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Does humility facilitate knowledge sharing? Investigating the role of humble knowledge inquiry and response

Amitabh Anand, Isabelle Walsh and Sandra Moffett

Abstract

Purpose – *Despite the strong focus on virtues in firms, humility is little recognized in the management literature and, more particularly in the literature about knowledge sharing (KS). Despite efforts to foster KS among employees in firms, the effectiveness of this process narrows down to the dyadic relationship between the knowledge seeker and provider within firm. This paper aims to investigate the role of humility in the KS process in dyadic activity.*

Design/methodology/approach – *The authors undertake an exploratory investigation to fill some of the gaps found in the literature. The paper draws insights from psychology, history, religion, current events and management literature.*

Findings – *The authors identify several individual propensities that help predict humility towards sharing knowledge from seeker (humble knowledge-inquiry) and provider perspectives (humble response). They propose a new conceptual process model of KS with humility as an important variable to consider. This work highlights several promising directions for future research.*

Originality/value – *As per the authors' knowledge, this is the first paper that investigates the role of humility in knowledge sharing from dyadic perspective. The authors also introduce concepts of humble knowledge inquiry and humble response in a dyadic context for effective knowledge sharing process.*

Keywords *Knowledge sharing, Humility, Dyadic, Humble inquiry, Humble response*

Paper type *Conceptual paper*

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1. Introduction

Knowledge is a critical resource in economies (Nonaka and Takeuchi, 1995) and one of the few assets that tends to grow when shared (Quinn, 1996). For organizations to capitalize on this asset, it needs to be shared amongst employees (Brcic and Mihelič, 2015) to transform individual knowledge into organizational knowledge (Foss *et al.*, 2010). Furthermore, while working in firms, people often face complex or ambiguous challenges, requiring the exchange or sharing of knowledge which leads to knowledge creation and innovation (Jones and Mahon, 2012; Zhou and Li, 2012), team creativity (Kessel *et al.*, 2012), sustainable competitive advantage (Alavi and Leidner, 2001; Ardichvili *et al.*, 2003) and organizational success (Smith, 2001; Wang *et al.*, 2014). Knowledge sharing is often a cornerstone in the knowledge management strategy of many firms (Riege, 2005). However, although employees interact and communicate with, and depend on, others for work-related knowledge, not everyone in every situation is willing to share their knowledge (Anand and Walsh, 2016), and not sharing knowledge has been considered an unethical practice in many organizations (Panda, 2012; Baskerville and Dulipovici, 2006). The literature on knowledge sharing (KS) has investigated many antecedents of KS. Examples include Razmerita *et al.* (2016) from an individual perspective, Ipe (2003) on motivation, Bock *et al.* (2005) on attitude, Kankanhalli *et al.* (2005a, 2005b) on self-efficacy, Levin and Cross (2004)

on the strength of ties, Chiu *et al.* (2006) and Wasko and Faraj (2000) on trust and reciprocity norms, and Mueller (2015) on culture at the individual level . However, there is very little evidence for the construct of humility and how it could foster KS. Humility is considered an ethical value in individuals (Jennings *et al.*, 2005), an ethical requirement for managers (Argandoña, 2017) and one of the ethical duties of a leader (Caldwell *et al.*, 2017), but appears to be neglected, or at least not highlighted as a primary virtue, in the business world (Argandona, 2015). Therefore, while being widely accepted as a virtue, humility has received little attention from organizations (Frostenson, 2015), especially in the field of KS. This raises the following questions:

- In a dyadic one-to-one relationship, does humility play a significant role in the KS process between a knowledge seeker and a knowledge provider?
- What individual and organizational specificities, if any, facilitate humble knowledge seeking and humble knowledge providing?

This paper undertakes an exploratory investigation to answer these questions, attempting to theorize the construct of humility as an antecedent of KS, drawing its sources from research fields that are tangential to management. Specifically, in the context of a dyadic KS relationship within a network of relationships, we refer to two concepts related to humility that are emerging in the literature – "humble inquiry" (originally coined by Schein, 2013) and "humble response" (Leach and Ajibade, 2016). We investigate if there is a reciprocal relationship between these two concepts, and the factors that may moderate or mediate the effectiveness of humility in the KS process. We propose a new model of KS where humility is highlighted as an essential component.

Our paper is structured as follows. First, we describe our methodological and systematic approach to the literature. Second, we investigate the literature on KS, highlighting the dyadic relationship between provider and recipient, and the emergence of the concept of humility in this research domain. We then investigate humility as a concept in the broader literature. Next, we define "humble inquiry" and "humble response" and propose different KS scenarios, before focusing on one such scenario through a KS process model with humility. Finally, we discuss our contributions, the limitations of our work and future research avenues.

2. Methodology

Undertaking a systematic literature review requires a methodological approach and defined keyword protocol to identify texts related to humility.

As we found few documents that combined the study of KS and the term *humility* and no existing suitable framework, we had to draw information from very diverse literatures. We therefore applied a narrative overview approach (Green *et al.*, 2006; de Geofroy and Evans, 2017), whereby the findings of the literature retrieved from database searches, manual searches, and authoritative texts are summarized (Green *et al.*, 2006) and many pieces of information are combined into a readable format (Green *et al.*, 2006; Ferrari, 2015). Our findings are summarized below.

To identify the relevant theoretical foundation, including empirical models and conceptual studies of humility, we conducted a systematic literature search. We drew on literature extracted through a list of diverse keywords, starting with *humility* combined with *knowledge sharing* and expanding to include keywords such as (*humility* and *business*), (*humility* and *organization*), (*humility* and *management*), (*humility* and *knowledge management*) and finally (*humble inquiry* and *humble response*). We started the search using the Scopus database but also conducted complementary searches on Google Scholar, using the same keyword protocol as applied to the Scopus database. Documents were selected based on the following criteria:

- reference to humility, humble inquiry, and humble response in books, journals and conference papers;
- studies focusing on organizational, dyadic, group and individual levels;
- humility addressed in broader management and business disciplines; and
- papers that explicitly address humility in the knowledge management and KS literatures.

After careful investigation of all articles highlighted in our search, and of some additional articles cited in primary sources, we eliminated overlaps between the two databases and sources that were irrelevant to our study. This resulted in a compilation of 44 articles, which we retrieved, read and analyzed (Appendix).

To guide our reading and understanding, we split the 44 papers into three categories: conceptual viewpoints, empirical analysis (containing qualitative and/or quantitative data) and reviews. We also identified the research focus of each article as outlined in the Appendix. Key to the systematic literature review was our focus on the concept of humility, its emergence in KS and possible theoretical gaps.

3. Knowledge sharing and humility

In this section, we first define and explain the KS process from an organizational, individual and interpersonal perspective. This leads us to highlight humility as an individual characteristic with possible significance in the KS process.

3.1 Explaining knowledge sharing

KS is one of the core activities of knowledge management (Zhang and Jiang, 2015). KS between employees, within and across teams, allows organizations to exploit and capitalize on knowledge-based resources (Wang and Noe, 2010; Ismail *et al.*, 2009). KS involves donating and collecting knowledge (Van den Hooff and De Ridder, 2004; De Vries *et al.*, 2006). The former implies an individual's willingness to share, while the latter involves consulting, adopting, and accepting intellectual capital and know-how (Lin, 2007; De Vries *et al.*, 2006). Knowledge can be shared at various levels: one to one (from one individual to another, Anaza and Nowlin, 2017), one to many (from an individual to a group, Connelly and Zweig, 2014), many to one (from a group/organization to an individual, Cerne *et al.*, 2017) or many to many (from a group/organization to another group/organization, Connelly *et al.*, 2012). Although KS is context-specific and varies in terms of definition and process (Sergeeva and Andreeva, 2016), in this paper, we are specifically interested in the one-to-one level of the KS process. Hence, we define KS as "an exchange of knowledge between two individuals: one who communicates knowledge and one who assimilates it" (Paulin and Suneson, 2012, p. 83).

