

IC - A (Re)Turn to Practice

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Final draft

Chapter

Published in:

Guthrie, J., Dumay, J., Ricceri, F., & Nielsen, C. (Eds.). (2017).

The Routledge Companion to Intellectual Capital. Routledge.

Abstract

Our chapter contributes to the emergent stream of IC-as-Practice, proposing that the IC triad be seen as a lens to guide, select activities, and assess effects and consequences of managerial action in its broadest sense. An IC-as-Practice perspective is concerned with how managers deal with the fact that action is irreversible and may have unexpected outcomes. It does not shy away from issues of power and ethics. If the full implications of IC-as-Practice are accepted IC scholars must do more than analyze IC-statements or manipulate large databases. It signals a commitment to sociological theories of practice and close-up methods, such as ethnographic methods and action research. We illustrate our proposition with the case of a large manufacturing company where management is facing strategic decision making in the face of uncertainty.

Introduction

Intellectual capital (IC) research has come a long way since its first awareness raising stage (Guthrie *et al.*, 2012; Dumay, 2013; Dumay, 2014). The second and third theory stages have yielded one important insight, showing that the social reality for organizations is too complex to be squeezed into a single theoretical framework, where financial performance directly or indirectly is the norm. The IC triad seems to have taken on the notion of ontology in Gruberø (1993) sense, and much research effort has gone into proving various IC triad classifications relevance for general financial performance. Our chapter contributes to the emerging stream of research, which broadens the perspective beyond the IC triad and beyond the narrow focus on financial value (Dumay *et al.*, 2017, p. xx) and other authors in this volume. We suggest that the way forward is to shift scholarly attention from ontological issues to epistemological issues, that is, towards practices of understanding, learning, and searching how to generate knowledge and meaning for managers and stakeholders of their organizations.

We argue that this will expand the applicability of IC from the traditional managerial focus on firms financial performance to management issues in general. Our proposition is that the IC triad will be seen as a visualization tool, a lens, an essential part of a methodology for practitioners to guide search, select activities, and assess effects and consequences of managerial action in its broadest sense. We approach IC from a social constructivist perspective (Giddens, 1984), where individuals activities and practices produce and reproduce structures in society. Individual action and social structure are in Giddens theory seen as mutually dependent on each other a duality of form and reform continuously both intentionally and unintentionally. An organization is, according to this perspective, a place of social construction, where structuration occurs. It makes the classifications and content of the IC triad contingent on the situation, the objective, and the task at hand. We define the concept of practice based on Bourdieu (1990) and illustrate our theoretical proposals through empirical research in the spirit of IC-as-practice.

The research object of the chapter is a business unit MT (fictitious name) within a large manufacturing company, where the top management team is facing a difficult management problem; a strategic decision under uncertainty. It is an example of a generic problem common to all practitioners. Managers and consultants are often forced to initiate change in a social environment without knowing how their objectives will be fulfilled and what the actual effects and

consequences will be for them and their stakeholders. We invite the reader to follow the process of how the MT management teams uses measurement of intangibles to frame their construction of meaning and objectives for action.

Management and the Issue of Uncertainty

Ever since the publication of organization scholar Thompson's (1967) classic *Organizations in Action*, coping with uncertainty has been seen as one of the fundamental management problems of complex organizations. We will here apply two theories dealing with the uncertainty problem. One is the economist Knight's (1921, p. 233), seminal distinction between "uncertainty" which he defined as unmeasurable, and "risk" which he considered possible to measure by assigning probabilities to objective outcomes. The other is Milliken's (1987, p. 136) definition of uncertainty, as "an individual's perceived inability to predict something accurately". Milliken's (1987) influential definition covers three types of uncertainty that managers may perceive in organizational settings. They experience "state uncertainty" when they perceive the organizational environment or a part thereof, to be unpredictable. It is essentially unmeasurable due to lack of information, and hence compatible with Knight's (1921) definition of uncertainty above.

Managers, however, are generally in a less severe situation. The case highlights that the managers had access to plenty of information and good networks, but they experienced the two other Milliken (1987) types of risk. They were uncertain about cause-effect correspondences and they had to respond to sudden events without sufficient information or knowledge about how to proceed. Milliken (1987) calls them "effect uncertainty" and "response uncertainty" respectively, and we approach them from the point of view of risk literature, which has devoted considerable effort to these issues.

Risk literature offers an approach to deal with both effect uncertainty and response uncertainty as deviations from objectives (ISO 31000, 2009). The benefit from our purpose is that it is a general approach and that deviations are not *a priori* labelled positive or negative. The potential effects of future events on objectives are heavily dependent on contingencies of the environment and business objectives, which tend to have a temporal reach extending over many years. Thus, some of the uncertainties identified can be calculable and thus be transformed to risk, whereas others (such as natural disasters), remain in the unmeasurable realm. A risk assessment similar to the ISO procedure focuses on the relationship¹ between our case company, MT, and a number of environmental factors, most of which are organizations or people, whom we refer to as "stakeholders" following Freeman (1984) and Freeman *et al.* (2010). What is measured is MT's relative resource dependency (Pfeffer and Salancik, 1978) on each stakeholder. The dependencies are assessed and evaluated according to the first order relationship (direct supplier-to-customer), while network effects are deliberately omitted. The relationships need to be categorized according to the purpose of the analysis; in the MT case, we classify them according to the IC triad.

