase reputation of the hotel and thereby increase occupancy rate ultimately creating shareholder value.

The evaluatory trap is most evident when Jhunjhunwala (2009, p. 217) declares afterwards that the process of measuring IC comes after the causal relationship has been identified rather than measure IC first and then determine the causal relationships as follows: "Once critical intangibles have been identified and causal relationship established, the firm needs to define specific set of indicator for each intangible". The opposite of this evaluatory trap is offered by Dumay (2009a) and Cuganesan and Dumay (2009), who outline an innovative and performative approach to measuring IC that first measures IC and then develops causal relationships.

On the performative side, several papers also propose new frameworks or models. For example, Davison (2009, p. 883) investigates the use of visual representations in the annual reports of British Bank The Bradford & Bingley plc and develops a model that "illuminates the ways in which visual branding interacts with business practices and conveys intangible values that are not reflected in the accounts". Another example is Chenhall *et al.* (2010, p. 737), who use "the concept of social capital to outline a distinctive approach to understanding the interplay between management control systems and the development of social connections in and between organisations". Murthy and Mouritsen (2011, pp. 636-9) also develop a model specific to a bank, showing how financial capital interacts with developing specific forms of human and structural capital. Similarly, Dumay and Cuganesan (2011, p. 24) "outline a method for making sense of IC utilising narratives, numbers and visualisations" to outline "how IC works within a division of a financial services company".

What these several examples have in common is investigating how specific aspects of IC (brands, social capital, structural capital, human capital…) have been applied in practice. Thus, the proposed frameworks or models presented in these papers help us understand how IC might be applied inside the organisation through praxis rather than a practice. For example, practitioners using Chenhall *et al.*'s (2010, p. 754) insights of how social capital impacts on management control systems inside an non-government organisation might rethink their strategy of how they implement "formal controls, such as budgets" because their case study showed how the attempts "were not successful as they were predicated on acquiring and managing economic capital". Thus, it is argued these types of models and frameworks are not part of the evaluatory trap because they are not concerned with creating ostensive models for measuring, managing and reporting on IC. Rather they create models specific to the organisations studied to show how IC is mobilised via praxis in a specific situation.

In contrast to these models there is evidence of performative research arguing for ostensive approaches to proposed frameworks and models. For example, Secundo *et al.* (2010, p. 140) review existing IC theories and practical experiences to build a conceptual IC model and dashboard and apply it to investigate IC in an Italian higher education and research institution. As a result of their study they state that their research is "exploratory" and their "dashboard of metrics proposed is comprehensive". Secundo *et al.* (2010, p. 152) also outline that the advantage of their model is that "IC is a metric of performance and the intangible report may well represent for HE (higher education) and research organizations what the balance sheet and the income statement are for business companies".

Similarly, Massingham *et al.* (2011) use "360-degree peer review as a method of validating self-reporting in HCVM (Human Capital Value Measurement) surveys" in the Australian Royal Navy. They argue their proposed method for validating HCVM helps "to build confidence in the objectivity of the HC scores" (Massingham *et al.*, 2011, p. 69). Here the logic justifying their approach is financial and abstract as they claim "the measurement of intangible assets, such as HC, has become a very important research agenda for both academics and practitioners. These methods seek to quantify the economic value of people to the organization and to assist management and financial decisions" (Massingham *et al.*, 2011, p. 69). Thus, there is evidence within performative IC research of second stage ICR thinking and outcomes trapped in the performative ICR agenda.

3. Conclusion – transformational ICR

Transformation is all about change. If researchers and practitioners continue with second stage ICR ideologies and incrementally improve or invent new frameworks and models there is no doubt they will make some progress towards understanding and implementing IC practices. However, these changes will most likely be marginal at best because it seems unlikely someone will invent a "new" balanced scorecard or improve substantially on the current plethora of frameworks and models available.

