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CONFLICTS IN KNOWLEDGE MANAGEMENT: VISITING THE HIDDEN PARTNER

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Abstract

As knowledge gains a reputation for being a critical resource in the information-intensive economy, organizations have doubled their efforts in trying to extract value from knowledge management policies. One particular aspect of knowledge management, which has gone unnoticed in academic research, is the presence of conflicts in knowledge activities. By adopting a conflict perspective of knowledge activities, this study arrives at a two-dimensional framework that defines knowledge conflicts in terms of its type and nature. Central to this paper is the fundamental idea that conflicts form an integral part of knowledge management and depending on how they are managed; conflicts may be formidable partners or dangerous adversaries in the corporate quest for knowledge-derived competitiveness.

Keywords: Knowledge Management, Knowledge Conflicts

1 INTRODUCTION

In an increasingly information-intensive economy, innovation is prized as the primary imperative of modern competition (Drucker 1993, Nonaka 1991) with strategic management in organizations embracing a knowledge perspective in deriving competitive benefits (Parent et al. 2000). This trend, in turn, has steered academic research along parallel directions with a proliferation of knowledge management articles to be found within scholarly journals (Cole 1998, Nonaka 1994, Spender 1996, Walsham 2001). Typically, the knowledge perspective postulates that corporate competitiveness is a function of the underlying knowledge base that is embedded within various firm-specific entities, including culture, routines, policies, systems and stakeholders (Grant 1996, Spender 1996). Since these knowledge-based resources are deemed to be more resilient to replication, the premise of knowledge management emphasizes the assimilation and transformation of the cumulative wisdom of individual stakeholders into long-term sustainable distinctive advantages (Alavi & Leidner 2001).

Not surprisingly, such emphasis has yielded knowledge management models such as Learning Laboratories (Leonard-Barton 1992), Learning Organizations (Prokesch 1997), Communities of Practice (Wenger & Snyder 2000) and Strategic Communities (Storck & Hill 2000). Though each of these managerial constructs approaches the topic from slightly different angles, they share a homogeneous emphasis on the value of communal interactions as an indispensable component of knowledge creation and diffusion. Nevertheless, hidden within these knowledge paradigms is the preconceived notion that interpersonal exchanges always occur harmoniously. This is an unjustifiable and one-dimensional oversimplification of the basis of human communications, which severely thwart organizational attempts at maximizing the knowledge potential from these sponsored discourses.

Wall and Callister (1995) believe that conflicts form an integral component of corporate management and they are often presumed to negatively affect group cohesion and performance (Schein 1988). Also, studies by Kolb and Bartunek (1992) have amassed numerous instances where organizational members intentionally ignore or avoid conflicting situations. Contrary to this prevalent phenomenon, an opposing school of thought hypothesized that the deliberate suppression and evasion of conflicts is counterproductive to business operations (Rubin et al. 1994). More provocatively, Robbins (1974) and Brown (1983) challenged their audience to consider conflict stimulation and promote overt conflict management to cultivate creativity and independent thinking.

By adopting a conflict perspective in examining how knowledge has been managed in developing Singapore's National I.T. Literacy Program (NITLP), a nationwide IT learning initiative introduced by the Infocomm Development Authority of Singapore (IDA) in response to the mounting global competitive pressure for an e-inclusive society, and the creation of the e-NITLP learning community portal, this study makes a preliminary attempt to understand the nature of conflicts in knowledge management. Specifically, this research will focus on distinguishing the types of conflicts that are prevalent in knowledge activities and at the same time, discuss their implications on knowledge management in an IT-driven environment.

2 LITERTURE REVIEW

Today, competitiveness has become commonly associated with organization's ability to consistently create, disseminate and apply knowledge to every aspect of business functions (Nonaka et al. 1998, Pfeffer & Sutton 2000, von Krogh 1998). Hackbarth (1998) posited that knowledge management can effectively boost the innovativeness and responsiveness of a firm. In this cycle of "continuous innovation" (Nonaka 1991), much have been deliberated on the conversions between tacit and explicit knowledge (Nonaka 1994, Nonaka *et* al. 2000) and how they can be accentuated through managerial efforts (Laszlo & Laszlo 2002, Pickering & King 1995). Knowledge is perceived to reside within both

individuals and groups (Spender 1996) where its creation relies on collaborative arrangements (Stebbins & Shani 1995) and personal cognitive processes (Vance & Eynon 1998).