In summary, the theories we apply to frame the case in this chapter are the notion of risk as a measurable plus/minus deviation from objectives and the measurement of this deviation as a relative resource dependency on each identified stakeholder. The relationship is symmetric (from

them to us/from us to them). For the practice perspective we rely on Bourdieu, in particular his *Logic of Practice* (1990), which we consider in the discussion section.

The MT Case

This section is divided into three parts. First, we briefly describe the MT organization and the visualization of its IC relationships. It is followed by the description of the risk assessment process, and thirdly the construction of meaning and the generation of action.

The MT Organization

The case company MT is a business unit within a major European industrial corporation, which manufactures heavy-duty metal-based equipment. MT assembles machine parts, where the metallurgical specifications of the components are of crucial importance. MT has developed a unique in-house technology, however the field is developing rapidly and cheaper substitutes are coming to market. In 2002, MT changed the board and recruited a new CEO. The new CEO initiated a process for determining a new strategy and started with an assessment of the risks inherent in the existing business in June 2002.

The new CEO identified two issues. First, MT did not have an in-house process for identifying risks, and second, MT needed a distinct easy-to-follow presentation format, which enabled a constructive discussion: "Our folks argue passionately and critically" they even shout in discussions. They do not accept anything at face value, and we needed something that was not just words on paper, but something that generates consensus and action."

The process the MT board decided to use was based on identifying stakeholders and the firm's relationships, categorized in a holistic way under four main headings. In Figure 1 these relationships are grouped according to the IC triad plus the fourth "Environmental factors" External and internal "structures" are to be seen, consistent with Giddens' sense, and they are created by the activities and simultaneously influencing of the actors. The visualization is measured at a certain point in time, thus an ahistorical snapshot, whereas the description of the process and how MT resolved the problem is in line with Giddens' "I influence but by the same token I get influenced" either directly or indirectly. In Figure 1 the case company MT is positioned in the middle as the focal point. The relative relationships between MT and the stakeholders are symbolized through lines. Arrows pointing in the direction of MT symbolize asymmetric dependencies that are riskier for MT than for the stakeholder. Double-edged arrows symbolize competition. Arrows with circles symbolize alliance. The thickness of the arrow symbolizes the strength of the asymmetry. The high dependency risk on the supplier that became identified as the urgent strategic issue is the thickest arrow. The numbers 1 to 10 in Figure 1 refer to the steps in the process described in the next section.

