APPLYING SOCIAL AND PRACTICE BASED LEARNING THEORIES INTO THE CLIMATE CHANGE DEBATE:
assessing the private sector´s role in decarbonisation initiatives in Brazil

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Abstract

Climate change debates have for long underestimated the contributions from social sciences. Not only the research sphere but also, and most importantly, the policy sphere have in majority used natural sciences studies repertoires and reports into account rather than sociological assumptions about how we should take action in order to mitigate the problem. Assessing the role of the private sector in decarbonizing initiatives is a crucial step towards a more social based research on climate disorders. The learning literature applied to the managerial sciences can contribute a lot to this debate bringing interesting insights about how corporations develop and spread mitigation technologies and about how and/or whether it could be integrated into other regions in the globe.

KEYWORDS

Organizational learning. Social and practice based approach. Climate change. Corporations. Decarbonisation.

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APLICAÇÃO DE TEORIAS DE APRENDIZAGEM SOCIAL BASEADAS NA PRÁTICA NO DEBATE DA MUDANÇA CLIMÁTICA: avaliação do papel do setor privado em iniciativas de descarbonização no Brasil

Resumo

Debates sobre mudanças climáticas por muito tempo subestimaram as contribuições das ciências sociais. Não só a esfera acadêmica, mais também, e sobretudo, a esfera política têm em sua maioria utilizado estudos e repertórios das ciências naturais em detrimento de pressupostos sociológicos sobre como devemos agir a fim de mitigar o problema. Avaliar o papel do setor privado nas iniciativas de descarbonização é um passo crucial em favor de uma pesquisa mais voltada para questões sociais sobre distúrbios climáticos. A literatura de aprendizagem aplicada às ciências gerenciais pode contribuir muito para esse debate trazendo insights interessantes sobre a forma como as empresas desenvolvem e difundem tecnologias de mitigação e sobre como e / ou se estas tecnologias podem ser integradas em outras regiões do globo.

Palavras-chave

Aprendizagem organizacional. Abordagem social e prática. Mudanças climáticas. Corporações. Decarbonização.

Introduction

The climate change debate has brought into account the role of corporations in developing solutions to the climate problem, mainly through the development of green technologies, rather than only their traditional role as polluters. But how firms are developing decarbonising initiatives and how

they can be spread across regions remain an underestimated topic. This paper uses some learning literature assumptions applied to the organizational sphere in order to establish a way of assessing the private sector's learning steps towards low-carbon technologies.

Organizational learning

Organizational learning (OL) is the academic literature "engaged in the study of learning processes in organizations" (EASTERBY-SMITH et al., 1998, p. 259). Although it was treated as an interesting sideshow but still peripheral to organizational theory for a long time, its initial peripheral importance to organizational theory changed within the years and the field has grown much in the 1990s when it is possible to observe a steadily growth in interest in OL. Among other factors, the growth in interest about the topic can be explained by the rapid technological change. According to Easterby-Smith et al. (1998, p. 260):

The speed of technological change means that there is continual pressure on firms to reduce the time from conception to launch of new products [...] As a consequence, firms cannot rely on established practices; they need to invent new processes and technologies: in other words, they need new ways of doing things (EASTERBY-SMITH et al., 1998, p. 260).

Moreover, the understanding that learning is a key factor towards competitiveness also explains the fact that the topic is currently studied a lot (DODGSON, 1993). In this direction, Crossan et al. (1995) mention that the only competitive advantage of a firm is its ability to learn faster than its competitors.

As well pointed by Dodgson (1993, p. 376) "the concept of learning has a broad analytical value" and "learning is a dynamic concept". Many authors agree that there is still no consensus in the literature about what learning is whether there is a final theory of learning. In this point, Crossan et al. (1999, p. 522) affirm that "although interest in organizational learning has grown dramatically in recent years, a general theory of organizational learning has remained elusive". More recently, Berends et al. (2003, p. 1035)

have stated that "although it is currently common to speak of organizational learning, this notion is still surrounded by conceptual confusion". Because of the social complexity of learning, "despite best efforts to measure, coordinate and assess, learning frequently ends up to be a slippery concept" (Antonacopoulou, 2006, p. 469).

However, some other views into the field have been less critical. "After reviewing the literature, it is apparent that the majority of researchers have complementary rather than conflicting perspectives" say Crossan et al. (1995, p. 355). Although defining OL has not been an easy task, "organizational learning is now an established field of study" (EASTERBY-SMITH et al. 2000, p. 783) and interest in the topic has only grown in past decades.

The multiple interests in the literature that sometimes lead to a lack of consensus in terms of concepts and definitions can be explained by the big amount of academic fields studying the topic, building interpretations and applying these interpretations to completely different areas. For example, Huber (1991) follows an information-processing perspective, while some other authors apply the learning literature to analyse product innovation (CROSSAN et al., 1999). In a different direction, cultural anthropology studies see learning in the form of meaning systems in which culture acts as cause and effect of organizational learning, and organizational theorists have given different definitions to OL and "most common to these definitions is the view that learning involves acquisition and exploitation of new knowledge by the organization" (MUTHUSAMY; WHITE, 2005, p. 416). This is not a definite neither a negative aspect of the field though. It may just show the variety and complexity of the topic.

This paper follows the organizational theory discipline. The organizational learning literature is used as a broader concept to analyse how corporations learn to develop decarbonisation initiatives. Here, social structures and practices are the phenomenon characterizing the learning process. Learning is seen as a trigger to competitiveness, taking place in the interface between the organization and the environment (or learning between organizations) in which effects of the context, interests and hierarchy are crucial. How the private sector can develop and diffuse mitigation technologies is the phenomenon under interest.

