Knowledge Nurturing Reflexivity: The Internal Conversation Approach

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Abstract

Leveraging intellectual capital has become imperative to facilitate individuals’ innovativeness. However, little is known about the process of knowledge nurturing reflexivity where newborn ideas and newfound knowledge, which may be incomplete or ineffective in their infancy, are further developed instead of being criticized or discarded. Without proper nurturing, they may be abandoned prematurely and never be transformed into innovativeness. To fill this research gap, this study explores knowledge nurturing reflexivity which is drawn upon the internal conversation. Data collected from 140 IS individuals were used to test the research framework. Empirical results show that sociability and solidarity are conducive to absorptive capacity which in turn influences knowledge nurture. In addition, innovativeness is significantly affected by knowledge nurture. This study contributes to overcoming the weakness of reflexivity modeling in the IS literature. It also provides important insights about the essential role of the internal conversation in building knowledge nurturing reflexivity.

Keywords: Internal Conversation, Knowledge Nurturing Reflexivity, Socio-cultures, Absorptive Capacity, Innovativeness
1 INTRODUCTION

Researchers and practitioners have paid extensive attention to managing the intellectual capital such as knowledge integration, creation, transfer, discovery, or application (Robert et al. 2008; Chai et al. 2011; Alavi & Leidner 2001). Despite the broad range of knowledge management (KM) investigations, knowledge nurturing remains poorly understood. New ideas can become innovations when they are reproduced “on a meaningful scale at practical costs” (Senge 2005, p. 5). In other words, newborn ideas and newfound knowledge need to be further developed instead of being criticized or discarded because they may be less reliable or cost-effective in their infancy. Without proper nurturing they may be abandoned prematurely and never be transformed into innovativeness. How do organizational members exploit newborn knowledge from existing structures and explore future fruitful extensions of newfound knowledge? This research question comes from the research gap and further needs to be addressed. Consequently, the purpose of this study is to examine how emergence, transformation, and evolution of knowledge nurturing reflexives can be explained and facilitated among individuals.

Knowledge nurturing reflexivity can be depicted as dynamics where individuals continually enhance their capacity to absorb knowledge from a social structure, where new ideas and knowledge are nurtured instead of being criticized or discarded, and where nurtured knowledge is converted into innovativeness. That is, it is a process of reproduction, emergence, and transformation from a various set of knowledge through social interactions among social actors. As an organization’s members reproduce existing knowledge and see things differently, they may have emergent ideas and knowledge, which may not be immediately beneficial. Accordingly, they need to be gone through processes of transforming them into realization. Because knowledge nurturing takes place within social context which provides an environment for individuals to interact with, Archer’s (2003) internal conversation provides a solid theoretical basis for explaining its dynamics. This study relates the lens of the internal conversation in order to show how individuals realize knowledge.

This study has primary purposes which will lead to contributions to the literature. It is to demonstrate the richness of the internal conversation to the KM domain. In the turbulent environment, today’s small ideas could be tomorrow’s innovativeness which sustains a firm, rather than today’s products and best practices becoming tomorrow’s unproductive assets and actions. This study cultivates the root of knowledge nurturing reflexivity by assimilating and accommodating the three reflexes of the internal conversation framework. This study also shows how the internal conversation can be linked to socio-cultures and absorptive capacity in the IS literature. The internal conversation does not have a universal form (Archer 2003; de Vaujany 2008), and this study makes a contribution to embodying the theory in the knowledge nurturing domain.

2 THE INTERNAL CONVERSATION AND THREE AGENTIVE REFLEXIVES

The philosophical tradition of critical realism has presented to the IS literature (de Vaujany 2008; Mutch 2010; Volkoff et al. 2007) and further reinforces a wide range of substantive theories such as Bhaskar’s (1979) transformative models of social action, Archer’s (1995) morphogenetic approach, and Archer’s (2003) internal conversation. Especially in the IS field, it is more appropriate to utilize the substantive theories rather than the philosophical debate of critical realism in part because they explain social processes of social actors (Mutch 2010). Accordingly, researchers employ the morphogenetic approach for organizational change (Volkoff 2007) and the use of information and communication technology (ICT) (Mutch 2010). Additionally, the internal conversation is used for ICT-mediated interactions as a social phenomenon (de Vaujany 2008).