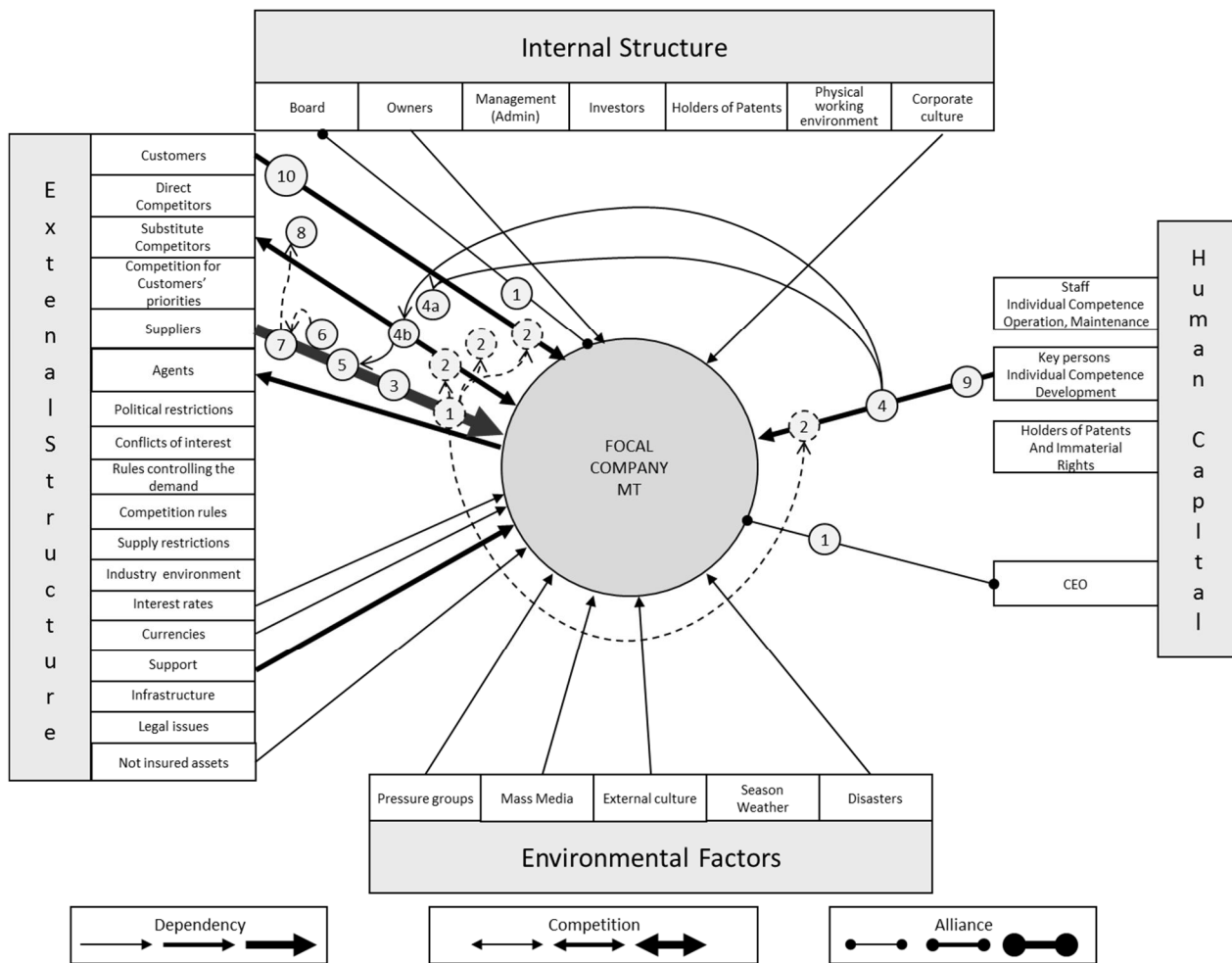


Figure 1. The visualisation of the MT stakeholder environment and relationships, applying IC-terminology/classification.

Assessing the Risks

The risk assessment process consisted of two parts. The first part was the RealBiz assessment workshop. There the management team, including CEO, key managers, and members of the board participated. They had to create the context within which the risks were to be assessed and the group formulated through lengthy discussions a corporate strategy and the objectives. The stakeholders and the salience of their relationships from a risk perspective were set in the visualization tool (Figure 1).

The second part of the process started with assessment of the objectives against the risks in the stakeholder relationships. Since all stakeholders can potentially have relationships with all others, the full picture is a daunting task and impossible to visualize. The method developer's practical solution to reduce complexity was to visualize only the first order relationship of 31 interested parties, most of which could be classified as stakeholder relationships, thus also IC elements. Each relationship was assessed by means of a set of question-and-answer alternatives, which then were

calculated to a score (degree of dependency, alliance, or competition),. The software visualized only the relevant relationships as arrows. In total there were nearly 300 potential questions, which the management team had to answer (see Appendix for an example).² The management team was coached by two management consultants (none of the authors), who were trained by the developer of the method.

The structure in Figure 1 functioned as the agenda for the conversations; it determined the issues to be discussed. This structured and visual method of taking risks into consideration affected conversations considerably and hence the strategy process. Also the dense/prompt formulation of the risks, which comprised the essential elements, was important. In order to arrive at the consensual formulation, lengthy and thorough discussion was needed. After the data was collected the system evaluated the severity of the identified risks.

Constructing Meaning and Generating Action

Construction of meaning enabled action:

The finding [supplier dependency] was not considered as important at first. Not until we articulated the issue in conjunction with the risk assessment it became obvious that the identified risks must be acted upon [removed] in order to achieve the strategic objectives (CEO).

The issue then, became what action to choose.

The following text is a synthesized excerpt from two three-hour open interviews with the CEO, based on one question: "tell me what did you do when you got the result of the assessment?" The numbers 1 to 10 in the process description below refer to the numbers in Figure 1.

The management team "awakened" (1) to the fatal supplier dependency (thick line in Figure 1). It was a known issue, but it had not been considered important. It was becoming a problem, however, since although MT's market was becoming more and more price sensitive, the supplier refused to reduce the price. Grounded in the new awareness, the management team's conversation became an attempt to understand (2) the implications of the dependency. The conversation synthesized the identified aspects into what we here call *the first re-negotiation strategy*. Due to the lack of direct competition for its primary product (no link to the direct competitors in Figure 1) the supplier was dependent on MT, and this would give MT leverage in future discussions about how to expand the market, and how to reduce costs. Based on this notion it made its first attempt (3) to renegotiate the contract with the supplier, *which failed*.

After the failure of the first renegotiation strategy, "we considered an aggressive response" and began searching for an alternative supplier in Eastern Europe. "We also mobilised our key persons (4) to do two things: to improve the production process of the primary product (4a), and; to learn and master the technology of a secondary solution/product to compete with the substitutes" (4b). For the primary product (4a), the R&D department suggested a package of five methods. In that way MT could tailor its offering, achieving "20-30%, even 50% cost reduction". The conversation now changed nature: from argumentation about implications to action-oriented (we can and will survive).

The management team suddenly realized that only very few key persons (4) possessed the required development competence to achieve the R&D goal; the risk had been identified earlier, but now it became important to address. They also began to interpret the lack of direct competitors for MT's type of product differently. Rather than considering the situation of no competition for their primary product as "good" their conversations now constructed the situation as "bad" a problem for market expansion. (If there is no competition for their primary product (4a), there is less "noise" and potential customers are not aware of its existence). *These (4a and 4b) became part of MT's second strategy (5) to renegotiate the supplier contract, which failed again.*

By now the search for a second supplier brought results; the test results from East-European suppliers showed that the quality was adequate, at least for some of the methods in MT's new "package" and the price was 90% lower than its existing supplier's (6). "We never believed, the risk analysis would lead us to buying air tickets to Ukraine, Russia and countries in search for new partners". This added leverage and credibility to the management team's "aggressive" strategy; instead of just saying we can survive they now knew that they could expand their market with support of the other suppliers. This became the foundation for MT's *third strategy*. By now, MT was more than one year into the process and it was time for a final negotiation with its existing supplier (7), which was to include all aspects of what MT had found out so far. The *result was success*: it managed to reduce the price and even to make the supplier a closer ally, thus realizing the objectives in the first renegotiation strategy.

