

**Open innovation through firm-hosted user communities:
A social practice perspective on firm-community relationship**

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In this paper, we respond to calls for newer approaches in addressing the complex social nature of open innovation occurring through user communities that are hosted by firms. Despite their growing prevalence, we know relatively little about the role of firm-hosted user communities in open innovation. Drawing on social practice theory, we offer a practice-based definition of firm-hosted user communities, and develop a relational framework to examine the interplay of practices within and across firm-hosted user communities. The framework directs particular attention to the collaborative, interactive practices between the entities involved in this community-based open innovation process. We suggest how future empirical research can apply our framework to study the firm-community relationships underpinning open innovation via firm-hosted user communities.

Introduction

Open innovation (OI) has become a significant way for organizations to seamlessly collaborate and exchange knowledge with external stakeholders as a means of leveraging complementary assets and capabilities in the innovation process (Chesbrough, 2003; Chesbrough & Bogers, 2014; West *et al.*, 2014). More recently, organizations are uncovering new avenues for OI by engaging with communities of users as co-creators of innovation (Bogers *et al.*, 2010; Piller & West, 2014; Von Hippel, 2005). While these can be business users, our focus in this research is on individual users who share ideas and knowledge with the host firm, and also with other users in the community to innovate in ways that improve the firm's offering (Baldwin & von Hippel, 2011). Often this happens via online web-based, social platforms, where firms host or sponsor user communities as a deliberate means of enabling and managing community-based OI (Jeppesen & Frederiksen, 2006; Wiertz & de Ruyter, 2007). In light of the growing prevalence of firm-hosted user communities, researchers have acknowledged the need for a more robust understanding of the role of user communities in OI (Fichter, 2009; West & Lakhani, 2008).

The majority of OI research has taken a firm-centric approach, directing the attention to inbound knowledge acquisition mechanisms that boost internal R&D and innovation outcomes. These studies focus on dyadic relations between the firm and its innovation partner (Piller & West, 2014; Vanhaverbeke *et al.*, 2014). Communities have been recognized as a distinct extra-organizational source of innovation (West & Lakhani, 2008). To develop a more comprehensive understanding of

user community-based OI, it is necessary to also study the phenomenon from the perspective of the users and the community, and adopt an approach that ultimately integrates intra- and extra-organizational perspectives (Vanhaverbeke *et al.*, 2014; West & Lakhani, 2008; West *et al.*, 2014).

The role of communities have received only little focus in core OI literature (Randhawa *et al.*, 2014; West & Lakhani, 2008), with the limited research in this space also directed to Open Source Software (OSS) communities (Dahlander & Wallin, 2006; von Hippel & von Krogh, 2003). OSS communities fundamentally differ from other kinds of user communities both in structure and processes, making generalization of insights a challenge (West & Lakhani, 2008). This highlights that OI research should focus more on how firms can engage with user communities (Jeppesen & Frederiksen, 2006; West & Gallagher, 2006), and manage firm-hosted communities (Ebner *et al.*, 2009; Füller *et al.*, 2008).

The user innovation (UI) (e.g., von Hippel & von Krogh, 2003) and community-based innovation studies (e.g., Nambisan & Baron, 2009), complementary bodies of work also centred on distributed innovation, have directed more attention to other user communities, but the focus here has predominantly been on intra-community aspects and the role of users as innovators, such as peer-to-peer assistance in OSS (Lakhani & Von Hippel, 2003), sporting goods (e.g., Franke & Shah, 2003; Shah, 2006) and other user communities. In the context of firm-hosted user communities, users interact not only with each other, but also with the host organization and its members. Noting that the firm and its value capture through the purposive exchange of knowledge with the user community is of primary concern to the OI paradigm, scholars have highlighted the need for a better understanding of the firm-community interactions and relationships that underpin the iterative knowledge flows in this form of OI (e.g., Dahlander *et al.*, 2008; Dahlander & Magnusson, 2005; West & Lakhani, 2008).

