Exploring the role of psychological safety in promoting the intention to continue sharing knowledge in virtual communities

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ABSTRACT

Virtual communities play an important role in business, society, and education. At present, one of the great challenges faced by virtual communities is the availability of knowledge, which is mainly created through knowledge-sharing behavior. Although prior studies have extensively studied knowledge-sharing behavior in virtual communities from various perspectives, they largely ignored the important role of psychological safety in this process. We propose to address this gap by examining psychological safety and its effect on individuals' intention to continue sharing knowledge. We also identify trust in the virtual community and self-consciousness as antecedents of psychological safety. The research model is empirically tested through a survey across two virtual communities in a major university. The results show that the condition of psychological safety has a positive influence on the intention to continue sharing knowledge. The level of trust has a positive impact on the intention to continue sharing knowledge not only directly, as documented in the literature, but also indirectly, through the mediating role of psychological safety. Finally, we find that self-consciousness exerts a negative influence on feelings of psychological safety. The implications of our findings and the need for future research are also discussed.

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1. Introduction

Knowledge has been recognized as the most strategically important resource for creating and sustaining competitive advantage (Fang, Wade, Delios, & Beamish, 2007; Fang, Jiang, Makino, & Beamish, 2010; Grant, 1996; Spender, 1996). Knowledge sharing is an important process, and one effective way to support it is to connect people (Alavi, 2000). Many Internet-based information and communication technologies have been developed for knowledge sharing, such as listservers, newsgroups, bulletin boards, Internet relay chats, and chat rooms (Preece, 2001). As these technologies grow in popularity, virtual communities, defined as "an aggregation of individuals or business partners who interact based on a shared interest, where the interaction is at least partially supported and/or mediated by technology and guided by certain protocols and norms" (Porter & Donthu, 2008, p. 115), have thrived in recent years.

Virtual communities have been widely recognized as comprising an important means to facilitate knowledge sharing (Dholakia, Bagozzi, & Pearo, 2004; Hazel & Dianne, 2004; Wasko & Faraj, 2000). Recently, many organizations have established internal virtual communities to facilitate employees' sharing of work-related information (Ardichvili, Page, & Wentling, 2003; Chiu, Hsu, & Wang, 2006). For example, Caterpillar Inc., a Fortune 100 corporation, launched internal virtual communities to support employees' knowledge sharing worldwide, and gained 200 percent return-on-investment (ROI) from this undertaking (Ardichvili et al., 2003; Chiu et al., 2006; Powers, 2004). However, the availability of virtual communities does not guarantee that their participants would share their knowledge. Hence, it is important to understand factors promoting knowledge-sharing behavior in virtual communities (Chen, 2007).

Many prior studies have identified a number of factors that influence knowledge sharing in the context of virtual communities (Ardichvili et al., 2003; Chen, 2007; Chiu et al., 2006; Hsu, Ju, Yen, & Chang, 2007; Wasko & Faraj, 2005). Despite this progress, a careful review of these studies uncovers that they have missed a factor which is considered highly important to knowledge sharing – the notion of psychological safety. In this regard, the objective of our study is to address this gap by exploring the role of psychological safety in affecting knowledge-sharing behavior in virtual communities.

The organizational behavior literature has long recognized the importance of psychological safety to promote learning and knowl-

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edge sharing in traditional workplaces (Kahn, 1990), project teams (Edmondson, 1999), and manufacturing workshops (Siemsen, Roth, Balasubramanian, & Anand, 2008). These studies suggest that psychological safety may lessen the reluctance of individuals to express themselves by reducing the fear of humiliation or uncertain reception (Kahn, 1990). In this study, we argue that psychological safety may play a role in promoting knowledge sharing in virtual communities. Specifically, we focus on addressing two research questions: (1) To what extent does psychological safety influence intention to continue sharing knowledge in virtual communities? and (2) What factors can promote psychological safety in these communities?

We address the first question by exploring the relationship between psychological safety and intention to continue sharing knowledge within the context of virtual communities. We address the second question by focusing on the role of trust, which has been widely assumed within existing literature to have a direct effect on knowledge sharing (Chowdhury, 2005; Staples & Webster, 2008), and in the context of the virtual community literature in particular (Chiu et al., 2006; Ridings, Gefen, & Arinze, 2002). Drawing on the psychological safety literature, we argue that trust is an important antecedent of psychological safety, and therefore it not only has a direct effect on knowledge sharing, but also plays a partial mediating role by promoting the feeling of psychological safety. Finally, we identify an important personal trait – self-consciousness – which directly influences the feeling of psychological safety. We empirically examine these relationships by conducting a survey of 144 respondents within a virtual community environment for knowledge sharing in a university.