However, third stage ICR has the potential to be transformational because, rather than developing IC practices, it gets involved with the praxis of IC (actually implementing IC) inside organisations. Thus, when by examining "How IC works" rather than building a "new and improved" top-down ostensive IC causal framework or model, provides a better view of the actual impact of IC in action. When the performative bottom-up approach is used to gathering insights into the workings of IC then models describing the interaction of IC elements can be developed rather than trying to allocate abstract IC measures in an attempt to fit into a predefined framework or model. Doing the latter puts researchers and practitioners firmly in the "evaluatory trap" of attempting to measure IC in order to define its "value". Doing the former creates insights into the impact of IC praxis, which can be used to critique, selecting what worked and what did not, giving researchers and practitioners the ability to reflect on the impact to inform future praxis.

It is the ability to reflect and be critical that is of paramount importance here because it is not the way most researchers and practitioners, who attempt to account for IC, have been trained by business schools. When researchers and practitioners attended their "accounting classes" they were educated in the principles of information for decision making and how to use debits, credits, assets, liabilities and equity to develop balance sheets, income statements, cash flows statements and eventually annual financial reports (which include a certain amount of narrative as well) for users. In the process the context of monetary transactions is abstracted into accounting numbers with some narrative so that readers can make sense of the big picture of what happened (Robson, 1992). So it is a logical next step when confronted with abstracting the context of "accounting for intangibles" that report producers attempt to create similar models and narratives. If this process is good enough for accounting for money then they think it is good enough to account for IC.

But this prevents looking outside the model of "accounting" to find an explanation as to why IC management practices (let alone IC reporting) have not proliferated in organisations today. Arguably, the continued efforts to promote IC reporting in Japan, Europe and Hong Kong (and elsewhere) as noted in the introduction is evidence that both IC researchers and policy makers believe that IC more IC disclosure is necessary. This is because of what Facione (2007, p. 17) describes as a "dominance structure" whereby "we settle on a particular option which is good enough we tend to elevate its merits and diminish its flaws relative to the other options". In this case it is argued that researchers, practitioners and policy makers settle upon the basic frameworks of measuring, collating and presenting IC information to users and cannot see why managers and other stakeholders are not interested in what is reported. The continued desire to reinvent and create these IC frameworks is evidence of this problem.

But the "good news" for the believers of IC as a transformational and powerful management tool is that researchers, practitioners and policy makers are beginning to transcend the dominance of accounting in the process of understanding and researching IC. Thus they are encouraged to pursue research in which the evaluatory trap of ostensive research is transcended by research that investigates the praxis of IC in specific contexts. As Dumay and Rooney (2011) conclude "it is possible to effectively implement IC practices without necessarily needing concrete IC measures". Thus, an "account" of IC practices can be delivered rather than IC measures. It is practice that helps researchers and practitioners to internalise what works (and what does not) inside a specific organisation rather than research that can be generalised to all organisations. The former is real life and the latter appears to be fantasy.

Hence, the implications of the paper for ICR and practice is that it adds to a continued discourse about evolving approaches to ICR by communicating leading edge, third wave ICR, which develops IC theory in practice and effective IC management through praxis. Doing so means researchers and practitioners can avoid becoming trapped in the second wave and ride the next wave towards greater insights into how IC works rather than what IC is.

However, this paper also has limitations. The first limitation is advocating the third stage of ICR as the path to move beyond the crossroads of relevance. So far this path is untested and undoubtedly will have problems with its implementation just as the first and second stages did before possibly morphing into a fourth stage of ICR. Second, there are other broader views on the path of IC relevance and development such as developing IC from the IC of nations perspective rather than the IC of particular firms (Lin and Edvinsson, 2009). This perspective shifts the focus of IC within a firm to a longitudinal focus of how IC is utilised to navigate the knowledge created by countries, cities and communities and advocates how knowledge can be widely developed thus switching from a managerial to an eco-system focus (see also Gray, 2006; Edvinsson, 2008). Thus, the path we have chosen may not be the only path used to progress beyond IC's crossroads of relevance (Chatzkel, 2004).