Collaboratively produced through mutual knowledge flows between the host firm, community and its user members, OI via firm-hosted user communities can be said to emerge from an interactive coupled model (Piller & West, 2014; West & Bogers, 2013). Here, the innovation is jointly developed *outside* the host firm through collaborative knowledge exchange between all entities involved. Knowledge flows in this type of OI cannot be isolated from the social interactions that individual users autonomously engage in within the collective community context, and with the host firm.

The complex structure and social dynamics in firm-hosted user communities challenge traditional conceptions of OI knowledge flows in the form of technology or IP through formal inter-firm arrangements such as R&D contracts or licensing agreements, and call for a more holistic, relational approach to address the social, interactive form of knowledge exchange in this context (Chesbrough & Bogers, 2014; West & Bogers, 2013). Studying the firm-community relationships, however, requires a theoretical lens that can connect these pivotal entities - host firm and the user community - with a particular focus on the social interactions linking them. Accordingly, in this paper we draw on social practice theory (Gherardi, 2008; Gherardi & Strati, 2012) to conceptualize 'OI through firm-hosted user communities' as a complex, relational practice and to examine the interplay of social practices that constitute firm-community relationships. We thus respond to OI scholars, who have called for the adoption of alternate theoretical lenses from outside the OI field (Bogers *et al.*, 2010; Vanhaverbeke & Cloudt, 2014; West *et al.*, 2014) and in particular, draw on sociological and organizational behaviour perspectives (West & Lakhani, 2008) to explore and better understand the role of user communities in OI.

We first apply the concept of community of practice (CoP) perspective (Brown & Duguid, 1991; Lave & Wenger, 1991; Wenger, 1998) to offer a definition of firm-hosted user communities, thereby responding to the call of OI scholars to provide a clear delineation of the community construct underpinning our framework (e.g., West and Lakhani, 2008). We then use social practice theory to develop a relational framework that integrates the perspective of the community (and its users) and host organization, thus extending the hitherto firm-centric view to studying OI (Randhawa *et al.*, 2014; West & Lakhani, 2008). In keeping with the suggestion of practice scholars (e.g., Amin & Roberts, 2008; Gherardi, 2009a, 2009b), the focus of this framework is the interactive, social, relational practices between these entities as the seat of knowledge flows through which OI emerges in the community context. Thus, our framework forms the basis to engage with the multidimensional, relational aspects that constitute the firm-community dynamics of OI. More specifically, we suggest how future empirical research can apply our framework to study various facets of firm-community collaboration – an area that remains under-researched till date (Dahlander, 2008; West & Lakhani,

2008). Thus, our research provides a significant contribution toward advancing our understanding of how firms can better engage user communities for OI.

OI through firm-hosted user communities: Toward a social practice-based conceptualisation

OI was originally implemented through dyadic collaboration between two firms, but today OI occurs increasingly when organizations tap into communities of users as external sources of innovation (Baldwin & von Hippel, 2011; Piller & West, 2014). Such firm-hosted communities can be involved across various stages of the OI process, and users take on multiple roles such as fans, hobbyists or experts depending on the nature of the innovation the community engages in. Starbucks's 'MyStarbucksIdea' and Dell's 'IdeaStorm' are online community platforms for ideation where users provide ideas on products and services, and evaluate others' ideas to assist firms in shortlisting implementation initiatives. Lego's 'Mindstorm' is a co-design initiative providing users and fans with a toolkit to design new solutions and prototypes. "Niketalk" is an online community of basketball players who design, evaluate and improve basketball shoes for Nike. Xerox's 'Open Xerox' and Nokia's 'Betalabsnokia' leverage lead users to test pre-commercialised products and share feedback for improvement. Some organizations (e.g., Threadless, Wikipedia) go a step beyond to base their business models around user community-based innovation and involve user communities across their entire value chain. For instance, Threadless, an online T-shirt company, user communities form the very essence of doing business; users submit creative designs, evaluate the designs and even take responsibility for advertising the products once produced.

