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Creating social and intellectual capital through IT career transitions

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Abstract

Many organizations must continuously innovate with information technology (IT) to maintain their competitive position. This paper illustrates how the Clarica Life Insurance Company created a stream of business-enabling IT innovations after more than 70 career transitions of IT people into line business positions. The theoretical lens used to discuss this case is the Nahapiet and Ghoshal theory of co-creation of social and intellectual capital. After presenting the Clarica case study with three management profiles, we interpret the data to show how social capital led to an increase in intellectual capital and the organizational advantage that was achieved. We conclude with suggestions for extensions of this model and implications for research and practice.

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1. Introduction

The need for organizational innovation through information technology (IT) has never been greater as firms attempt to build flexible, extendable infrastructures to support new business models. The effective management of both social and intellectual capital has been proposed as a critical element of organizational flexibility and innovation (Rockart, 1988; Henderson, 1990; Ross et al., 1996). An ongoing challenge for organizations, however, is to develop effective social networks and IT knowledge throughout the organization (Nelson and Coopridger, 1996; Rockart, 1988; Reich and Benbasat, 2000).

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Many organizations have attempted to raise the capability of business units to use IT for organizational advantage. A number of strategies have been developed, including renting (hiring consultants to work with business units), buying (hiring new employees to create IT units within business units), leasing (moving IT people temporarily into business units for a specific project or timeframe) and training (adding IT knowledge to existing business unit employees). Each of these approaches has its own strengths and weaknesses relating to social network and IT expertise creation. In this research, we explore another option—the option of moving employees from the IT department permanently into business units, into line positions such as administration, marketing, and customer service. A theoretical lens was used to investigate the effects of *permanent moves of IT people into business units*. We hope to create a framework that can be used by organizations wishing to adopt the IT-to-line strategy to raise their success using the information technology to transform their business.

This research uses a case study of Clarica Life Insurance Company¹ to illustrate how the permanent transitions of IT professionals into non-IT business positions resulted in increases in intellectual and social capital, and through these changes, organizational advantage with IT. Our analysis of the case data draws upon the co-creation theory presented by Nahapiet and Ghoshal (1998) to illustrate the benefits that resulted from Clarica's IT-to-line career transitions. We also explore extensions to this model by illustrating key issues at Clarica important to *initiating* and *sustaining* the complex interplay of intellectual and social capital, so that organizational advantage could be achieved.

In the following sections we present a brief overview of theory, the research methods, and the career transitions at Clarica. Then the discussion, extensions to the theory, and conclusions are presented.

2. A theoretical lens

The theory (Nahapiet and Ghoshal, 1998) suggests that social capital creates the environment in which intellectual capital can be created, leading to organizational advantage and to further increases in social capital. In effect, they propose a self-sustaining spiral of social and intellectual capital. In the next section we briefly explore this theory, associated literature, and how they relate to information technology. The theory is pictorially represented in Fig. 1.

2.1. Social capital

Leana and Van Buren (1999) define social capital as "...collective goal orientation and shared trust, which create value by facilitating successful collective action". Social capital

¹ Clarica, formerly The Mutual Group, is a major financial institution serving customers in Canada and the U.S. Clarica markets a wide range of financial products and services, including life insurance, investment products, employee benefits, disability management services, financial planning, mortgage loans, annuities and pension plans. In 2002, Clarica was acquired by Sun Life.

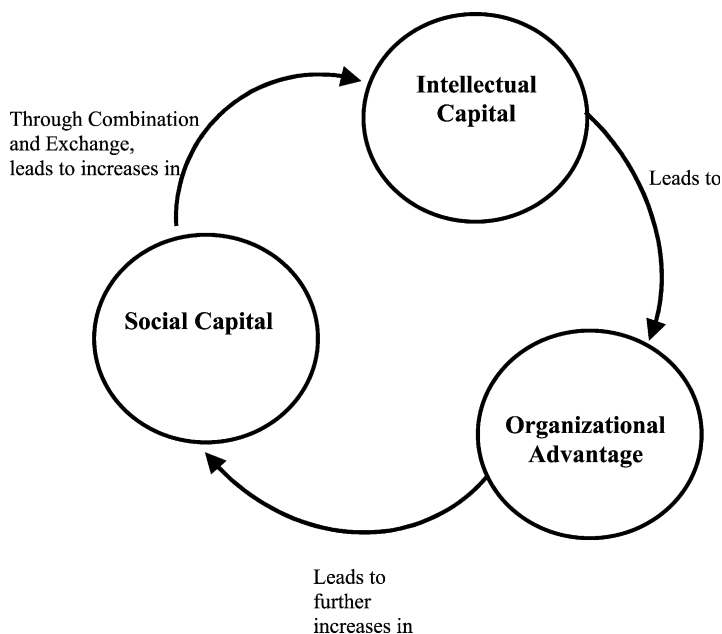


Fig. 1. Social and intellectual capital theory. Adapted from Nahapiet and Ghoshal (1998).

thus comprises both the network and the assets that may be mobilized through that network (Burt, 1992; Nahapiet and Ghoshal, 1998).

