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Community Representations in Learning Communities

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ABSTRACT

This conceptual paper revisits a set of pivotal learning community notions filtered through sociological and community psychology perspectives to unravel representations of the community construct within learning contexts. A conceptual review of sociological and community psychology perspectives on the community construct is initially presented. These representations act as lens for a further integrative conceptual review of the community construct in pivotal learning community notions. This integrative conceptual review shows that although most learning communities share a basic set of community representations, some foundational differences are also observed. Our contribution aims to enhance readers' understanding of how "community" is represented in learning communities, which in turn can inform any design decisions and facilitation strategies by learning community researchers and practitioners.

1. Introduction

In the last decades, great effort has been devoted to the study of learning communities as learning spaces, social structures, frameworks, instructional approaches, or as myriads of other conceptualizations. However, within the learning communities' literature the "community" construct itself has scarcely been analyzed through the theoretical lenses of sociology and community psychology from which the community construct originates. Nevertheless, elements of sociological and community psychology perspectives seem to be prevalent in central learning community notions. This conceptual paper has a two-fold aim: first, to review and juxtapose various perspectives on the community construct—as originally approached in sociology and community psychology—to exemplify its conceptual plurality, and second, to review and juxtapose how any of these multiple perspectives are embraced, directly or indirectly, by educational researchers and incarnated in their theorizing of representative and pivotal learning community notions.

Based on Cooper's (1988) taxonomy of literature reviews, our review can be characterized in relation to Cooper's six characteristics of literature reviews as follows (see Table 1).

Our integrative conceptual review (see Torraco, 2016), involves a synthesis element, which does not claim to be a reformulation or reconceptualization of community representations in learning communities, but instead, as supported by Pan (2013), a "speculation of how pieces of evidence found in the literature fit together along with some tentative conclusions and a discussion of the implications" (p. 2), towards a more informed understanding of and new way of thinking about

Table 1. Characteristics of the integrative conceptual literature review.

Characteristic	Category
Focus	Theories
Goal	Identification of central issues
Perspective	Neutral representation
Coverage	Representative/central or pivotal
Organization	Conceptual
Audience	General scholars/practitioners or policy makers

Note: The labels of the categories derive from Cooper's (1988) taxonomy.

the community component in learning community notions. Such an understanding can be a useful aid for educational researchers and practitioners in terms of design decisions (i.e., different community representations may involve different design principles—when design is applicable) and facilitation strategies (i.e., different community representations may involve different facilitation strategies—when facilitation is applicable).

The remainder of this paper is organized as follows. The first section discusses the contested nature of the community construct across and within disciplines. The second section reviews a selection of representative early and later sociological perspectives on the community construct to depict how the construct has been approached within sociology. The third section reviews a representative and pivotal community psychology perspective on the community construct to depict how the community construct has mainly been approached in community psychology. The fourth section reviews a set of pivotal learning community notions. Finally, the last section reviews the sociological and community psychology representations of the community construct and elements of these representations in each learning community notion as described by their pioneers. The coverage of the sociological and community psychology perspectives is not exhaustive, but rather representative, based on the perspectives' relevance to learning communities. The coverage of the learning community notions is also not exhaustive, but rather representative, based on centrality and pivotality of the learning community notions as well as the public availability of sufficient theoretical specification of the learning community notions by their pioneers to an extent that their main constituent elements can be identified.

2. Community: A Contested Construct

Community has been a ubiquitous concept in everyday life to refer to—at least—a collective of people or other living organisms. In terms of human communities, the constituent elements of a collective of people for it to be a community are still disputed and admittedly vague, showing that "communities, like all individuals, are unique" (Peck, 1987, p. 74). Communitarians associate communities with positive feelings of belonging, sharing, and companionship, liberalists with sense of service, sacrifice, restriction, exclusion, and lack of freedom, and neo-liberalists with a pursuit of social order based on principles defined by the business world (Blackshaw, 2010). Irrespective of what communities connote based on different perspectives, the popularity of the concept implies a potentially distinctive, defining, natural or just desirable effect on people's lives (for themselves and/or by others) (Bauman, 2001; Blackshaw, 2010; Brint, 2001). Its popularity subsequently justifies its place in people's doxa, that is, people's expected common beliefs (Bourdieu, 1972/1977).

Moving beyond its omnipresence in everyday life, community has been extensively used as a scientific construct in a variety of disciplines, including ecology, geography, anthropology, business and knowledge management, education, political sciences, sociology, and psychology. Despite its extensive use across disciplines, there is no general theory that underlies community as a scientific construct. Each discipline masks and/or shapes communities differently by emphasizing divergent aspects, structures, functions, and goals. In turn, this leads to profound conceptual controversies and scientific debates within and across disciplines, constituting community a highly contested

scientific construct (Blackshaw, 2010; Brint, 2001; Cohen, 1985; Komito, 1998; Mannarini & Fedi, 2009; Popple & Quinney, 2002).

Hillery (1955) identified 94 definitions of community already back in the 1950s. In a later work, *A research odyssey: Developing and testing a community theory* (1982), Hillery highlighted that "I do not believe that an essential part of community can be defined in scientific terms (…) one could at least define the correlates of community, whether or not he could define the phenomenon itself" (Hillery, 1982, p. 13). In this attempt to classify the identified definitions, Hillery concluded that "beyond the concept that people are involved in community, there is no complete agreement as to the nature of community" (Hillery, 1982, p. 24). Pahl (2005), espousing a similar stance, claims that "any attempt to write an article on community is surely asking for trouble (…) community appears as elusive a notion today as it was forty years ago" (p. 621).

Prior to addressing "what makes a community" in learning contexts, a reference to ways in which community is approached in sociology and community psychology is considered to be a prerequisite for its conceptualization in any other context. Both disciplines adopt a multilevel approach to human behavior, considering the individual, the individual in relation to the other, and the collectives within which they act and interact. Nevertheless, there is considerable variation in the ways in which this is executed within and across these two disciplines (i.e., sociology and community psychology). Community aspects and perspectives outlined in sociology and community psychology constitute supra-frameworks that inform the community conceptualization in learning contexts. Moreover, associating learning communities with sociological and community psychology conceptions of "community" can enhance the theoretical concreteness by which the community construct is approached in learning contexts and minimize the likelihood for theoretical ambiguities and misuses of learning community notions and community-related terms.