Archer (2003) introduces the internal conversation to grasp social actors’ reflexivity processes. She argues that “internal dialogue is the practice through which we ‘make up our minds’ by questioning ourselves, clarifying our beliefs and inclinations, diagnosing our situations, deliberating about our concerns and defining our own projects” (Archer 2003, p. 103). The process can be parsed into
tripartite analytical stages: the conditioning ‘me’, the conversational ‘I’, and the elaborated ‘you’. As she empirically illustrates the concept, Archer (2003) presents three modes of the internal conversation: “communicative reflexives”, “autonomous reflexives”, and “meta-reflexives”. Communicative reflexives are the first mode of the internal conversation. In this mode, social actors have a strong tie with the environment, showing little competence on their own deliberations and perceiving the world in an undifferentiated way (de Vaujany 2008). Individuals situate their thoughts and actions which are shaped by their past practices and social context, and they strive to sustain cohesion with their social structure. These reflexives are regarded as the conditioning ‘me’ (Archer 2003).

Autonomous reflexives are the second mode of the internal conversation. In this mode, individuals endeavor to express some concerns regarding social structures and taken-for-granted understandings, and stick to their own projects. As a result, autonomous reflexivity shows contextual discontinuities. These reflexives are described as the conversational ‘I’ (Archer 2003). There are distinct differences between communicative reflexives and autonomous reflexives. Communicative reflexives foster “social integration” at the cost of “morphogenesis”, while autonomous reflexives reinforce “system integration” at the expense of “morphostasis” (Archer 2003).

Meta-reflexives are the third mode of the internal conversation. In this mode, the mental scheme of social actors is full of their concerns and projects by questioning about senses on actions and realizing their ideals. Individuals have a willing tendency to pay a higher price to preserve their own projects. “By personifying their ideals of truth and goodness, the meta-reflexives awaken them and re-present them to society” (Archer 2003, p. 361). That is, meta-reflexives give social salience to their ideals without concealment and hesitation. This reflexivity is about the elaborated ‘you’ (Archer 2003).

3 ACCOMMODATION AGENTIVE REFLEXIVES OF THE INTERNAL CONVERSATION INTO KNOWLEDGE NURTURING REFLEXIVITY

The internal conversation and associated reflexives provide a coherent theoretical basis for examining knowledge nurturing dynamics because the progressive reflexives are a form of social transformation where many individuals interact with one another to interpret, discover, and change as a social life. Knowledge nurturing is a typical process of formulating new ideas or thoughts and then inspecting and transforming them. This process is well described as reflexivity modes in the internal conversation which is interplay among the ‘me’, the ‘I’, and the ‘you’. Organizational members are exposed to existing structures, practices, and knowledge, which are represented by the conditioning ‘me’, then find some concerns and subsequently start their internal dialogues, which are described as the conversational ‘I’, and shape and develop their projects, which are consistent with the elaborated ‘you’. This study develops a knowledge nurturing reflexivity model with an adaption of the internal conversation and a link to socio-cultures and absorptive capacity, shown in Figure 1.

In the first mode of the internal conversation, Archer (2003) identifies “context” or “socio-cultural structure” which is not of social actors’ making or choosing, but is more influential than social actors’ projects. Organizational members strive to be consistent with their thoughts and actions which are shaped by past understandings and practices, and thus conditioning context plays a critical role in their knowledge work. In line with the internal conversation, this study employs socio-cultures for knowledge nurturing reflexivity. Individuals are heavily affected by the sociocultural environment because culture is the conditioning context to form social actors’ interpretive schemes that understand situations and “make sense of ongoing events, activities, and human relationships” (Leidner & Kayworth 2006; Reichers & Schneider 1990; Sackmann 1992). The lens of sociology describes a community in two types of human relations: sociability and solidarity (Goffee & Jones 1996). Sociability is a sociocultural dimension that facilitates social, friendly interactions among members, while solidarity is a focus on the achievement of goals, objectives, and tasks. Sociability indicates “sincere friendliness among members of a community”, whereas solidarity depicts “an ability to pursue shared objectives quickly and effectively, regardless of personal ties” (Goffee & Jones 1996). Because socio-culture determines a social cost psychologically or practically, the type of the
environment enables or constrains individuals by giving a premium or a penalty to certain actions respectively (Archer 2003; de Vaujany 2008; Goffee & Jones 1996). For knowledge nurturing reflexivity, this study uses the two types of sociocultural dimensions on which social actors are drawing social ties in their knowledge work.