Nahapiet and Ghoshal identify three dimensions of social capital: structural, cognitive, and relational. The structural dimension describes the network itself; the cognitive deals with the content of the social capital (codes, language, and narratives); and the relational emphasizes the ties that bind the network together (trust, norms, obligations, and identification).

The importance of social capital for community survival has been proposed for over thirty years. In the context of an IT Department and strategic use of IT, social capital is the goodwill built up with users, functional managers, corporate managers, and outside parties. Strong partnerships between line and IT groups are a key piece of achieving competitive advantage with IT (Ross et al., 1996), ultimately leading to closer alignment of business and IT strategies (Reich and Benbasat, 2000).

A question explored in this research is: what effect would the transition of IT people into line departments have on the creation of social capital between the IT department and the business units? Would social networks and goodwill be strengthened or weakened?

2.2. Creation of intellectual capital

Intellectual capital has been conceptualized as a combination of competence and the commitment to apply one's abilities (Ulrich, 1998). Nahapiet and Ghoshal (1998) define intellectual capital as "the knowledge and knowing capability of a social collectivity, such as an organization, intellectual community, or professional practice" (1998). Although

intellectual capital has been characterized as an attribute of the individual (Simon, 1991), the dominant view is that it is an organizational level construct (Brown and Duguid, 1991; Nelson and Winter, 1982; Weick and St Roberts, 1993).

According to Nahapiet and Ghoshal, the presence of social capital will facilitate the creation of intellectual capital through two mechanisms: combination and exchange. Combination refers to the act of combining knowledge in new ways, either incrementally or radically. Exchange refers to a transfer of explicit or tacit knowledge through teamwork or collaboration. Further, there must be four conditions satisfied before the combination or exchange of knowledge will take place: opportunity, expectation of value creation, motivation, and capability. Each of the structural, cognitive and relational aspects of social capital are proposed to play a part in this transformation of knowledge. For example, network ties, shared language, collective narratives, trust, and identification facilitate exchange and combination of knowledge in slightly different ways, but each contributes to the creation of new intellectual capital.

In the IT domain, studies of IT Competence have shown that knowledge of technologies plus experience working with them are needed to provide leadership in utilizing IT resources (Basselier, Reich and Benbasat, 2001; Nelson and Cooperider, 1996). IT departments have long valued those technicians with good people skills and user networks. Similarly, more and more business units are valuing their business professionals who possess IT knowledge. In this research, a key question was: What is the effect on intellectual capital when an IT person makes a career move into a business unit? Is their intellectual capital transferred? Is there some loss of knowledge or is there an IT knowledge gain throughout the organization?

2.3. Organizational advantage

Nahapiet and Ghoshal's theory proposes that as social capital and networks are used for various types of exchange, they are sustained and reinforced in a dialectic process. When they are used to create collective intellectual capital, this can result in new ideas, processes, and products within the organization. The success that follows strengthens trust, and identification with the firm, thereby increasing social capital. The model depicted in Fig. 1 is dynamic, and once set in motion, can keep operating in a virtuous cycle.

According to Spender, "Collective knowledge is the most secure and strategically significant kind of organizational knowledge" (Spender, 1996:52). The collective knowledge of a group is an asset that is very difficult to replicate and not easily destroyed if a single member of the group leaves. Therefore, one can visualize it as a strategic asset that might enable organizational advantage. There has been much work on the development of core competencies by organizations (Henderson, 1990; Kogut and Zander, 1996; Storck and Hill, 2000; Ulrich, 1998), and the Nahapiet and Ghoshal theory of social and intellectual capital gives us a conceptual framework of how this might be facilitated.

Many organizations are struggling with the promise of information and communication technologies, trying to harness the power of these technologies to create organizational advantage. In the context of this research, the Nahapiet and Ghoshal theory poses the question: Is there evidence that these 'transplants' from the IT department enhanced the business units'; ability to use IT effectively? If the answer is yes, then through what

mechanisms did this happen? And further, will this enhanced organizational capability result in increased social capital, creating a self-perpetuating spiral with long term benefits?

3. Research methods

Our data collection at Clarica focused on capturing the phenomenon of the IT-to-business career transfers and the outcomes. We began this study informally in 1991 with an initial interview with the Vice President of IT. We followed up with intensive interviews of key individuals in 1993 through 1996, with a set of matched surveys, and follow-up interviews. From that time to the present, we have regularly corresponded with Clarica to keep abreast of their activities. Appendix A provides additional details on methods used.

To address some of the problems commonly attributed to aggregation of individual responses, we collected multiple types of data including surveys, interviews, and published documents from corporate and media sources (Kaplun and Duchon, 1988). We also triangulated across the three different organizational groups that would have insights into the impact of seeding the line with former IT employees: former IT professionals (i.e. the ex-IT group), business professionals, and IT professionals still in the IT department. Our intent was to validate and provide both confirmatory and contradictory evidence that would permit a rich understanding of the career transitions and the outcomes.