3. The Community Construct in Sociology

3.1. Early Sociological Community Perspectives

Sociology focuses on the study of human social life and the social world by situating social phenomena in their surrounding contexts (Giddens, 2006). Community, as a contested construct in sociology —as in other disciplines, has been used to refer to a wide variety of social phenomena. Early sociological community perspectives by Tönnies (1887/1963), Durkheim (1893/1997), and Weber (1921-1922/1978) constitute milestones in community research. As revolutionary responses to political and societal shifts in Europe, these contributions reflect influential community perspectives on a societal level (e.g., village, town, city) that increased interest in community studies by sociologists.

Ferdinand Tönnies (1887/1963), reflecting on the social changes occurring in an era of urbanization, classified two ideal types of social formations based on different types of human relationships and surrounding economies: *Gemeinschaft* (community) and *Gesellschaft* (society). Gemeinschaft is based on sentimental relationships (i.e., habits, traditions, beliefs, and affective bonds) and local economy, whereas Gesellschaft is based on associational relationships (i.e., instrumental rationality, self-interest) and industrial economy. Representations of the former type of social formation could be family, village, town, whereas representations of the latter could be an industrial city and nation (Tönnies, 1887/1963).

Émile Durkheim (1893/1997), in the same era of urbanization, was interested in the development of societies, from primitive to advanced, and the maintenance of social order therein based on mechanical and organic solidarity. Mechanical solidarity refers to homogeneous individuals in terms of education, work, and lifestyle, characterizing primitive societies, whereas organic solidarity refers to interdependent individuals who complement each other based on their heterogeneous specializations, characterizing advanced societies (Durkheim, 1893/1997).

Max Weber (1921-1922/1978), affected by social problems caused by economic and political changes in a post-industrialization era, viewed economic, political, or social interests as sources of

competition that lead to community formation and social relationships. Communities and social relationships in turn enable these interests to be monopolized. In Weber's terms solidarity is based on mutual orientation to social action as a response to pressures external to the community (Weber, 1921-1922/1978).

These seminal sociological contributions to the conceptualization(s) of the community construct imply that communities are responses to phenomena and are formed to deal with those phenomena in a specific socio-historical era. Nevertheless, these three conceptualizations differ in terms of what brings people together to form a community, what keeps them together, how they are organized and function, and the principles by which the members relate to each other. These early sociological community perspectives constitute pioneering contributions to community studies and underscore the dynamic and complex constitution of communities. The next section presents a conceptual review of prominent sociological perspectives on the community construct—that moves beyond these early precursors—to exemplify the plurality of community conceptualizations and representations in sociology and to build the framework for the integrative conceptual review of learning communities later-on.

3.2. Prominent Sociological Community Perspectives

Over the past century a wide range of hermeneutic community notions have been developed representing different sociological community perspectives[1], including (1) *classical human ecology*, (2) *relational*, (3) *functionalist*, (4) *social complexity*, and (5) *network* perspectives.

The classical human ecology perspective conceives communities as human ecologies. This early ecological perspective is mainly attributed to Park and Burgess (1921) and solidified by McKenzie (1924). Human ecologies constitute natural phenomena of social structures based on human characteristics and needs, that develop from simple, general and centralized structures to complex, specialized and decentralized structures through cycles of adjustments (i.e., succession), whenever the equilibrium state of community is disturbed, to achieve a state of *climax* (i.e., maximum development; McKenzie, 1924, p. 292). The formation of human ecologies resembles that of organisms since "the structural growth of community takes place in successional sequence" (McKenzie, 1924, p. 297).

The relational community perspective, attributed to Gusfield (1975),[2] conceives communities as

> a characteristic of human relationships rather than existing in a bounded or defined group (…) Here, studies are oriented toward the ways in which group members cooperate and conflict—to the existence or absence of bonds of similarity or sympathy, to what unites or differentiates a collectivity of people. (Gusfield, 1975, xvi)

Yet, Pickvance (1977) points out that Gusfield "denies that pre-existing conditions cause people to make communal designations and stresses together that the interaction process itself is the source of such designations" (p. 1367). This perspective emphasizes the elements of human relationships and interactions as prerequisites for community formation. Relational communities constitute dynamic and evolving entities created out of a quest for community toward goal achievement, and do not represent objectively identified states (Gusfield, 1975).

Functionalist community perspectives are represented in contemporary human ecology, mainly influenced by Hawley (1950, 1968), and in action systems, mainly introduced by Parsons (1951). Contemporary human ecology, as a descendant of classical human ecology, conceives communities as local social structures. Social structures refer to social contexts that "do not consist just of random

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[1]Readers might argue for other equally important sociological community perspectives that have been developed over the years, such as political communities (see Dagger, 1999), personal communities (see Pahl & Spencer, 2004), imagined communities (see Anderson, 1983; Calhoun, 1991; Phillips, 2002), virtual communities (see Poster, 1995) or others. Although these contributions are acknowledged, they are not included in this selection due to limited theoretical relevance to the present conceptual analysis.
[2]Gusfield's (1975) community perspectives – or dimensions as Gusfield approached them – include: territorial and relational. These perspectives are not mutually exclusive. Nevertheless, the territorial community perspective prioritizes an emphasis on communities as physical spaces or geographical territories within which individual reside and/or work (Gusfield, 1975). Based on the territorial perspective, proximity constitutes a prerequisite for community existence that can lead to local interactions. The territorial perspective is not addressed because it moves beyond the scope of the present conceptual analysis.

assortments of events and actions; they are structured, or patterned in distinct ways" (Giddens, 2006, p. 8). Contemporary human ecologies are based on symbiotic relationships among heterogeneous social units implying interdependence and on commensalistic relationships among homogeneous social units implying competition (Hawley, 1950). The resulting pattern of both symbiotic and commensalistic relationships is that of community, whose needs are addressed through functional interdependencies among its constituent social units. In later work, Hawley (1968) further developed this perspective by referring to social systems, instead of communities, thereby extending the notion of human ecology. The action systems perspective also conceives communities as social systems, positioned in a broader action system along with personality systems and cultural systems (Parsons, 1951). A social system is defined by Parsons (1951) as "a mode of organization of action elements relative to the persistence or ordered processes of change of the interactive patterns of a plurality of individual actors" (p. 15). The structure of a social system is based on relations among individual actors involved in interactive processes, constituting participation therein the central unit of a social system (Parsons, 1951). Participation is expressed through an actor's status (i.e., position in the system) and role (i.e., what an actor does in relation to others—i.e., their functional significance) in the social system (Parsons, 1951). Both functionalist perspectives emphasize that functions enable the path from problems to solutions in communities.