Firm-hosted user communities have received only little research attention in the OI literature (Randhawa *et al.*, 2014; West & Lakhani, 2008). UI and community-based innovation studies have focused more on user communities, but these streams, driven by their key orientation towards users' personal utility and value in a communal context, have almost exclusively examined intra-community aspects (West & Lakhani, 2008). Firm-hosted user communities, where users contribute to innovations that are commercialized by firms (Chesbrough & Bogers, 2014), also entail interactions between the host firm and the user community. This highlights the need for understanding the firm-community relationships as a core aspect of OI (Dahlander & Magnusson; Dahlander *et al.*, 2005;

West & Lakhani, 2008), especially with the OI paradigm being primarily concerned with the firms' appropriation of commercial value from innovation (Piller *et al.*, 2014).

A cornerstone in the OI concept is the purposeful inflows and outflows of knowledge between the firm and entities that form part of the collaborative platform forming the key enabler of value capture by the innovating firm. (Chesbrough & Bogers, 2014). Accordingly, current OI research has studied knowledge exchange processes predominantly using absorptive capacity (Cohen & Levinthal, 1990), exploration and exploitation (March, 1991; Rivette & Kline, 2000) and the knowledge-based view (Kogut & Zander, 1996) as theoretical lenses. These perspectives have suited extant research that has largely adopted a firm-centric approach to explain the exploitation and integration of knowledge viewed as tangible stocks in the form of technology or IP mainly in inter-firm dyads or network-based structures (Aslesen & Freel, 2012; Lichtenthaler & Lichtenthaler, 2009) that are governed by formal arrangements such as R&D contracts or IP transfer agreements.

These conventional conceptions that view knowledge exchange as a planned, mechanistic process appear inadequate in the context of firm-hosted user communities where OI emerges from an interactive coupled model (Piller & West, 2014; West & Bogers, 2013). Here innovation is jointly produced through mutual knowledge exchange that is embedded in social interactions between the firm and the user community, and amongst users within the community itself, thus introducing much more complex dynamics to the creation and integration of knowledge (Chesbrough & Bogers, 2014). A comprehensive understanding of firm-community relationships hence requires a framework that accounts for these social interactions and how they shape the dynamics between the firms and the community. We suggest that social practice theory which conceives knowledge as situated in social practice (Gherardi, 2001, 2009c), is well suited to explain how knowledge sharing interactions occur and drive OI in this context. We now adopt a social practice perspective on knowledge exchange and OI in firm-hosted user communities.

A social practice view of knowledge for OI via firm-hosted user communities

According to social practice theory, knowledge does not reside in people's heads or in databases, but is instead an activity that people 'do' together (Nicolini, 2011). From this perspective, knowledge and learning is seen as grounded in mundane, everyday practices, leading to the notions of knowing-in-practice and learning-in-practice (Gherardi, 2008; Gherardi & Nicolini, 2000). These works draw on earlier ideas on human knowledgeability that view knowledge as actively constructed in practice (Bourdieu, 1977), intricately tied to social routines (Giddens, 1979) and situated action (Lave, 1988). According to Gherardi (2009b), knowledge is not a static entity but a consequential activity that is dynamically and relationally produced when social actors engage in practice.

Practices, as defined by social practice theory, are linked and implicit ways of understanding, saying, and doing things (Schatzki, 1996). The practice perspective focuses on the situated nature of action as enacted by actors and manifested in interactions with other actors, in the site where the action occurs (Nicolini, 2011). Social practice theory pays attention to how actors, actions and structures interact and co-evolve. By viewing knowing and learning as socially situated, social practice theory acknowledges the social complexity of knowledge sharing as a process that goes beyond mere acquisition and transfer of bodies of knowledge (Brown & Duguid, 1996; Lave, 1988). Critical to practice theory is the relationship between specific instances of situated action and the social world in which the action takes place. Thus, this perspective specifically sensitizes us to the importance of interactions between entities that form part of the practice, and is hence well suited to our context.