Figure 1. The internal conversation and knowledge nurturing reflexivity

The second mode of the internal conversation evokes autonomous reflexivity. Within the sociocultural structure, the “young agents” begin forging their own projects which define something that is worthy of deliberating his/her “concerns” (Archer 2003). Social actors look forward to the future and make sense of opportunities with the transformation of social structures. This reflexive capacity may be embodied by an actor’s absorptive capacity in knowledge nurturing reflexivity. Absorptive capacity is a “function of existing cognitive structures or prior related knowledge that enables individuals to recognize the value of new knowledge, assimilate it, and apply it” (Massey & Montoya-Weiss 2006, p. 100). It is the capacity of individuals to interrelate to their colleagues’ expertise (Roberts et al. 2012; Tiwana & McLean 2005). Autonomous reflexives enable social actors to bring together elements previously unconnected and develop a novel way of combining elements previously unassociated. As autonomous reflexives are judgmental and interpretive powers of social actors (de Vaujany 2008), absorptive capacity reflects the concept by relating to ability for individuals to initiate changes from within (Lewin et al. 2011). As such, absorptive capacity is linked to autonomous reflexivity.

The third mode of the internal conversation is meta-reflexives which are an individual’s critical reflection of his/her reflections. Individuals seek “self-knowledge” and exercise “self-critique” to attain “self-improvement” and “self-realization” (Vandenberghe 2005). That is, social actors are continuously on the move, viewing their context, social structures, or existing understanding in a different way. They are more likely to pay the price for “re-locating themselves in a different context” (Archer 2003). Implementing the capacity of meta-reflexives can be embodied by knowledge nurture. Knowledge nurture is the extent to which an organization’s members care for and encourage the growth or the development of perspectives. It is to “deconstruct or reconstruct” new understandings by “recontextualizing, refining, and making it operational” (Carlo et al. 2012). Individuals engage in an adjustment process of their newborn, newfound knowledge through contextual forces, other members’ pressures, and the surrounding environment and build its validity and efficacy. Knowledge nurture is a typical representation of meta-reflexives because social actors critique their understanding, improve the value of the understanding, and realize their knowledge.

The three progressive reflexives of the internal conversation epitomize the dynamics of knowledge nurturing reflexivity. In short, individuals are involuntarily structured with an understanding which is defined by sociocultural integrations. As they are aware of their “ultimate concerns,” they commit
themselves to projects and order them to represent to the society. This study is to investigate knowledge nurturing reflexives based on the internal conversation, shown in Figure 2.

![Figure 2. Knowledge nurturing reflexives](image)

### 3.1 Sociability and Absorptive Capacity

Research shows that sociocultural values influence the organizational configuration of knowledge assimilation processes (Lewin et al. 2011; Chatman & Cha 2003). Sociability is a sociocultural dimension which creates an enjoyable, friendly environment where individuals are more likely to share understandings and to be open to new ideas with “morale and spirit de corps” (Goffee & Jones 1996). It creates a strong tie continuously in an informal way although people no longer work together in their workplace. Individuals absorb knowledge more easily when they have common characteristics, and sociability increases individuals’ willingness to go beyond formal relationships of tasks and to provide freedom to express and accept out-of-the-box approaches (Reagans & McEvily 2003; Goffee & Jones 1996). As social actors immerse themselves in their social environment, individuals find it comfortable to communicate with one another (Phang et al. 2009). Sociability will help identify and recognize values by more freely interacting with peers. It is particularly important for autonomous reflexives because individuals feel pleasant and at ease to engage in interpersonal exchanges by reducing stress, building intimacy, and increasing approval for an individual’s ideas. The ease of knowledge exchanges among individuals increase shared understanding (Robert et al. 2008), and friendly social interaction is a key driver for their willingness to seek and contribute knowledge (Wasko & Faraj 2005). When problems arise, people seek help from friends rather than official lines or people that manage the systems (de Vaujany 2008). Sociability creates an environment where individuals can freely express their ideas and ask questions, preventing them from being overwhelmed or feeling stupid, and encourage a friendly exchange of knowledge which is conducive to absorptive capacity. Accordingly, this study presents the following hypothesis:

*Hypothesis 1: Sociability is positively related to absorptive capacity.*

### 3.2 Solidarity and Absorptive Capacity

Individuals rest upon patterns of social interactions which may facilitate or impede their thoughts and actions, and culture is an outcome of how people are associated with one another. Solidarity is a sociocultural dimension that organizational members pursue objectives effectively regardless of their
personal relationships. In some cases, individuals may not like one another, yet work together for their goals. Although they efficiently collaborate for their tasks, they return to their own jobs, never to associate again (Goffee & Jones 1996). Because solidarity escalates shared understanding of an organization’s tasks with cooperation, individuals can be more likely to be bound together. Solidarity increases formal relationships among individuals and strengthens their identity in an organization with “a coherent framework” (King et al. 2010). As organizational members perceive a sense of solidarity with one another, they are willing to pursue a common goal, share resources, and engage in knowledge exchanges. A high level of solidarity increases an act of unity, induces a quick response to changes, escalates common ground, and reduces tolerance of poor performance (Goffee & Jones 1996). Solidarity generates commitment and loyalty to an organization’s goals, and the shared values build necessary interconnectedness to process a wide range of knowledge. The identification, acquisition, and assimilation process of absorptive capacity can be facilitated by solidarity among organizational members. Accordingly, this study develops the following hypothesis:

Hypothesis 2: Solidarity is positively related to absorptive capacity.

3.3 Absorptive Capacity and Knowledge Nurture

Knowledge nurturing reflexives are the process whereby incomplete, ineffective newborn and newfound knowledge are realized. The reflexivity requires individuals to share knowledge and exchange novel ideas as individuals decrease cognition load and maximize the development of emergent knowledge. In other words, individuals need to have their own positive, self-reinforcing dynamics in autonomous reflexives. Knowledge nurture is subject to constant modifications by asking and answering questions fallibly to realize knowledge, and absorptive capacity plays a critical role. Absorptive capacity has an impact on knowledge nurture as it enables individuals to recognize the value of knowledge, to implement appropriability, and to conduct transformative processes. It promotes the integration of complementary knowledge bases. It facilitates variation by enabling the emergence of new ideas and further development by sharing and combining knowledge (Lewin et al. 2011). Individuals in the mode of autonomous reflexives are less integrated into the social order, and they are primary concerned about the development of their own projects (Clarke 2008). As social actors are working on realizing their projects, they transform objects that have an impact on them (Archer 2003; Vandenberghe 2005). Research shows that absorptive capacity solicits individuals to propose ideas and explore challenges by combining and recombining existing knowledge (Lewin et al. 2011). The potential value of knowledge can be realized when individuals develop and reinforce knowledge, and this study proposes the following hypothesis:

Hypothesis 3: Absorptive capacity is positively related to knowledge nurture.

3.4 Knowledge Nurture and Innovativeness

While many outcomes may result from knowledge nurture, this study focuses on innovativeness because the growth and development of knowledge is highly related to innovativeness. Innovativeness can be generated when new ideas and emergent knowledge can be reproduced “on a meaningful scale at practical costs” (Senge 2006). Innovativeness is an important construct to study individual behavior toward innovations, and has a long standing in innovation diffusion research (Agarwal & Prasad 1998; McKnight et al. 2002; Rogers 1995).

The knowledge-based economy needs the development and growth of knowledge on a continual basis. Research shows that knowledge has become prominent in innovativeness and an organization’s access to knowledge has an impact on innovativeness (Foss et al. 2011; Tsai 2002; Cohen 1990). In meta-reflexives, the mental scheme of social actors is to inspect their belief and inclinations, improve their ultimate concerns, and represent them to the society. Meta-reflexives provide “contemporary social salience to their ideals” without which ideals would “sleep on” (Archer 2003). In the reflexivity capacity, individuals go through the critical reflection of their reflections and realize their knowledge. In other words, individuals question an existing way of understanding, clarify new ideas, deliberate concerns, and envision their projects. As a result, they are more likely to have novel and useful ways to accomplish tasks. It is highly related to innovativeness which indicates the development, adoption,
or implementation of new ideas and work methods (Yuan & Woodman 2010). “Exploiting preexisting knowledge” increases efficiency, while “exploring new knowledge” escalates innovativeness (March 1991; Wong 2004). When individuals unearth things that are interesting, novel, and useful, it may multiply innovativeness. As individuals are encouraged the development and advance of emergent knowledge, the likelihood of innovative occurrences will be increasing. Accordingly, this study poses the following hypothesis:

Hypothesis 4: Knowledge nurture is positively related to innovativeness.