As a further advancement of the functionalist perspectives, the social complexity perspective conceives community as a complex system (Connell, 2006). Complex systems are composed of many interacting agents whose behavior is emergent, resulting into emergent patterns of behavior on a system level. In other words, the behavior of the system cannot be predicted from the behavior of its individual agents (Bar-Yam, 1997; Mitchell & Newman, 2002). Central features of complex systems are those of emergence (i.e., patterns are generated from multiple interactions of individual agents), self-organization (i.e., spontaneous formation of structures or functions in systems composed of individual elements or agents), decentralization (i.e., dispersed decision-making or control by agents with no central authorities), and feedback (i.e., when the interactions between parts of a system at a later point depend on their prior interactions) (Bar-Yam, 1997; Ladyman, Lambert, & Wiesner, 2013).

The network perspective on community conceives communities as social structures of networks, or community networks (Wellman, 2001; Wellman & Leighton, 1979). Wellman (2001) defines community as "networks of interpersonal ties that provide sociability, support, information, a sense of belonging and social identity" (p. 228). Wellman (2001) explains that in networks

> boundaries are permeable, interactions are with diverse others, connections switch between multiple networks, and hierarchies can be flatter and recursive (…) most people operate in multiple, thinly connected, partial communities as they deal with networks of kin, neighbors, friends, workmates and organizational ties. (p. 227)

Hence, communities as networks are based on social ties that allow flows of resources, while neglecting locality and solidarity as prerequisites for community existence (Wellman, 1979; Wellman & Leighton, 1979). This perspective represents a network analytic perspective, typically referred to as social network analysis, which focuses on "delineating structures of relationships and flows of activities" (Wellman, 1979, p. 1203).

Table 2 presents an overview of the prominent sociological community perspectives along with their community representations and three key elements of each perspective. The representations and key elements are based on the original descriptions of the sociological community perspectives.

Despite their divergence, these perspectives share (a) the situatedness of the individual in a social setting(s) that is in constant *structuration* (i.e., continuous construction and reconstruction) and (b) the involvement of interactions among individuals and the surrounding setting(s) (Giddens, 2006, p. 8). Nevertheless, their divergence in key elements and representations implies that the nature of (re)constructions, the elements that are (re)constructed, the ways in which they are (re)constructed, and the agents involved in the (re)construction(s)—along with the nature and degree of interactions—vary across perspectives. Moving beyond pure sociological orientations towards

Table 2. Overview of sociological community perspectives and their representations and key elements.

Perspective	Representation	Key elements
Classical human ecology	Human ecology	a. Natural phenomenon b. Succession c. Simple to complex
Relational	Human relationships	a. Relationships b. Interactions c. Goal achievement quest
Functionalist	Social structure/system	a. Structure/pattern b. Functions c. Interdependence
Social complexity	Social complex system	a. Emergence b. Self-organization c. Decentralization
Network	Social network	a. Social ties b. Flows of resources c. Flows of activities

Note: The presented key elements are based on the original descriptions of the community notions.

community, the next section will examine the community construct within the framework of community psychology, which views community through the lens of individual behavior.

4. The Community Construct in Community Psychology

Influenced by sociological perspectives, the field of community psychology is concerned with how social systems relate to individual behavior and well-being within community settings, adopting a multilevel approach to human behavior (i.e., macro, meso/intermediate, micro systems) (Orford, 2008). Its main focus is to prevent and/or solve social problems and understand human behavior affected by social factors (Levine, Perkins, & Perkins, 2005). In community psychology, the individuals and groups are situated in the real-world, within which diversity is embedded, and are affected by multiple levels of influence (Trickett, 1996).

A psychological construct highly associated with communities is the construct of *psychological sense of community* which was originally coined by Sarason (1974) and defined as

> the perception of similarity to others, an acknowledged interdependence with others, a willingness to maintain this interdependence by giving to or doing for others what one expects from them, the feeling that one is part of a larger dependable and stable structure. (p. 157)

Nowadays, it is referred to as *sense of community* (SOC). Following the establishment of the theoretical foundation of the SOC by Sarason (1974), many community psychologists focused on its theoretical and empirical advancement (e.g., Chavis & Pretty, 1999; Flaherty, Zwick, & Bouchey, 2014; Loomis, Dockett, & Brodsky, 2004; McMillan & Chavis, 1986; Nowell & Boyd, 2011). The most influential advancement of SOC is McMillan and Chavis' (1986) theoretical framework of SOC, which aimed to contribute to the understanding of various types of communities that operate on the principles of understanding and cooperation. In this framework, SOC is conceptualized as "a feeling that members have of belonging, a feeling that members matter to one another and to the group, and a shared faith that members' needs will be met through their commitment to be together" (McMillan & Chavis, 1986, p. 9). In particular, SOC consists of four main elements: (a) *membership*, (b) *influence*, (c) *integration and fulfillment of needs*, and (d) *shared emotional connection* (McMillan & Chavis, 1986).

According to McMillan and Chavis (1986), membership refers to a feeling of belonging and identification deriving from individuals' personal investment to each other and to the group. Community membership both defines and is defined by its boundaries, either obvious or subtle, that are

set by the community and its members to offer emotional safety that allows for group intimacy to grow. Membership also leads to and is formed by the development of a common symbol system that contributes to the maintenance of the community boundaries.

Influence implies that community members strive for participation in communities in which they can be influential while the community is also influential to its members. In other words, there is concurrent influence of a member on the community and of the community on a member. This reciprocal influence is highly associated with the strength of the bond among the members and with the community and in turn with a consensual validation by the individual and the community. Consensual validation refers to the assumption that "people possess an inherent need to know that the things they see, feel, and understand are experienced in the same way by others" (McMillan & Chavis, 1986, p. 11).