We now apply the social practice lens to frame knowledge exchange relationships for OI in firm-hosted user communities. First, we define firm-hosted user communities by drawing on the concept of CoP (Brown & Duguid, 1991; Lave & Wenger, 1991; Wenger, 1998), and clarify the conceptualisation of the community construct applied in our framework. Second, we develop a relational framework that is grounded in the theorizing principles of social practice to understand how innovation occurs through firm-hosted user communities, particularly in relation to firm-community interactions. Finally, we suggest how this framework can be applied for a clearer understanding of topical aspects of the firm-community relationship.

Firm-hosted user communities as a ‘community of practice’

Underpinned by the notion of social practice theory, CoP has been conceived as a social space where knowledge, learning and innovation emerge in a community context (Brown & Duguid, 1991; Wenger, 1998; Lave & Wenger, 1991). The idea of knowledge and learning that underpins CoP is consistent with how it has been conceived in practice-based studies; that is, knowledge and learning are situated in a social structure (i.e. the community) and emerge out of the relational dynamics within and across these communities. Further, the concept of CoP also links learning with innovation because it explains how knowledge sharing processes and reciprocal interactions that are situated within a social context may lead to innovation (Brown & Duguid, 1991), even in online communities (Amin & Roberts, 2008). Therefore, we use the concept of CoP to define the construct of firm-hosted user communities. We thereby respond to the call of West and Lakhani (2008) for a clear definition of the community construct in the context of OI.

CoPs are emergent structures where the basis for knowledge, learning and innovation lies in the individual members’ participation in the collective practices of the community. In CoPs, members pursue a common domain of interest by engaging in communal activities through mutual interactions and informal knowledge sharing, around which the community develops a shared repertoire of resources including routines, tools, artefacts and common ways of doing things. It is as a result of these activities that CoPs collective learning and innovation is produced (Brown & Duguid, 1991; Wenger & Snyder, 2000; Ystrom, 2010).

Comprising of a group of users informally and contextually bound together by shared domain of interest and the pursuit of a joint enterprise, user communities meet the description of a CoP (Lave & Wenger, 1991; Brown & Duguid, 1991, Wenger, 1998). User communities are to a high degree emergent and self-forming, establish common ways of working through mutual engagement, and develop a shared repertoire of tools and artifacts, in a way that resembles CoP (Roberts, 2006; Swan *et al.*, 2002). The mutual relationships and knowledge sharing in such CoPs contribute to learning and innovation (Brown & Duguid, 1991; Wenger & Snyder, 2000; Ystrom, 2010). User communities serve as collaborative, open arenas where users from around the world come together voluntarily,

participate in joint activities and reciprocal relations, and share knowledge actively leading to the collective emergence of innovation (Füller *et al.*, 2008; von Hippel & von Krogh, 2003).

Such user communities are predominantly virtual with online technological platforms bringing together disparate and distributed users temporally and spatially. Research on virtual CoPs suggests they are organic, emergent structures constituted and reconstituted through interactions among community members, and between community and members of the larger institutional environment (Ardichvili *et al.*, 2003; Barab *et al.*, 2004; Henri & Pudelko, 2003; Hung & Nichani, 2002). Amin and Roberts (2008) stress how web-based technology mediates these interactions in online innovation communities to create virtual sociality that spurs collaborative knowledge exchange and innovative activities and behaviour. In the case of firm-hosted user communities, these social interactions occur through online collaborative platforms hosted by the firm amongst users, and between the users and the host firm members who also form participants in the online community (Figure 1).

Insert Figure 1 here

Thus, applying the characteristics of a CoP, we define firm-hosted user communities as: *an online space initiated and hosted by a firm where users pursue innovation by mutually engaging in social practices with each other and with members of the host firm by drawing on a common repertoire of resources and socially constructed understanding*. It is through this complex, relational process that OI emerges in firm-hosted user communities. Thus, the CoP-based conceptualisation not only highlights the role of the collective social practices of the community but also the role of the individual user (the human actors) in engaging in and shaping those social practices, thus integrating the individual and collective levels.

