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IC 21: reflections from 21 years of IC practice and theory

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Abstract

Purpose – The purpose of this paper is to reflect on 21 years of IC theory and practice as input into discussing the origins of IC, its multiple perspectives and where it is heading.

Design/methodology/approach – This article is based on the author's reflections of the past and vision for the future.

Findings – IC is still for many an invisible fuzzy dimension, or mainly a measuring and accounting issue. For others, it is thought of as a more and more strategic ecosystem for sustainable value creation. Is there a kind of learned blindness in financial capital accounting or ignorance of new value opportunity spaces? We need to go beyond IC reporting. We are on the edge of something, but what?

Originality/value – The paper presents the personal views of an internationally renowned IC academic and practitioner about what the future may hold for IC.

Keywords IC as third dimension, IC metrics, Intellectual capital statement, National IC, IC 21, Societal innovation, Innovation, Intellectual capital

Paper type Viewpoint

Introduction

> What did Steve Jobs actually do in Apple? He managed its Intellectual Capital […] How? For Steve Jobs managing the intellectual capital involved the capability to give proper direction to the knowledge assimilated in the organisation in order to generate innovative ideas and develop them (B. Prasad, in International Business, 6 October 2011).

Today we see the remarkable stock market value appreciation of the enterprise Apple. In August 2012, it had become the most valuable company in history with a stock market value of over 600 billion USD[1], many times more than Nokia, the previous market leader. What is Apple's innovative business recipe? Is it sustainable? This and other IC cases worth observing are Angry Birds from Rovio in Finland, Facebook and Google from the USA and Skype and Spotify from Sweden. How did these organisations use IC to create value?

I am writing this in the south of France, close to the small village Tautavel, in the Roussillon region. Nearby is the cave, Arago, where the oldest archaeological remains in Europe, *homo erectus tautavelensis*, were discovered, which date back 450,000 years. Arago 21 is the name given to the most important discovery, the cranium of our ancestors. It made me think of the word "capital", from the Latin word for "head" and how this brings us to the term "intellectual capital" (IC) and what it means. One possible definition is that IC is derived insights about head value, future earnings capabilities, based on human capital, as well as organisational, structural and relational capital. Is it an asset, liability or something else? How does IC work and what is its impact?

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It is 21 years since I began in the pioneering job as the world's first Director of Intellectual Capital at Skandia, where I developed the Skandia Navigator to support the strategic process of leveraging hidden assets. A due time to reflect on the IC journey and what is next.

Where is IC heading in the twenty first century? For many, it remains an invisible fuzzy dimension, for others mainly a measuring and accounting issue, and for others still a more and more strategic ecosystem for sustainable value creation. In grappling for the meaning of IC, are we suffering a kind of learned blindness, based on financial capital accounting? Or are we in ignorance of new value opportunity spaces? Or is it a power systems battle? It seems we are on the edge of something, but what?

The origins of IC

The Skandia Navigator model was the basis for the first official publication of a corporate IC annual report in the world in 1994. The origin of Skandia's IC Navigator was an attempt to visualise the hidden value, rather than account for, intangibles. The work on IC reporting escalated in many countries in the 1990s, with the pioneering work by Sveiby in Sweden, Lev in the USA, Mouritsen in Denmark, Roos in the UK, Bontis in Canada, Andriessen in The Netherlands and many more. Now this has grown into a world community of measuring intangibles, intangible assets and IC. This IC revolution is now well described and analysed by, among others, James Guthrie and John Dumay (see Guthrie *et al.*, 2012).

A number of significant IC prototyping projects on enterprise level have been launched, including:

- RICARDIS – Reporting on Intellectual Capital to Augment Research, Development and Innovation in SMEs, a European Commission project finished in 2006 (http://ec.europa.eu/invest-in-research/policy/capital_report_en.htm).
- EFFAS – European Federation of Financial Analysts, officially published in March 2008, the Principles for Effective Communication of Intellectual Capital (www.effas.net).
- WICI – World Intellectual Capital Initiative, a public/private sector consortium researching and developing IC accounting and integrated reporting, with the backing of leading accounting firms and leading IC scholars (www.wici-global.com).