However, unexpectedly a new competitor appeared (8); an East-European supplier had copied the technology that MT had developed and was trying to patent it. MT had not filed for patent protection, because its earlier analysis had not shown any dependency on intellectual property owners. The event triggered an immediate reassessment of MT's human capital side, in particular the dependence on key people (9), who might be attracted by the new entrant. They immediately discovered one unexpected benefit of the new alliance: "We had only one expert on welding and it was shared 50/50 with our main supplier. Suddenly, he decided to leave us to be employed 100% by the main supplier. We were lucky that no third party was involved." This made MT realise that: "Our brains are our absolutely biggest tool or production resource". As a consequence, MT initiated a program for improving the staff's physical safety, and it also led to a more careful attitude in terms of intellectual property, such as non-disclosure clauses in employment contracts.

Finally (10), having resolved the supplier dependency issue MT could concentrate on the customer's needs and meet its requirements. They reduced the price level and the number of potential customers grew and two years later the bottom line had turned from red to black.

The CEO reflected on the experience a year later: "We would not have started these forceful activities unless it [the dependency] had not arisen so big and if the results had not been discussed on the board of director level."

Analysis of the Case

The case highlights how the management team alternates between two typical management activities. One is intra-team assessment and conversations, where meaning is created and leads to a range of decisions; the other is when individual members go outside the team to execute the

decisions. The place for IC-as-practice would be in supporting the first type of activities, where *identification and measuring* are only the initial steps. IC (can) also generate *consensus about the meaning* of the metrics; it (can) enable, in fact enforce, a *holistic approach* to any issue under investigation; it may contribute to the *formulations of actions* and; it (can) make the *time span shorter* between talk and action. We see them all in the MT case.

The method for identifying and defining relevant metrics is an example of the *Logic of Practice* (Bourdieu 1990): the designer's long experience of due diligence work (*habitus*; for more see the Discussion section). The metrics underlying the arrows in Figure 1 are hence not 'objectively true' they are numbers (+1, 0, -1, etc) subjectively allocated by the software to subjective assessments, such as 'high' 'low' 'yes' 'no' expressed by the managers during the conversations. The function of numbers, mathematics, and presentation format is hence not to 'prove' anything in the scientific sense.

The function of metrics is to crystallize individual subjectivity into a meaningful whole; a consensus to which each individual team member knows that he/she is contributing. The format enforces holistic thinking, but the numbers and the meanings are fluid; the holistic approach sees each relationship in the context of other relationships. Several other relationships are required in order to complete the configuration³ based on which strategic action can be formed, and we see how the managers create and re-create the meaning over and over again in light of new information, reflecting previous attempts. A successful solution to a complex issue, as the MT case, is only rarely found where the problem is first identified. It requires an exploratory approach, which follows the logic of practice: a chain of activities and experiments that link into each other and the final outcome is unknown, because unintended consequences are generated along the way.

The dependency on key people is a measure of value of human competence and the case shows two approaches to dealing with key-person dependency. One is the CEO's approach to regard key people as capable resources and to motivate them to stay by giving them attractive tasks and by mobilizing them to build new methods and products. The dependency becomes impetus for a new line of business: to develop and sell software that enables customers to apply the technologies with less support from MT. The other approach is the owner group and its HR-department; they treat the dependency as a risk, and try to contain it through non-disclosure agreements. This shows that each resource has a specific role, defined just for this particular attempt to achieve the objective, and that their role changes when circumstances are assessed differently. Thus, even though the metric stays the same, the meaning of the metric can shift from 'risk' to 'opportunity' in an instant.

The IC triad is sufficiently flexible to disregard the common notion that the firm's legal structure determines its boundaries. The choice of focus entity is crucial. If, for instance, the problem had been seen as a logistics issue or delegated to a logistics function, the solution would have been sought in terms of supplier relationships. The relevant boundary for resource dependency is around a program or project, where development competencies are needed most intensively. The case shows that boundaries may include 'parts' of many firms: customers, suppliers, even competitors. The project or the program fails or succeeds based on how well the participants are able to collaborate. Open access to information and other individuals' knowledge is essential. The event of the key person, who left to be employed by the supplier, highlights the inadequacy regarding the internal structure from a firm's legal perspective. Thanks to the new supplier alliance MT still had

access to the person's competence (a positive unanticipated consequence). Human capital, knowledge, and the capabilities to access information know no boundaries. It is hence counterproductive to require talented people's professional networks to be confined within firm boundaries, while at the same time demand superior performance from them. The above is quite a challenge for many managers; they must understand more than just the rules of financial accounting. For instance, how value is created through human participation. This is one area where an IC perspective can make a difference.

We finish this section by suggesting several generic questions that we consider essential, when the IC triad is used as a lens in construction of metrics and meanings. The questions are specifically linked to the dynamic capabilities view of the firm (DCV) ⁴

Questions for Intellectual Capital-As-Practice

What is the Purpose of the Task?

The purpose in the empirical case was to formulate strategy and to assess its risks against 31 factors (26 could be considered as IC related relationships) for the focal entity MT. Dependencies were assessed symmetrically: the focal entity's dependency on a particular stakeholder and vice versa; the stakeholder's dependency on the focal entity.

What is the Business Logic of the Firm/Organization in Focus?