In line with Brown and Duguid (2000), our CoP-based definition and conceptualisation of firm-hosted user communities is firmly grounded in social practice theory. In other words, our focus goes beyond studying CoP (i.e. firm-hosted user communities) as a spatial structure for innovation practices, to the actual enactment and embodiment of practices by actors participating in these communities, as the key to knowledge interactions that drive innovation (Gherardi, 2009a). This is in sync with the view of Gherardi (2009a, 2009 Intro) that the intellectual roots of the concept of CoP lie so clearly in practice

theory that there is merit in reversing the terminology from CoP to the ‘practice of community’ (Gherardi, 2009a), thus foregrounding the role of the social, relational practices that underpin the knowledge interactions within and across the community (Amin & Roberts, 2009). In line with (Siedlok *et al.*, 2015), we take the view that the development of social practices is fundamental to the emergence and sustenance of the community. In the next section, we apply this approach to develop a practice-based relational framework that can serve as the foundation for studying the complex, social, relational practices involved in OI via firm-hosted user communities.

Relational framework of OI through firm-hosted user communities

In keeping with social practice ontology, we conceive the phenomenon of OI via firm-hosted user communities to be fundamentally constituted of and produced by the social practices that the actors (users and organizational members belonging to the community) collaboratively engage in. Thus, social practice becomes the fundamental building block of the phenomenon under investigation (Feldman & Orlikowski, 2011; Orlikowski, 2002, 2010), with the reciprocal relations between the actors and their activities forming our primary focus. We also use social practice as a theoretical lens (Feldman & Orlikowski, 2011). This aids our objective of understanding the “how” of the phenomenon, that is, how OI is embedded in the way the social practices within and across user communities are produced and reproduced. Applying the theorizing principles of practice theory bears key implications to our framework: first, we regard innovation to be situated in social participation; in fact it is a by-product of engagement in the various social practices of the CoP (Wenger, 1998; Lave & Wenger, 1991; Brown & Duguid, 1991). Second, following Schatzki (1996), we see CoPs as spaces where the individual (users and firm members) and collective (user community and host firm), assuming blurred boundaries between these actors, their practices and the socio-material structures. Third, we view CoP members as engaging in iterative social interactions and knowledge exchange, and stress the mutual interconnectedness and recursive relationships between actors, actions and structures.

Practice have been said to comprise of a set of actions linked by: (1) rules, (2) know-how (3) ethos, (4) motivation, and (5) material artefacts (Antonacopoulou, 2008; Schatzki, 2005; Warde, 2005). We

adapt these elements of practice to our context as follows: the practical activities carried out by actors (users and organizational members) in the community are organized through (1) rules – explicit procedures, principles, precepts and formal instructions for community engagement (laid by the host firm); (2) know-how – practical understandings, knowledge of what to say and do, tacit cultural templates for understanding and action; (3) ethos – soft elements driven by two aspects: i) community-developed norms, values, and informal routines and rituals, ii) member identity formation and meaning-making processes through participation in community actions; (4) motivation – *telos*, purpose or objective of the community; and (5) material artefacts – IT systems, collaboration platforms and tools for community engagement (provided by the host firm). These form the building blocks of our relational framework which are inextricably linked and mutually constitute each other to form the practice of OI through firm-hosted user communities.

Central to practice is not only examining its constituent elements, but also understanding how these elements connect with each other. Antonocopoulou (2008, 2009) do this by extending McIntyre's (1985) account of practice as a dynamic between external goods – 'hard', tangible aspects such as wealth, social status, prestige, fame, power and influence – and internal goods – 'soft', intangible qualities that are internal to the character of the practice in the way practitioners choose to perform a practice. She brings attention to the ways in which a practice emerges as a result of the *tension* between its external and internal goods of practice. Following this, we argue that OI in firm-hosted user communities emerges through the *tension* between its internal and external goods. In keeping with McIntyre (1985), the institution (i.e. the host firm) almost exclusively manages the external goods, while internal goods are developed by the community through mutual engagement processes. Thus, our relational framework presents firm-community relationships as being reflected as *tensions* between the elements of practice embodied in its internal and external goods (Figure 2).