KS can occur in various circumstances and is mainly driven by individual characteristics, interpersonal relations or situational demands (Zhang and Jiang, 2015). Many researchers have investigated it from different perspectives: individual (Judge and Bono, 2001; Zhang and Jiang, 2015), interpersonal (Brcic and Mihelič, 2015; Chowdhury, 2005; Mooradian *et al.*, 2006; Wu *et al.*, 2007) and organizational (Kovacic *et al.*, 2006; Liebowitz, 2003; Nelson *et al.*, 2006). In this paper, we are specifically interested in the individual and interpersonal perspectives, while taking into consideration the organizational environment and reflecting on key antecedents of KS that include:

- individual providers' characteristics (Judge and Bono, 2001);
- interpersonal characteristics (Chowdhury, 2005; Mooradian *et al.*, 2006; Wu *et al.*, 2007); and
- organizational characteristics (Liebowitz, 2003; Nelson *et al.*, 2006).

From an individual perspective, Brcic and Mihelič (2015) categorized the factors contributing to KS as intrapersonal (e.g. employee motivation and willingness) and interpersonal (e.g. the working relationship between co-workers). Considering interpersonal factors, communication between employees is critical and inter-individual and team relationships are based on how people communicate (Barker and Camarata, 1998; Jones, 2004i) with individual communication styles contributing to KS: for example, an extrovert communication style predicts KS attitudes in different work-related teams (De Vries *et al.*, 2006). From a situational perspective, KS can happen under various circumstances: Bartol and Srivastava (2002) identify four important approaches for individuals to share knowledge: contribution of knowledge to organizational databases; sharing knowledge in formal interactions within or across teams or work units; sharing knowledge in informal interactions with individuals; and sharing knowledge within communities of practice, which are voluntary forums of employees formed to discuss a topic of interest.

From an interpersonal perspective, KS involves communication, interaction and the exchange of skills, expertise, and information between two or more people. It implies actively communicating what one knows to others (Van den Hooff and de Ridder, 2004) and requires the involvement of at least two parties (Zhang and Jiang, 2015). Furthermore, collaboration and interpersonal relationships between individuals are essential for collaborative inquiry and KS (Reynolds, 2016). KS depends on interdependence between workers (Anand and Walsh, 2016), and in the process of knowledge seeking, individuals communicate in their daily routines, through meetings, conversations, and other forms of communication (Weick, 1979). We refer to communication as human interaction through oral conversations and the use of body language while asking questions, inquiring or reciprocating. KS requires dynamic interaction (Shariq, 1999) and the involvement of a minimum of two parties (dyad) (Zhang and Jiang, 2015). Furthermore, for KS to occur, a dyadic setting should be in place, although there is a dearth of studies that attempt to understand dyadic KS behavior (Pan *et al.*, 2014). In a KS process, a seeker and provider (components of the dyad) are essential, and the effectiveness of the KS depends on the quality of interpersonal communication between them (Barker and Camarata, 1998). Furthermore, KS depends on the relationship stance between employees (Brcic and Mihelič, 2015) and the quality of formal and informal conversations (Davenport and Prusak, 1998). Conversations are not "limited to a merely additive back and forth exchange of information [. . .] [they] can also afford the generation of new knowledge, since each remark can yield new meaning as it is resituated in the evolving context of the conversation" (Cook and Brown, 1999, p. 393). Conversations (when positive) help create a shared experience (Dixon, 1997), build trust and strengthen the relationships between the participants (Harkins, 1999), and are a prerequisite for effective KS (Szulanski, 1996). Furthermore, according to Schein (2013), building relationships between humans is a complex process, with willingness and curiosity considered as missing factors in most conversations. He further suggests that what we ask and the way we ask it define a trusting relationship, which in turn facilitates better communication and ensures collaboration towards accomplishing a task (Schein, 2013).

From an organizational perspective, KS may occur spontaneously or be formally facilitated in organizations. Ford and Chan (2003) argue that for companies to gain competitive advantage through KS, an appropriate culture and environment must be in place. Furthermore, many studies have found that KS is strongly related to organizational culture (Issa and Haddad, 2008; Yang, 2007; Al-Alawi, 2005; Fahey and Prusak, 1998) and the cultural values of individual employees (Jennex, 2006; Hutchings and Michailova, 2004; Hofstede, 2001; Pfeffer and Sutton, 2000). Organizational culture influences not only the successful achievement of KS but also knowledge workers' morale and productivity (Lai and Lee, 2007; Ruppel and Harrington, 2001a; Carayannis, 1998). An organizational culture that supports informal and formal KS (Suppiah and Sandhu, 2011) and provides incentives to share knowledge (Wang and Noe, 2010; Wang *et al.*, 2014) increases the chances of

successful KS. From an organizational perspective, senior managers' actions and leaders' supportive behavior also influence KS. According to Carmeli *et al.* (2013), supportive leadership behavior is directly and indirectly related to KS. On the other hand, according to Owens *et al.* (2013), humble people make the most effective leaders and are more likely to be high performers in both individual and team settings.

The literature generally argues that employee relationships are based on trust, self-efficacy, reciprocity, and similar characteristics (Wang and Noe, 2010). In a dyadic network, the nature of social ties is important and depends on the frequency of interaction and closeness of the relationships (Naif-Marouf, 2007). Being arrogant or self-focused can impair relationship quality (Peters *et al.*, 2011). For an organization to benefit from the greatest impact, workers must establish a deep connection to better understand the knowledge provider's thoughts (Brcic and Mihelič, 2015). Ichijo and Nonaka (2007) suggested that, good conversations in organizations create social knowledge and as positive conversational routines and the interaction patterns enhance relationship building while traits such as defensive arguing or "unequal turn-talking" (Ellinor and Gerard, 1998) prevent KS (Mengis & Eppler, 2008). Employees who communicate with each other frequently and/or have a strong emotional attachment are more likely to share knowledge than those who communicate infrequently or are emotionally detached (Naif-Marouf, 2007).

While seeking knowledge, we communicate and interact, which may change the course of our actions. Individuals have different needs, desires and goals that help them in choosing behaviors that will bring about the desired results (Krok, 2013). This implies that the person who needs knowledge may decide what communication or conversational approach is best suited to engage with co-workers in the search for knowledge. People willing to share their knowledge will expect others to reciprocate for mutual benefit and to achieve both individual and organizational goals (Lin, 2007; Adler and Kwon, 2002). If people who have rich knowledge yet tend not to share it with co-workers or seekers see humility in others, this may encourage them to become more willing to engage in the KS process; humble people tend to offer more help to those in need than less humble people (LaBouff *et al.*, 2012). Therefore, we propose that the initial step to forming a positive and strong relationship with co-workers may begin with humble conversations. When an individual seeks knowledge, the KS interaction between seeker and provider depends on the seeker's learning attitude – perceived as modest, open-minded, and humble or hubristic, arrogant and pretentious; this interaction depends on the quality of the seeker–provider relationship (Zhang and Jiang, 2015). Furthermore, researchers suggest that humble individuals may act as social nodes that reinforce positive social relationships in a group (Kruse *et al.*, 2014; Zhang and Jiang, 2015), and both tacit and explicit knowledge are easier to transfer through strong ties (Reagans and McEvily, 2003). The elements summarized above lead us to investigate whether humility could be a characteristic that can help the frequency of dyadic interactions to build better relationships for KS.

3.2 Emergence of the concept of humility in the knowledge sharing literature

The concept of humility is under-studied in the field of KS but has been emerging in recent years as a new concept of interest. We identified four works on this subject in the Scopus and Google Scholar databases: Zhang and Jiang (2015), Mallasi and Ainin (2015), Zhang and Sundaresan (2010) and Dezdar (2017).