Integration and fulfillment of needs imply reinforcement of a positive sense of togetherness and binding through rewards relevant to the individuals and the group. According to McMillan and Chavis (1986), possible reinforcers are membership status, competences of others from whom members can profit, and success of the community. Reinforcement has been associated with the concept of shared values, which foster community cohesion. A strong SOC is achieved with parallel fulfillment of everyone's needs (McMillan & Chavis, 1986).

The element of shared emotional connection is based on frequent and meaningful interactions and relationships, the value and importance of relationships and shared events/experiences, group cohesiveness through positive resolution of events, investment at a physical, materialist and/or emotional level, effect of honor associated with community attractiveness, and the spiritual bond. Communities with strong SOC are the ones that offer opportunities for experiencing positive interactions, shared events, resolutions, honor, investment, and spiritual bonding (McMillan & Chavis, 1986).

Although a further in-depth discussion of the community construct from a sociological and community psychology perspective might be worthwhile (albeit with the risk of an endless journey), both perspectives as presented can further inform our understanding of learning communities. In fact, as Komito (1998) suggests, when dealing with or researching communities, the first question that should be asked by community researchers is "what kind of community is being discussed, or what features of 'community' are being emphasized" (p. 98). Therefore, the following sections will address the "community question" with an initial conceptual review of community notions introduced in learning contexts (i.e., learning communities) and a subsequent integrative conceptual review to illustrate how sociological and community psychology representations of community are incarnated in the learning community notions.

5. The Community Construct in Learning Contexts

The community construct has been embraced by educational researchers to refer to directed/ designed, negotiated, or informal/spontaneously emerging social formations, structures, settings, or systems within which individuals act, interact, interdepend, share, and co-construct knowledge, expertise, and learning experiences. These community notions are typically referred to as *learning communities* since they all focus on learning aspects, either formal or informal, and they all have been characterized as such by their pioneers.

Although learning communities share the underlying characteristic of a social collective working together to facilitate a learning process (Hill, 2012), they have been approached from different perspectives that serve different purposes (e.g., Bielaczyc & Collins, 1999; Gabelnick, MacGregor, Matthews, & Smith, 1990; Wenger, 1998). Instead of providing a global definition of learning communities, which may not be appropriate or as inclusive as preferred, describing them separately leads to more concrete conceptualizations of the learning community notions and consequently offers substantial ground for the filtering of each learning community through the lenses of sociological and community psychology perspectives.

The selected learning community notions are classified into (a) learning communities in informal learning settings and (b) learning communities in formal learning settings. This classification

Table 3. Overview of the indicative centrality of learning community notions.

Community notion	Papers	Citations
Learning communities	>1000	>101295
Communities of Practice	>1000	>117455
Communities of Interest	185	1634
Communities of Learners	150	2893
Communities of Inquiry	139	1763
Knowledge-Building communities	78	3569
Communities of Innovation	28	379

Note: The maximum number of results that Google scholar allows is 1000. Queries that resulted in more than 1000 findings indicate that more publications are available but not retrieved by Google Scholar. The Learning Communities in Higher Education notion introduced by Gabelnick et al. (1990) is not included in this overview due to overlap with other learning communities in higher education that do not represent their notion.

does not exclude the presence of informal learning communities into formal learning settings, however, it highlights the original setting within which a specific learning community notion was coined. The notions of *Communities of Practice* (Lave & Wenger, 1991; Wenger, 1998), *Communities of Interest* (Fischer, 2001), and *Communities of Innovation* (Coakes & Smith, 2007) are predominantly grounded in informal learning settings. Whereas the notions of *Communities of Learners* (Brown, 1992; Brown & Campione, 1990; Rogoff, 1994), *Communities of Inquiry* (Lipman, 1988, 1991, 2003; Lipman, Sharp, & Oscanyan, 1977), *Knowledge-Building Communities* (Scardamalia & Bereiter, 1994), and *Learning Communities in Higher Education* (Gabelnick et al., 1990) emerged as learning community notions in formal learning settings (i.e., educational systems).

The reason for selecting these learning community notions lies in their relative centrality in the research community. Table 3 serves as an indicator of the centrality of these learning community notions. The search was conducted with Harzing's (2007) Publish or Perish, a software that retrieves academic citations based on Google Scholar as a citation source. The criteria for the identification of publications that dealt with learning communities included each learning notion as a keyword phrase, and in particular as a title phrase within the time period 1970–2015.

Table 3 shows that *Learning communities* and *Communities of Practice* are the most commonly used notions within the time period 1970–2015. The popularity of these notions can be justified by the inclusiveness of the *Learning Communities* notion and its frequent use as an umbrella term, and by the attractiveness of the *Communities of Practice* notion across disciplines—even occasionally resulting into inconsistent use as signaled by Wenger (2010, p. 192). The comparatively lower popularity of the remaining notions indicates that they tend to address more specific audiences of interest.

The next section provides a brief overview of the aforementioned learning community notions, as they were originally coined by their pioneers. The learning communities have been classified as notions originally coined and developed within (a) informal learning settings and (b) formal learning settings.

5.1. Learning Communities in Informal Learning Settings

With their seminal work *Situated learning: Legitimate peripheral participation*, Lave and Wenger (1991) induced a shift in thinking about learning as information and knowledge transfer to participation in socioculturally situated activities, which has led to an increased attention to the "community" construct within authentic and informal learning settings. Within the framework of participation in situated activity, learners participate in communities of practitioners and move towards the mastery of knowledge and skills along with their movement from the periphery to the core of the sociocultural practices of the intended community (Brown & Duguid, 1991; Lave & Wenger, 1991). The following learning community notions constitute a set of vocabulary to represent social structures within which knowledge is constructed and shared in informal learning settings.