Among the most intriguing IC systems of today is systems dynamics reporting on IC, which has its roots in MIT, with Jay Forrester. It has been refined and applied with growing success in Germany and also diffused in Europe. In 2004, Germany started a project called Wissensbilanz Made in Germany, under the leadership of BMWA – BundesMinisterium fur Wirtschaft unt Arbeit (www.wissensbilanz.org). It has now evolved to incorporate small as well as large German enterprises, both public and private. It has resulted in open software to download from its web site, which is now distributed more than 100,000 copies to enterprises in Germany. And more than 240 ICS coaches have been trained by Fraunhofer Academy, and millions of readers have been exposed to various IC materials in Germany. Recently in 2012 the project work on Wissenskapital/IC was institutionalised into a Wissensbilanz association (see www.bvwb.de). The German evolution on IC is going from reporting of IC as a position to a process view of the nonhierarchical interaction and interdependencies

between the IC components that shape value. It has many benefits from a strategy, leadership and IC quality viewpoint.

A significant European Commission project was launched in 2007 called Intellectual Capital Statements (InCaS). It was focused on expanding the learning from the German Wissensbilanz project and includes five countries (see www.incas-europe.org). It has also resulted in at least three specific IC PhD dissertations by K. Alwert, A. Yu and M. Will. InCaS was then followed by another European Commission project called CADIC – Cross Organisational Assessment and Development of IC, with a strong focus on IC flows (see www.cadic-europe.org).

In Asia, both Japan (with METI) and China have leveraged this IC work and launched research and application work. Another related unique global group for refined reporting is International Integrated Reporting Council (see www.theiirc.org). In Hong Kong, the Intellectual Property Department has successfully prototyped a project on ICR with about 600 SMEs (see www.ipd.gov.hk/eng/icm.htm).

The IC logic of cultivation

When I first started to work on IC in the early 1990s, it was related to my background in service management and innovation development and macro economical transformation in Sweden. The question that was central to my work was: how do you innovate and develop services at an enterprise micro level as well as a regional and national macro level? In Sweden, the implicit focus was on the transformation from an industrial economy to a service economy. This kind of economy is very much based on intangibles or, as initially labelled in Japan in the early 1980s, softnomics, or soft economics.

It was also based on the quest for an alternative value logic. Logic, based on service interaction and renewal with an appreciation of dimensions other than hard assets. Today this is referred to as the experience economy or innovation ecology.

However, two more dimensions related to knowledge can be added – a time line as well as extended intelligence value logic. The time line is the present surrounded by the past and the future. IC is about the future. IC is also, from a systems science perspective, a larger concept. It contains precise components, such as intellectual property (IP) and IP rights, which are legally packaged and protected intangible assets, as value logic. But it also incorporates knowledge, in a much broader sense.

One of the more powerful and deeper understandings of the modern knowledge economy is in relational or network dimensions. In Asia, knowledge is perceived as this in-between space, while, in the west, it is often constrained into an object. Leadership and management have to be more and more focused on the interdependencies of the in-between dimensions. A more holistic ecosystem perspective might call this social capital, which incorporates citizenship and growing global brain power. Other recent terms for this include crowd sourcing and the emerging phenomena, crowd funding.

To visualise this quest for the new IC logic, I used images and a distinctive IC taxonomy to highlight the hidden values for knowledge leadership. A fundamental and instrumental image is that of the tree of knowledge, which illustrates the holistic ecosystem of IC, as well as its hidden dimensions. In this tree, fruit is visualised as assets, showing how these are developed from the capabilities of the roots. The soil is the enabling cultural context for continuous renewal and knowledge growth (Edvinsson and Malone, 1997).