There is a major difference, for instance, between the business logic of manufacturing and that of professional services, and performance requirements need to be tailored for the particular business logic. As the CEO noted: "We did not understand until after the process that we had different types of businesses: consulting and manufacturing". What is the appropriate focal entity for the identified issue? The case shows a total firm perspective; a sub-unit focus, such as the logistics department would have limited the perspective.

People – The Dynamic Force

First of all: "People are everywhere" in all three IC categories. People are the main dynamic force in all organizations. Hence, a useful distinction for determining people's contributions to the dynamic capability of the organization is between creation/development competences and maintenance/operation competences.

What are the Roles of People and their Competencies?

What is labelled "human capital" in Figure 1, is only those people whose competences contribute directly to the core of the organization's fundamental business, such as those who are in direct contact with customers or R&D. In human capital this is the distinction between the expertise to create deep customer relationships and change their offerings so they follow the needs of the customer and keep abreast of the competition, versus the ability to produce or sell predefined products or services. The distinction has relevance when reflecting on the relationships between

human capital and structures. MT CEO: "We would not have been this successful without well organised external brainwork".

Who are the Customers and What are our Relationships with Them?

The customer relationships generally tend to be considered the most important, but, as the case shows, the solution to customers' demands may have to be found elsewhere – and this is where a holistic perspective is essential.

Who are the Competitors and What are our Relationships with Them?

MT had no direct competition for its primary product and had initially seen the cheaper substitutes as a mere nuisance. The owner's decision to change board and CEO changed this. Still, the new management team did not realize until far into the process that their core technology was being copied by one of their suppliers; a major change in the relationship.

Who are the Other External Stakeholders and What are our Relationships with Them?

The case shows that one particular supplier relationship was important. This was because they directly contributed to the core competence of MT. ⁵

What are the Roles of People and their Competencies in External Structure?

We see it as the distinction between the value of a personal relationship with the people of a demanding customer, who challenge our experts to create the "impossible" versus the value of a faceless relationship with a corporation, which just generates a stream of orders.

Which Processes are Essential for Sustaining the Organization Long-term?

New processes, which enhanced the effectiveness of the primary technology, were developed. They were a means to improve the main objective – to meet customer expectations – and to influence the supplier of the critical material to start producing solutions to the technology of substitute competition.

What are the Roles of People and their Competencies in Internal Structure?

The case shows how management "discovered" that people had two roles requiring two types of important competencies: The key persons possessed the crucial competence to create new processes was in short supply, whereas MT was less dependent on the competence to use, apply, and maintain existing organizational routines and processes: "This [exercise] opened our eyes in a fundamental way that brains and competencies are our biggest resources".

Discussion and Conclusion: Towards a Practice Perspective on Intellectual Capital

Recent IC literature points towards a changing notion of IC; a 'third stage' (Guthrie *et al.*, 2012; Dumay and Guthrie, 2012) or 'IC2' (Mouritsen, 2006), which calls for IC research to become closer to practitioners. This is consistent with the 'practice turn' which has been emerging in the management literature since Mintzberg's (1971) classic work revealed the unheroic world of 'managerial work' inside organizations. Whittington's (1996) seminal work starts the lively Strategy-as-Practice stream in management literature, and a Leadership-as-Practice stream (Carroll *et al.*, 2008) is also emerging. So, who are the 'IC practitioners'?

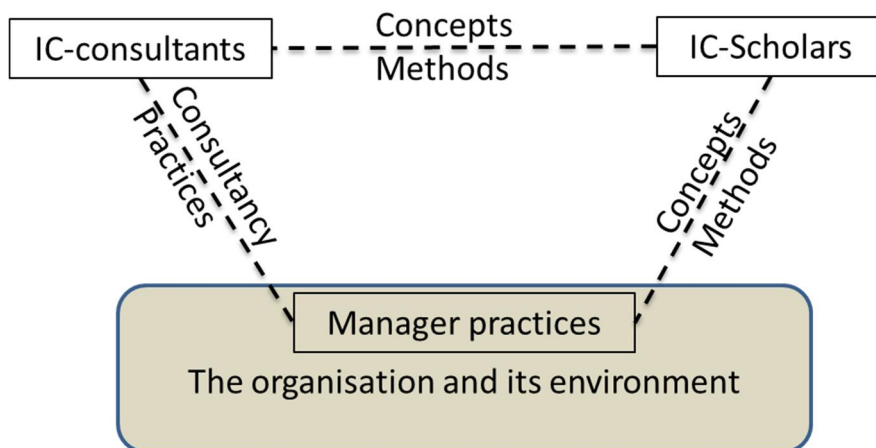


Figure 2. Three practitioner roles and three types of practices.

IC literature gives several alternatives. The practitioners can be consultants (Yu and Humphries, 2012) or internal practitioners/participants (Dumay and Guthrie, 2012). For some, the focus is on management practice of/in organizations (e.g., Mouritsen, 2006) or employed key people (e.g., Bontis and Serenko, 2009). There are also the practices and methods of the IC scholars that, as Polanyi (1962) pointed out, are as personal and dependent on tacit knowledge as any of the other two. The borders between the practitioner types are fuzzy and, therefore, it perhaps makes more sense to talk about them as 'roles' that a practitioner may play over time. The fuzziness in literature may have to do with the fact that many of the early first-stage contributions to IC theory originate from managers, who tried to make sense of their practical experiences in knowledge intensive firms, which at the time were poorly understood. Some of them shifted roles to become consultants, in some cases also academic scholars, and wherever they went they brought their manager *habitus* with them.