Zhang and Jiang (2015) argue that in a dyadic situation, if knowledge providers wish to increase self-efficacy or authority, they prefer knowledge seekers to approach them respectfully and humbly, with a willingness to listen and learn, rather than with an attitude of hubris and arrogance. They highlight two important factors that impact KS: the seeker's attitude and the seeker–provider relationship. If the seeker demonstrates a learning attitude (being modest, open-minded and humble), then the provider is more willing to share. Conversely, if the seeker's attitude is arrogant and pretentious, then the provider may be

reluctant to share. These authors also suggest that good relationships and trust increase provider willingness to share, but they fail to provide evidence on how relationships are built. We argue that gratitude is an important element in building relationships and increasing humility: if the seeker receives the expected response, they should express gratitude, which helps develop the seeker–provider relationship. Zhang and Jiang (2015) suggest that managers should build a culture that encourages employees to seek knowledge and that a match between the seeker's and provider's professional competencies can help build relationships. Managers should create a climate of trust to facilitate KS. Mallasi and Ainin (2015) investigate KS in the academic environment, identifying it as a social interaction facilitated by non-monetary factors such as the enjoyment of helping, reputation, self-efficacy, interpersonal trust, and humility. They define humility as the lack of a sense of superiority, arrogance, and haughtiness in one person toward others (p. 3). They suggest everyone should be treated with respect, gentleness, kindness, and forgiveness and that high levels of humility might promote KS. They investigate humility in scholars and generally. Humility can easily be recognized in scholars when they admit their shortcomings and their struggle to overcome them (Crigger and Godfrey, 2010). A scholar is a knowledge seeker or learned person who has much knowledge in a particular area (Merriam-Webster Online, 2016). Therefore, to become a scholar, one should continuously seek knowledge through learning, and so should lack arrogance and over-confidence (Ghosh, 2002). In the same context, Dezdar (2017) suggested that humility is one of the factors that encourages individuals to share knowledge in an academic setting. In her studies, using a student sample set, it was found that humility is positively related to KS behavior and strongly influences individuals to share knowledge with others. She claims that individuals who hold more knowledge tend to be humbler. Furthermore, humility proved to be a non-monetary motivational factor in knowledge sharing behavior. Zhang and Sundaresan (2010) tell us that the knowledge recipient may be humble or arrogant, with different propensities for learning characterized by different learning inhibition cost functions. A humble knowledge worker is more willing to learn and will not be ashamed of reporting their learning, whereas an arrogant knowledge worker will be more reluctant to learn after expanding their knowledge. When a provider's knowledge level is relatively low, that of potential recipients will also be low. Zhang and Sundaresan suggest that firms should be able to deal with different types of knowledge recipients (arrogant or humble) when seeking optimal rewards. Other researchers have suggested that KS depends on cooperative relationships between different organizational members; dyadic cohesion is therefore very important in understanding KS, as an individual may show high levels of humility in one facet of life (e.g. academic ability) but not necessarily in another (e.g. social relationships) (Meagher *et al.*, 2015).

3.3 Humility in the literature

As there is little evidence on humility in the knowledge management and KS literatures, we investigate this concept further in the broader literature. Humility has been studied in psychology, theology, ethics, management, etc. and its importance was highlighted over a decade ago by Exline and Geyer (2004) and Vera and Rodriguez-Lopez (2004). In recent years, investigation into the concept of humility has gained momentum (Argandona, 2015; Argandoña, 2017; Frostenson, 2015). Understanding humility is important for organizational scholars as it underpins the choice and capacity to approach one's work (and life) from a broader, interdependent perspective that is productive, relational and sustainable (Nielsen and Marrone, 2018).

3.3.1 Defining the characteristics of humility. Humility is rooted in philosophy and religious beliefs (Hopkin *et al.*, 2014). In psychology and personality studies, humility has mostly been addressed from an individual perspective (Davis *et al.*, 2011; Exline and Hill, 2012; Landrum, 2011). In business and management, the importance of this construct has

recently been highlighted in the literature (Argandona, 2015; Baldoni, 2009; Frostenson, 2015; Morris *et al.*, 2005) as a personality trait in managers, as an essential quality for good performance (Argandona, 2015), as a virtue related to the economic, cognitive, and moral aspects of business practice and managerial work (Frostenson, 2015), and as an empowering factor for leadership (Chiu *et al.*, 2012; Owens *et al.*, 2013; Baldoni, 2009). Furthermore, it has been studied as a predictor of generosity (Exline and Hill, 2012), linked to perceived religious beliefs (Hopkin *et al.*, 2014), important to human relationships (Davis *et al.*, 2011; Kruse *et al.*, 2014) and as a personality trait (Chancellor and Lyubomirsky, 2013; Meagher *et al.*, 2015).

Various authors view humility as a virtue (moral excellence) (Argandona, 2015; Frostenson, 2015; Dwiwardani and Hill, 2014). According to Chiu *et al.* (2014), humility is a virtue that exists in both Eastern (Ou *et al.*, 2014) and Western philosophies (Owens *et al.*, 2013). Other researchers consider humility a personal hallmark (Chancellor and Lyubomirsky, 2013), an accurate assessment of one's abilities (Tangney, 2000; Landrum, 2011; Vera and Rodriguez-Lopez, 2004), a personal orientation (Morris *et al.*, 2015), the opposite to arrogance (Meagher *et al.*, 2015), a personality trait (Owens and Hekman, 2012), an interpersonal characteristic (Owens *et al.*, 2013), a marker of healthy interpersonal relations (Exline, 2008), a willingness to learn from others (Templeton, 1997), a product of egoism (Solomon, 1999), a trait of forgiveness and patience (Lavelock *et al.*, 2014) or a value (Exline and Geyer, 2004). Chancellor and Lyubomirsky (2013) show that individual humility depends on the situation and on interpersonal and intrapersonal qualities (e.g. secure, accepting identity; freedom from distortion; openness to new information; a focus on others; and egalitarian beliefs). Less ego predicts humility, gratitude and forgiveness (Dwiwardani and Hill, 2014). Owens and Hekman (2012) investigated why some leaders behave humbly while others do not, showing how leaders can engage followers through a developed sense of humility, which in turn can lead to organizational effectiveness.

Humility has been linked to openness and gratitude (Chiu *et al.*, 2012) and modesty (Davis *et al.*, 2011). It is a desirable personal quality, providing the foundation for moral action in the workplace (Nielsen *et al.*, 2009; Owens and Hekman, 2012) and for openness to new ideas and advice seeking (Morris *et al.*, 2005; Owens *et al.*, 2011). Humility lets us go more than halfway to meet the needs/demands of others (Downer, 2009) and contributes to social cohesion and trust (Argandona, 2015). It allows the expression of forgiveness, cooperation, and a desire to help (Peters *et al.*, 2011) and feelings of personal worth and self-focus (Kruse *et al.*, 2014). For context setting, we adopt the following working definition, based on the facets of KS underscored by Peters *et al.* (2011) and Tangney (2000): humility is being modest, respectful and open-minded rather than arrogant, self-centered and conceited. Humility can be enduring and dispositional (grounded in personality) or situational (situation- and context-specific).

3.3.2 Humble behavior: true humility versus false-pretense humility. It is sometimes difficult to understand whether humble behavior is genuine or a pretense to obtain something in return. For example, in Western management, there is a growing tendency to examine humility (Chiu *et al.*, 2012); Chinese people and other East Asians may appear humbler, but brainwave analysis suggests they can be as proud and arrogant as other cultures (Chen, 2016; Liu *et al.*, 2018). Bobb (2013) writes: "while meeting with the boss, your co-worker is differential and winsome, but back in the office, he is full of bluster and condescension for all around him. In public, he wears humility like a comfortable hat, but in private it is all about his self-interest." Some authors suggest that true humility and false-pretense humility can be identified. People with the latter attitude are self-centered and self-congratulating, prone to blame others, slow to accept responsibility for mistakes (Bobb, 2013), insecure, people-pleasing and self-focused. On the other hand, true humility may be witnessed through characteristics such as admitting mistakes, putting others first, talking less and listening

more, self-sacrificing and being keen to serve others (Bobb, 2013; Argandona, 2015; Tangney, 2009).