4. Career transitions at Clarica

In this section the story of career transitions of IT professionals at Clarica is told in two ways. First a summary of the transitions is presented, outlining the moves in aggregate and identifying some of the key reasons for the moves and their results. In the second part three profiles of individuals are presented, so that specific stories can be told.

4.1. *Transitions from IT to the line at Clarica*

Clarica Life Insurance Company has a very mature IT environment. The IT department has been a centralized unit since its inception in the 1960s and this organizational structure still exists today, with about 500 people in the corporate IT department. Our research found that more than 70 IT people moved out of the IT department from the 1970s until the data collection in 1994 and 1995 (Reich and Kaarst-Brown, 1999). Most of these people were still with the company and all who we collected data from were still in line positions within the business units. We were able to survey 39 of these ex-IT people, and interview 9 more.

On average, the survey respondents who moved out of IT had 19 years of experience with Clarica and 10 within the IT department, so their knowledge of IT was very significant. Even after an average of 9 years, they reported continuing strong ties with the IT department. They also reported a lot of opportunity to share their IT expertise with their

peers, subordinates, and superiors in the business units. Many of them feel that they have made a contribution to the success of the organization through their IT related contributions.

The first reported moves out of the IT department began in the 1970s. Typically, the moves were unplanned, with a job offer coming from the senior Human Resources person in the firm or from a job availability in a line unit which was offered to the IT person. One of the earliest people to transition was the head of the IT Department, who was asked by the company President to take an important line role in the Individual Life business unit. He is now a corporate officer for that business. In 1978, the manager of the Systems Development area was appointed Director of Human Resources. The people who transitioned early reported that there was a very strong working relationship between IT and line units at that time and that Clarica made good use of IT, relative to its competitors. According to interviewees, everyone in IT knew who had left and where they had moved to within the business units. Once the first few moves had happened, the path was cleared for other career transitions out of IT.

Over the next decade and a half, 60 to 70 more IT people moved into line positions. These individuals reported wanting additional career challenge, a desire to be closer to the business, and having friends in the various line areas to support them when they moved out of IT. Most of them reported that the jobs they went to looked equally or more interesting than their IT jobs, but did not command a higher salary or a higher rank than their previous positions. Some very senior IT people moved into line positions. In 1980, the executive in charge of Computer Systems development moved out after 9 years in IT. In 1987, the executive in charge of Support Services moved out after 15 years in IT. He is now a Senior Officer with the company.

The ways in which the IT people found their line jobs was varied, but the common threads that run through the stories are:

- There was no corporate initiative or strategy to make these moves happen.
- People in IT were approached by senior line and Human Resources managers to consider positions. Few of them had a conscious plan to move out of IT.
- The ex-IT people who had already moved were quite instrumental in bringing IT people into their departments to fill vacant positions. One interviewee could trace a total of 7 people brought into the individual unit by one former IT manager.

Our conclusion is that these career transitions were a relatively ‘organic’ phenomenon, in the sense that no formal corporate policies were in place to make them happen. After the first few moves resulted in successful career transitions, the rest happened as a result of good quality people in the IT department, good relationships with line units, and a growing company.

What Clarica did have in place was a history of cross-functional moves, and a proactive Human Resources department that would try to facilitate whatever solutions the line managers wanted to put in place. As we see later, it was necessary for them to be very flexible and accommodating, but this was apparently the prevailing practice at Clarica.

Over the years, many of these former IT professionals became senior leaders within Clarica, filling Vice President positions in Individual and Group Insurance units, Human

Resources, Marketing, and Quality Business. In 1999, six of Clarica's 16-person top management team were IT or former IT managers.

The importance of IT to Clarica's success was evident in the attributions made by technical and non-technical people alike. When asked "In your opinion, what has Clarica gained competitively from the use of Information Technology?" over 90% of respondents reported that Clarica had lowered costs, increased services to customers and distributors, and that IT had made Clarica a stronger company. Over the years, Clarica has built a very high level of IT innovation capability that has been recognized within and outside their industry (Kaarst-Brown and Reich, 2002). Their business results have been impressive.

4.2. Three examples of IT-to-line transitions

The following individual profiles were compiled from interviews of former IT professionals and their colleagues and where possible are told in the language of the participants. The first person profiled was one of the earliest people to move out of IT who progressed to senior levels of leadership within the Individual Division. The second profile shows how a former IT project manager brought her IT perspective to business problems. The third profile highlights impact at a senior level, illustrating how a former IT executive had a vision of how the company could succeed with IT and made changes in every line division he managed.

