Tacit–Explicit and Specific–General Knowledge Interactions in CoPs

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INTRODUCTION

Over the last decade the fields of knowledge management and organizational learning have developed rapidly, showing increasing diversity and specialization in the academic literature. Ikujiro Nonaka has played a leading role in setting standards and earning academic legitimacy for the emergent field of "organizational knowledge management" (Easterby-Smith & Lyles, 2003). In the period 1995-2001, the book *The Knowledge-Creating Company* (Nonaka & Takeuchi 1995) was the most-cited knowledge management work from academic literature (Koenig & Srikantaiah, 2004). Interestingly, in this book and in following works, the authors themselves prefer to use the term "knowledge creation" rather than "knowledge management," later also dropping the term "organizational" from the initial proposition. Easterby-Smith and Lyles also state (2003, pp. 642-643) that in the field of organizational learning and knowledge management, among the topics of articles published in the last two years, "learning capabilities, experience, and absorptive capacity" is the largest category, including several articles that assess the impact of learning on performance. Seeming to be frequently interrelated, "organizational learning and knowledge management across boundaries," "knowledge creation and transfer," and "human resource management and human capital" are the next largest categories for articles. Communities of practice, socio-political processes, and the development of tacit knowledge or social identity are among the other topics frequently addressed in the literature, categorized in terms of "cognition, socio-political aspects, and tacitness."

Using the extant and emerging perspectives in knowledge management, organizational learning, and communities of practice literature, in the following sections of this short article, we will first discuss the importance of specific-general knowledge, and context for knowledge creation and management. Then we will introduce the conceptualization of "specific" and "general" knowledge interactions, and discuss a framework that proposes these interactions as contextual knowledge conversions for learning and practice. The following section will aim to contribute to the representation of our knowledge on these contextual knowledge interactions, using visualization tools like geometric figures. We will conclude our discussion by highlighting future research possibilities in the relevant research fields.

BACKGROUND

Specific-General Knowledge and Context for Knowledge Creation and Management

According to the organizational knowledge creation model of Nonaka and Takeuchi (1995), the continuous and dynamic interaction between tacit and explicit knowledge that happens at the individual, group, organizational, and inter-organizational levels can be significant for the sustainable development of any social setting. Nonaka and Takeuchi follow the distinction of Polanyi (1966) between tacit and explicit knowledge: Tacit knowledge is personal, context-specific, and therefore hard to formalize and communicate. Tacit-explicit knowledge interaction is identified as the epistemological aspect, while the interactions among the different levels (individual, group and organization, inter-organizational) correspond to the ontological aspect of the model. When the authors first introduced their model, at the epistemology level they identified four distinctive interactions between tacit and explicit knowledge: socialization, externalization, combination, and internalization. Socialization is the process of creating tacit

knowledge from tacit knowledge, whereas externalization is that of articulating tacit knowledge into explicit concepts. Combination involves the process of systemizing concepts into an explicit knowledge system. Internalization is a process of embodying explicit knowledge into tacit knowledge.

Nonaka, Toyama, and Byosiere (2003) also suggest that at the foundation of their modeling lies *ba*: the context that knowledge needs in order to exist, in which it is shared, created, and utilized. Although the concept of *ba* shows similarities with that of communities of practice, especially highlighting the importance of context for learning and knowing, Nonaka et al. (2003) differentiate them according to the nature of the learning and participation that takes place within them. For instance, a community of practice is a place where members learn knowledge embedded in the community; *ba* is a place where new knowledge is created.

Real or virtual interactions among individuals or between individuals and their environments are key for the understanding of *ba* and knowledge creation. Especially, within the tacit knowledge conversions of socialization and externalization, a real *ba* where participants can interact face-to-face in the same time and space is essential (Umemoto, 2002). In general, with regard to the type of interaction (individual or collective) and the interaction medium (face-to-face contact or through "virtual" media) (von Krogh, Ichijo & Nonaka, 2000), four types of *ba* can be defined, corresponding roughly to socialization, externalization, combination, and internalization: originating *ba*, dialoguing *ba*, systemizing *ba*, and exercising *ba* (Umemoto, 2002).

Although initially knowledge creation and management was widely understood as simply the interaction between tacit and explicit knowledge, the type of interaction—individual (personal) or collective (group, social, societal)—is also increasingly being recognized as another dimension of knowledge interaction and conversion that parallels the tacit-explicit dimension of knowledge and knowledge interactions. For instance Wierzbicki (2004) sees socialization as the transition from personal tacit knowledge to group tacit knowledge; externalization, group tacit to group explicit knowledge; combination, group explicit to personal explicit knowledge; and internalization, personal explicit to personal tacit knowledge. In fact, tacitness relates to the transferability of knowledge, which also makes the location of knowledge an important issue (OECD, 2000).

According to von Krogh, Ichijo, and Nonaka (2001), knowledge can be observed and distinguished on two levels, individual and social. In addition, as recognized by various authors, there is "general knowledge," which is widely possessed by a large number of individuals and can be transferred easily among individuals, and "specific knowledge," which is idiosyncratic and narrowly possessed by a very limited number of individuals (Becerra-Fernandez, 2004). Whereas general knowledge is inexpensive to transfer, specific knowledge is expensive and costly (Jensen, 1998). Starting with global public knowledge, which is general and explicit, Stiglitz (2001) also analyzes the development of knowledge along two dimensions, general-local and implicit-codified. The description or classification of knowledge as a public or private good or asset retains an important place in the socio-economic modeling of knowledge (OECD, 2000). In order to redesign cross-cultural management, Holden (2002) discusses three domains of cultural knowledge as follows: general cultural knowledge, culture-specific knowledge, and cross-cultural know-how. While general cultural knowledge can be associated with explicit knowledge and cross-cultural know-how with tacit knowledge, culture-specific knowledge can be both tacit and explicit according to the convention. Gasson (2004) highlights the problems of managing and transferring local knowledge beyond its workgroup and specific context, and discusses the ways in which this distributed knowledge is managed, communicated, and translated across organizational boundaries. The shared explicit knowledge is transited into shared tacit knowledge, then to tacit distributed knowledge, and finally to explicit distributed knowledge.

Whether it is general, global, public, shared, common, collective, social, societal…or specific, idiosyncratic, local, private, distributed, individual, personal, and so forth, and although their units and levels of analysis differ, these various discussions all try to capture the same conceptual understanding about knowledge or knowing. However most of them remain as classifications of knowledge, rather