Thinking about the future, we might turn the tree upside down, to amplify the strategic shift in perspective of this ecosystem. Interestingly, this relates to the way the words intellectual capital is written in Chinese, where the meaning of capital is close to the meaning of the roots and ground. Where IC and service management intersect, in modern IC taxonomy is known as organisational capital. Bounfour and Edvinsson (2005) refers to this as regime, an interesting French perspective on organisational capital. It can be seen as the way we organise and cultivate the system or bridge between people outside the enterprise and inside.

IC metrics as a third dimension

Metrics, a kind of language in itself, describe and visualise the progress, risks, sense-making of organisational activity. This is a kind of knowledge navigation, to capture position, direction and speed. With the navigation metaphor, it might be easiest to think of longitude. This is a particular dimension, actually a third dimension beyond altitude and latitude, to highlight IC's dynamic and relative position. The traditional unit of longitude measurement is time. Thus, IC can be seen as three dimensional, in which the third dimension is the longitude strategy formulating process. It is made visible when considered in combination with altitude and latitude (see more at www.corporatelongitude.com; Edvinsson, 2002). Too much focus on metrics and measurements means that there is not enough focus on the real strategy process, in other words, the knowledge navigating of more and more intangible dimensions or components of IC. In focusing on the historical cost accounting measurement, the dynamic process of value creation, is overlooked, and missing the strategic interdependencies and knowledge flows between stakeholders. Much more attention has to be on so-called hidden values and future impact.

For more than five centuries, accounting has been an instrument for assessing knowledge, directly or indirectly. Taking the navigational approach, and considering it dynamically, the core of this measuring might now be refined to what I call me-assuring, meaning to be on the right track with the right direction and speed. This is a kind of longitude leadership that provides a lot more depth and support for the dynamic process of value creation.

IC flow and dynamics

Professor Nonaka points to the importance of managing the knowledge flow (Nonaka *et al.*, 2008). Traditional measurement tools are too limited and do not capture the flow of knowledge, the impact of the flow and the value creating dimensions over time (longitude).

In a scenario from 1982, Peter Russell described the world as a global brain with a growing number of connection networks and nodes. This outlook is still valid today, because knowledge work will be globally integrated through these networks. In 2015, there will be around 5 billion brains connected via broadband. What will be the implications for future IC?

At CES 2012, the prominent Consumer Electronics Association show in Las Vegas, the CEO of Ericsson explained how it has been investing in building the global broadband infrastructure and so-called networked society. The vast global annual R&D investment is not truly appreciated by the stock market, in spite of adding to a tremendous sustainable earning position in the forthcoming exponentially growing digital future. The 1 billion users of broadband are estimated to grow into 5 billion in less than five years. According to research by Ericsson, a 10 per cent growth in broadband will add 1 per cent

to GDP; for every 1,000 new broadband connections, there will be 80 new network jobs. New structures will emerge where the value co-operative is in the networked innovative society, outside traditional organisational silos.

Peter Russell also argues the need for a shift in consciousness. The critical issue for organisations is to avoid institutional failure and bureaucracy, by working on organisational renewal and innovations, for example, the business recipe innovation. Often this implies a new energising ecosystem with knowledge flow and insourcing of cross-disciplinary perspectives and intelligence, cross-fertilising skill and competences. Dave Snowden, at Cognitive Edge, sees blogging as a social global knowledge sharing tool, resulting in improved knowledge productivity (see www.cognitive-edge.com).

Cloud computing and social media will play a growing power role for the new societal fabric. We are at the beginning of this, not only in Europe, but globally. So where do we find the most innovative systems design for not only enterprise innovation, but also urban and societal renewal, political renewal, financial currency renewal, youth engagement, social security innovations and so on? These questions are critical parts of the Vision and Agenda 2020 for Innovative Europe. And the open innovation strategy and policy group (OISPG) have been doing pioneering work in this area to support policies for open innovation at the European Commission. The focus is on inspiring prototyping projects, among others on the new paradigm for open user-centric innovation, especially for service science and innovation (see https://sites.google.com/site/openinnovationplatform/home).