4.2.1. Profile 1 Frank Sharp: making a difference

Frank Sharp has been part of Clarica Life since doing his university internships with the company, 25 years ago. His start was in the machine room, as a computer operator. He is now the Director of Individual Insurance Administration, a unit of 140 people. The road from the computer room to the executive suite was a series of steps, from programmer to computer systems analyst to application specialist, and then a leap to administration in the policy services area, claims, annuities, and then into jobs championing new technology in sales and distribution areas.

The move out of IT was made at his request, since his work as an analyst had piqued his interest in making decisions about the business rather than just supporting and giving advice. He proposed a new job to the Vice President in the administration area, who had himself moved out of IT six years previously. "My first job (out of IT) was not a systems type job. I was a line manager".

After 11 years in line positions, Frank tries to keep his IT knowledge current, voraciously reading both business and computer-based literature. To find new IT-led business ideas, he meets on a regular basis with an IT manager. As he describes the purpose of these meetings, "It's to talk strategy; we don't necessarily focus on the piece that each of us is responsible for but out of that comes the germ of an idea that we can then take forward... We have a couple of key projects that I see as making a big difference over the next two to three years". This is a very believable claim; Frank has led several successful strategic systems such as Clarica's client file system to support their sales force and also electronic applications.

In retrospect, Frank believes he could have made more money if he had remained in the IT department, since "they are paid a little higher for the same level of responsibility". But

he is committed to directly making a difference and says: “I don’t regret for a moment having made the move I made”.

In Frank Sharp, we have a senior line manager with deep IT knowledge and commitment to use IT to further the interests of the business. As he describes the relationship between himself and IT professionals, “we understand what each other is talking about”. The result of this mutual appreciation and support is a string of business innovations at Clarica.

4.2.2. Profile 2: Ellen Smith: new perspectives on operational problems

Ellen Smith came to Clarica with 11 years of programming and systems experience. At Clarica, she continued in IT for another eight years as a programmer and application analyst in the Individual Life area, supervising a team of 25 people who supported the annuities information systems. Then, “When I was working on my MBA I started talking to my boss, Bill Bennett, the Vice President of IT. At that time, I didn’t know what kind of change I was looking for”.

A month after her MBA graduation, Ellen moved to a pure administrative role, as manager of the 25-person collections area within Individual insurance. “While I was there, we introduced PC’s, PC front-ends, and a lot of process improvements. My mandate was not only to introduce those changes, but to make people want to do them”. A year later, “I was offered a job in the annuities area. My responsibility was to work with sales agents rather than with the systems. I was making the decisions I used to ask other people to make”.

Eight months after taking the position in annuities, Ellen was asked to lead a team to eliminate a block of insurance business. “We started out with ten people. We could not keep up. Even with 20 people working overtime, we still couldn’t keep up. So, we wrote a little logic chart...then we wrote a program. Gradually, we added a few more functions. Within two months, the program was doing 98% of the work and we were still working overtime to handle hundreds of thousands of client requests. If another manager had my project, they would have hired another 100 people. I had a program written. I think that was probably the best use of my system and administrative expertise that I have had”.

Although Ellen has only been in line positions for three years, she has already made a significant impact in the productivity of the areas and projects she managed. Since she plans to stay in line administrative roles, it is a safe bet that Clarica will benefit from the combination business and IT skills well into the future.

4.2.3. Profile 3: Wayne Richmond: executive impact

After his engineering degree, Wayne Richmond joined Clarica in the IT department. He spent a total of 15 years there, progressing from Programmer Analyst through to Supervisor of Computer Operations, and finally to Support Services Executive, reporting to the Vice President, IT. He wanted to move to the line: “to get closer to clients we(IT) were doing all this work for. I had also decided I liked the environment at Clarica and was planning on staying”. After 7 years in line positions, he is currently Vice President of Group Underwriting.

Wayne has made an impact in several areas over the course of his line positions. In his three years with the Investment Division, he led the implementation of many IT-enabled

changes, including securities administration, retail mortgage administration, corporate loans, and electronic applications in commercial mortgages.

After moving to the Group Division, he sponsored the Customer Service Workbench project, which was an award winner in the 1999 Canadian national IT awards. This system combined advanced features such as web access to legacy systems, knowledge bases, and workflow management to create a rich customer care environment.

Wayne has not only made an individual contribution by his leadership in IT and business. He has mentored his superiors, peers, and subordinates about the ways in which IT can be used to advance the business and in their roles in managing projects. He keeps his IT knowledge up to date through his close connection to the IT department. This allows him to continually recognize opportunities for IT and implement projects successfully. “My time in IS made it easier to coordinate line and IT resources for larger projects”.

As the Vice President of IT commented: “The Group Insurance Division automated most of their administrative, policyholder and policy issue systems after Wayne was recruited from the IT Division and became their VP... He’s the kind of individual we really like to see go out from IT into the line area because he is always pushing us to expand the envelope...He is constantly coming back and saying ‘I saw this’ or ‘Could we do this?’ or ‘Will it let me do this better?’ ”.