5.1.1. Communities of Practice

Communities of Practice (CoPs) were originally coined as an analytical notion by Lave and Wenger (1991) to describe already existing phenomena in craft production within a situated learning framework. Situated learning implies that "learning, thinking, and knowing are relations among people in activity in, with, and arising from the socially and culturally structured world" (Lave & Wenger, 1991, p. 51). Within this framework, CoPs have been referred to as "a set of relations among persons, activity, and world, over time and in relation with other tangential and overlapping communities of practice" (Lave & Wenger, 1991, p. 98). The CoP notion was further developed by Wenger (1998), who provided an elaborate theoretical analysis of the notion with a focus on its constituent elements, structure, and value. Wenger (1998) conceptualized CoPs as social collectives whose participants mutually engage into a constantly negotiated joint enterprise while developing a shared repertoire of resources that support the negotiation of meaning. In their attempt to differentiate CoPs from other social structures, Wenger, McDermott, and Snyder (2002) state that CoPs are loosely connected, informal, and self-managed structures that are based on collegiality as opposed to formal relationships, and on members' participation as opposed to members' affiliation. Once the CoP notion entered the knowledge management field through Wenger's work, it has also influenced and inspired other contemporary researchers within the field to generate or further advance other community notions that highly relate to and are based on CoPs, including *Communities of Interest* (Fischer, 2001) and *Communities of Innovation* (Coakes & Smith, 2007).

5.1.2. Communities of Interest

Communities of Interest (CoIs) is a notion that refers to groups that are informally formed based on shared beliefs, values, and concerns as opposed to locality or social patterns. Within the framework of learning communities, CoIs, as a notion, is highly related to CoPs since it is defined as communities that are constituted of representatives from various CoPs that operate within different knowledge systems and gather to address a particular problem of interest within collaborative design projects (Fischer, 2001). According to Fischer (2001), CoIs differentiate themselves from CoPs since they are temporary and framed within the context of a specific project. When compared to one single CoP that operates in a single knowledge system, CoIs are described as being more complex, multifaceted, and powerful for innovation—as they have the potential to transform the distribution of knowledge into a source of social learning and creativity through the interaction of multiple knowledge systems across CoPs. Wenger et al. (2002) also differentiate CoPs from CoIs —with no specific references to Fischer's work though—by stating that a shared interest does not suffice for a CoP, but that a shared practice in a domain should be developed as well. Nevertheless, the consideration of the multiplicity of knowledge systems and interactions of these systems across CoPs—implied in CoIs—brings the notion of CoI to close resemblance with what Wenger-Trayner and Wenger-Trayner (2015) call "landscapes of practice" (p. 15).

5.1.3. Communities of Innovation

Communities of Innovation (CoInvs) is yet another community notion that has been referred to as a special form of CoP that can serve as a mechanism for sustaining innovation within organizations by supporting a secure setting for creation of innovative ideas, practices, and products (Coakes & Smith, 2007, p. 74). According to Coakes and Smith (2007), CoInvs are formed and sustained by influential agents and their social networks in organizations, since they have the power to influence the acceptance, support, and promotion of a multitude of innovations originating from several sources within a social system (Coakes & Smith, 2007). As CoInvs emerge from the social network of actors in an organization and are not installed through management structures, CoInvs act as informal learning communities.

5.2. Learning Communities in Formal Learning Settings

The powerful nature of the "community" construct has inspired educators and educational researchers since the 1970s to develop and promote innovative pedagogical and instructional approaches that reflected a quest for educational reform and transformation. Despite the mass interest in educational reform in the 1970s, the foundational inspirations in rethinking education can be traced in Dewey's (1897) work, *My pedagogical creed,* in which education is described as a social process of living and school as a form of community life. This "radical reconceptualization of educational practice" aimed to foster critical thinking, students' control over their own learning, thinking and understanding, and knowledge advancement and construction through the design of effective learning environments (Bielaczyc & Collins, 1999, p. 269). The following learning community notions reflect efforts of educational innovations and classroom transformations as a response to traditional educational settings and schooling cultures.

5.2.1. Communities of Inquiry

Communities of Inquiry[3] (CoInqs) is a learning community notion credited to Lipman (1988, 1991, 2003) and Lipman et al. (1977). Lipman (2003) envisioned a conversion of classrooms into communities of inquiry in which students respectfully exchange information, advance each other's ideas, ask for reasoning and argumentation of opinions, help each other in making valid conclusions, and attempt to realize each other's assumptions. Lipman (2003) views CoInqs as a means for developing critical thinking and problem-solving skills in education. According to Lipman (2003), CoInqs are rooted in a reflective educational paradigm that involves conversational apprenticeship (i.e., dialogue between teacher and students based on mutual respect and teacher's non-authoritative role), autonomy (i.e., learners are autonomous thinkers), and reflective thinking (i.e., awareness of thinking assumptions, implications, process, and subject matter). Garrison, Anderson, and Archer (2000) introduced the notion of CoInq within the context of online learning by arguing that the educational experience takes place within CoInqs which are constituted of three interacting core elements, namely (a) cognitive presence (i.e., information exchange, connecting ideas), (b) social presence (i.e., emotions, encouraging collaboration), and (c) teaching presence (i.e., focusing discussion, sharing personal meaning).

5.2.2. Communities of Learners

Communities of Learners (CoLs) is a learning community notion that has been both used as an umbrella term and a project-related term that reflects an educational reform initiative in the early 1990s (Brown & Campione, 1990, 1994). The notion of CoLs has been used by educators and researchers to refer to communities that aim for the advancement of knowledge and learning how to learn on the classroom level in educational settings (Bielaczyc, Kapur, & Collins, 2013; Brown, 1992; Brown & Campione, 1990). Its initial conceptualization by Brown and Campione (1990) described the practical implementation of a set of theoretical principles in classrooms, based upon Vygotskian premises (1930-1934/1978) and Dewey's (1897) experiential learning, towards a reform movement in education through a shift in the culture of education and innovative classroom design based on reciprocal teaching techniques (Brown, 1994; Brown & Campione, 1994; Bruner, 1996; Palincsar, Brown, & Campione, 1993). CoLs in education are particularly associated with a shift in students' role from passive knowledge recipients to active co-constructors of knowledge, while being responsible for their own learning and its design (Brown, 1992). Therefore, CoLs have been used as an instructional technique to enhance knowledge sharing and distribution of expertise and responsibility among students and teachers aiming to build a collective learning culture in which students respect and value each other's contributions (Bielaczyc et al., 2013; Brown & Campione, 1994).

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[3]Communities of inquiry were originally coined by Peirce (1955) to exclusively refer to communities of scientific inquiry.