Knowledge is a social process, and social network analyses are becoming more used as a tool. Especially for science and R&D communities this seems to be an excellent starting point for understanding knowledge flows, as well as a basis for further investigation and investment. This presents opportunities for outside-in logic, and challenges for IC metrics.

The world of apps

A new pattern of knowledge and social networking is emerging. In 2010, about 10 billion apps were downloaded. In 2012, it may be as many 30 billion. The forecast for 2015 is more than 100 billion downloads. In 2011, there were reported to be more than 1 million different apps, and around 15,000 new apps are added each week. The commercial aspect of this activity, however, is still in its infancy, with a reported turnover of around 11 billion euros.

One fascinating example is that of Angry Birds from the young company Rovio, in Helsinki, Finland. The App was launched in 2009, after much prototyping. There have since been around 1,000 million downloads. The time spent by players on this game is said to be more than 200,000 man-years.

We can today see the emergence of intelligent regions such as Öresund between Sweden and Denmark, and the new innovation region between Hong Kong and Shenzhen. This kind of space is characterised by societal renewal based on social innovation and different kinds of work. Special economic zones are being upgraded to knowledge innovation zones (see www.inthekzone.com). Knowledge innovation has become a recent, much needed, concept.

Space for IC innovation

During my work at Skandia we also launched an arena for knowledge innovation, called Skandia Future Center. It became one of the world's first prototyping labs for

organisational capital. We were focusing on the innovation dimension as an organisational issue.

The critical question became how to build a bridge between brains inside the organisation, known as human capital, and brains outside, known as relational capital. This bridge was and is, the channel for flows of knowledge. The speed of knowledge exchange and innovation is also critical. Speed is related to context, culture and organisational barriers. So the organisational capital renewal and innovation dimensions are critical.

Many more such places have since been established, however, with a different context, achievements and aspirations, such as ABB Future Center, Sweden, EON Future Center, Sweden, Minc for Malmö City, Sweden, Mindlab, Denmark, Future Center, Norway, Mobilion/LEF, a range of such centres in The Netherlands, Innovation Lab for Royal Mail, UK, Scottish Intangible Asset Centre, UK, Beér Sheva in Israel, Mind Tree in India, InnoNest in Hong Kong and so on. One of the most well-known centres, was launched in November 2007 by ABN Amro Bank as a special hub for dialogue, learning, prototyping and incubators (see www.dialogueshouse.nl).

Today there are many such hubs for knowledge innovation and more in progress around the world, particularly in Asia. A global network of Future Center pioneers has been established, called Future Center Alliance, a network for benchmarking learning (see www.fc-alliance.net).

An efficient Future Center, actually uses shock tactics to freeze time, and stop the logical brain from working, thus building new circuits and synapses in the brain. It is a process of unlearning, aiming to wipe out pre-held assumptions and prejudices by experiential knowledge explorations. A Future Center, should lead to the emergence of new intellectual capability, and is a systems science tool to nurture and grow individual, organisational and societal innovation capabilities in developing true IC.

As Noburo Konno, closely collaborating with Professor Nonaka, writes, most enterprises today have designed their offices for administrative process work, based on old paradigms and inadequate understanding of knowledge creation (Konno, 2011). Now it is time to look for cognitive design, social knowledge dimensions and knowledge campus models. So we might learn from another type of ecosystem that works less for administrative functions and more for knowledge innovation.

NIC 40 – a macro navigation perspective

More than 15 years ago, I started to develop a prototype for an enlarged macro IC perspective on how to view national intellectual capital (NIC). If we take a longitude perspective of future earnings capabilities, that is, a 40-50-year future outlook, this becomes especially challenging.