Wayne’s views on moving IT people into line positions are positive, not just from his perspective, but from the company’s as well. As he notes, “IT and line areas work as partners-while respecting each other’s special talents”.

5. Discussion

Nahapiet and Ghoshal’s theory suggests that social capital, through the mechanisms of combination and exchange, creates intellectual capital, organizational advantage and further increases in social capital. This section applies this model, using the profiles, survey, and interview data from Clarica. These findings are shown on Fig. 2.

5.1. Social capital

At Clarica, a high level of social capital was present between the IT department and the line divisions before the career transitions took place. In our survey of the ex-IT people, we asked about the strength of their relationship with the business units *at the time they made their move out of IT*. A total of 77% agreed with the statement “IT and business had a very healthy working relationship”. When asked about the importance of status in their decision to move to the line, 90% of respondents disagreed with the statement “non-IT jobs have higher status than IT jobs, in general” and 95% disagreed with the statement “IT people are not highly regarded”. Clearly, at Clarica, even in the early 1980’s, the IT group enjoyed strong networks and relationships with their counterparts in the line.

Our conclusion was that this high level of social capital, built before the first moves out of IT took place, is a critical point in the explanation of this phenomenon. Without good relations, people from the IT department may not have been sought out by senior managers

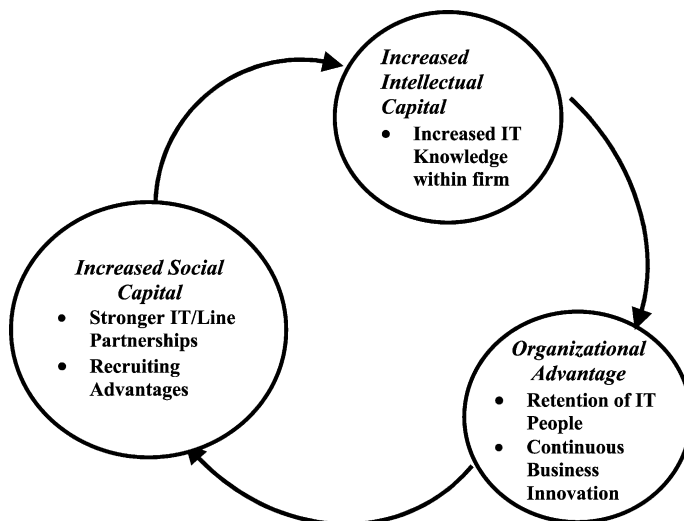


Fig. 2. Social and intellectual capital theory. Illustrated with Clarica data.

and may not have been accepted within the business units. The vacant or new positions may have been filled with other types of internal or external candidates.

5.2. Creation of intellectual capital

Nahapiet and Ghoshal (1998) propose that intellectual capital is created when there is opportunity, expectation of value, motivation, and the capability to exchange and combine knowledge. At Clarica the opportunity was created by the moves and the general business climate of rapid change and need for technology. Ex-IT people whose new careers depended on their success in line units supplied the value and motivation aspects. The capability dimension was present since long tenured, highly valued employees had moved. These ex-IT people not only could see the business issues, but they could bring their considerable IT experience to bear on them (as noted in Ellen Smith's Profile). The following quote is only one among many from business managers who worked with ex-IT colleagues:

Having former IT people in the division improved our business/IT knowledge and skill sets. I gained knowledge through affiliation, and as a result was better informed and made better decisions.

The moves of IT people into line jobs resulted in a significant increase in IT-related intellectual capital. According to survey respondents, 63% of these ex-IT people taught their bosses about IT, 85% taught their peers, and 93% taught their subordinates. In this way, each move created a large 'multiplier effect' of IT knowledge transfer. One area in which survey respondents noted a significant increase in intellectual capital between

the time they moved and the time they filled out the survey, was the “ability of business managers to recognize opportunities for IT”.

Another example of intellectual capital created as a result of the moves was project management expertise in the business units. On an unprompted, open-ended question about the impact of the moves of IT people, many respondents suggested that the company’s ability to manage projects had improved. Examples of these comments include: “IT staff bring higher project management skills” and “project management skills were transferred to non-IT staff”. These comments paint a clear picture of the ‘exchange’ form of intellectual capital creation, as IT people collaborated with their business counterparts and passed on their knowledge about how to conceptualize and manage projects.

5.3. Organizational advantage

Interviews elicited many specific examples of cost reductions and process improvements at Clarica. As exemplified by Wayne Richmond (Profile 3), the senior ex-IT people made significant changes within the company. We identified two sustained effects that contributed to organizational advantage: retention of IT knowledge and personnel, and continuous business innovation.