Notes

1. See www.incas-europe.eu
2. In this paper the term "critical" is used not to find fault with current thinking about IC but forms a basis from which to examine the reality of IC in action; thus, the focus is on "critique" rather than "criticism" (see Alvesson and Deetz, 2000, p. 8).

References

Adams, S. and Simnett, R. (2011), "Integrated reporting: an opportunity for Australia's not-for-profit sector", *Australian Accounting Review*, Vol. 21 No. 3, pp. 292-301.

Alvesson, M. and Deetz, S. (2000), *Doing Critical Management Research*, Sage, Thousand Oaks, CA.

Andriessen, D. (2004), *Making Sense of Intellectual Capital: Designing a Method for the Valuation of Intangibles*, Elsevier Butterworth – Heinemann, Waltham, MA.

Barney, J.B. (1991), "Firm resources and sustained competitive advantage", *Journal of Management*, Vol. 17 No. 1, pp. 99-120.

Bismuth, A. and Tojo, Y. (2008), "Creating value from intellectual assets", *Journal of Intellectual Capital*, Vol. 9 No. 2, pp. 228-45.

Boedker, C., Mouritsen, J. and Guthrie, J. (2008), "Enhanced business reporting: international trends and possible policy directions", *Journal of Human Resource Costing & Accounting*, Vol. 12 No. 1, pp. 14-25.

Bontis, N., Dragonetti, N.C., Jacobsen, K. and Roos, G. (1999), "The knowledge toolbox: a review of the tools available to measure and manage intangible resources", *European Management Journal*, Vol. 17 No. 4, pp. 391-402.

Brooking, A. (1996), *Intellectual Capital: Core Assets for the Third Millennium Enterprise*, Thomson Business Press, London.

Burgman, R. and Roos, G. (2007), "The importance of intellectual capital reporting: evidence and implications", *Journal of Intellectual Capital*, Vol. 8 No. 1, pp. 7-51.

Burgman, R., Roos, G., Boldt-Christmas, L. and Pike, S. (2007), "Information needs of internal and external stakeholders and how to respond: reporting on operations and intellectual capital", *International Journal of Accounting, Auditing and Performance Evaluation*, Vol. 4 Nos 4/5, pp. 529-46.

Chatzkel, J. (2004), "Moving through the crossroads", *Journal of Intellectual Capital*, Vol. 5 No. 2, pp. 337-9.

Chen, M.C., Cheng, S.J. and Hwang, Y. (2005), "An empirical investigation of the relationship between intellectual capital and firms market value and financial performance", *Journal of Intellectual Capital*, Vol. 6 No. 2, pp. 159-76.

Chenhall, R.H., Hall, M. and Smith, D. (2010), "Social capital and management control systems: a study of a non-government organization", *Accounting, Organizations and Society*, Vol. 35 No. 8, pp. 737-56.

Córcoles, Y.R., Peñalver, J.F.S. and Ponce, Á.T. (2011), "Intellectual capital in Spanish public universities: stakeholders' information needs", *Journal of Intellectual Capital*, Vol. 12 No. 3, pp. 356-76.

Cuganesan, S. and Dumay, J. (2009), "Reflecting on the production of intellectual capital visualisations", *Accounting, Auditing & Accountability Journal*, Vol. 22 No. 8, pp. 1161-86.

Davison, J. (2009), "Icon, iconography, iconology: visual branding, banking and the case of the bowler hat", *Accounting, Auditing & Accountability Journal*, Vol. 22 No. 6, pp. 883-906.

Dumay, J. (2009a), "Intellectual capital measurement: a critical approach", *Journal of Intellectual Capital*, Vol. 10 No. 2, pp. 190-210.