Many studies have ventured to explore the methods to enhance and leverage on these knowledge activities in a corporate environment (Choo 1996, Prokesch 1997, Storck & Hill 2000, Wenger & Snyder 1999). These studies pointed to knowledge creation and diffusion as proportional to the effectiveness of cooperation between knowledge workers (Coleman 1999). But as Nonaka (1991) observed, even though team dynamics contribute substantially to knowledge creation by providing the "shared context where individuals can interact with each other and engage in constant dialogue on which effective reflection depends" (p. 104), it is common for disagreements to surface within group discussions. He reported that team performance may be compromised if divergent views are forced to synchronize from the beginning. Similarly, other researchers have testified to the emergence of conflicts in inter-organizational coopetitive situations (Davenport et al. 1996, Loebbecke et al. 1998).

Yet, despite these minor observations, the existence of conflicts has usually been neglected in light of a bigger picture for subsequent knowledge management studies. It is thus the objective of this research to examine the nature of conflicts in knowledge activities as well as to bridge the practical and theoretical gap in corporate knowledge management. As defined by Thomas (1992), conflict begins when an individual or group feels negatively affected by opposing entities. The reasons for conflict occurrences vary extensively and range from incompatible behaviour (Deutsch 1973) to a perceived divergence of interests (Rubin et al. 1994). Amidst these diverse perceptions, comprehensive studies of organizational conflicts identified the underlying task-related values as the main culprits of group disorders (Eisenhardt & Schoonhoven 1990, Watson et al. 1993). Based on this understanding of the nature of corporate conflicts, management scholars are split over the implications of such disputes on company performance.

One school of thought believes that conflicts aversely affect operational functioning. Citing reduced satisfaction among team members, studies following this line of argument conclude that conflicts threaten team cohesion and diminish the prospective future strategic decisions (Schweiger et al. 1986). It is also hypothesized that disputes may cause group members to feel a sense of unfairness and result in an increased desire to withdraw from team participation (Kabanoff 1991). However, there exist management articles that deem conflicts as invaluable to decision quality by encouraging the evaluation of multiple opinions and improving consensus among decision makers, thereby increasing the probability that decisions will be implemented as intended (Schweiger et al. 1989, Schwenk 1990). Furthermore, research illustrates that debates provide a platform for team members to voice concerns and arrive at multi-faceted solutions (Eisenhardt 1989). Hence, intentional conflict suppression may lead to 'groupthink' - the extreme concurrence seeking by decision makers (Janis 1989) and result in negative consequences as in the infamous disaster of the *Challenger* space shuttle (Turner & Pratkanis 1994). From these contradicting stances, a dilemma seemingly arises where conflicts are posited to improve decision quality at the expense of team cohesion (Schweiger et al. 1986). Eisenhardt and Zbaracki (1992), however, credited this paradox to the fact that conflicts have always been portrayed as a monolithic construct that varies only in its intensity. This explanation has given birth to a multi-dimensional conceptualization of conflicts (Amason 1996, Jehn 1995), which separates conflict types into two main categories.

Cognitive conflict is task-oriented and evolves from judgemental differences (Jehn 1994). Mitroff (1982) believes that cognitive disputes are inevitable within decision making bodies and form a significant part of the process through which managers can leverage their diverse attributes to achieve quality solutions (Turner & Pratkanis 1994). *Affective conflicts*, on the other hand, involve personal disagreement or individual dissatisfaction (Jehn 1994) and surface when cognitive disagreements are misinterpreted as personal criticisms, especially in circumstances with potential for great personal gain or loss (Baron, 1984; Brehmer 1976). These studies attribute the downward spiralling effects of affective conflicts as the primary animosity contributor that leads to an unwillingness to tolerate opposition and to maintain cooperation (Amason 1996, Jehn 1995). Clearly, the above discussion summarizes the merits and hazards of conflicts in group dynamics. In addition, it also brings to

attention that occurrences of team-based conflicts are allied to a collation of cognitive and affective elements. Hence, this study will focus specifically on appreciating cognitive and affective conflicts in knowledge activities together with their influence on effective knowledge management strategies.