Insert Figure 2 here

Here, the external goods are those 'hard', measurable, performative elements – rules and material artefacts – both provided by the host firm. Also, forming an external good is the expected rewards – profit appropriation for the host firm, and extrinsic aspects such as money, prize, status, prestige recognition for the user participants. The internal goods, on the other hand, include the 'soft', social

elements developed by the community - know-how (i.e. practical understandings) and ethos (i.e. communal norms, values, routines and rituals, as well as member identities and meaning-making processes). The social value users derive through their community engagement is also an internal good. These internal goods operate at a conscious and unconscious level, providing meaning and significance to the external goods. The internal and external goods are *in-tension*. Motivation itself can be seen as an overarching force that guides the internal and external goods – and their interactions. Thus, the internal and external goods, driven by motivation of the practice, link the host firm with the community. Focussing on the *tension* between the internal and external goods provide a useful way to empirically engage with firm-community interactions. Our social practice framework accounts for two key aspects of firm-hosted user communities as a CoP:

Multi-entity structure: The framework presents firm-hosted user communities as a distributed system of multiple entities - the host firm members, the community and its user members (Vanhaverbeke *et al.*, 2014a; West & Lakhani, 2008), along with the elements of their social practices in the CoP. This is in alignment with a practice-based view which would depict a CoP not as a mere aggregation of its members (and their characteristics) but through the relations shaped by their practices. Our framework aids granular insights on how host firm's practices link with (user) community practices allowing for analysis at both the collective and individual level. In keeping with the practice-based approach, we represent this multi-entity structure as a "texture of practice" (Gherardi, 2009c) and theorize dualisms as constituted mutually by linking the individual and the collective aspects of the CoP.

Relational processes: The framework draws attention to the mutual embeddedness and relational interdependencies between the actors, practices and their context, thus acknowledging the collaborative, social connections between them (Piller *et al.*, 2014; West & Lakhani, 2008). We anticipate using the framework to analyse the mutual knowledge sharing practices and recursive interactions between the entities that constitute firm-community collaboration. We take the view that one can understand actions only in *relation* to the practical contexts in which they are situated. Underpinned by relational thinking in practice theory, the framework looks not only at the recursive relation between entities but regards situated practice as the locus for the production and reproduction

of relations. In the next section, we present some topical facets of firm-community relationships that can be examined through this social practice-based framework.

Avenues for future research

While social practice theory serves as a useful lens to explore intra-community and firm-community dynamics, our focus in this paper has been on developing framework to study the ways in which the host firm interacts with the user community. This framework can be applied to explore a multitude of research opportunities, but we suggest three aspects of firm-community relationships that can be examined fruitfully using the notion of *tension* integral to our framework. Similar to Siedlok et al. (2015), we posit that understanding the tensions that underpin firm-community dynamics can help host firms formulate support initiatives that aid in orchestrating the firm's practices with those of the (user) community, and thus overcome barriers to the creation and capture of value through community-based OI.

Community governance: While the host firm provides the explicit rules, including policies and protocols, as well as material artefacts that govern participant behaviour, the users also develop shared understanding and practical know-how that guide how they engage in the community practices. Users also become socialized into community norms i.e. the “shared beliefs about what actions and attributes bring respect and approval (or disrespect and disapproval) from oneself and others” (Cancian, 1975, p. 6; see also Füller *et al.*, 2007). Participant behaviour tends to be as influenced by community norms as those of the host firm (Lindenberg, 2001; Dholakia et al., 2004). In similar vein, communities also develop social values and informal rituals which also influence their self-governing traits. It is hence interesting to examine the tension between the explicit and tacit, the canonical and non-canonical (Brown & Duguid, 1991) aspects of the practice. A better understanding of how these actually plays out in firm-hosted user communities can feed into better aligned community governance practices – a topic of high pertinence to OI research (Dahlander *et al.*, 2008).