3.4 Humility in practice

Kellogg's includes humility as one of its core values: "We have the Humility and Hunger to Learn." When a firm adopts humility as a core value, this can make employees aware of its importance to its mission (Ferguson, 2013), thus encouraging them to contribute and engage in a KS culture. US-based Rockwell Automation also instills a humility culture. It has adopted the widely used leadership style of the "fishbowl," in which senior leaders take questions from junior employees, with unscripted conversations on any topic. Furthermore, leaders routinely demonstrate humility by admitting to employees that they do not have all the answers, and by sharing their own personal journeys of growth and development (Prime and Salib, 2014). This exhibits how senior employees can express humility by sharing their personal knowledge.

Vera and Rodriguez-Lopez (2004) offer the examples of Odebrecht Organization in Brazil and Mary Kay in the USA. Odebrecht states that although it is very important for the organizational culture to explicitly recognize the value of humility, it is even more important for leaders at all management levels to clearly display humility. Mary Kay Ash modeled her own firm around respect for the golden rule: "Do unto others as you would have them do unto you." Its culture, structure, and sales system reinforce the need to be humble, and to think about others.

Recruitment practices can help firms identify people willing to engage in KS with humility, making firms more agile and strategic by creating a culture to engage them as team players. For example, Rick Hensley of Messer Construction used a "personal humility index" to gage humility in potential new hires. His main goal was to find candidates that "see themselves as others see them" (Baldoni, 2009). Lazlo Bock of Google also looks for humility in new hires, not just humility in creating space for others to contribute, but 'intellectual humility': "Without humility, you are unable to learn" (Prime and Salib, 2014). UPS Corporation's leaders are humble and keen to serve others; there is an awareness of accountability to others, and to the entire organization, that many companies simply do not have because their leaders are focused on themselves rather than on their people (Goleman, 2013).

4. Proposal of a new model

Combining the literatures on KS and humility leads to the two concepts of humble knowledge inquiry and humble response, which have started emerging in the broader literature but have not been properly defined or investigated in depth in relation to KS. We attempt to fill this void. We propose different KS scenarios and introduce a new conceptual model of the KS process facilitated by humility in both knowledge seekers and providers.

4.1 Humble knowledge inquiry and humble response

A humble person is more likely to activate others' motivation to share knowledge than a hubristic person (Zhang and Jiang, 2015). If the knowledge seeker's communication approach is offensive/abusive, disrespectful, commanding or authoritative, the provider will be reluctant to share knowledge, or might share partial knowledge or hoard knowledge. If a seeker's communication or inquiring approach is humble, the provider will be more inclined to share knowledge. Therefore, to nurture the KS process, it appears essential for knowledge seekers to adjust their actions toward humility and to align their behavior accordingly (Zhang and Jiang, 2015); we call this process the *humble knowledge inquiry*. Furthermore, humility is viewed as an interpersonal stance that is other-oriented rather than

self-focused, marked by the ability to restrain egotism (Davis *et al.*, 2011; Davis *et al.*, 2015). So, in this context, when the knowledge seeker makes a humble inquiry, the knowledge provider is inclined to share with a humble response. On the other hand, a knowledge holder, though sometimes vested with authority or power as they retain some knowledge, may respond and share knowledge with a humble attitude; we call this process the *humble response.*

In the literature, we identified two variables that appear to facilitate humble knowledge inquiry and response, and humility may be perceived as having two facets: situational and dispositional. The situational facet is linked to specific situations and opportunities; the dispositional facet is determined by personality and values (Peterson and Seligman, 2004; Tangney, 2000, 2002). In the same way, humble inquiry is driven by either the demands of the work situation or by personal disposition and values. Humble inquiry is mostly an interpersonal characteristic (Argandona, 2015); variables like openness (Chancellor and Lyubomirsky, 2013; Davis *et al.*, 2013; Morris *et al.*, 2005), patience (Argandona, 2015), learning orientation (Owens *et al.*, 2012), gratitude (Davis *et al.*, 2011; Kruse *et al.*, 2014) and non-arrogance (Landrum, 2011), curiosity (Schien, 2009a), sincerity (Davis *et al.*, 2013), low self-esteem (Exline and Geyer, 2004) and honesty (Ashton and Lee, 2008) may be considered as essential (Figure 2). Schein (2013), the first to coin the term "humble inquiry", suggests that organizations should create a climate in which people, by asking genuine questions, display an interest in others so that they will want to tell the truth (Schein, 2013). Humble inquiry helps the knowledge seeker obtain help and advice and build healthy relationships (Figure 1).

Humble response, on the other hand, is more of an intrapersonal characteristic. At the dispositional level, variables found to influence humble-response behavior are generosity (Exline and Hill, 2012), greed avoidance (Davis *et al.*, 2011), modesty (Chancellor and Lyubomirsky, 2013), empathy (Davis *et al.*, 2013; LaBouff *et al.*, 2012; Peters *et al.*, 2011), low ego (Vera and Rodrigues-Lopez, 2004), transcendence (Oc *et al.*, 2015; Exline *et al.*, 2004), appreciation (Morris *et al.*, 2005; Tangney, 2000), self-improvement (Owens *et al.*, 2013) and low arrogance (Rowatt *et al.*, 2006) (Figures 2 and 3).

Although individual specificities may facilitate humble knowledge inquiry and humble response and cause intrinsic motivators to behave humbly (Deci and Ryan, 1987), the