Metrics at the national level can now be visualised through a unique database from Taiwan IC Research Center developed by Dr Carol Lin, together with me and others (Lin and Edvinsson, 2008). It shows data and IC trajectories for more than 40 countries during more than 15 years based on 24-48 IC indicators. Other related work in progress on NIC is that of Pirjo Ståhle and Sten Ståhle, from Finland. Now distinctive regional reports are being developed (Lin and Edvinsson, 2012) for specific NIC regions like Portugal, Italy, Greece and Spain, as well as Brazil, Russia, India, China and South Africa, the Nordic countries and more. Special NIC trajectories or scatter plots can be constructed for NIC navigation and its policy making (see Figure 1).

On a look at a global cluster NIC map, it is evident that the top leading countries seem to be small countries, especially Singapore, the Nordic countries,

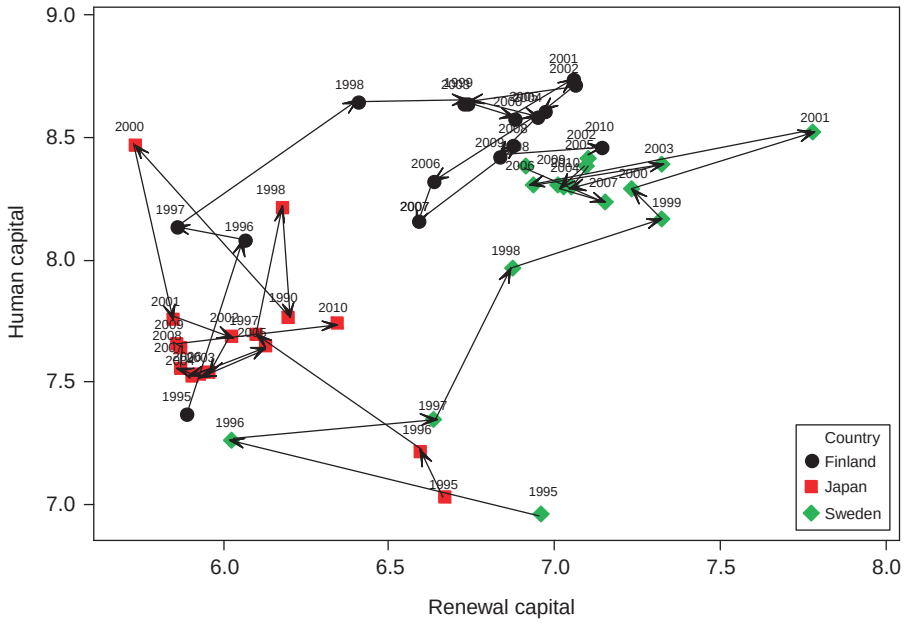

Figure 1.
Excerpt of scatter plot of human vs renewal capital

Sources: www.NIC40.org and Lin and Edvinsson (2011)

Hong Kong and Taiwan. For the USA, Finland and Sweden around 50 per cent or more of its economic growth is related to NIC aspects. Sweden, Finland, Switzerland, the USA, Israel and Denmark are strongly influenced in its GDP growth by focusing on renewal capital. But it might not be a extremely clear societal NIC navigating path by looking closer into a correlation of renewal capital related to human capital development.

These NIC trajectories lead to many intriguing questions. How sustainable is NIC? What kind of NIC policy is needed? Why are so many on the list from northern Europe? Is there a reason why many of them are rather small-scale nations? Why is not the USA at the top? How is the IC of China? What are the emerging NIC trends as well as deeper insights for NIC outlook? What combination metrics might show NIC, Gini-coefficient (income distribution ratio) and health as a new 3D map?

This kind of NIC mapping might be a kind of stress test of the economics of nations and enterprises. Such mapping or path analysis is about the roots of financial well-being. Financial collapses in countries like Greece actually started many years ago before the financial markets reacted. A deeper understanding of the roots, as well as the present, is essential for future national wealth and well-being of present as well as future generations. Perhaps the core is to be found through renewal and innovation of society's systems.