Dumay, J. (2009b), "Reflective discourse about intellectual capital: research and practice", *Journal of Intellectual Capital*, Vol. 10 No. 4, pp. 489-503.

Dumay, J. (2012), "Grand theories as barriers to using IC concepts", *Journal of Intellectual Capital*, Vol. 13 No. 1, pp. 4-15.

Dumay, J. and Cuganesan, S. (2011), "Making sense of intellectual capital complexity: measuring through narrative", *Journal of Human Resource Costing & Accounting*, Vol. 15 No. 1, pp. 24-49.

Dumay, J. and Rooney, J. (2011), "'Measuring for managing?': an IC practice case study", *Journal of Intellectual Capital*, Vol. 12 No. 3, pp. 344-55.

Edvinsson, L. (1997), "Developing intellectual capital at Skandia", *Long Range Planning*, Vol. 30 No. 3, pp. 366-73.

Edvinsson, L. (2008), "Knowledge navigation and the cultivating ecosystem for intellectual capital", in Ahonen, G. (Ed.), *Inspired by Knowledge in Organisations: Essays in Honour of Professor Karl-Erik Sveiby on his 60th Birthday 29th June 2008*, Svenska handelshogskolan, Helsingfors, pp. 1-15.

Edvinsson, L. and Martin, H. (2007), "Editorial", *International Journal of Accounting, Auditing and Performance Evaluation*, Vol. 4 Nos 4/5, pp. 333-5.

Facione, P.A. (2007), "Critical thinking: what it is and why it counts", Insight Assessment, available at: www.insightassessment.com/pdf_files/what&why2006.pdf (accessed 26 January 2009).

Firer, S. and Williams, S.M. (2003), "Intellectual capital and traditional measures of corporate performance", *Journal of Intellectual Capital*, Vol. 4 No. 3, pp. 348-60.

Ghemawat, P. (2002), "Competition and business strategy in historical perspective", *Business History Review*, Vol. 76 No. 1, pp. 37-74.

Gowthorpe, C. (2009), "Wider still and wider? A critical discussion of intellectual capital recognition, measurement and control in a boundary theoretical context", *Critical Perspectives on Accounting*, Vol. 20 No. 7, pp. 823-34.

Gray, R. (2006), "Social, environmental and sustainability reporting and organisational value creation? Whose value? Whose creation?", *Accounting, Auditing & Accountability Journal*, Vol. 19 No. 6, pp. 793-819.

Guthrie, J. and Murthy, V. (2009), "Past, present and possible future developments in human capital accounting: a tribute to Jan-Erik Grojer", *Journal of Human Resource Costing & Accounting*, Vol. 13 No. 2, pp. 125-42.

Guthrie, J. and Petty, R. (2000), "Intellectual capital: Australian annual reporting practices", *Journal of Intellectual Capital*, Vol. 1 No. 3, pp. 241-51.

Guthrie, J., Petty, R. and Ricceri, F. (2007), *Intellectual Capital Reporting: Investigations into Australia and Hong Kong*, research monograph, The Institute of Chartered Accountants of Scotland (ICAS), Edinburgh.

Guthrie, J., Ricceri, F. and Dumay, J. (2012), "Reflections and projections: a decade of intellectual capital accounting research", *British Accounting Review*, Vol. 44 No. 2, p. 70.

Jenkins, E.L. (1994), "Users' critical external reporting needs are not being met", *Journal of Accountancy*, Vol. 177 No. 5, pp. 77-82.

Jhunjhunwala, S. (2009), "Monitoring and measuring intangibles using value maps: some examples", *Journal of Intellectual Capital*, Vol. 10 No. 2, pp. 211-23.

Johanson, U., Koga, C., Almqvist, R. and Skoog, M. (2009), "'Breaking taboos': implementing intellectual assets-based management guidelines", *Journal of Intellectual Capital*, Vol. 10 No. 4, pp. 520-38.