Figure 1 Individual specificities that facilitate humble knowledge inquiry

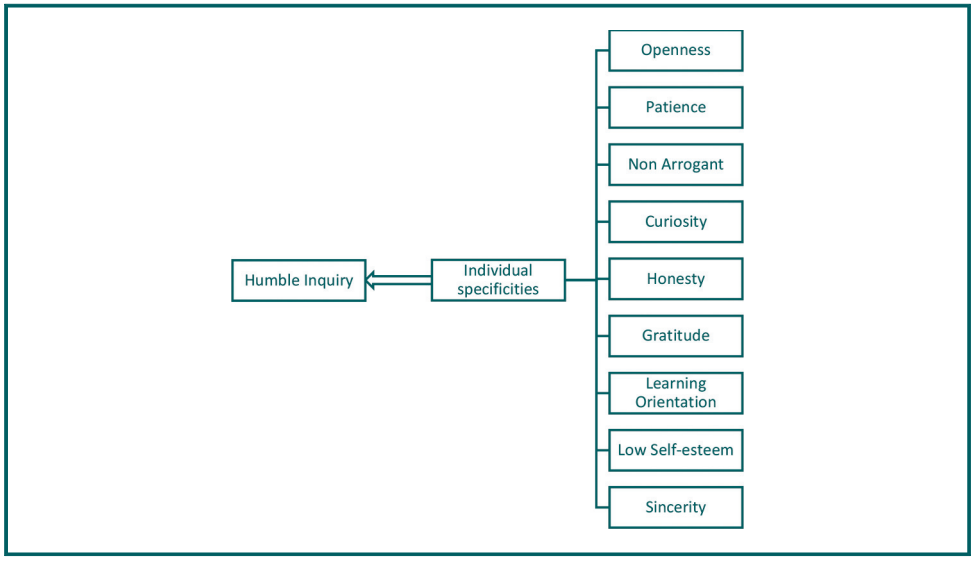


Figure 2 Individual specificities facilitating humble response

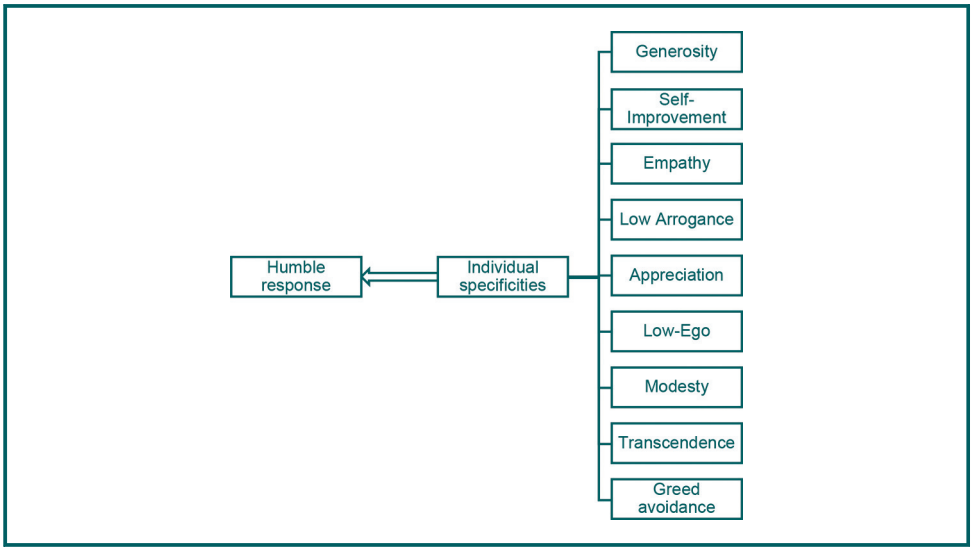
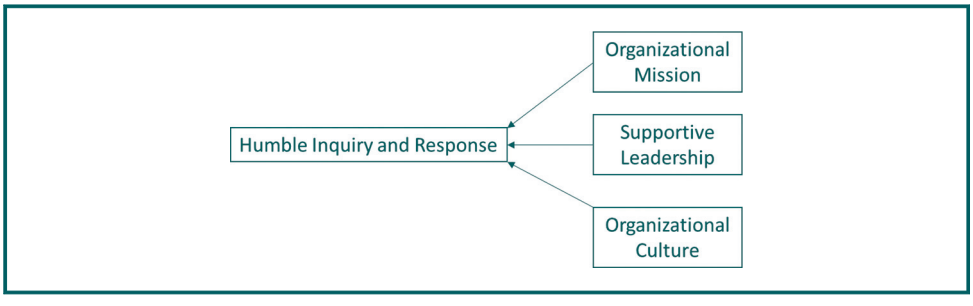


Figure 3 Organizational specificities facilitating humble inquiry and response



literature suggests that extrinsic organizational factors may also influence individuals to develop humble behavior (Ferguson, 2013; Vera and Rodriguez-Lopez, 2004). Furthermore, organizations have embraced humility through various methods, for example in the mission statement, as a core organizational value (Ferguson, 2013) or as part of a nurtured organizational culture. Embracing humility at the organizational level was found to increase employee participation in humble behavior (Ou *et al.*, 2014; Vera and Rodriguez-Lopez, 2004). Organizations may also use recruitment methods to identify humble individuals, which helps firms in promoting individuals as humble team players and increases the learning capabilities of others (Prime and Salib, 2014; Baldoni, 2009). Within organizations, it has also been highlighted that supportive and humble leaders help individuals to follow humility (Nielsen and Marrone, 2018) (Figure 3).

4.2 Humility and possible knowledge sharing scenarios

Whilst the personal specificities of both recipient and provider are crucial in KS, a knowledge holder may choose to share knowledge irrespective of those seeking it. If this is done humbly, it can encourage recipients to welcome shared knowledge; we call this process the *humble knowledge offer*. We propose three possible scenarios for the sharing process.

In Scenario 1 (Figure 4), the knowledge provider acts as the initiator in offering the knowledge. Altruism may be one of the provider's top-ranked values, derived from the intrinsic enjoyment of helping others (Kankanhalli *et al.*, 2005b), making them humble enough to share knowledge. At the same time, extrinsic motivations (e.g. rewards, recognition, reciprocal benefits and self-esteem) may encourage the provider to develop humble behavior. An extrinsic motivation would be a monetary reward for KS offered by the organization (Beer and Nohria, 2000; Hall, 2001b), which could lead to a better overall outcome (Kankanhalli *et al.*, 2005a). For instance, according to Lin (2007), the KS costs for an individual (e.g. time taken, mental effort, etc.) provide potential gains in receiving organizational rewards. If we are motivated by our own needs and values, we are intrinsically motivated; if we are motivated by someone or something else, we are extrinsically motivated (Deci and Ryan, 1980). Furthermore, in this scenario the provider may offer knowledge when someone appears in need or when asked to do so by a third party or may volunteer to give away knowledge whether or not it is needed (at that particular time). In this case, the recipient is not an active seeker; they receive the knowledge passively following the provider's initiative.

In Scenario 2 (Figure 5), the knowledge recipient is the initiator in seeking knowledge. Beyond the extrinsic motivation of obtaining much-needed knowledge through a humble

Figure 4 Scenario 1 – Provider as initiator (humble knowledge offer)

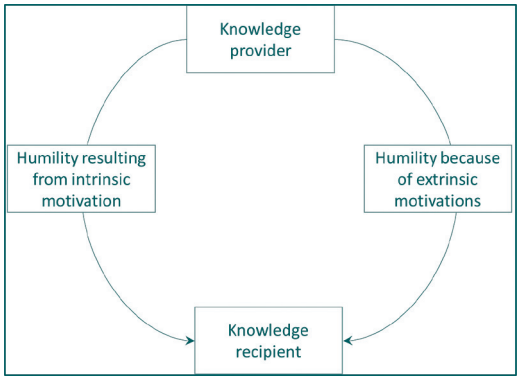
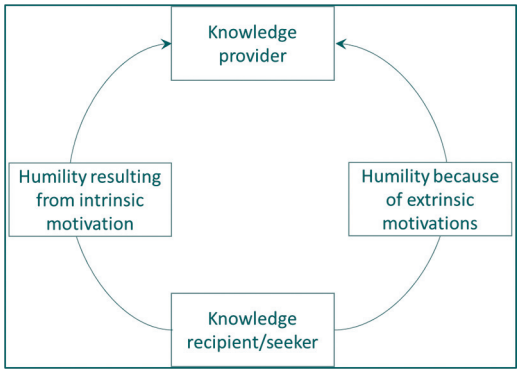


Figure 5 Scenario 2 – Recipient as initiator (humble knowledge inquiry)



attitude, the seeker has values (e.g. down to earth, modest, polite, and altruistic) that may intrinsically motivate them to be humble. They may also observe co-workers seeking knowledge with humility and be inclined to replicate this attitude. Also, if the seeker has received knowledge passively through a humble provider, this might make the seeker reciprocate with humility when actively seeking knowledge.

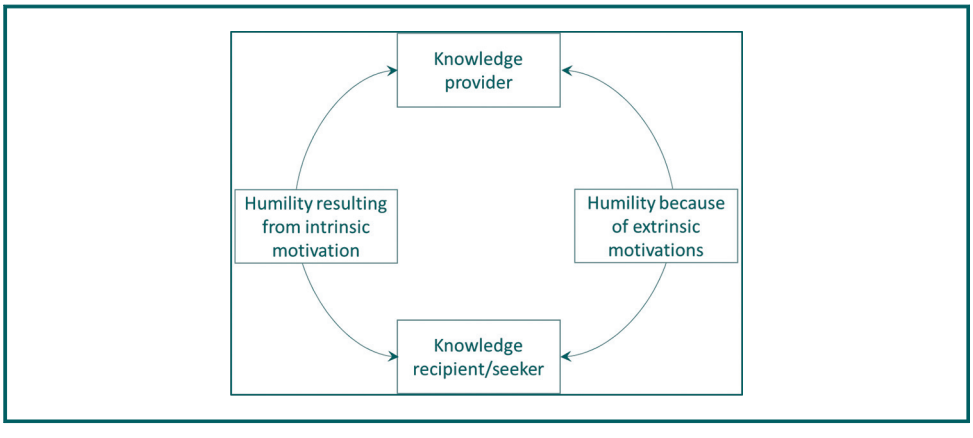
In Scenario 3 (Figure 6), there is a two-way initiative (from both seeker and provider) toward KS; both may be intrinsically and/or extrinsically motivated to ask for, share or receive knowledge with humility. Both parties may engage in KS with humility because intrinsically they enjoy the process and find it inherently interesting (Deci and Ryan, 1980) and are satisfied by enhancing their knowledge self-efficacy or confidence in their ability to provide knowledge that is useful to the organization (Lin, 2007; Constant *et al.*, 1994). They may also be driven by a goal that extrinsically motivates them (Ryan and Deci, 2000). Here, extrinsic benefits could be reputation (Bock *et al.*, 2005), feedback potentially leading to active participation (Donath, 1999), and reciprocity (Wasko and Faraj, 2000).