3   METHODOLOGY

For this study, the participative case study methodology has been adopted for data collection. Participative research provides a secure basis for an exploratory study of semi-iterative development processes to obtain a high level of internal consistency (Robson 1993) where the perspective adopted by the researcher is in sync with that of the Infocomm Development Authority of Singapore (IDA), the sole overseer of the National I.T. Literacy Program (NITLP). Given this opportunity, a participative observatory approach enables investigators to observe the complexities and issues within the organizational context of IDA (Braa & Vidgen 1999). The unit of our analysis in this case is the development team where knowledge activities related to the formulation of the NITLP, are centred, while at the same time taking into consideration the broader organizational environment. Specifically, this study focuses on documenting the motivations, considerations and interactions within these activities (Blackler 1995) and in a way, the investigator will perform a facilitating role throughout the process of study and supplies insights through 'expert' opinion in the research process (Greenwood 1999). A complete on-site study performing the role of a member within the development team was also carried out. This created a sense of total immersion within the context of the study and provided excellent access and openness in terms of rapport and information. Data collection is done through interviews, brainstorming sessions, informal conversations, socialization, discussions and meetings. Field notes of daily observations were also taken and together, the information enables the researchers to "build the picture of the organization" using a joint construction of descriptive accounts of the situation. This in turn provides a deep understanding of the social and organizational context the study.

4   CASE DESCRIPTION & ANALYSIS

The IDA was established in 1999 by the Singapore government to drive the strategic development and adoption of infocomm technology (ICT) among Singaporeans. Since 1998, computer ownership and the number of households connected to the Internet have risen considerably. Of the 1.1 million households in Singapore, six out of 10 (63.9%) own personal computers and 56% have access to the Internet. However, in a survey of households, it is reported that high level of awareness among Singaporeans of the availability of online services did not actually translate into actual utilisation of these services (The Straits Times 2002) with research indicating that only 47% of the Singaporeans are equipped with the necessary IT skills to perform online transactions (The Straits Times 2002).

The NITLP was thus launched by the IDA in June 2001 to train 315,000 Singaporeans over a period of three years to become adept users of ICT (The Straits Times 2002). The strategies employed by the NITLP are multifaceted. Fundamentally, the NITLP is designed to equip non-ICT literate citizens with basic computing and Internet skills and to promote the integration of ICT into the daily lives of Singaporeans. However, the ultimate aim of IDA and its partners was the hope of encouraging proactive sustainable usage by these graduates of the co-created e-NITLP learning community portal so as to maintain their interests and keep their ICT skills relevant.

Naturally, the success of the NITLP, as a massively complicated cross-organizational project, in attracting a steady rate of participants is by no means a coincidence and demands nothing less than seamless cooperation among dependable partners. Without prior experience, IDA is constrained in its knowledge of these ICT non-believers and lacks an efficient means of contact by which it can reach out to its target audience. To overcome this, the agency sought assistance and recruited allies from various echelons of the society, including the private learning institutions for their proficiency in conducting IT training courses as well as the self-help associations and grassroots representatives for their intimacy with the general public. Through regular conversations with these key knowledge

sources of consumer habits, IDA has managed to engineer the NITLP into a popular curriculum amongst the IT illiterates. As exhorted by one of the project managers on the usefulness of sharing knowledge with community associates, *"they [self-help groups] help us to handhold the community. They know how the community functions, how it behaves, what approach [to take with it]. We collate their needs and see where we can come in to help."* Such dynamic and devoted working relations also inevitably led to the formation of effective but rudimentary inter-organizational knowledge-sharing communities that stems from the extensive managerial and logistical coordination required for the success of the NITLP (Hildreth 2000, Wenger & Synder 2000) as indicated by the same project manager: *"we have regular contacts with members of the public or our partners, for example, people from Mendaki [Malay Self-Help Association], AMP and Jamiyah (ATCs). We like to meet them face to face to discuss potential ideas. It is much easier for us to get responses from them this way."*