Symbolic value creation: Another unexplored area in OI research pertains to how users develop and derive social, symbolic value through their participation in firm-hosted communities (Dahlander *et al.*, 2008). Even UI and community literature has narrowly focused on innovation as improvements to

product features, technology or processes, and has rarely recognized the social, symbolic aspects of innovation that unfolds through shared, meaning-making processes in the community context. Through their emotional engagement with the practice, users co-construct social identity and assign symbolic meaning to their actions in the community context (Nicolini, 2011). It is hence topical to examine how users develop social identity through differentially incorporating elements of the practices of the community and the host firm (Schatzki, 2005), and how these shape their intrinsic motivation to participate in open innovation (Shah, 2006). Users negotiate identities through their perceived relationship and sense of belonging to the community. At the same time, their relationships and experiences with the host firm also contribute to their sense of identity. The construction of user identities reflects how the user perceives the host organization. For example, a primary reason why users become and remain members of a brand community is related to how their association with the organization's brand allows them to construct a desirable image of themselves. An interesting research avenue hence is to examine the tension between users' social, symbolic value through their relationship with the community vis-à-vis the host firm. These insights can determine a way for firms to align their community engagement practices so as to enable users' social, symbolic value creation.

Motivation: Host firms are primarily focussed on capturing value from OI communities, that is, they are profit –driven in their motivation. Users, on the other hand, are motivated by social factors derived by their communal participation, interactions, knowledge sharing and learning in the community context. A related dynamic of interest is between two potentially conflicting orientations that communities may exhibit: a *telo ludic* orientation where the community is orientated towards achieving outcomes typically specified by the host firm and directed towards its commercial objectives; and a *communo ludic* orientation, where social objectives of the community take precedence and value co-creation is both a direct product and by-product of the innovation activities of community members (Kozinets *et al.*, 2008). These competing motivations lead to firm-community tensions worth examining.

It is clear that a variety of research questions can be empirically investigated by using this framework to address diverse aspects of firm-community relationships. The focus in such a practice-based study

is on the theoretical relationships between the actors and their practices viewed as distinct yet interconnected aspects of the phenomenon (Feldman & Orlikowski, 2011). In keeping with social practice theory, it is the actual enactment of host firm and (user) community practices in the CoP (and not just the CoP as a structural entity itself) that forms the core of inquiry (Brown & Duguid, 1991; Gherardi, 2009a; Roberts, 2006). The objective of analysis in such a practice-based study is to focus on the relations between them that unfold in practice (Amin & Roberts, 2008).

Conclusion and key contributions

Responding to the need for newer approaches in studying the multidimensional, relational aspects of OI via firm-hosted user communities, in this paper, we conceive a way of exploring firm-community relationships constituting this phenomenon from a social practice perspective. We offer a practice-based definition of firm-hosted user communities, and develop a relational framework that lays the ground for deepening the theoretical understanding of how OI emerges through firm-hosted user communities, in particular, the firm-community interactions - an area that has not yet received sufficient research focus (Chesbrough & Bogers, 2014; West & Lakhani, 2008; West & Bogers, 2014). Adopting a social practice view offers key advantages: first, by viewing practices as the fundamental building blocks, and tracing the interplay between them, a social practice perspective aids a more fine-grained understanding of the complex mechanisms underpinning firm-community relationships. Second, the relational thinking underpinning social practice theory allows us to bring focus to the interactive, collaborative practices as the seat of knowledge exchange between the entities involved. Third, by accounting for the individual users' symbolic meaning making practices, along with the collective community's socio-cultural practices, this practice-based approach serves to extend the firm-centric approach dominant in extant OI research and enables a holistic understanding of OI via user communities (Vanhaverbeke et al., 2014a; Chesbrough & Bogers, 2014). Social practice orchestration between firm and community can translate into better firm-community collaboration, and better balance between firm's value capture and community's value creation. Through this, firms are in a better position to foster and nurture user communities for sustained OI.