The manager *habitus* is a considerable strength in the role of management consultant; one's own management experiences give an ability to understand the situation and they give credibility during coaching sessions. Manager *habitus* is 'embodied history, internalized as a second nature and so forgotten as history [it] is the active presence of the whole past of which it is the product' (Bourdieu, 1990, p.58). At MT, in their roles as managers, the management team had applied the logic of practice, which Bourdieu (1990) contrasts against the logic of science of the academic

scholar (by which he means positivist science). Many issues that trouble IC scholarship may emanate from the difference between the two logics for acquiring knowledge, and the attempts by practitioners to justify their individually acquired *habitus* in terminologies that positivist scholarship can accept.

Practice unfolds in time and it has all the correlative properties, such as irreversibility, that synchronization destroys. Its temporal structure, that is, its rhythm, its tempo, and above all its directionality, is constitutive of its meaning. Because it is entirely immersed in the current of time, practice is inseparable from temporality, not only because it is played out in time, but also because it plays strategically with time) and especially with tempo. A player who is involved and caught up in the game adjusts not to what he sees but to what he fore-sees, sees in advance in the directly perceived present. Science has a time which is not that of practice. For the [academic scholar] analyst, time disappears: not only because, as has often been repeated, arriving after the battle, the analyst cannot have any uncertainty as to what can happen, but also because he has the time to totalize, that is, to overcome the effects of time (Bourdieu, 1990 p. 81).

The practice perspective hence focuses on the unromantic realities of the micro level. It takes interest in *how*; how managers work with the nitty-gritty of budgeting, meetings, reporting, presentations, and so on. A practice perspective is concerned with how managers deal with the fact that action is irreversible and tends to have unexpected outcomes. Also, the practice perspective does not shy away from issues of power and ethics as Yu and Humphreys (2012) point out in their vision for ða transformed IC-in-Practiceö. This is where the practitioner roles separate. Also, when the IC consultants and the managers work and learn together the external consultants will eventually leave the internal managers, for the next client.

The managers, then, remain with the responsibility and governed by the logic of practice; every action carries a risk and as the effects of their actions unfold in time they ó and their stakeholders ó will have to re-act, when the (Giddens-) structures return the unintended consequences of their actions. Our study highlights how managers shifted in interpretation; the meanings attributed to the individual elements in the IC triad were contingent on position (CEO versus Owners versus key people); in time (early in the process versus later), and; on relationships (direction of dependency), of which their actions changed the relative dependencies.

For the academic IC scholar a perspective is a challenge. As Bourdieu points out above what unfolds over time cannot be understood -after the battleø or studied from a distance with the aim to produce generic theory. Thus history is crucial when attempting to understand how managers work. If the full implications of IC-as-Practice are accepted IC scholars will have to do more than analyzing IC statements or manipulate large databases. It signals a commitment to sociological theories of practice (Vaara and Whittington, 2012) and close-up methods, such as ethnographic methods and action research. The (often implicit) notion in IC literature that value is synonymous with financial performance does not hold in the MT case. The key determinant for performance is contingent on what particular business they are in. In MT, the performance of the volume business (which follows a standardized production routine) is measured by metrics that emphasize financial aspects, whereas the Knightian uncertainties that reside in R&D practices cannot be measured, only

subjectively assessed. There, best available assessment is hence the management's subjective faith and judgment to use Knight's (1921) expression.

Summary and Implications

Our proposal for IC-as-Practice builds on seeing the IC triad's weakly structured elements as an opportunity and on Mouritsen's (2006) suggestions for the new direction of IC research that he calls IC2. We suggest expanding his notion and hence the applicability of IC from the traditional issue of firm performance to management issues in general, such as the vexing problem managers are dealing with in the MT case: how to accomplish a complex management task under uncertainty and how to generate consensus around the activities to undertake. We have shown how different constructions of a social world can emerge from intense interaction between metrics and narratives and how this enable both managerial action and preparedness to deal with unanticipated consequences. The case illustrates how the strategic issue of resource dependency of the performative purpose to reduce uncertainty, and the constructed metrics may stay the same over time, while the conversations change their meanings, and hence the managers' constructions of this particular slice of their social world.

We conclude the chapter by listing three existing advantages that have accumulated from more than 20 years of IC research that give IC a unique position to accomplish a (re)turn to practice.

First, the holistic perspective of the IC triad combined with the triad's weakly constructed structure is a unique feature of IC. We suggest that the primary value of the IC triad lies in being used as the epistemological lens when studying organizational and managerial issues. The lens is flexible, yet firm in maintaining the holistic perspective also when the lens is combined with other concepts. The opportunity is that the IC triad can with this perspective be a tool for managers; a structuration lens. We distinguish two basic purposes for the structuration: one is epistemological, to acquire knowledge. The other is performative, to influence the construction of the social structure of which their organization is part.

Second, the theory of the resource-based view of the firm, in particular its extension, the Dynamic Competencies Perspective (DCV) is implicitly or explicitly one of theoretical bases of most IC research (Teece *et al.*, 1997; Eisenhardt and Martin, 2000). IC research is, in fact, one of the liveliest streams of DCV-based scholarship, albeit not recognized as such. Making the DCV more explicit in studies would add theoretical strength to arguments and it would increase IC scholarship's relevance for the academic community.