5.2.3. Learning Communities in Higher Education

Learning communities in Higher Education (LCHEs) constitute a structural reform effort of institutions and curriculum in the United States (Gabelnick et al., 1990). LCHEs have socio-historical significance as they emerged as a response to concerns and criticisms of higher education institutions in the United States in the 1980s (see Association of American Colleges and Universities, 1985). However, the foundations of learning communities as structural reforms in higher education can be traced back to Meiklejohn (1932). Meiklejohn (1932) developed an experimental inter-disciplinary, inter-faculty, and inter-curricular structure at the University of Wisconsin. LCHEs have been defined by Gabelnick et al. (1990) as

> curricular structures that link together several existing courses—or actually restructure the material entirely—so that students have opportunities for deeper understanding and integration of the material they are learning, and more interaction with one another and their teachers as fellow participants in the learning enterprise. (p. 19)

Along the same lines, but in more contemporary terms, LCHEs are also described as intentional structures that aim to "promote and maximize the individual and shared learning of its members. There is ongoing interaction, interplay, and collaboration among the community's members as they strive for specified common learning goals" (Lenning, Hill, Saunders, Solan, & Stokes, 2013, p. 7). For a recent review on the evolution of LCHEs, see Mathews, Smith, and MacGregor (2012) and Benjamin (2015).

5.2.4. Knowledge-Building Communities

Knowledge-Building Communities (KBCs) is a learning community notion coined by Scardamalia and Bereiter (1994) to refer to an attempt to transform/restructure classrooms and schools into "communication systems in which relations between what is said and what is written, between immediate and broader audiences, and between what is created in the here and now and archived are intimately related and natural extensions of school-based activities" (p. 266). In other words, Scardamalia and Bereiter (1994) attempted to restructure schools from first-order environments, in which learners attempt to adapt to a stable system of routines, to second-order environments, in which learners' adaptation in the environment changes the environment itself and instigates re-adaptation of other learners. The KBC notion emphasizes that the students have the ability to construct new knowledge instead of just learn what is already known. According to Scardamalia and Bereiter (1994), the KBC notion better represents a sense of continuity with the other knowledge-building communities outside schools and conceives knowledge-building as a collective product that moves beyond the mere collection of individual products. KBCs have been described in close association with technological advancements (e.g., Computer-Supported Intentional Learning Environments, Knowledge Forum; see Scardamalia & Bereiter, 2006).

6. Learning Communities: What Communities Are We Talking About?

The topics of communities and learning communities are both rather mature topics of interest in research communities in branches of sociology, community psychology, educational sciences, and other related disciplines. Nevertheless, the way in which community-literature has informed or is represented in learning community-literature is neither self-evident nor straightforward, which justifies the need for an integrative conceptual review, provided below.

In this section, sociological and community psychology perspectives are brought together into a conceptual review of community representations in learning communities. To avoid any potential confusion, it should be highlighted that the sociological and/or community psychology representations attributed to each learning community notion result from the original descriptions of the learning community notions by their pioneers. The integrative conceptual review of community representations in learning communities, presented in Table 4, is based on (a) direct connections and/or references made by the pioneers themselves or on (b) indirect connections and/or subtle references to and/or

Table 4. Connection of sociological and community psychology perspectives to learning community notions.

Domain	Perspective	Representation	Key elements	Learning community notion
Sociology	Classical human ecology	Human ecology	a. Natural phenomenon b. Succession c. Simple to complex	Community of Practice (CoP)
	Relational	Human relationships	a. Relationships b. Interactions c. Goal achievement quest	Community of Practice (CoP)
	Functionalist	Social structures/ system	a. Structure/pattern b. Functions c. Interdependence	Community of Practice (CoP) Community of Interest (CoI) Community of Innovation (CoInv) Community of Inquiry (CoInq) Community of Learners (CoL) Learning community in HE (LCHE) Knowledge-Building Community (KBC)
	Social complexity	Social complex system	a. Emergence b. Self-organization c. Decentralization	Community of Practice (CoP)
	Network	Social network	a. Social ties b. Flows of resources c. Flows of activities	Community of Innovation (CoInv)
Community psychology	Sense of community	Sense of community	a. Membership b. Influence c. Integration and fulfillment of needs d. Shared emotional connection	Community of Practice (CoP)

descriptions of the community representations and their key elements without explicitly stating or drawing the underlying connections to the sociological and community psychology perspectives.

As shown in Table 4, some learning community notions adhere to one community representation (e.g., CoL)—at least explicitly enough to be identified or represented as such—whereas others adhere to a multiplex set of representations (e.g., CoP). Despite their differences, all learning communities adopt a functionalist perspective to the community representation in their learning community notion, being represented as social structures/systems, since they constitute non-random social structures that are patterned in one way or another. Nevertheless, the exact way in which learning communities are structured and function may differ. The way in which these community representations are expressed in the different learning community notions as well as their potential implications for design decisions and facilitation strategies will be examined next.

6.1. Classical Human Ecology

From a classical human ecological perspective, communities are viewed as human ecologies that constitute natural phenomena that evolve through succession from simple to complex. Out of all selected learning community notions, only the CoP notion adheres to a human ecology representation of community. Wenger et al. (2002) stress the organic nature of CoPs, describing them as natural phenomena that evolve within a natural life cycle. They cannot be designed, in the traditional sense that implies imposition, but can be supported through cultivation for aliveness (Wenger et al., 2002, p. 12, p. 51–53). The lack of emphasis on the representation of a human ecology in all other learning community notions may be associated with the involvement of external agents in the community formation(s) and the prominent element of design therein. Learning communities that are organic in nature, such as CoPs, involve voluntary participation and subsequently members self-attribute relevance to their participation, which in turn might lead to engagement and finally to value creation for their members (Wenger et al., 2002, p. 50). This representation and its accompanying key elements have the potential to influence structures in "non-organic" learning communities to allow for more self-defined relevance and subsequent voluntary participation as opposed to externally defined relevance and pre-defined participation.