To strengthen this spontaneous knowledge-sharing momentum, IDA took the initiative to sponsor monthly "tea-sessions" for all partners to facilitate and supplement the overarching inter-organizational knowledge strategy. Such interactive forums are useful for the leveraging mutual competencies and sharing of good practices. For instance, one of the items that frequently crops up during these informal meetings is the sharing of innovative methods of reaching out to trainees during course delivery. This in turn led to the contextualization of the training content for different segments of the trainee population (i.e. homemakers, workers and senior citizens) instead of rigidly conforming to the original course syllabus that were designed with the average citizen in mind. Through this loosely-coupled CoP or the NITLP cross-boundary team, the various organizations have a chance to socialize and exploit each other's capabilities to formulate collaborative schemes such as the "Great Singapore Surf" in Sep 2002 that achieved wide-reaching success in trainee recruitment. Although IDA is the coordinator of these regular knowledge-sharing events, it does not dominate the proceedings but instead, seek to be a team player. It advocated peer-to-peer communication and took the position as the knowledge hub to consolidate strategic value from knowledge integration. The rationale for such a stance was explained by one of its executives, *"knowledge initiatives come from all quarters and angles. I mean in terms of peer organizations, it can be initiated in a variety of routes. The ideal situation is that there is a great deal of collaborations: some people to help facilitate different team ideas and consolidate them into one... [Someone] to see where the little Lego blocks of knowledge can fit together to craft out projects... and then somehow, the decision makers are kept in the loop... and everybody learns something new and the team gets built."*

The assimilated knowledge is then infused into the knowledge network of the agency for future referencing through familiar applications such as shared folders and knowledge repositories (Kankanhalli et al. 2001). As substantiated by one of the IDA staff when questioned on the means by which knowledge diffuses within the organization, *"there are shared folders and also this unit repository thingy that you can use to share knowledge and stuff like that. These are all the knowledge tools for people to tap into."* Considering the extensive developmental issues associated with such a nation-wide initiative, the NITLP provides the unusual opportunity to study how knowledge activities are managed across a multitude of perspectives, including those of the national IT agency, the trainees and the agency's partnering ATCs. In another sense, the integration of knowledge domains between various stakeholders in developing the program provides an appropriate setting to explore conflicts in knowledge activities. To be more specific, this research will concentrate on appreciating the prospective conflicts, which may arise from these intra- and inter-organizational collaborations.

The inclusion of a broad spectrum of extra-organizational helpers in project planning is however not without its inherent risks. With such a wide-ranging array of agendas, IDA has had its hands full in accommodating conflicting interests in order to prevent explosive confrontations. In another sense, the combination of knowledge domains across multiple stakeholders in developing this nation-wide learning initiative provides an appropriate setting to uncover the origins of conflicts in knowledge activities. As pointed out by one of the interviewees on the tedious ritual of even getting partners to come onboard, *"we have to cajole, grab and convince people to come aboard... And [then] everyone wants his own say in it and you have to spell that [the ground rules] out to the different parties before*

they even join up." To be more specific, this research will concentrate on revealing prospective conflicts, which may arise from these intra- and inter-organizational collaborations.

4.1   Cognitive Knowledge Conflicts

The presence of cognitive conflicts as discussed earlier, is inevitable during strategic decision making because people at "different positions see different environments" (Mitroff 1982). As such, contentions over the best methods to accomplish shared missions are quite prevalent among team members (Astley et al. 1982). However, studies have demonstrated that it is precisely these diverse opinions, which improve the quality of complex and ambiguous decisions (Amason 1996, Jehn 1995). By engaging in rigorous cognitive debates, managers can not only encourage a more exhaustive evaluation of the assumptions underlying different options, but they can also gain a more insightful view of the rationale behind their eventual decisions (Schweiger et al. 1986). From this proposition, it is therefore reasonable to discern that cognitive conflicts may play an important role in knowledge creation by satisfying both the need for social collaboration and individual cognition.

In the case, ***cognitive knowledge conflicts*** are a common occurrence during brainstorming sessions in problem solving situations. During the period of participation in such discourses, it is noticed that conflicts arise in knowledge scenarios due to differences in individual knowledge base. As highlighted by one of the project managers during project discussions, "*we have a guy with 30 years of project management experience in both the public and private sector. As such, he is very well-versed with the requirements and procedures [of the project]. At the same time, we have another guy who doesn't have that many years of experience, but is a technical expert who has prior managerial experience in international projects. Hence, conflict arises when both of them perceive it [the project] as their area of expertise.*" It is obvious from this statement that cognitive knowledge conflicts transpire when group participants possess relevant but contrasting knowledge towards an identical context. As such, it advances the idea that knowledge is contextual and does not exist outside of an agent (a knower) (Alavi & Leidner 2001). In fact, the example suggests that a prerequisite for effective knowledge management is thus the assimilation of these differing task-related knowledge assets into a multi-dimensional perspective of the problem and ultimately, deliver a more holistic solution.