Third, the methodology of measuring intangibles is another unique feature of IC scholarship. The construction of indicators for ephemeral phenomena is the first IC practice, and it has a strong legacy by now. We suggest that the purpose of measuring should not be control, but learning, to complement language for increasing the precision in strategy conversations, and for speeding up impetus for action.

As final notes, the authors contribute two personal reflections.

Author's Reflections

Ritvanen Reflecting on Discovering Intellectual Capital

I have devoted a large part of my working life to measurement issues attempting to bridge the understanding/communication gap between business and computer technology. When I started my IC and IC management related doctoral studies, I was astonished to discover that I had unknowingly been working with IC related phenomena all the time. I believe that many of the managers and experts that I have been working with over the years are still in a situation similar to mine before my "enlightenment" they are working with IC related elements, often unknowingly. This "bilingual" or "multilingual" role assumes the understanding of both "worlds" which is difficult without work experience in them. My turn from practitioner to scholar has been a lengthy transition, much learning, but probably more unlearning.

In the 1990s I was working as knowledge engineer with Expert systems and there I met Per Erik Kihlstedt and his issue of formalizing the inference logic of his tacit knowledge in a software, which eventually became the RealBiz risk assessment system. The challenge was to arrive at a standardized score that took all the selected environmental factors into account in a coherent way. We arrived at the solution described in the MT case above.

This kind of work, where one has to acquire and formalize expertise, certainly leaves traces in one's thinking and I picked out Sveiby's (largely unread) book, *Kunskapsföretaget (Managing Knowhow)*, from my book shelf to read it from a new perspective. I then realised that while working as a marketing manager in a large Finnish ICT service company some 30 years ago in the 1980s, I had actually been working in a "knowledge company"

During the early 2000s I worked with another ICT company known for its analytics technology. Sadly, the unfortunate result from our highly efficient report generators was that managers were often overwhelmed by reports, because the simple question about the purpose of the measurements was rarely asked. Today I believe that the purpose of measurement is all-important and it should be made explicit and clear before the measurement work is even started. The clearer the purpose the smaller the number of indicators and reports. This also makes it easier to cancel reports, when a purpose changes.

As the MT case shows, risks constitute the proverbial "devil" because they affect the aggregate, the "whole" but they reside hidden in the detail. This is where visualization may function as a multidimensional tool and IC is perfectly suited for this, if we allow for flexibility. When I conducted the interviews with the CEO we used the same visualization as they did during the process we describe in this chapter. It was a considerable help during the communication between interviewer and interviewee. Compared to a "normal" question/answer situation the interview became a progressive dialogue with two "controlled" dimensions. One was to focus on the selected relationship and problems in it (supplier dependency), the other was to discuss the focal relationship in context – that is, its relationship to other relationships. This holistic view "lifted" the discussion to address the second-order dimension of the relationships, where the problems were resolved. I, as the outsider, came closer to what the insider might have experienced – an invaluable extra dimension.

Finally, I wish to emphasize the experience of an old practitioner scholar: IC allows and requires a close collaboration between theory and practice. IC was born in practice but it has too long been a

theoretical exercise. Practitioners are always on the hunt for something useful and will gladly accept an IC theory that is built squarely on practice. It is not either/or but the synthesis, that is, both/and. In the spirit of Vermeulen (2005); "Relevance is then found in the question, rigor in the method applied to provide the answer." (2005, p. 979).

Sveiby Reflecting on the Purpose of it All í

Approaching a half-century of working life, I have had the fortune to experience all three roles in Figure 2, and Bourdieu's (1990) logic of practice describes quite well my own experience. As a manager I had to act and make decisions with direct impact on the welfare of my firm and the working life of employees, despite not fully knowing the impact and indirect consequences for those affected by the activities. In an increasingly complex world, therefore, it is no wonder that many managers rely heavily on the strongly structured concepts of financial accounting and economics for guidance. The enormous performative power of measuring human activity in economic terms is, however, dehumanizing organizations; it reduces human agency to petty conversations about budgets, euros, dollars, and cents.

My interest in what has become known as "intellectual capital" and "knowledge management" (Sveiby and Risling, 1986; Sveiby and Lloyd, 1987) started as frustration with this situation (I was then a manager and co-owner of a publishing firm), and I found that I was not alone. Hence, I took the initiative to gather a handful of Swedish practitioners to form the Konrad group, in the late 1980s. It turned public in Sweden (Konradgruppen, 1990) and spread globally (Edvinsson and Malone, 1997). There were both managers and consultants among us, and the common purpose was to do something about the inadequacy of financial accounting as guidance in our jobs. We represented two kinds of practices – line management and management consulting – and our purpose was explicitly performative: to develop something that could help us to manage our businesses better and to give better advice to our customers. The performative power of the IC metaphor has since supported the practices of many management consultants and also produced a proliferation of scholarly measuring models; there were more than 30 of them in 2010, mine included.