Johanson, U., Koga, C., Skoog, M. and Henningsson, J. (2006), "The Japanese government's intellectual capital reporting guideline: what are the challenges for firms and capital market agents?", *Journal of Intellectual Capital*, Vol. 7 No. 4, pp. 474-91.

Kaplan, R.S. and Norton, D.P. (1992), "The balanced scorecard – measures that drive performance", *Harvard Business Review*, Vol. 70 No. 1, pp. 71-9.

Lev, B. (2001), *Intangibles: Management, Measurement, and Reporting*, Brookings Institution Press, Washington, DC.

Lin, C.Y.-Y. and Edvinsson, L. (2009), *National Intellectual Capital: A Comparison of 40 Countries*, Springer, New York, NY.

Lönnqvist, A. and Mettänen, P. (2005), "Criteria of sound intellectual capital measures", in Kambhammettu, S.S. (Ed.), *Business Performance Measurement, Intellectual Capital: Valuation Models*, Le Magnus University Press, Hyderabad, pp. 97-120.

McPhail, K. (2009), "Where is the ethical knowledge in the knowledge economy?: power and potential in the emergence of ethical knowledge as a component of intellectual capital", *Critical Perspectives on Accounting*, Vol. 20 No. 7, pp. 804-22.

Marr, B. and Chatzkel, J. (2004), "Intellectual capital at the crossroads: managing, measuring, and reporting of IC", *Journal of Intellectual Capital*, Vol. 5 No. 2, pp. 224-9.

Marr, B., Schiuma, G. and Neely, A. (2004), "The dynamics of value creation: mapping your intellectual performance drivers", *Journal of Intellectual Capital*, Vol. 5 No. 2, pp. 312-25.

Mårtensson, M. (2009), "Recounting counting and accounting: from political arithmetic to measuring intangibles and back", *Critical Perspectives on Accounting*, Vol. 20 No. 7, pp. 835-46.

Massingham, P., Nguyen, T.N.Q. and Massingham, R. (2011), "Using 360 degree peer review to validate self-reporting in human capital measurement", *Journal of Intellectual Capital*, Vol. 12 No. 1, pp. 43-74.

Meritum Project (2002), *Guidelines for Managing and Reporting on Intangibles (Intellectual Capital Report)*, European Commission, Madrid.

Mouritsen, J. (2006), "Problematising intellectual capital research: ostensive versus performative IC", *Accounting, Auditing & Accountability Journal*, Vol. 19 No. 6, pp. 820-41.

Mouritsen, J. and Roslender, R. (2009), "Critical intellectual capital", *Critical Perspectives on Accounting*, Vol. 20 No. 7, pp. 801-03.

Mouritsen, J., Bukh, P.N., Flagstad, K., Thorbjørnsen, S., Johansen, M.R., Kotnis, S., Larsen, H.T., Nielsen, C., Kjærgaard, I., Krag, L., Jeppesen, G., Haisler, J. and Stakemann, B. (2003), *Intellectual Capital Statements – The New Guideline*, Danish Ministry of Science, Technology and Innovation (DMSTI), Copenhagen.

Murthy, V. and Mouritsen, J. (2011), "The performance of intellectual capital: mobilising relationships between intellectual and financial capital in a bank", *Accounting, Auditing & Accountability Journal*, Vol. 24 No. 5, pp. 622-46.

Nielsen, C. and Madsen, M.T. (2009), "Discourses of transparency in the intellectual capital reporting debate: moving from generic reporting models to management defined information", *Critical Perspectives on Accounting*, Vol. 20 No. 7, pp. 847-54.

Olson, O., Humphrey, C. and Guthrie, J. (2001), "Caught in an evaluatory trap: a dilemma for public services under NPFM", *European Accounting Review*, Vol. 10 No. 3, pp. 505-22.

Petty, R. and Guthrie, J. (2000), "Intellectual capital literature review: measurement, reporting and management", *Journal of Intellectual Capital*, Vol. 1 No. 2, pp. 155-76.