Bassett-Jones and Lloyd (2005) found that intrinsic motivators outweighed financial incentives to make employees willing to contribute ideas. Furthermore, researchers assert that intrinsic motivation has significant positive effects on KS compared to extrinsic motivation (Law *et al.*, 2017; Bock and Kim, 2002; Lucas and Ogilvie, 2006).

The above scenarios are applicable in the context of sharing tacit or explicit knowledge. However, these scenarios hold good only in a workplace setting that involves face-to-face communication: interactions and behaviors may differ in different contexts, for instance online or virtual environments.

We highlight in the scenarios described above that humility can be an intrinsic motivator (dispositional character) and/or an extrinsic motivator (driven by reward or influenced by others). We outline situations when the seeker or provider actively seeks/provides and/or passively seeks/provides knowledge; the seeker's/provider's dispositional characteristics (intrinsic motivation) may make them always remain humble in any situation or they may observe others doing the same and develop a humble attitude (seeker and provider), or organizational rewards may drive them to develop a humble attitude (seeker and provider). Humility as a virtue is intrinsic to one's character (Argandona, 2015), and extrinsic motivation of humility in business complements the normative and consequentialist idea of why humility is relevant in today's business (Frostenson, 2015, p. 97). Therefore, even though the literature argues that individuals should possess the virtue of humility intrinsically (Frostenson, 2015; Argandona, 2015), extrinsic motivators may also encourage people to embrace and develop humble attitudes.

Figure 6 Scenario 3 – Both provider and recipient as initiators (reciprocity)



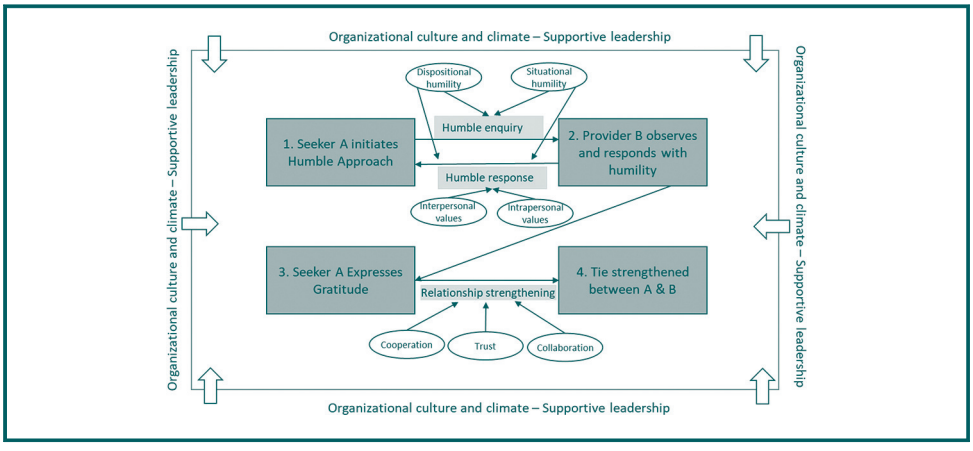
4.3 Sharing with humility: proposal of a model

In today's highly competitive corporate world, few people are prepared to offer their knowledge freely (Anand and Walsh, 2016); thus, KS is often induced by employees actively seeking knowledge from others. Based on the literature, humble inquiry by the knowledge seeker at work is more likely to induce a positive and humble response by the knowledge provider, irrespective of their dispositions. We propose a four-phase model of KS with humility (Figure 7) and define each phase accordingly.

Phase 1 (*humble approach*): Some scholars argue that dispositional humility is a trait present only in knowledge providers (Zhang and Jiang, 2015). However, the knowledge seeker, after identifying the source of knowledge (provider), may make a humble inquiry to seek specific answers or close knowledge gaps. Humility in an individual can induce generosity amongst others (Exline and Geyer, 2004), and individuals who have a humble attitude tend to receive more support from others (Exline and Hill, 2012). Hence, a humble approach by the knowledge seeker can increase the chances of the provider sharing with humility. Furthermore, humility has been described as a character strength (Peterson and Seligman, 2004) that is valued by people (Dahlsgaard *et al.*, 2005; Exline and Geyer, 2004) and related to multiple pro-social outcomes (Chancellor and Lyubomirsky, 2013). Therefore, we would suggest that this first phase of the KS process is optimized if the knowledge seeker is of a humble disposition (Landrum, 2011), and their humility is not situationally induced or pretentious (Zhang and Jiang, 2015).

During Phase 2 (*humble response*), the provider observes the seeker's approach and communication method. If the approach is humble, the provider will be more inclined toward generosity and might respond with humility. Concerning the provider, some researchers suggest that sharing one's knowledge is pro-social in nature, and there may not be any reward for such acts. Employees who are pro-socially inclined tend to be more interested in benefiting others (Bolino and Grant, 2016). The term "humility response" underscores that if the provider has knowledge that could be useful to someone else (whether actively seeking or not), they will donate it generously, i.e. humility can be a dispositional quality among providers (Zhang and Jiang, 2015), or, if they do not know the answer to the seeker's specific query, they will openly express their ignorance with humility, perhaps suggesting to the seeker what needs to be done to obtain the information (alternative information source). Zhang and Jiang (2015) point out that a sincere, modest or humble approach motivates others to respond similarly. Some authors highlight that in business, humility is a trait found in some knowledge providers, predicting ethical business

Figure 7 KS with humility



practices (Ashton and Lee, 2008), willingness to help (LaBouff *et al.*, 2012) and cooperation (Hilbig *et al.*, 2012). Furthermore, individuals tend to develop humble responses from the motivation that they get from leaders who are humble and supportive and generate positive workplace behaviors (Owens and Hekman, 2012). It has been highlighted that humble leaders empower followers (Ou, 2012).

During Phase 3 (*Gratitude*), gratitude complements the humble response. The literature shows that gratitude is associated with better relationship satisfaction, increases pro-social behavior, reduces self-focus, and promotes humility (Kruse *et al.*, 2014) and less negative affect following major life changes (Wood *et al.*, 2008). In our proposed model, if the relationship between seeker and provider should continue in future subsequent interactions, the seeker's expression of gratitude would promote and increase humility and pro-social behavior in the provider and build better relationship satisfaction (Kruse *et al.*, 2014; Peter *et al.*, 2011; Bartlett and DeSteno, 2006). Therefore, we suggest that gratitude may have a strong impact on the provider's subsequent humility, which in turn will help in building a stronger relationship between seeker and provider and nurture further KS.

Phase 4 (s*trengthening ties*): Although several dispositional and situational variables influence whether one person helps another (Penner *et al.*, 2005), helping one another in times of need is a cornerstone of high-quality human relationships (Labouff *et al.*, 2012). Humble interactions facilitate strong ties, create trust, and increase trustworthiness (Ou *et al.*, 2014; Sousa and van Dierendonck, 2015), cooperation (Exline and Geyer, 2004; Peter *et al.*, 2011), collaboration (Schein, 2013; Vera and Rodriguez-Lopez, 2004; Ou *et al.*, 2014; Lin, 2007), and high-quality and strong relationships (Peter *et al.*, 2011; Dezdar, 2017). If KS has taken place between the seeker and provider, gratitude may further help in strengthening their relationship (Kruse *et al.*, 2014). A social bond develops between the two, making the sharing process more effective. Humble behavior can also help repair broken relationships and builds a strong bond between people (Davis *et al.*, 2013; Worthington *et al.*, 2017). This fourth phase completes a dyadic closed loop of KS but may also serve as an example to other actors. Furthermore, humility combined with gratitude may build strong relationships, because the two are mutually reinforcing (Kruse *et al.*, 2014).