5.3.1. Retention of IT knowledge and personnel

At Clarica, when people in IT needed new challenges, they were able to move themselves and their knowledge into other areas of the firm rather than to another company. From the individual profiles, we see that Wayne Richmond, who reported to the Vice President of IT for 6 years, was retained at Clarica because of the company’s willingness to move him to a line position. Of IT professionals who moved out of IT, about 85% of them have remained and progressed within Clarica. In 1999, Clarica’s CIO reported annual IT turnover of 10%, much lower than many comparable organizations². Therefore, for a company whose business centers on the production and use of information, a competitive advantage is having a team of IT-trained managers with a long history with the firm and strong cross-divisional working relationships.

5.3.2. Continuous business innovation

In the past decade Clarica has demonstrated a continuous cycle of award-winning IT-enabled business innovations in telecommunications (Snell, 1992), expert systems (Underwood, 1993), call centers (Rodgers, 1998), web sites (Horwitt, 1999), and knowledge management (Smith, 2000). These innovations were enabled by the strong working relationship between the IT and business units (Kalvaitis, 1993; Smith, 2000; Reich and Kaarst-Brown, 2001), and frequently the champion has been a former member of the IT department.

This history of successful IT innovation is arguably the most important of the benefits achieved. Each success gave Clarica more confidence to tackle the next ‘impossible’ goal

² According to data from the Information Technology Association of America, turnover in 1999 averaged 20% per year in the IT sector, and the cost of recruitment can be as high as \$100,000 per employee.

and to continue extracting organizational advantage from IT. As noted by one executive: “Success begets success”, and so the co-creation spiral continues.

5.4. Further increases in social capital

Another result of the diffusion of IT people into business positions was a further increase in the IT Department’s social capital. Ex-IT respondents noted an increase in the number of IT champions in business units in the years following their move. Others, in unprompted statements, noted a strengthening in the common language and trust between the business and IT units:

There are lower ‘walls’ between the two groups. There is no ‘elite’—we talk to each other in common terms.

Moving IT people into the business units avoided the us/them mindset between IT/non-IT that is so prevalent elsewhere.

As noted earlier, over 70% of former IT professionals report that they maintain strong connections with their former IT colleagues, in addition to sharing these networks with co-workers. In addition, good relations between IT and the business units and the broader career alternatives available for IT professionals provided a very attractive recruiting environment.

6. Extending the social capital model

Our analysis of the Clarica case provides support for the theoretical model proposed by Nahapiet and Ghoshal (1998) and its use as an interpretive lens. It also suggests two extensions to the model: 1) enablers of the initial levels of social capital, and 2) inhibitors of the social and intellectual capital spiral.

Fig. 3 illustrates this extended model. Since our data is exclusively from Clarica, we can speak only to their experiences for these model extensions.

6.1. Enablers of the initial social capital

Through long term assignments as business analysts and project managers, IT people had created deep bonds with line units, as exemplified by Wayne Richmond (Profile 1), whose close working relationship with a business Vice President enabled him to suggest, and ultimately secure, a line position.

The company and the Vice President of IT had built this social capital over several years. We identify two key elements of this enabling strategy: building company loyalty and ensuring that IT people were business literate.

6.1.1. Loyalty to the company

Research has suggested that professionals, including IT people, accountants, and engineers, may feel a stronger affiliation to their technical expertise and career path than they do to the company (Zabusky and Barley, 1996). Over the years, Clarica had taken