4 RESEARCH METHODS

The survey methodology was adopted for data collection to test the research model. This study examined the measurement and structural models by using Partial Least Squares (PLS) Graph version 3.00. Items for sociability and solidarity were adopted from Goffee and Jones (1996). Absorptive capacity is adapted from Szulanski (1996) and Tiwana and McLean (2005). Because previously tested measures for knowledge nurture were not available, this study developed items based on the definition and description. Its items were specified as formative measures because each of them distinctively represents different aspects of knowledge nurture (Petter et al. 2007). Items for innovativeness were adopted from McKnight et al. (2002). This study was concerned that a level of an individual’s education and duration, and firm size would have an impact on knowledge nurture and innovativeness. As individuals have more education or job experience, they may have more understanding of their work processes. When a firm has a bigger size, they may have more resources to facilitate knowledge interactions. Consequently, duration, education, and firm size were used as control variables. Controlling for these effects allows this study to better identify the real impact of the variables.

A pilot study was conducted prior to the administration of the large-scale survey. Market Tools, Inc. provided a list from managers and above who engaged in knowledge interactions. 69 responses were used to test corrected-item to total correlation (CITC), exploratory factor analysis, correlation analysis, and Cronbach’s alpha before employing a large-scale survey. After purifying items through the pilot study, the large-scale survey methodology was used to test the research model. The questionnaire asked respondents to answer each question on a scale from 1 to 5 where 1 was “Strongly Disagree” and 5 was “Strongly Agree”. The instruments entering the large-scale survey are listed in Appendix A. Market Tools, Inc. provided IT managers from various industries. It invited 800 people and 140 answered the survey, resulting in 17.5% of the response rate. Responses were received from the industry of IT (50.0%), telecommunication (30.0%), manufacturing (10.7%), biotechnology (6.4%), and finance/insurance (2.9%). The size of the firm was 100-249 (7.9%), 250-499 (10.7%), 500-999 (7.1%), 1,000-2,499 (9.3%), and 2,500 and over (62.9%). Respondents spent an average of 10.60 years (median = 8.00, standard deviation = 8.93) in the firms. Their educational level was: high school (13.6%), associate degree (11.4%), bachelor’s (51.4%), master’s (20.0%), and Ph.D. (2.9%).

Response/nonresponse bias was assessed by comparing data from early and late survey respondents on the number of employees and annual sales using a Chi-square test (Armstrong & Overton 1977). Results show that there is no significant difference between the early and the late response on the number of employees ($\chi^2 = 2.910$, d.f. = 4, $p < .05$) and annual sales ($\chi^2 = 2.319$, d.f. = 5, $p < .05$).

4.1 Measurement Model

An exploratory factor analysis of all reflective measures was conducted. Results show four factors (i.e., sociability, solidarity, absorptive capacity, and innovativeness) in Table 1, indicating that all items load more highly on their own constructs than on other constructs. The four factors account for 77% of total variance. All factors of Cronbach’s alpha are greater than 0.85 and show a high reliability.

Confirmatory factor analysis was performed to assess convergent and discriminant validity for reflective measures, using PLS. Evidence of convergent validity was examined by item loadings, composite reliabilities, and average variance extracted (AVE) (Fornell & Larchker 1981). All item
loadings exceeded 0.70, shown in Table 2, indicating that there was more shared variance between a construct and measures. Internal consistency of each scale was assessed with composite reliabilities, which showed that the lowest was 0.83 in the results and were in excess of the 0.7 guidelines (Nunnally 1978). AVE measures the average amount of variance that a construct explains from its items relative to the amount because of measurement errors. All of them exceeded the 0.5 threshold (Chin 1998). The square root of AVE for constructs was greater than all respective correlations and provided evidence of discriminant validity. Table 3 shows the results of the measurement analysis.

<table>
<thead>
<tr>
<th></th>
<th>Absorptive Capacity</th>
<th>Sociability</th>
<th>Innovativeness</th>
<th>Solidarity</th>
</tr>
</thead>
<tbody>
<tr>
<td>SC1</td>
<td>.04</td>
<td>.80</td>
<td>.11</td>
<td>.23</td>
</tr>
<tr>
<td>SC2</td>
<td>.18</td>
<td>.85</td>
<td>.12</td>
<td>.22</td>
</tr>
<tr>
<td>SC3</td>
<td>.30</td>
<td>.70</td>
<td>-.02</td>
<td>.34</td>
</tr>
<tr>
<td>SC4</td>
<td>.21</td>
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<tr>
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<td>.13</td>
<td>.23</td>
<td>.21</td>
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<tr>
<td>AC2</td>
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<td>AC4</td>
<td>.81</td>
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<td>IN1</td>
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<td>.10</td>
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<td>IN2</td>
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<tr>
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<td>Cronbach’s α</td>
<td>.88</td>
<td>.87</td>
<td>.85</td>
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</table>