The same informant also elaborated on how this knowledge gap between theory and practice was bridged, "*a solution appears when experience is combined with technical expertise. It is kind of like a 'piat' [instinctive] tactic to walk through the problem step by step. Because 'A', upon realizing the conflict, invites 'B' to a discussion and then says, 'Okay, let's go through how this should be organized'.*" Adopting a progressive approach to conflict resolution, IDA succeeded in transforming overt cognitive disagreements into invaluable knowledge assets by merging individual knowledge resources into an integrative organizational knowledge pool, which is then propagated to employees through knowledge repositories. Specifically, it allows both parties involved in the dispute to negotiate and overcome personal knowledge biases or limitations that impede the decision making capabilities of a collaborative group entity. Hence, such overt task-oriented knowledge conflicts can be classified as a form of ***Constructive Knowledge Conflict*** in corporate knowledge management strategies.

In addition to the presence of constructive conflicts, hidden or covert cognitive conflicts do exist among collaborative team members as well. One peculiar observation within group functioning is the contradicting phenomenon that project recommendations are usually conveyed between group partners through diplomatic writing in place of face-to-face communication. This behavior as clarified by one of the project team members is a habitual technique for easing potentially unreceptive comments, "*when someone comes up with a detailed program, and after you have looked at it, you should say, 'Okay, let me make some suggestions for your considerations', so that you do not hurt his ego.*"

Undoubtedly, such actions contribute to a cohesive working environment. As reinforced by one respondent, "*we [team members] must have mutual respect for each other. If someone is too aggressive, it spoils the [working] relationship*." Nonetheless, Rubin et al. (1994) advised against restraining individual discomfort as it may hinder innovative thinking. In particular, this tradition of

allowing for concessions through voluntarily censoring one's knowledge involvement bears crucial implications for organizational knowledge frameworks, which are founded primarily on interactive communal settings (see Prokesch 1997, Wenger & Snyder 2000). The knowledge exchange study by Thomas-Hunt et al. (2003) indeed, revealed evidence that suggest "socially connected members' discomfort with disagreement may constrain their emphasis on their own unique knowledge" (p. 474).

Sociological and managerial scientists have thus advised against putting restrains on individual discomfort during conferences as they may hinder creative thinking and the generation of responsive solutions (Deutsch 1994, Rubin et al. 1994, Schweiger et al. 1989). Simply, covert task-related conflicts can be regarded as ***Potential Knowledge Conflicts*** because if properly managed, these suppressed notions have the promise of being upgraded into constructive knowledge conflicts.

4.2   Affective Conflicts

As opposed to cognitive conflicts, affective conflicts often threaten performance and productivity (Brown 1983). Research has demonstrated that affective, personal attacks decrease team performance (Brehmer 1976) by focusing group attention on resolving or ignoring interpersonal disagreements instead of task completion (Kelley 1979). Furthermore, it is purported that affective conflicts are inseparable from cognitive ones because "often, what starts as a rational exchange of opposing views deteriorates into an emotion-laden interchange…in which strong negative feelings are aroused" (Baron 1984). Hence, it is imperative to take into account the presence of affective differences as an irrevocable counterpart of cognitive knowledge conflict evolution.

From a knowledge perspective, ***affective knowledge conflicts*** transpire when external parties infringed individual knowledge domains of expertise. In other words, these conflicts are consequences of well-intended advice being misinterpreted as contentious acts to undermine recipients' authority in their fields of specialization. As informed by one of the managers, "*people are very turf-minded, so when you give opinions, it is like a jolt to them... they get disturbed because they have failed to realize this [the suggestion] earlier and they feel slighted. Moreover, they have already done the work and to go back and redo it takes a lot more effort. So that ruffles a few feathers.*" In another sense, knowledge workers in the present economy are protective over their areas of professionalism and regard any form of intrusion as an attempt to undermine their perceived proficiency. It is thus the responsibility of knowledge managers to address these uncertainties associated with intrinsic knowledge acceptance and explore the means by which partners can share knowledge congenially.