For the four phases to be effective, organizations play an essential role in facilitating humble practices among individuals. Since humility in organizations is a competitive advantage, it helps strategic leaders and firms to achieve outstanding performance (Vera and Rodriguez-Lopez, 2004, p. 398). For instance, adopting humility as a mission and as a core organizational value encourages employees to value humility (Ferguson, 2013) and humility as part of an organizational culture can increase pro-social behavior among individuals (Owens and Hekman, 2012; Vera and Rodriguez-Lopez, 2004). Leaders who represent organizations can support humility in individuals through a climate of empowerment (Ou *et al.*, 2014) and supportive leadership behaviors (Owens *et al.*, 2013), which help individuals develop humility (Nielsen and Marrone, 2018).

On the other hand, from an individual perspective, both seeker and provider may have interpersonal and intrapersonal values that could be prerequisites for humble behavior. Chancellor and Lyubomirsky (2013) show that individual humility depends on the situation, and on interpersonal and intrapersonal values (e.g. secure, accepting identity; freedom from distortion; openness to new information; focus on others and egalitarian beliefs). Furthermore, pro-social interpersonal values that facilitate humble behavior include modesty, respect, honesty, orientation towards others, willingness to ask for help or accept criticism, the ability to recognize others' strengths, and the tendency to feel awe before the sacred (Bollinger, 2010; Davis *et al.*, 2011). Intrapersonal values in both seeker and provider may include self-knowledge and virtue (Argandona, 2015), possession of an accurate or moderate view of the self (e.g. Bollinger, 2010; Tangney, 2000), and the ability

to assess personal characteristics relative to others (Tangney, 2002) rather than inflating one's self-evaluation.

Our model contributes to the investigation of KS by Zhang and Jiang (2015), who suggest that the knowledge seeker's characteristics affect the knowledge holder's willingness to share. Viewing others as humble should facilitate greater commitment to the KS process (Davis *et al.*, 2011). The added component of gratitude in a dyadic situation could encourage humble behavior from the provider and help build stronger relationships (Kruse *et al.*, 2014).

5. Conclusion

This study makes a theoretical contribution to knowledge management – and in particular knowledge sharing – research. The growing attention on KS as a critical success factor of knowledge management (Dezdar, 2017) motivated this paper in an effort to understand whether humility, often considered as an ethical value in individuals, is in fact an important factor for KS in a dyadic relationship, and what individual and organizational specificities, if any, facilitate humble knowledge seeking and humble knowledge providing. Through an extensive review of diverse literatures, our findings highlight that there are various factors that help both individuals and organizations to adopt different facets of humility in the KS process. We found that the knowledge seeker's role is essential in this process, as the seeker's humble approach can motivate the knowledge provider to share their knowledge and to do so with a humble response. Humility is driven by individual dispositions and situational constraints, which may lead to true or false-pretense humble behavior.

Furthermore, this study found that there are three important organizational factors, namely culture, mission and leadership, which can support effective KS between individual employees. We reveal how humble inquiry and response can promote the creation of strong social ties and relationships in a dyadic KS process. Our work shows that humility may be a prerequisite for KS, and so needs to be embraced not only at the individual level but also promoted across organizations.

6. Limitations

This paper, along with the proposed model, has limitations but also opens up many avenues for future research and contributes to the current body of literature on humility and KS. Humility remains a relatively new, poorly understood, and often neglected construct in organizational research (Oc *et al.*, 2015) and even more so in the KS context. One obstacle to an empirical approach to humility is the basic conceptual question of what humility actually is (Meagher *et al.*, 2015); there is therefore a need for researchers to seek greater consensus in their definitions of humility, particularly in the context of KS. One challenge that remains is to fully understand the intention behind a seemingly humble attitude. Might it be false-pretense humility driven by selfishness, opportunism, political motivations or self-promotion? A person may choose a humble approach based on the situation, but its success depends on how the knowledge seeker's behavior is interpreted by the knowledge provider. This further depends on the provider's traits or history of KS activities with a given seeker and requires further investigation. In our proposed model, we considered mostly one possible type of KS, where knowledge is recognized as needed by the knowledge seeker. Yet KS may also be initiated by a knowledge provider toward recipients who are not actively seeking knowledge. Hence, these recipients might not recognize the importance and usefulness of the knowledge that is shared with them (e.g. when a professor teaches passive students who do not want to learn). In this case, a different process model would have to be proposed.

Our model helps firms better understand the KS process at the one-to-one level and better facilitate and guide it. However, several caveats should be highlighted. First, humble

behavior may depend on cultural context and individual perceptions; for instance, it may be part of the existing norms in some cultures and exceptional and rare in others. As most of the existing research on which our model is based is set in the West, the model we proposed may need some adaptation to be applied to Eastern cultures. The provider might also feel that being too humble risks the seeker becoming a threat. KS depends on the willingness of individuals to share with others, and in some instances needs to be effectively encouraged and facilitated. Similarly, humility could be encouraged and facilitated, but forcing humility could also be a violent act (Kerr, 2017). Thus, KS and humility may be highly dependent on the context in which knowledge is voluntarily shared or requested.

7. Study implications and future research

This study provides practical implications for both managerial and organizational practices. For instance, to boost KS practices, firms could aim to nurture humble environments and promote humility through the appointment of humble managers. Managers/leaders often act as knowledge providers; employees who rate their managers as humble feel more engaged and less likely to quit, more committed to the leader's vision, and more trusting of and receptive toward their ideas (Feder & Sahibzada, 2014). Thus, humble and empowering leadership can help firms to nurture humility among employees at an organizational level (Owens, 2013). Furthermore, adopting humility as a core value in organizational mission and goals can attract employees who would be more inclined and motivated to work with humility.

However, some dilemmas in sharing knowledge with others that are faced by some individuals might only be resolved through rewards (Cabrera and Cabrera, 2002). Our proposed humility model may help reduce reward mechanisms and increase citizenship behavior among employees (Anand and Walsh, 2016; Lam and Lambermont-Ford, 2010).

Creating a humble environment as part of an organizational culture can improve and encourage collaboration, versatility, learning and inventiveness, thus promoting KS and boosting competitive advantage. However, researchers have suggested that in order to do so, there is a need to encourage a humble culture in firms (Owens, 2013; Baskerville and Dulipovici, 2006). An enlightening example from the Maori people of New Zealand highlights a practice named *kia mahaki*, meaning being humble, sharing knowledge, and seeking to empower the community through research (Pipi *et al.*, 2004). Thus, humility in firms could become an opportunity as it helps provide confidence and allows employees to develop strong relationships. Furthermore, to encourage proactive KS among employees, managers need to consider the importance of identifying and rewarding the firm's "primum movens" (the first person willing to share with humility, setting an example, and motivating others to do so) (Anand and Walsh, 2016).

Furthermore, investigation into the role of humility in manager–employee relations as an enabler and facilitator of KS could be useful. For a knowledge seeker, the provider's knowledge will have a positive impact on learning and help build a strong relationship. Expressed humility reflects a person's tendency to approach interpersonal interactions with a strong motive for learning through others (Owens *et al.*, 2013). Humility appears to be an important ethical characteristic not only for leaders but also for employees, allowing both groups to work well individually and as teams. A humble employee is aware of personal limitations and is willing to accept and give help as needed. As humble people do not seek social dominance, they are more willing to learn from others and compliment others on their accomplishments (Exline, 2008).