Pike, S. and Roos, G. (2007), "Recent advances in the measurement of intellectual capital: a critical survey", paper presented at the 8th European Conference on Knowledge Management, Barcelona, 6-7 September.

Pike, S., Rylander, A. and Roos, G. (2002), "Intellectual capital management and disclosure", in Choo, C.W. and Bontis, N. (Eds), *The Strategic Management of Intrllectual Capital and Organizational Knowledge*, Oxford University Press, New York, NY, pp. 657-71.

Riahi-Belkaoui, A. (2003), "Intellectual capital and firm performance of US multinational firms: a study of the resource-based and stakeholder views", *Journal of Intellectual Capital*, Vol. 4 No. 2, pp. 215-26.

Ricceri, F. (2008), *Intellectual Capital and Knowledge Management: Strategic Management of Knowledge Resources*, Routledge, Milton Park.

Robson, K. (1992), "Accounting numbers as 'inscription': action at a distance and the development of accounting", *Accounting, Organizations and Society*, Vol. 17 No. 7, pp. 685-708.

Roos, G., Pike, S. and Fernstrom, L. (2005), *Managing Intellectual Capital in Practice*, Elsevier, London.

Roos, J., Roos, G., Dragonetti, N.C. and Edvinsson, L. (1997), *Intellectual Capital: Navigating in the New Business Landscape*, Macmillan, Basingstoke.

Roslender, R. (2009), "The prospects for satisfactorily measuring and reporting intangibles: time to embrace a new model of (ac)counting?", *Journal of Human Resource Costing & Accounting*, Vol. 13 No. 4, pp. 338-59.

Roslender, R. and Stevenson, J. (2009), "Accounting for people: a real step forward or more a case of wishing and hoping?", *Critical Perspectives on Accounting*, Vol. 20 No. 7, pp. 855-69.

Secundo, G., Margherita, A., Elia, G. and Passiante, G. (2010), "Intangible assets in higher education and research: mission, performance or both?", *Journal of Intellectual Capital*, Vol. 11 No. 2, pp. 140-57.

Ståhle, P. and Grönroos, M. (1999), *Knowledge Management*, WSOY, Porvoo.

Ståhle, P., Ståhle, S. and Aho, S. (2011), "Value added intellectual coefficient (VAIC): a critical analysis", *Journal of Intellectual Capital*, Vol. 12 No. 4, pp. 531-51.

Starovic, D. and Marr, B. (2003), *Understanding Corporate Value: Managing and Reporting Intellectual Capital*, Chartered Institute of Management Accountants (CIMA), London.

Stewart, T.A. (1997a), "Brain power", *Fortune*, Vol. 135 No. 5, pp. 104-10.

Stewart, T.A. (1997b), *Intellectual Capital: The New Wealth of Organisations*, Doubleday – Currency, London.

Stewart, T.A. and Losee, S. (1994), "Your company's most valuable asset: intellectual capital", *Fortune*, Vol. 130 No. 7, pp. 68-73.

Sveiby, K.E. (2010), "Methods for measuring intangible assets", available at: www.sveiby.com/portals/0/articles/IntangibleMethods.htm (accessed 22 August 2010).

Vafaei, A., Taylor, D. and Ahmed, K. (2011), "The value relevance of intellectual capital disclosures", *Journal of Intellectual Capital*, Vol. 12 No. 3, pp. 407-29.

Yi, A. and Davey, H. (2010), "Intellectual capital disclosure in Chinese (Mainland) companies", *Journal of Intellectual Capital*, Vol. 11 No. 3, pp. 326-47.

Youndt, M.A., Subramaniam, M. and Snell, S.A. (2004), "Intellectual capital profiles: an examination of investments and returns", *Journal of Management Studies*, Vol. 41 No. 2, pp. 335-61.

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