A significant impact of overt affective conflicts towards knowledge creation, as covered by one of the interviewees, is that "*when conflicts go unresolved…feelings are hurt; trust and camaraderie are destroyed and it takes more than a year for people to get comfortable with one another again.*" This comment is consistent with research findings illustrating the rippling and lingering effects of affective disputes in triggering a series of prolonged emotional disturbances, which extends beyond current project cooperation (Amason 1996, Jehn 1995). Consequently, explicit demonstration of affective dissatisfaction or ***Disruptive Knowledge Conflict*** compromises knowledge creation by removing the foundation of interpersonal acceptance necessary for knowledge diffusion (von Krogh 1998) and broadening these prejudices onto other collaborating knowledge activities. Moreover, it is noted that individuals often find it difficult to differentiate cognitive from affective issues during disputes. As mentioned by a project manager, "*very rarely do people dissociate the problem from the person or the person from the organization.*" Hence, when managing expressive modes of affective knowledge conflicts, organizations should be sensitive to the debating parties and exercise more accommodative options of coping with them in order to minimize their spill-over effects.

Like the concept of potential knowledge conflicts, the investigator observes that affective conflicts occur covertly within teams too. As one team member in pushing for projects illustrated, "*mostly, the project manager accepts one idea and he chooses one based on his judgment without [giving] explanations. It is very hard to know why he chooses another over mine.*" Under such circumstances, Brehmer (1976) remarked that distrust might creep into the subconscious of the opposing team

member, as decision makers can never fully justify their preferences. Even though such imperceptible disparagements differ from disruptive knowledge conflicts in the sense that the unknowing party will not intentionally limit his or her contribution to knowledge activities, covert affective knowledge conflicts, if left unchecked, can lead to "full-scale" psychological warfare (Brehmer 1976).

These emotional frictions are the usual perpetrators in giving conflicts a bad name due to their demolishing features such as structural disintegration, poor morale, high absenteeism, sabotage and of course, violence (Leung & Tjosvold 1998). As illustrated by an IDA interviewee, "*I had an idea and this other person had another. We were both adamant that our own method was the better way… In the end, what happened was that my idea was adopted. But I think there were doubts and the results were not really satisfactory by the management's standard. So this other person said, 'Why don't we try it this way?' As much as I disagreed [with the suggestion], I had to say, 'Okay, I'm in. But I don't think it works.' My idea was just being implemented. Of course it [the switch to the second suggestion] was not that pleasant!*" Therefore, such **Malignant Knowledge Conflicts** must be diagnosed early and treated immediately before the pent-up negative emotions intensify. An open culture should thus be encouraged within knowledge sharing communities to foster understanding and supply avenues for team members to communicate and address one another's concerns.

	Overt	**Covert**
Cognitive	**Constructive Knowledge Conflict** ☐ Open task-related disputes leading to better quality decisions.	**Potential Knowledge Conflict** ☐ Hidden task-related disagreements with potential of leading to more effective solutions.
Affective	**Disruptive Knowledge Conflict** ☐ Open emotional feuds leading to disruptions in decision making process.	**Malignant Knowledge Conflict** ☐ Hidden emotional differences leading to constant turmoil in collaborative problem-solving scenarios.

Figure 1.   A Framework of Knowledge Conflicts

In sum, the notion of conflicts in knowledge management is devised as the interplay of the type of occurrence and the basis for disagreements. Combing them, a two-dimensional framework for understanding knowledge conflicts can be devised (see Figure 1). This proposed model serves as a focal point for future research by spelling out the types and characteristics of knowledge conflicts, which are predominant in organizational knowledge initiatives. Also, the case has identified potential implications for knowledge management. A summary of the insights is depicted in Table 1 below.

Types of Knowledge Conflicts	Implications for Knowledge Management
Constructive Knowledge Conflicts	☐ The promotion and encouragement of such conflicts to reap the benefits of responsive, multi-faceted solutions.
Potential Knowledge Conflicts	☐ The cultivation of a candid knowledge sharing culture to provide the necessary social incentive to upgrade these conflicts into constructive ones.
Disruptive Knowledge Conflicts	☐ The exercise of sensitivity and the adoption of accommodative measures in managing them to minimize their rippling negative effects.
Malignant Knowledge Conflicts	☐ The necessity of taking stock of knowledge interactions to identify and isolate symptoms of concealed dissatisfactions to implement remedial actions swiftly.