In the next section, we will describe the concept of virtual community and review literature about knowledge sharing in virtual communities, as well as the theoretical background on the role of psychological safety. We will then formulate the research model and develop the corresponding hypotheses. The empirical testing of the research model will also be described. The results will then be presented, followed by the discussion of the theoretical and practical implications, and future research directions.

2. Theoretical background and research model

Many virtual communities, despite their growth and promotion of active participation at the initial stages, suffer from the lack of sustained participation which threaten their eventual success (Chen, 2007). We therefore focus on understanding the most pertinent issue of continued knowledge-sharing behavior in virtual communities. We propose that psychological safety is an important but understudied factor promoting intention to continue sharing knowledge in virtual communities. We also explore trust and self-consciousness as important antecedents affecting the level of psychological safety. Fig. 1 shows our research model.

2.1. Knowledge sharing in virtual communities

Knowledge sharing plays an important role in the development of virtual communities. Knowledge in virtual communities is mainly created by their users through their knowledge-sharing behaviors (Lee, Douglas, & Moez, 2003). Without the availability of sufficient knowledge, people may be reluctant to participate because the virtual community cannot fulfill their knowledge needs (Wasko & Faraj, 2000). A great deal of research has investigated the factors influencing knowledge-sharing behavior in virtual communities from various theoretical perspectives. Some of them focus on the inherent motivational factors (Wasko & Faraj, 2005), while many others focus on the interpersonal conditions that can shape knowledge-sharing behavior, such as social capital (Chiu et al., 2006; Wasko & Faraj, 2005), social cognition (Chiu et al., 2006; Hsu
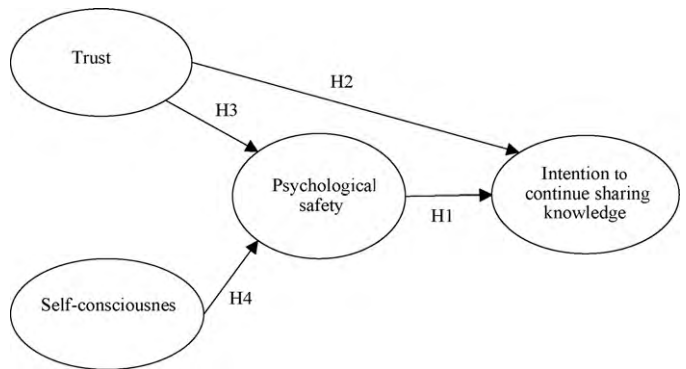

Fig. 1. Research model.

et al., 2007), trust (Ridings et al., 2002), satisfaction (Chen, 2007), social network (Wasko, Faraj, & Teigland, 2004), or attachment to collective action (Cheung & Lee, 2007; Wasko & Faraj, 2005; Wasko et al., 2004).

A careful evaluation of these studies reveals that these are contextualized in virtual communities that are open to the public (named hereafter public virtual communities), such as public professional communities (Chen, 2007; Chiu et al., 2006) and *Yahoo!* groups (Hsu et al., 2007; Ridings et al., 2002; Wasko & Faraj, 2000). These public virtual communities are often characterized by open membership, anonymity, and little or even zero offline interaction (Hsu et al., 2007). However, there are also other kinds of virtual communities that are different from the public ones; these are the ones studied in this paper. These virtual communities, like many other organizational information technologies, are built within a particular organization, such as a university, to support the learning and knowledge exchange of its existing members only (Wan, Neufeld, & Fang, 2007). The empirical context of this study will be shown later in Section 3.

These virtual communities exhibit different characteristics compared with public ones that are commonly seen in prior research. First, their membership normally is not open; second, participants may know some others at a personal level and may even have face-to-face interactions. Moreover, the activities in these virtual communities are identifiable to individuals in their real life. Virtual communities of this kind are often deployed to complement the social interaction in existing offline environments by enabling the participants to interact and exchange knowledge with other people they already know at any given time and place.

In today's Internet-enabled world, these virtual communities have become commonplace. Many contemporary organizations, including private or public institutions, have internal virtual communities (such as discussion forums) that are made available to enable their members to undertake information exchange. These internal communities have been playing an increasingly important role in organizations as they support online activities to overcome time and space limitations, and serve as knowledge sharing tools for organizational members (Ardichvili et al., 2003) or e-learning tools for students in education institutions (Wachter, Gupta, & Quaddus, 2000). Thus, our study focuses on this type of virtual community as our research context.

We argue that focusing on this kind of virtual community may help us advance our understanding of participants' knowledge-sharing behavior due to the different levels of participants' personal stakes from those in public online communities. Unlike participants in public virtual communities who have little to lose in their real lives for sharing their opinions online, participants in these exclusive virtual communities may have (or at least perceive) their