Figure 1: Firm-hosted user communities as a CoP – and firm-community interactions

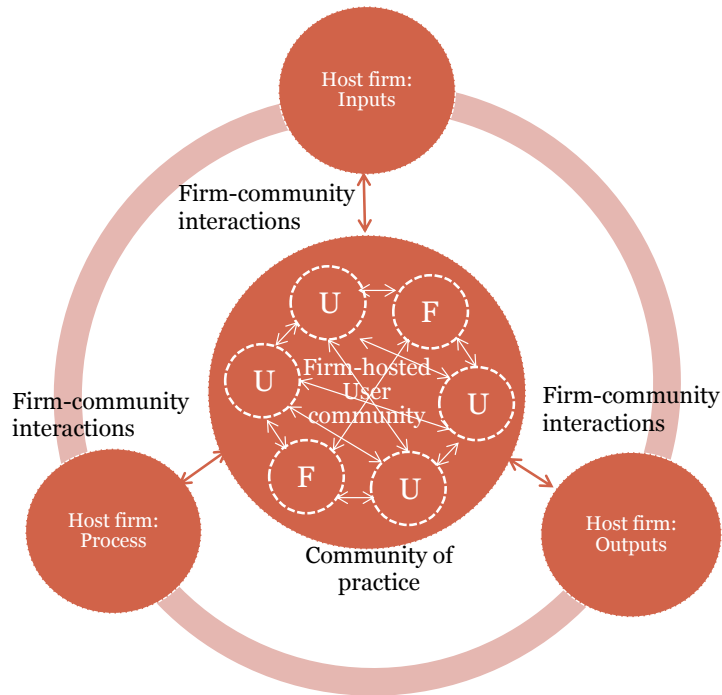
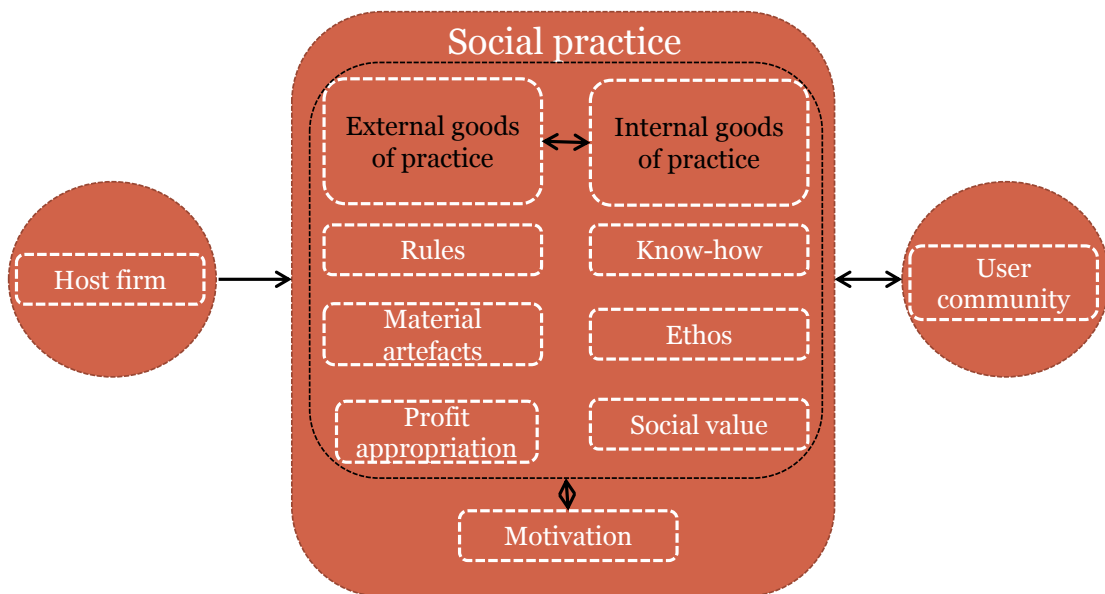


Figure 2: Practice-based relational framework



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