Table 1.  
Exploratory factor analysis

Knowledge nurture was modeled as a formative construct. The validity and reliability of formative constructs need to be differently analyzed because of the different nature (Petter et al. 2007). The construct validity was examined by using a principal component analysis to assess item weightings for instruments. All of them were significant. The reliability was tested by examining multicollinearity. If the VIF (variance inflation factor) value is less than 3.3, formative constructs show reliability (Petter et al. 2007). Results illustrated that there were no multicollinearity among measures of the formative construct.

For the common method bias, this study follows Liang et al. (2007) which examine each indicator’s variance. Results indicate that the average variance explained by the substantive indicators is 0.656 and the average variance explained by the method is 0.007. Considering the small level of the method variance, the common method bias is not a serious issue in this study.
Sociability | Solidarity | Absorptive Capacity | Knowledge Nurture | Innovativeness
--- | --- | --- | --- | ---
SC1 | .768 | .381 | .290 | .287 | .248
SC2 | .825 | .442 | .354 | .257 | .175
SC3 | .788 | .429 | .400 | .326 | .118
SC4 | .868 | .362 | .353 | .306 | .216
SL1 | .451 | .824 | .331 | .235 | .023
SL2 | .336 | .820 | .367 | .241 | .104
SL3 | .460 | .840 | .323 | .173 | .153
AC1 | .374 | .348 | .844 | .442 | .366
AC2 | .388 | .380 | .837 | .394 | .304
AC3 | .356 | .373 | .744 | .320 | .306
AC4 | .254 | .198 | .750 | .399 | .326
KN1 | .188 | .111 | .291 | .708 | .417
KN2 | .422 | .305 | .488 | .869 | .394
KN3 | .207 | .172 | .346 | .769 | .434
IN1 | .116 | .017 | .293 | .324 | .780
IN2 | .221 | .076 | .381 | .472 | .845
IN3 | .203 | .161 | .317 | .453 | .815

Table 2. Item construct correlation

<table>
<thead>
<tr>
<th>Construct</th>
<th>Reliability</th>
<th>Sociability</th>
<th>Solidarity</th>
<th>Absorptive Capacity</th>
<th>Knowledge Nurture</th>
<th>Innovativeness</th>
</tr>
</thead>
<tbody>
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<td><strong>0.81</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Solidarity</td>
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<td>.498</td>
<td><strong>0.83</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Absorptive Capacity</td>
<td>0.87</td>
<td>.434**</td>
<td>.413**</td>
<td><strong>0.79</strong></td>
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<td></td>
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<tr>
<td>Knowledge Nurture</td>
<td>0.83</td>
<td>.364**</td>
<td>.264**</td>
<td>.490**</td>
<td><strong>0.78</strong></td>
<td></td>
</tr>
<tr>
<td>Innovativeness</td>
<td>0.86</td>
<td>.229**</td>
<td>.110</td>
<td>.410</td>
<td>.521</td>
<td><strong>0.81</strong></td>
</tr>
</tbody>
</table>

Note: ** denotes significant correlations $p < .01$. The diagonal elements in bold indicate the square root of AVE.

Table 3. Descriptive statistics, correlations, and average variance extracted

4.2 Structured Model

The research model was tested by examining the size and significance of path coefficients and the percentage of variance explained. Figure 3 displays path results which show statistical significance for each hypothesis.

Sociability has a significant, positive impact on absorptive capacity ($\beta = 0.305$, $p < 0.01$), supporting the first hypothesis. Solidarity also has a positive effect on absorptive capacity ($\beta = 0.263$, $p < 0.01$), supporting the second hypothesis. Absorptive capacity has a significant, positive impact on knowledge nurture ($\beta = 0.437$, $p < 0.01$), supporting the third hypothesis. To explore the mediation role of absorptive capacity, this study tested the direct effect of sociability and solidarity on knowledge nurture (Tiwana & McLean 2005). The path coefficient between sociability and knowledge nurture is 0.179, which lacked statistical significance. In addition, the direct impact of solidarity on knowledge nurture ($\beta = 0.008$) did not show statistical significance, either. Accordingly, the mediation effect of absorptive capacity is supported. Innovativeness is significantly affected by knowledge nurture ($\beta = 0.519$, $p < 0.01$), supporting the fourth hypothesis. As such, all the hypotheses are statistically supported. Sociability and solidarity collectively explains 24.2% of the variance in absorptive capacity. In addition, the model explained 30.8% of the variance in knowledge nurture, and 30.9% of the variance in innovativeness.
5 DISCUSSION