Table 1.   A Summary of Implications on Knowledge Management

5   CONCLUSION

Over and above the implications on knowledge management from the study of conflicts in IDA, the case findings does bear theoretical innings for future research in knowledge management as well as knowledge management systems (KMS).

5.1   Research Implications for Knowledge Management

As a whole, this study achieves its intended objective of congregating the dispersed but intuitive facets of knowledge conflicts into an integrative framework for theoretical appreciation. Nevertheless, this research recognizes that a single case has only limited power of generalizability. The proposed model of knowledge conflicts does not claim to be definitive nor comprehensive. Quite the opposite, it can actually benefit from any refinements derived as a consequence of subsequent conceptual or empirical scrutiny across other organizations or cultures. At the same time, a more fine-grained examination of the causal mechanisms underlying these differing categories of knowledge conflicts would be useful in strengthening the link between their manifestations and the corresponding approach for management.

This preliminary model of knowledge conflicts serves to focus future research along parallel directions by spelling out the types and characteristics of knowledge conflicts, which exist predominantly in organizational knowledge initiatives and their implications for pragmatic knowledge management strategies. Subsequent studies could add to this discourse by considering the correlation between each of these types of knowledge conflicts and effective knowledge management policies. For practitioners, this discussion is meant as a more novel alternative to the assessment of the role of conflicts in knowledge discussions, which if appropriately managed, may be a hidden partner in tendering distinct competitive advantages. In addition, the framework is analogous to that of a stethoscope for managers to diagnose the type of knowledge conflicts, which may arise from social interactions.

5.2   Research Implications for Knowledge Management Systems (KMS)

The findings of this study may also be assimilated into contemporary Information Systems literature to shape future research directions for KMS development. With the help of Information Technology (IT), Scott (2000) argued, corporate barriers can be made more permeable for knowledge to be leveraged from all working stations. Transparency should thus be investigated further as a possible decisive virtue of KMS as it grants automatic rights to every employee to participate in knowledge sharing (Pan et al. 2001). Through a transparent knowledge channel that is available and accessible to employees of the organizational community, Peter and Martin (1999) posited that knowledge participants can tap on complementary knowledge resources which are often localized (Sunny 1999). As demonstrated in the case of the IDA, employees are reluctant to substitute congenial working relationships for more honest feedback that over time, culminate in individualized knowledge deposits. Therefore, the capability of transparent KMS to make clear members' possessions of unique information (Stewart & Stasser 1995) may eliminate the psychological barriers of potential knowledge conflicts and promote constructive knowledge conflicts; a hypothesis that future studies could establish or disprove.

Finally, the concept of Anonymity, popularized in Group Support Systems (GSS) literature (see Dennis & Garfield 2003, Jessup et al. 1990), is the other relevant candidate for research into KMS development. Studies have shown that the subtraction of participants' identity does curtail the emotional elements during interactions (Pinsonneault & Heppel 1997), i.e. discussants have a lower tendency to withhold opinions or information. This is handy for overcoming reluctance to challenge the viewpoints of those in power (Nunamaker et al. 1991, Tyran et al. 1992), thus preventing knowledge clots from developing into fertile breeding grounds for disruptive and malignant knowledge conflicts. Specifically, as witnessed in the case of the NITLP, anonymous KMS may be effective remedies for the affliction of affective knowledge conflicts by empowering team members to query the basis of any unjustified managerial decisions without fear of retribution. Hence, a

progressive, in-depth study of anonymity in KMS would advance the existing knowledge on the effectiveness of anonymous knowledge contribution in reducing affective disturbances.

In sum, this study addresses the topic of conflicts in knowledge management by exploring the presence of cognitive and affective conflicts in cross-boundary knowledge activities. One important finding of this research is the acknowledgement that conflicts are part and parcel of any knowledge activity. Notwithstanding the managerial implications, this research also has a bearing on the future research directions knowledge management and KMS. As compared to conventional perspectives where knowledge management and its supporting systems emphasize the socio-technical dimensions of information flow, this paper suggests that the upcoming generation of knowledge thinkers should subscribe to an open mind on the cognitive, human topic of knowledge conflict resolution such that a holistic system of knowledge management can be foreseeable in the near future.

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