The purpose of my consulting practice was and still is to help make organizations better for people and to help managers see metrics as a language with the purpose of learning (Sveiby, 2004). However, I have come to realize that measuring intangibles serves two other purposes in most organizations: one is public relations, to support the executives' optimistic statements in annual reports; the other is to be part of the internal systems for performance control. In my experience, and again confirmed by the MT case, indicators of intangibles and their meanings are subjective and are as fluid as normal language. This makes them invalid for PR and far too dangerous to be used for control, because how they are constructed and how they are interpreted depend entirely on context, and context changes over time as a consequence of managerial action. For scientific purposes the validity of intangible indicators is hence generally quite poor. If the managerial purpose is to measure for rewarding or punishing individual performance, their application can be outright counterproductive, and seen from the perspective of the measured individuals they can even be debasing. When I came to understand how IC measuring was actually used in organizations and how easily the fine line between learning and control was crossed into a full-on control

purpose, I turned critical. I stopped my measuring consulting practice and turned my attention to IC's sister discipline, knowledge management.

So, was IC measuring as used in the MT case, learning or control? The managers were, of course, controlled by their own construction of meaning – intangible indicators and visualization are effective performative tools. However, they controlled the measurement tool and the continuously changing meanings were their own, no one else's. That is where the border line goes. When measuring intangibles, make sure that you will control the meaning. If not, it is better having no metric at all than applying a correctly calculated but invalid indicator.

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Appendix. An Example of Questions and Coding of Answers.

MT applied an approach for risk assessment -RealBizø developed by the Swedish executive Per-Erik Kihlstedt.

Stakeholder	Variable	Question	QA1	QA2	QA3	VA1	VA2	VA3
Agents	Agent Damage	AGENTS How much would the profit before tax of the business area "{businessidea}" drop in case the agent it is most dependent on would stop its business? Include loss of revenues, non-recurring costs as well as remaining increases of costs.	1. A change would not cause a drop in profit that is bigger than "{currency}" "{damagesmall}".	2. A change would not cause a drop in profit that is bigger than "{currency}" "{damagelarge}".	3. A change would cause a drop in profit that is bigger than "{currency}" "{damagelarge}".	1	2	3
Agents	Agent Problem	THE BUSINESS AREA "{businessidea}'s" IMPORTANCE TO THE AGENTS What would happen to the agent on whom the business area "{businessidea}" is most dependent if the relation would be broken?	1. The relation between the agent and the business area "{businessidea}" can be broken without serious damage to the agent.	2. The relation between the agent and the business area "{businessidea}" cannot be broken without serious damage to the agent.	3. The agent would not survive if the relation to the business area "{Businessidea}" would be broken.	1	2	3

Stakeholder	Variable	Question	QA1	QA2	QA3
Staff	Key Person Exist	<p>KEY PERSONS</p> <p>Does the business area "{businessidea}" have any key persons among the employees? Exclude the leader.</p> <p>For definition of the concept key person consult the help text.</p>	Yes	No	
Staff	KeyPerson Alternative	<p>ALTERNATIVE TO KEY PERSONS</p> <p>Is there a person inside or outside the company who is identified as the potential successor for every key person in the business area "{businessidea}" if the present key person would leave or become unable to work?</p>	<p>1. For every key person in the business area "{businessidea}" there is a person identified who is able to succeed. Alternative normal recruitment.</p>	<p>2. It is difficult to find a successor of at least one key person in the business area "{businessidea}".</p>	<p>3. It is very difficult to find a successor of at least one key person in the business area "{Businessidea}".</p>
Staff	KeyPerson Mobility	<p>THE MOBILITY OF THE KEY PERSONS</p> <p>Could the key persons of the business area "{businessidea}" easily find other jobs outside the company if it would be necessary?</p>	<p>1. The key persons can easily find other jobs outside the company.</p>	<p>2. The key persons can find other jobs outside the company with some difficulties.</p>	<p>3. The key persons can find other jobs outside the company only with great difficulties.</p>

<p>Staff</p>	<p>KeyPerson ExchCost</p>	<p>THE COSTS TO CHANGE KEY PERSON</p> <p>How much would the earnings decrease during the next 12 months if it suddenly was required to change the key person who is most difficult to replace in the business area "{businessidea}"? Include potential costs to hire a consultant and a new key person and reduce with the costs for the present leader. The result is:</p>	<p>1. The costs to change key person of the business area "{businessidea}" are less than "{currency}" "{damagesmall}".</p>	<p>2. The costs to change key person of the business area "{businessidea}" are less than "{currency}" "{damagelarge}".</p>	<p>3. The costs to change key person of the business area "{Businessidea}" are bigger than "{currency}" "{damagelarge}".</p>
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¹ Following Freeman (1984) and ISO 31000:2009 we define relationships as mutual, two-ways.

² The act of measuring the uncertainty in the relationships transformed them to *risk* in Knight's (1921) sense.

³ Configuration expresses how things are put (or just are) together, often for some purpose. Here it is used in Mintzberg's (1979) sense, as the basis for describing structural transitions: "to help us to understand how and why organizations undertake transitions from one structure to another".

⁴ Teece *et al.* (1997 p. 516): We define dynamic capabilities as the firm's ability to integrate, build, and reconfigure internal and external competences to address rapidly changing environments. Dynamic capabilities thus reflect an organization's ability to achieve new and innovative forms of competitive advantage given path dependencies and market positions.

⁵ From Teece *et al.* (1997 p. 516): Core competences define a firm's fundamental business as core. Core competences must accordingly be derived by looking across the range of a firm's (and its competitors) products and services. The value of core competences can be enhanced by combination with the appropriate complementary assets. The degree to which a core competence is distinctive depends on how well endowed the firm is relative to its competitors, and on how difficult it is for competitors to replicate its competences. N.B. initially the notion core competence stems from Prahalad and Hamel (1990).