Although many studies apply, measure, and extend KM, knowledge nurturing reflexivity has yet to be examined in detail and the research gap is filled in this study. This research domain is particularly relevant in the environment where newborn ideas and newfound knowledge need to be further elaborated despite less reliability or cost-effectiveness. This study explores reflexives for knowledge nurturing through the lens of the internal conversation.

5.1 Implications for Research

Critical realist frameworks have been advanced to go beyond the philosophical debate of critical realism and to illuminate the social process of social actors. However, they remained theoretical (de Vaujany 2008; Morton 2006) and subsequently some researchers have recently paid attention to critical realist frameworks to explain IS (Strong & Volkoff 2010; Mutch 2010; Volkoff et al. 2010). Considering the significance and impact, their research needs to grow in scope and prominence. To the best of this study’s knowledge, the substantive theory of the internal conversation is applied to the KM literature for the first time. This study takes a step further by embedding the internal conversation into the knowledge nurturing domain.

Although research on reflexivity is critical to IS, little studies have been conducted (de Vaujany 2008). This study overcome the weakness of reflexivity modeling in the IS literature, and sheds light on exploring the dynamics of knowledge nurturing reflexivity by adapting the complex modes of reflexives presented by the internal conversation. Archer (2003) argues that the “progressive specification of concrete courses of actions, which involves the trajectory concerns → projects → practices →, is accomplished through internal conversation.” (p. 133) Drawing upon the theory, this study is to develop a coherent theoretical framework of knowledge nurturing reflexivity. That is, the concept of knowledge nurturing reflexives is first proposed and tested as an exploratory mechanism to formulate active knowledge work. This study shows how each form of reflexivity is embedded in the knowledge nurturing domain and the different configurations of knowledge nurturing elements move from one reflexivity to another. The intriguing empirical results of this study show that the research
model is relevant to the application of the internal conversation scheme. By mapping onto elements of knowledge nurturing reflexives, a new type of the internal conversation is uncovered in this study. Given that there is no universal form of the internal conversation (Archer 2003; de Vaujany 2008), this study describes the origin of reflexives in the internal conversation and further embodies the theory in the practical domain of knowledge nurturing.

Another contribution of this study is to link the internal conversation to complementary work in socio-cultures and absorptive capacity in the IS literature. The existing conditions enable or constrain the dialogical discussions of the conversational ‘I’ that develops and elaborates the ‘You’ of the future. Certain types of culture may be an impediment to effective knowledge management, whereas some may facilitate it (Yoo & Torrey 2002). Cultural systems structure individuals’ cognition by facilitating or limiting their activities, and this study illustrates how the dual role of sociocultural dimensions has a relationship with a typology of social actor’s reflexivity processes of the internal conversation. As a matter fact, Archer (1995, 2003) mentions social structures and cultural systems have causal power to enable or constrain social actions. Knowledge nurturing reflexivity employs absorptive capacity to have a connection to the conversational ‘I’. In autonomous reflexives, individuals focus on their development more than attempting to be part of their communities (Clarke 2008). The identification, acquisition, assimilation of absorptive capacity plays an essential role in monitoring, self-evaluation, and self-commitment in knowledge nurturing work. As social actors engage in meta-reflexives, the reinforcement of existing practices, the modification of previous properties, and the introduction of new structures are facilitated. In other words, individuals shape and reshape structures, and reorganize and reconstitute emergent knowledge, which is to enhance innovativeness. This study advances the three agentive forms of reflexivity with a link among socio-cultures, absorptive capacity, and knowledge nurture. As such, the progressive processes of the heterogeneous reflexive modes are adapted and embedded in this study, which makes sense of social actors’ interplay in knowledge nurturing reflexivity.