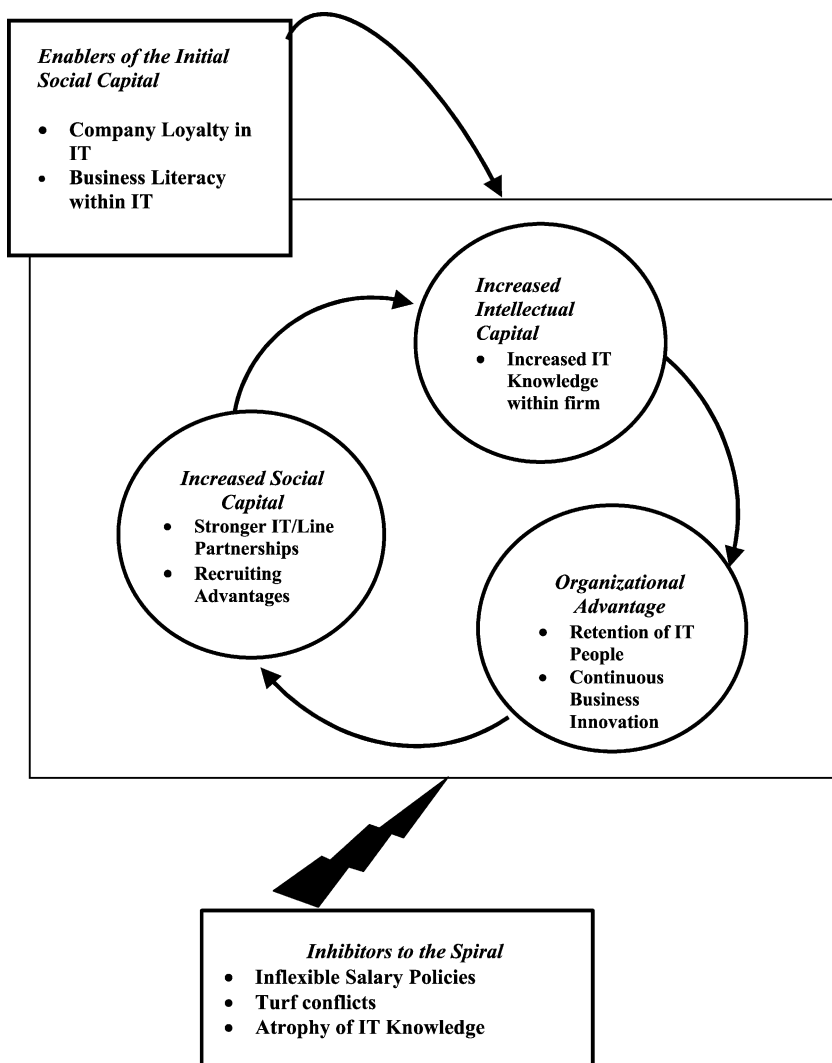


Fig. 3. Extended model of social and intellectual capital theory. Illustrated with Clarica data.

several specific actions to encourage a wider loyalty within all employees:

- Orientation of new employees to the culture and history of the whole company rather than specific departments.
- Encouraging involvement with company-wide associations, social clubs, cross-functional teams, and projects.
- Creating a general policy of promoting from within the company, thereby motivating IT people to build their careers at Clarica. With that expectation, professionals may be willing to develop strong relationships with their internal clients.

These efforts seem to have been successful, although we have no comparative data from other firms. In the survey of ex-IT people, over 80% of them felt positively about moving into a more general insurance role versus staying within the IT profession.

6.1.2. Business literacy among IT people

Ensuring that the IT people have an understanding and appreciation for the business was an important element in building social capital with business partners. At Clarica, industry training was very strongly supported and the FLMI³ was valued on both the business and IT sides of the organization. Of those who moved out of IT, 50% had taken the 10 required courses and obtained the FLMI designation. When surveyed, 43% of their IT colleagues held this industry designation, showing that there was still a strong commitment to building business understanding in the IT division at Clarica. Internal development of business knowledge also came about through regular exposure to business professionals and projects, and support in attaining graduate business degrees.

6.2. Inhibitors of the social and intellectual capital spiral

Despite the fact that career transitions across divisions will result in stronger relationships and sharing of knowledge, this particular strategy also generates challenges that will need to be managed. Three important issues emerged at Clarica: salary levels, turf battles, and atrophy of IT knowledge. It is a credit to Clarica that these issues were dealt with successfully, since individually or collectively, they could have stopped the social and intellectual capital spiral.

6.2.1. Salary levels

Historically, due to the scarcity of IT skills and the need for specialized training, IT professionals have been compensated using pay scales that differ from non-specialized line business employees. For example, an IT person leading a 10-person systems design unit will usually be paid more than a business person leading a 10-person insurance administration unit. At Clarica, almost every ex-IT respondent mentioned that his/her salary was *not* increased when they moved to the line. If line salary policies had been enforced, most of their salaries would have been decreased! This was a challenge when line directors were trying to attract a manager from IT to his/her area. A lack of flexibility in Human Resources policies could have put a brake on the career transitions. As a Clarica IT division executive advised:

The career paths and opportunities in the line area must be equal or better than those in IT. Otherwise, only the weakest people in IT may be willing to give up salary and slow their career progression.

³ The FLMI or Fellow Life Management Institute is a highly respected designation within the life insurance industry. This designation requires the successful completion of 10 courses, each with a three-hour exam at the end.

At Clarica, this challenge was overcome in a number of ways. Clarica had a history of moving people across organizational boundaries, so they had policies in place to make this happen smoothly. Sometimes the line job was enlarged to match a larger salary requirement, or salaries were frozen until the job responsibilities caught up. However, in most cases the line manager gained approval for a bigger salary to be paid for a lower ranked job. No doubt this caused some backlash and envy (we did hear a bit of this in our survey responses), but management was very insistent on this point. This was a cost of doing business, and they were willing to pay it. As one respondent explains:

When I moved into that area, it was probably a job that would have taken \$15,000 less than I was currently being paid. But that wasn't an issue at all. And it never is.

6.2.2. *Turf battles*

As noted in the profiles, a number of former IT professionals occupying senior line positions at Clarica were quite directive when it came to specifying their IT requirements. Turf conflicts between IT and the line occurred. The balance of power had changed for the IT department and some of them did not appreciate it:

We are seeing some roles that were traditionally done in IT now being done by end-users, for example, some of the analysis work or project management. We may not be involved as early in the planning stages as they have the technology representative in the ex-IT person.