6.1.1. Implications for Design and Facilitation

Design decisions and facilitation strategies in informal/organic and formal/non-organic learning communities may vary significantly due to the different degree of external agency, imposition, interference, and/or intervention that learning communities allow for in the case of organic learning communities, and ask for in the case of non-organic learning communities. This is not to say that non-organic learning communities are automatically less successful than organic ones, but they are undoubtedly different in nature, and consequently require different design decisions and facilitation strategies. For example, an informal/organic learning community with a natural cycle of life would not necessarily welcome an external agent to set up learning community events on behalf of the community members, unless the members themselves decide so. On the contrary, a formal/non-organic learning community would be dependent to a large extent on that external agent coordinating and facilitating members' actions and interactions.

6.2. Relational

The relational perspective on community views communities as human relationships, which constitute the prerequisite for community formation as opposed to other "connectors". Wenger (1998) highlights the importance of human relationships in the CoP notion, both as a prerequisite and a constituent element. CoPs are built on pre-existing personal networks, which enable the potential of the CoP formation, but in order for these networks to form a CoP they need to develop what Wenger (1998) calls mutual relationships (see Wenger, 1998, p. 76; Wenger et al., 2002, pp. 70–71). Mutual relationships, both in the sociological relational community perspective and in the CoP notion, do not necessarily imply harmony, but a complex medley of dualities (see Wenger, 1998, p. 77). Contrary to the CoP, no other learning community notion emphasizes the function of relationships as a prerequisite for community formation. Undoubtedly, relationships exist and are highly relevant in all other learning community notions, but those communities are not necessarily formed out of these relationships; or in other words, the relationships are neither the driving force for the formation of the learning communities nor pre-existing elements on which their formation is based, yet members' relationships within the learning communities have the potential to contribute to community success.

6.2.1. Implications for Design and Facilitation

The role of relationships (i.e., as a prerequisite element or a forming element) in different learning communities is of key relevance to design decisions and facilitation strategies. For example, learning communities such as CoPs that incorporate a relational perspective may not allow for design interventions that interfere with the preexisting relationships among their members (e.g., imposed sub-groupings to serve objectives of a design intervention), or in other words may resist to imposing interventions that interfere with its natural evolution. Hence, "design" in communities that incorporate a relational perspective cannot be implemented from scratch, but only as a support aid or a facilitation strategy for the communities' cultivation and natural evolution across different developmental stages (see Wenger et al., 2002, pp. 51–54).

6.3. Functionalist

The functionalist perspective views communities as social structures/systems that involve a patterned structure, functions, and members' interdependence. Table 4 indicates that all learning communities are represented as social structures/systems. The degree to which the original pioneers refer to exact representations of social structures differs, but they all explicitly outline learning community characteristics in terms of patterned structures, functions, and interdependence. Prior to discussing each learning community notion, it should be highlighted that they all share the element of interdependence in the sense that members in all learning community notions function as resources for

each other. As they differ in terms of patterned structures and function, this will be described in more detail for each notion.

Wenger (1998, 2010) draws direct connections between the CoP notion and social structures/systems and their underlying assumptions, represented in Giddens' (2006) work, within the functionalist approach (see Wenger, 1998, p. 281, 2010, p. 179). CoPs have a patterned structure of domain, community, and practice within boundaries defined by their members, who are expert and/or novice practitioners. Central functions within a CoP are mutual engagement, mutual accountability, and constant negotiation of a joint enterprise towards a shared development of practice (see Wenger, 1998, pp. 73–85). CoP members mutually interdepend as they act as resources to each other. Likewise, CoIs also share a patterned structure defined by a temporary project-based open structure based on multiple knowledge systems towards a problem resolution (see Fischer, 2001, p. 4). CoInvs also represent a patterned structure that is organizational in nature and is constituted of influential agents and their social networks, but the central function in CoInvs is the exchange of innovatory ideas towards innovation achievement. CoLs are structured in a classroom setting populated by teachers and students with a central function being that of reciprocal teaching and students' co-construction of knowledge towards students' enculturation (i.e., become acquainted with the culture of an intended discipline). CoInqs are also structured in a classroom setting populated by teachers and students and focus on functions of advancement of each other's ideas, asking for reasoning and argumentation, help in making valid conclusions and realizing each other's assumptions towards the development of critical thinking and problem-solving skills. KBCs are structured in an extended classroom setting populated by teachers and students with their key function being that of students' co-construction of knowledge towards construction of new knowledge. LCHEs share an intentional thematic-curricular structure set within boundaries that involve cohorts of students, faculties, and teachers. Their main function is linking courses across disciplines, which implies a mutual structural interdependence, that extends the common element of resource interdependence towards interdisciplinary learning.

6.3.1. Implications for Design and Facilitation

The analysis and understanding of the social structure/system of each learning community notion is fundamental for any design decision making process and selection of facilitation strategies. For example, learning communities viewed as social structures/systems entail a specific structure/pattern, functions, and members' interdependence. When design is applicable, external agents may be responsible for organizing the intended structure/pattern, functions, and purposes of these functions, as well as members' "prescribed" interdependence in relation to, for example, potentially intended collaborative tasks (if applicable). When design is not applicable, such as in organic learning communities discussed in section 6.1, the structure/pattern, functions, and members' interdependence need to be internally coordinated and/or externally facilitated to enhance its potential for success and/or sustainability. A clear understanding of learning community notions in terms of this functionalist perspective and the degree of members' interdependence is crucial for community facilitation and guidance by internal and/or external agents.

6.4. Social Complexity

The social complexity perspective conceives communities as complex systems defined by the key elements of emergence, self-organization, and decentralization. Out of all included learning community notions, only CoPs constitute emergent structures that develop on their own with no clear start and end time—which is also in close alignment with the classical human ecology perspective (see Wenger, 1998, p. 96, 2010, pp. 179–180; Wenger et al., 2002, p. 12). CoPs also adhere to the principle of self-organization in the sense that their existence and design are not imposed by an external agent and that members select themselves, but CoPs can still benefit from cultivation and "design for evolution" elements (e.g., establishing a support team, developing private and public spaces, combining familiarity and excitement) (see Wenger, 2010; Wenger et al., 2002; Wenger & Snyder, 2000). It

should be highlighted, that CoLs and KBCs emphasize the element of decentralization, which is a key feature of complex systems, in terms of distribution of expertise and assigned distribution of partial responsibilities through negotiations, but they do not substantially reflect the elements of self-emergence and self-organization in their structures due to the prominent aspects of design and assignment by external agents.