5.2 Implications for Practice

A knowledge nurturing model is theoretically proposed and empirically tested by presenting its unfolding process. This study particularly enhances understandings of knowledge nurturing reflexivity and provides practical suggestions for managers who strive to nurture knowledge and lead to innovativeness. It opens the black box to identity the constituent components of reflexives for knowledge nurturing. Individuals need to better utilize newborn ideas and newfound knowledge without being overwhelmed or feeling stupid due to the lack of efficiency and cost-effectiveness. A social cost is a critical component of explaining activities of social actors. When individuals need to pay a high social cost psychologically or practically, social actors would not try to deviate from routine. There are systemic constraints or enablers in social structures. Organizations need to embed socio-cultures which enable knowledge flow more effectively. This study shows that sociability and solidarity are enabling social structures. The magnitude of path coefficients provides useful insights to the relative importance to absorptive capacity. Sociability is the highest loading to have an influence on autonomous reflexives. Sociability creates an environment where social actors appear to be candid in voicing their abstract ideas, conveying new ways of understanding, and interacting with others about emerging understanding. It indicates that the knowledge nurturing process of an organization’s members is facilitated by a social environment where people have freedom to develop new understandings and insights. Sociability is less well-integrated and it has more social influences. The path coefficients between sociability and knowledge nurture and between solidarity and knowledge nurture are insignificant, showing a mediating role of absorptive capacity between social structures and knowledge nurture. Absorptive capacity is a critical social capability which is essential in promoting knowledge nurture. As autonomous reflexives acknowledge the autonomy of social structures and absorptive capacity is an exhibition of the reflexivity process. As organizational members make interdisciplinary knowledge relevant to their tasks, nurture their potential perspectives and advance them, they will produce more innovativeness, which is critical to survival to hypercompetitive business environments. The whole development process of knowledge nurturing reflexives will provide useful insights to practitioners.
6 CONCLUSIONS

The internal conversation and different forms of reflexivity provide a coherent theoretical basis for examining knowledge nurturing dynamics because the progressive reflexivity of Archer’s (2003) internal conversation makes sense of explaining the interplay of social actors in the knowledge nurturing domain. This study establishes the internal conversation as a valuable lens through which knowledge nurturing reflexivity can be understood. Knowledge nurturing reflexivity realizes social actors’ interaction with one another to discover, interpret, and change as a social life. Knowledge nurturing is to do “what individuals make of what they are made of” (Laing 1967). That is, the progressive processes of reflexivity and their associated stances are commensurate with the development of knowledge nurturing among organizational members. Because it is one of the initial endeavors to empirically examine the internal conversation in the KM literature, this study opens a new avenue for the research on how to effectively build and sustain knowledge nurturing dynamics.

References


Appendix A: Measurement Items Entering Large-Scale Survey

<table>
<thead>
<tr>
<th>Construct</th>
<th>Survey Items</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sociability</td>
<td>SC1 My organization’s members often socialize outside the office.</td>
</tr>
<tr>
<td></td>
<td>SC2 When my organization’s members leave our group, we stay in touch.</td>
</tr>
<tr>
<td></td>
<td>SC3 My organization’s members do favors for others.</td>
</tr>
<tr>
<td></td>
<td>SC4 My organization’s members often confide in one another about personal matters.</td>
</tr>
<tr>
<td>Solidarity</td>
<td>SL1 My organization’s members understand and share the same business objectives.</td>
</tr>
<tr>
<td></td>
<td>SL2 Our collective will to win is high.</td>
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<tr>
<td></td>
<td>SL3 My organization shares the same strategic goals.</td>
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<tr>
<td>Absorptive Capacity</td>
<td>AC1 I have the ability to use existing knowledge.</td>
</tr>
<tr>
<td></td>
<td>AC2 I have the ability to interrelate my knowledge to others’ expertise.</td>
</tr>
<tr>
<td></td>
<td>AC3 I have the ability to integrate expertise from organizational members.</td>
</tr>
<tr>
<td></td>
<td>AC4 I have the ability to recognize the value of new knowledge.</td>
</tr>
<tr>
<td>Knowledge Nurture</td>
<td>KN1 I make inter-disciplinary knowledge relevant to my tasks.</td>
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<tr>
<td></td>
<td>KN2 I nurture my potential perspectives.</td>
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<tr>
<td></td>
<td>KN3 I advance my unique perspectives.</td>
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<tr>
<td>Innovativeness</td>
<td>IN1 I am innovative in thinking of new or better ways to perform tasks.</td>
</tr>
<tr>
<td></td>
<td>IN2 I like to explore new ways of doing tasks.</td>
</tr>
<tr>
<td></td>
<td>IN3 When a non-routine matter happens, I invent new ways to handle the situation.</td>
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