Our study provides an understanding for leaders to engage employees with a humble attitude, which may in turn encourage employees to seek required work-related knowledge. It could be useful to research leaders' possible influence on employees toward the development of humble behaviors in KS. Research on whether adopting humility as a core

organizational value changes organizational members' attitudes would also be interesting to develop. Furthermore, mediating factors such as collective humility and shared leadership (Chiu *et al.*, 2016) have also emerged and could motivate researchers to investigate further.

Although our model is conceptual, it could be enhanced with scale development and/or experimental studies. One could investigate whether or not humility is, in fact, always possible in KS activities, whatever the context. For example, researchers could experimentally manipulate situations that make humility difficult to practice (conflict, recognition, and power struggle), thus enhancing differences in humble behavior (Davis *et al.*, 2011).

Furthermore, our model could help investigate the role of humility in building social relationships, which have been receiving more attention in organizational scholarship (Owens *et al.*, 2013). Researchers have used various tools, e.g. self-reporting (Lee and Ashton, 2004; Meagher *et al.*, 2015) and social comparisons (Rowat *et al.*, 2002) to assess humility, but a detailed multi-method approach could help better understand humble behavior. Applying structural equation modeling could be considered. For example, an experimental design to test the proposed model could be set up to verify whether our theory holds true. This could lead to new developments of supporting attributes: humility is a valuable, scarce resource and people who claim to be very humble may seem to be bragging, something truly humble people would not do (Davis *et al.*, 2015). Future research is needed to verify whether humility is, indeed, always connected to positive outcomes in KS and in which contexts, if any, humility could be ill-advised.

From a social exchange perspective, interpersonal reciprocity and trust are antecedents of KS (Liao, 2008), and perceived support and encouragement of KS from supervisors increase employees' knowledge exchange with each other as well as their perceptions of the usefulness of KS (Cabrera *et al.*, 2006; Kulkarni *et al.*, 2006). We address humility as another variable in our study, which might encourage researchers to study it from different theoretical perspectives (e.g. theory of reasoned action, social exchange theory, theory of learned behavior).

Recognition and appreciation can increase humility among employees working in firms. As Newman (1982, p. 283) pointed out, humility requires a severe appraisal of oneself combined with a reasonably generous appraisal of others. Humble people appreciate others' positive recognition of their worth, strengths, and contributions (Morris *et al.*, 2005). For example, receiving organizational recognition, positive feedback on knowledge shared, or feedback on *how* the knowledge was shared helps co-workers and the company facilitate KS efficacy. When others recognize the value of one's knowledge, individuals may gain an enhanced self-perception in terms of competency, credibility, and confidence (Stasser and Titus, 2003), which increases the likelihood that they will share their knowledge with others. Such appreciation is grounded in the legitimate understanding of their strengths, thus removing any need for entitlement or dominance over others (Peterson and Seligman, 2004). Thus, a study into whether recognition practices induce humble behavior among employees towards KS would be beneficial.

We highlight humble inquiry and response as fairly new concepts to be considered in the context of KS. Whether the sharing process continues in the long term through continued humble inquiry and response under any given situations still needs to be investigated. For instance, if any conflict arises between seeker and provider, will it lead to non-humble behavior on the part of the provider? Does gratitude increase relationship satisfaction and reduce self-focus (Kruse *et al.*, 2014)? These are some of the questions that could be addressed by future research. More broadly, the model we proposed could be tested at different time intervals: one could investigate whether humility in individuals changes over a period of time or remains consistent, and due to what factors.

People practicing religious faiths should also be aware of the role of humility. For example, the Bible provides a description of what humility is not: "Haughty eyes and a proud heart, the lamp of the wicked, are sin" (Proverbs 21:4); "Do nothing out of selfish ambition or vain conceit, but in humility consider others better than yourselves" (Philippians 2:3). In the Bible, humility is being courteously respectful of, and gentle, kind, and forgiving toward, all others; it is the opposite of aggressiveness, arrogance, boastfulness, and vanity. It might also be interesting to investigate whether individuals' practice of religious faiths influences humble behavior in KS.

Our exploration of different types of humility (true versus false-pretense humility) and the different corresponding facets of this construct (dispositional versus situational) may help its modeling in future research. Furthermore, our work suggests that, in the context of KS, humility may need to be approached from both the knowledge seeker's and the knowledge provider's perspectives. To help achieve this in further research, we have highlighted the various individual specificities that may contribute to humble knowledge inquiry and response.

In the context of virtual teams, where face-to-face communication is limited, as highlighted by Ardichvili *et al.* (2003), people in virtual communities share knowledge out of moral obligation; they assume that knowledge belongs to their organization and not to themselves. Furthermore, these authors suggest that organizational culture and personal networks may influence KS. It could be interesting to study whether computer-mediated communications by knowledge seeker(s) (for instance, through video conferences) result in changes in our model and investigate if humility does have a role to play in virtual settings.

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Appendix

Table AI List of articles analyzed to review humility and its association with individuals, group, organization and knowledge

Sl	Citations	Empirical (Qualitative)	Empirical (Quantitative)	Conceptual	Review	Focus area
1	Argandoña (2015)			✓		Humility in management
2	Argandoña (2017)				✓	Humility in decision making
3	Ashton and Lee (2008)		✓			Honesty-Humility predictions
4	Baldoni (2009)			✓		Humility improving individual performance
5	Bobb (2013)				✓	Humility as greatest virtue in America
6	Chancellor and Lyubomirsky (2013)				✓	Interpersonal and Intrapersonal humility
7	Chiu *et al.* (2012)				✓	Humble leadership in Chinese and Western context
8	Criger and Godfrey (2010)			✓		Humility and its importance in nursing
9	Davis *et al.* (2011)		✓			Humility as a personality judgment
10	Davis *et al.* (2013)		✓			Personality and relational humility
11	Davis *et al.* (2015)		✓			Intellectual humility and humility
12	Dezdar (2017)		✓			Humility influence in KS
13	Dwiwardani *et al.* (2014)		✓			Predictors of humility
14	Exline (2008)				✓	Humility challenges
15	Exline and Geyer (2004)		✓			Perceived humility
16	Frostenson (2015)			✓		Humility in context of business
17	Hopkin *et al.* (2014)		✓			Intellectual humility and religious beliefs
18	Kruse *et al.* (2014)		✓			Humility and gratitude
19	Labouff *et al.* (2015)		✓			Humble people help more than less humble ones
20	Landrum (2011)		✓			Measuring dispositional humility
21	Leach and Ajibade (2016)				✓	Predictors of humility
22	Lee and Ashton (2004)		✓			Honest-Humility as a personality factor
23	Mallasi and Ainin (2015)		✓			Humility as a non-monetary factor
24	Meagher *et al.* (2015)		✓			Intellectual humility
25	Morris *et al.* (2005)				✓	Humility in leadership
26	Nielsen and Marrone (2018)				✓	Role of humility in organization
27	Nielson *et al.* (2009)			✓		Humility concept in charismatic leadership
28	Oc *et al.* (2015)		✓			Leader humility in Asian context
29	Ou *et al.* (2014)		✓			Humble CEO's and empowering leadership
30	Ou *et al.* (2015)		✓			Humble CEO's
31	Owens (2009)		✓			Humility in organizations
32	Owens and Hekman (2012)	✓				Humble leaders
33	Owens *et al.* (2011)				✓	Humility in organization
34	Peters *et al.* (2011)		✓			Dispositional humility
35	Prime and Salib (2014)				✓	Humble leaders are best leaders
36	Rowatt *et al.* (2002)		✓			Humility and religion
37	Schein (2013)			✓		Humble Inquiry
38	Sousa and Dierendonck (2015)		✓			Servant leadership
39	Tangney (2000)			✓		Theoretical perspectives of humility
40	Tangney (2002)			✓		Humility concepts
41	Tangney (2009)				✓	Humility concepts
42	Vera and Rodriguez-Lopez (2004)				✓	Humility as competitive advantage
43	Zhang and Jiang (2015)		✓			Recipient perspective of KS
44	Zhang and Sundaresan (2010)		✓			Humble knowledge recipient

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