6.4.1 Implications for Design and Facilitation

The elements of (a) emergence, as opposed to design or prescription, (b) self-organization, as opposed to externally defined organization, and (c) decentralization, as opposed to centralization, are "delicate" components of complex social systems that practitioners and/or researchers need to consider and handle carefully when dealing with learning communities. For example, by definition designing from scratch and/or imposing an organizational or structural pattern on an emergent structure is simply not possible, and if an intervention is implemented, the emergent structure is then distorted. This is not to say that practitioners and researchers cannot or should not intervene into emergent CoP structures, but when doing so, designed social structures, as opposed to naturally emergent ones, are yielded. Facilitating emergent structures and ensuring they retain their emergent nature, implies that no imposition or intervention should be implemented in a way that interferes with the emergent properties of these structures. For a primer on emergence and design in learning communities see Dingyloudi and Strijbos (in press).

6.5. Network

A network perspective on community conceives it as a network structure based on social ties, flows of resources, and flows of activities. In this integrative conceptual review, only the CoInv notion draws direct connections to network perspectives and the critical role of ties and flows of resources in forming and enabling connections in CoInvs and in triggering or expanding organizational innovations (see Coakes & Smith, 2007). References to the network perspective also appear in Wenger's (1998) work, but although the network perspective on community is related to the CoP conceptualization, CoPs have a different focus. Specifically, Wenger (1998) claims that "communities of practice could in fact be viewed as nodes of "strong ties" in interpersonal networks, but again the emphasis is different" (p. 283). Therefore, the network perspective evident in the CoInv notion implies a degree of "looseness" in relationships among their members (i.e., weak ties). This is not to say that all other learning community notions do not involve or do not enable the development of networks, but the community structure itself as presented in all other notions does not resemble the open, loose, and flow-based profile of network structures.

6.5.1. Implications for Design and Facilitation

Designing and/or facilitating communities that are based on network principles can be quite challenging given their dynamic, permeable, loose, and fragile structure in a state of constant flux. Typically, network communities are to be observed and analyzed by practitioners and/or researchers as opposed to be designed by external agents. Nevertheless, the flows of resources and activities can be facilitated with appropriate affordances (e.g., technological innovations) or by facilitating or creating connections between individuals who may appear to have common interests and shared views in relation to the community's joint endeavor(s).

6.6. Sense of Community

The sense of community (SOC) perspective is represented by the elements of membership, influence, integration and fulfillment of needs, and shared emotional connection. After a close examination of the learning community notions, the SOC framework seems to be represented in the CoP notion, whereas no explicit references to SOC are made in any of the other notions. In the CoP notion the element of membership is highly associated with the social formation of identity and members' identification

and feelings of belonging in a CoP (see Wenger, 1998, p. 163, 197). The element of influence is clearly evident in Wenger's (1998) work through direct references to politics of participation, influences, and power relations among CoP members (see Wenger, 1998, p. 91, 240). The element of integration and fulfillment of needs is reflected through the process of value creation (see Wenger et al., 2002; Wenger, Trayner, & De Laat, 2011). The element of shared emotional connection is represented by mutual engagement and shared repertoire (see Wenger, 1998, pp. 73–74, 82–83).

6.6.1. Implications for Design and Facilitation

Designing and/or facilitating the development of a sense of community can be a challenging endeavor for practitioners and researchers, since it should target each individual on a micro-level and the community as a whole on a meso and/or macro level. Feelings of belonging and emotional connection highlight that a sense of community typically comes from within the community as opposed to interventions from external agents. Nevertheless, a sense of belonging can be cultivated, for example, by encouraging peripheral members to more actively engage in or contribute to some community practices, either as external agents (if an intervention is in place) or as more core members in the community.

7. Summary and Conclusion

This conceptual paper provided an account of representations of the "community" construct in learning community notions from sociological and community psychology perspectives. First, a conceptual review of sociological and community psychology perspectives on the contested "community" construct was provided to capture the multiplicity of its representations developed within different schools of thought. The plurality of community representations is extensively depicted in sociological community perspectives, namely (1) classical human ecology, (2) relational, (3) functional, (4) social complexity, and (5) network. In contrast to sociological perspectives, community psychologists viewed community through psychological lenses that bring it closer to the idea of community as exemplified by individual behavior and experience of collective endeavors. The Sense of Community (SOC) perspective aims to contribute to the understanding of communities through feelings and perceptions of the individual members of a community.

This initial conceptual review was followed by a description of learning communities which aimed to provide a basic understanding of a set of pivotal learning community notions. These notions were subsequently filtered through the sociological and community psychology perspectives to provide an integrative conceptual review that captures if, and in what ways, these perspectives were reflected in the learning community notions. This decomposition and re-composition of learning community notions revealed that some notions can be described in terms of multiple perspectives, whereas others adhere to one or two perspectives; either explicitly or implicitly. All learning community notions are represented as social structures/systems by their pioneers, reflecting a functionalist perspective, without always relating to this sociological perspective *per se*. Despite this common representation, social structures themselves differ in most learning community notions in terms of patterned structures and functions.

This integrative conceptual review provides a springboard for a deeper understanding of "what makes learning communities" actually communities in terms of sociological and community psychology perspectives through a decomposition of each learning community notion's characteristics and descriptions by their pioneers. Such an understanding aims to raise researchers' and practitioners' attention to tracing any community representations prior to any design decisions and selection of facilitation strategies. Dingyloudi and Strijbos (2014) provide a representative example of how such an understanding can contribute to concept development, design decisions, and facilitation strategies within the framework of learning communities in the field of the learning sciences.

Given that the picture is to a large extent still incomplete, further analyses of learning community notions through sociological and psychological lenses are recommended to establish the relevance of design decisions and facilitation strategies for each learning community notion, as well as towards a

better understanding of learning communities across formal and informal settings. Future analysis on the development of these learning community notions in relation to sociological and psychological perspectives—from their original coinage up to their current use—is recommended, taking into consideration that the learning community notions have a whole "career" in the community studies and their original use may have been modified by their pioneers and others over the last decades (e.g., Wenger-Trayner & Wenger-Trayner, 2015: landscapes of practice), potentially resulting into different representations than the ones presented in this paper.

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