IC outlook

In the modern knowledge economy, we have to keep looking for those invisible opportunity spaces, which I think of as capital in waiting. We should take an outside-in view! We need to go beyond IC reporting, to think in terms of cross-disciplinary systematised perspectives that will increase the IC consciousness.

A crucial challenge is the understanding and development of the value of networks, also called relational capital in the taxonomy of IC. For example, understanding the implication of the growth of global mobile broadband is a strategic IC issue. For Apple, this resulted in the shaping of a most successful strategy, the App store. As a result, Apple is making more revenue out of the trade on its network than sales of its actual devices. A tangible illustration of IC business transformation!

What should be the aim of economic activities? Maximising resource utilisation? Explaining human choices? Mapping future well-being? Economics needs to shift from control of numbers to cultivation of relational nano-roots. How can the traditional IC approach based on human capital, structural capital and relational capital be reframed to establish a deeper understanding of a higher form of capital (Edvinsson and Yu, 2008).

This will take us to the quizzics of understanding different levels of IC. Here, we also find the intangibles of values, and thought patterns, which questions the correlation of wealth and values. At the macro perspective, we are facing the deeper understanding of IC of nations, such as the evolution of Singapore and Finland vs Indonesia and China. But also that IC of cities and regions, is leading to the quizzics of what is behind the concept of knowledge cities/hubs or knowledge harbours? Perhaps we might leave the economy of ignorance and now head for a mind economy? Emerging signals about future directions point towards a supportive society across different age groups, ethnic groups and roles. Here, the deeper understanding of neuroscience and brain research will give further insights. Neuroscience can inform how our thoughts and actions can relate to and shape urban design and the interspaces between people. Perhaps supplementing the shopping centre with a mind zone, will be innovative urban design that attracts talent (see www.pwc.com and their report Cities of opportunities).

The opportunities for IC in its broadest sense are wide open. Perhaps the emphasis on wealth generation might move into another IC ecosystem. Perhaps the insights from Scandinavia and parts of Asia might be a catalyst for our future systems navigation and a shift from the orthodox economic man to IC man or insightful man (or woman, of course). This is also in line with the shift from the theory of the firm to the new theory, the theory of the un-firm, as illustrated by networked enterprises, for example, Google, Apple or IKEA.

These alternative ways of thinking are leading us on a new journey, into another IC consciousness. With a deeper understanding of human capital, organisational capital can be leveraged to create the connections with borderless relational capital on a global scale. This will involve innovative contracting models for value creation, beyond the concept of employment. Just look at how Apple is leveraging individual innovators and channeling this through the platform of its App store with enormous, rapid multiplication of volume, revenues and financial value.

Perhaps this can be called IC systems science, a systematic cross-disciplinary study of how intellectual resources can be identified, nurtured, shared and utilised for the larger good:

- on an individual level, an ability to unlearn, to find out what we do not know;
- on an organisational level, to build trust and leverage collective capacity to reach IC multipliers;
- on a societal level, using social networking to grow talent and improve the quality of life; and

- on a global level, shifting from capitalism 1.0 (Adam Smith), capitalism 2.0 (John M. Keynes) and capitalism 3.0 (Milton Friedman) towards capitalism 4.0 based on new insights into values and relationships, with fusion of IC and societal innovation into evolving social capital and national well-being (see also New Club of Paris, www.new-club-of-paris.org).

This new approach to IC will also highlight capital in waiting as the opportunity space for the future well-being and wealth creation, in the progress towards societal innovation. Talent will be the connector in bridging new IC alliances, creating a strategic and wide-ranging intangible capacity, with impact and societal well-being. Thus, IC is not a zero sum system, but rather an exponential growth ecosystem. This is due to the IC multiplier effect whereby human capital is needed to leverage relational capital and structural capital. Without human capital, neither can work, nor be utilised.

IC 21 is at the crossroads to a more refined thinking. Happy future!

Note

1. See www.forbes.com/sites/benzingainsights/2012/08/21/apple-now-most-valuable-company-in-history/

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