Two successive Vice Presidents of IT at Clarica dealt with this issue. They reported a two-pronged strategy: internally talking about this conflict as a benefit because the IT department had very competent and knowledgeable line partners; externally, negotiating expectations with users about the roles each partner would play on projects.

If resentment or unresolved conflict had been allowed to fester, there is little doubt the social capital would have been damaged and the spiral may have ground to a halt.

6.2.3. *Atrophy of IT knowledge*

All three of the profiles illustrate that former IT people were looked upon as leaders and champions in the use of IT in their departments. Some of them worked hard to keep their knowledge current or limited their involvement in technical decisions. However, others were reported to be woefully out of date. As one IT manager bluntly noted:

One of the worst things in the world is an out-of-date IT person who thinks they still understand IT.

At Clarica, the IT department recognized that the root of the problem was not social relationships, but sustaining intellectual capital, and took steps to keep their former colleagues and other interested business managers current. Clarica's initiatives included an IT Council made up of business and IT professionals, brown bag lunches, and IT 'update sessions' where they shared information about emerging technologies. Dealing

with this inhibitor further enhanced the virtuous cycle, rather than letting it become a vicious cycle of frustration and distrust.

7. Conclusions

There are two main contributions of this research. First, Nahapiet and Ghoshal (1998) theory is illustrated through a rich case study of IT career transitions at Clarica. Second, extensions to their theory are suggested by adding enabling and inhibiting elements.

7.1. Implications for research

Although the research literature on social capital warns of the potential for negative outcomes such as ‘group think’ or entropy causing a slow-down in innovation (Janis, 1971), we found that the opposite should happen if strong IT people in an organization are helped to move into line positions across diverse business divisions. A knowledge spiral should begin, where their IT expertise is shared, their implementation skills create new confidence in IT capability, and even the toughest projects are successful.

The theory of social and intellectual capital provided a rich and illuminating starting point from which to understand experiences at Clarica. A limitation of this approach, however, is that we were unable to look comprehensively at structural or political issues. Nahapiet and Ghoshal’s model assumes that social capital overcomes political agendas. Our extension of this model incorporates some of the explicit issues of power that Clarica faced (turf battles) but other researchers might find that this case lends itself to a more thorough political analysis.

The very nature of a case study limits us to the experiences of Clarica with a single phenomenon of career transitions. Although this has provided some valuable insights into the importance of initial social capital to start the spiral, we do not know if an infusion of intellectual capital alone (perhaps from outside consultants or training) would have similarly started the spiral. Nahapiet and Ghoshal (1998) suggest that without social capital, this type of infusion might not make enough of a difference; however, further research is needed to understand the trigger points.

Similarly, we have identified ‘inhibitors’ or ‘brakes’ on the co-creational spiral. These challenges were identified at Clarica, but were successfully dealt with. We can only speculate on whether similar or different potential impediments might occur with other strategies or in other organizations.

7.2. Implications for management

There is no doubt that managers at Clarica recognize and value the social capital and intellectual IT capital that has evolved over the years. This is evidenced by the fact that they continue to work to avoid something putting the brakes on the knowledge spiral.

Other organizations could learn several lessons from Clarica's experience with these lateral IT-to-line moves. First, an assessment of initial social capital between business and IT areas should be taken. Without some level of social capital between IT and business units, any type of collaborative relationship is likely to be fraught with tension.

Second, each company may face similar or different impediments to this spiral starting or continuing. Looking to Clarica, if a company successfully addresses the issues of salary policy, atrophy of knowledge, and turf battles, relationships between IT and the line will facilitate an environment of commitment and partnership in which knowledge is shared and combined, and intellectual capital created.

The results should be a line management team that is very capable of implementing the most challenging IT-enabled projects.

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Appendix A. Capturing a phenomenon

Data was gathered using interviews and matched surveys⁴ over an extended period of time. Interviews were conducted in three waves. A total of 29 interviews with 25 people and 134 eleven-page surveys were gathered.

The first round of interviews gathered rich case stories from eight former IT professionals now in the line. This data was used to help develop a survey instrument that could be adapted across all three groups of respondents. Later interviews were used to develop a richer understanding of the overall impact of having former IT professionals within the business units.

'Matched surveys' refers to the attempt to match demographics across the three groups. The ex-IT survey was mailed to the entire remaining ex-IT population of 59 individuals. We then sent surveys to the same distribution (e.g. officers and non-officers, gender, and divisional representation) within the business units. We included both those business units that acquired former IT members and departments that had not acquired former IT members in order to obtain cross-organizational representation and as unbiased a response as possible. IT respondents were selected the same way, but without matching for division. Where relevant, we used the same questions across the three different groups (Jackson, 1988).

⁴ Surveys are available from the authors, as are complete descriptions of the respondent demographics in the surveys and interviews.

Data analysis included both content analysis of interviews and open-ended survey questions as well as statistical analysis of Likert style survey questions. While some questions were unique to those who made the decision to move out of IT, many questions were comparable across the three groups.

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