For this research, in order to provide a definition, Fiol and Lyles's (1985, p. 811) attempt is used: learning is "the development of insights, knowledge, and associations between past actions, the effectiveness of those actions, and future actions". This concept was reinforced recently by Berends et al. (2003, p. 1036): "organizational learning is the vehicle for utilizing past experiences, adapting to environmental changes and enabling future options".

The idea of applying the concept of learning to organizations is not new and dates back to Cyert and March´s paper in 1963, Chandler´s attempt in 1962, and March and Simon´s study in 1958 (BLACKLER, 1995; BERENDS et al., 2003). The studies about individual learning, whose origin is in the psychology discipline, were an anchor to the initial research about OL. An opening approach was the behaviorist in the period shortly before the 50s with the studies about stimulus-response and change-in-behaviour topics.

Shortly after, attempts into the OL theory focused on individual acquisition of information. "This focus on individual acquisition of skills and knowledge as the point of departure for OL has been criticized for focusing upon individual mind processes and a concept of knowledge that stresses the importance of abstract thinking" (ELKJAER, 2004, p. 419). This cognitivist view characterizes, to some extent, the "prejudice that, for more than two millennia, has asserted that practical knowledge is an inferior form of knowledge" (GHERARDI; NICOLINI, 2000, p. 331).

So while management theorists with a cognitivist background assumed that "learning occurs when there has been an adjustment or change in the way organizations or individuals process information, develop shared meaning, and interpret events", behavioural theorists believed that "learning has occurred if there has been a change in behaviour or action" (CROSSAN et al., 1995, p. 348). That means, "cognitive theorists would assume learning has occurred if there is a change in thought processes (unobservable), even in the absence of adjusted behaviour (observable)" but "behaviourists assume that learning has occurred if there is a noticeable change in behaviour, even if not preceded by a change in thinking to motivate the new behaviour" (CROSSAN et al., 1995, p. 348).

Within the time, debates about how to apply the concept of learning to organizations started to increase. In general, "most of the literature on organizational learning has addressed the topic from a perspective that entails various concepts traditionally associated with cognition" (COOK; YANOW, 1993, p. 374). Thus, "a fundamental problem derives from the fact that it is impossible to see cognition taking place in the actions of organizations" (COOK; YANOW, 1993, p. 375). This idea in the cognitivist approach of "attributing an ontological status to organizations as cognitive entities" was considered to be "conceptually as problematic as it is provocative" (COOK; YANOW, 1993, p. 376). This brought the debate about the reification issue that is applying human-like qualities to companies. "Therefore it has been argued that organizational learning should be interpreted as a metaphor in order to avoid these fallacies" (BERENDS et al., 2003, p. 1036). This means, "a cognitivist perspective on organizational learning either takes the organization as an independent cognitive entity, which can only be interpreted as a metaphor, or reduces organizational learning to individual learning in an organizational context" (BERENDS et al., 2003, p. 1036). This initial debate led to what is commonly called the acquisition metaphor.

In the acquisition metaphor, the focus of analysis is on the individual members of a company meaning "learning is about how organizational members may acquire knowledge about phenomena outside themselves. The knowledge to be acquired is already stored somewhere (in books, databases, heads) waiting to be transferred and acquired" (ELKJAER, 2004, p. 422). The understanding here is that abstract knowledge is much more important than concrete / practice-based one. This lack of focus on practice was proved later on to be very problematic.

On the other hand, the participation metaphor appears as a result of studies about learning which didn´t observe any teaching taking place (ELKJAER, 2004). This collective comprehension of learning originated concomitantly to the emphasis on the 'practice' aspect in the social sciences. This led to the understanding that learning in a non-individual basis requires collective construction of new knowledge and interaction with multiple systems and actors (VASCONCELOS; MASCARENHAS, 2007). About that, Berends et al. (2003, p. 1038) assert that "building theories of organizational

learning based on theories of individual learning alone, makes it hard to capture the social nature of organizational learning".

The participation metaphor in the OL literature is often called situated learning, learning as cultural processes or practice-based learning. This participation approach "takes learning out of the individual mind and formal educational settings and places it into the everyday organizational life and work" (ELKJAER, 2004, p. 420). Here, "learning is regarded as a part of human activity – learning can, in other words, not be avoided. Learning is an integrated part of the everyday organizational life and its work practice" (ELKJAER, 2004, p. 422). That means, learning is "a practical, rather than a cognitive process" (ELKJAER, 2004, p. 422). It "invokes themes of togetherness, solidarity, and collaboration" (FENWICK, 2001, p. 7).

This other way of analysing and understanding the learning-in-enterprises phenomenon, based on participation and practices, brings the social context to its core. Organizational learning is now presented as a "social process, which is affected by the contextual factors such as the organization structure, information, communication and control processes" (ANTONACOPOULOU, 2006, p. 456). "Although most contributions in the field say it is not possible to talk about organizational learning because this would be reification" (ANTONACOPOULOU, 2006, p. 456), as already mentioned before, here it is accepted that OL, in the firm level, can occur.

Therefore, the answer to one of the most fundamental questions in organizational learning research – does an organization learn? – would be yes here. "Companies develop and accumulate knowledge in files, rules, roles, routines, procedures; through their culture and structure they develop shared mental models, values and behaviours which constitutes part of the organizational memory" (ANTONACOPOULOU, 2006, p. 456).

According to this participation approach, the main question of interest is not if organizations can learn but rather how they learn (DYCK et al., 2005, p. 88). This led to the idea that OL "refers to the capacity of an organization to learn how to do what it does, where what it learns is possessed not by individual members of the organization but by the aggregate itself" (COOK; YANOW, 1993, p. 378).

As pointed by Araujo (1998, p. 317), the societal or broader

institutional context "has important structuring consequences for situated practices". There is some lack of attention in the literature about the cultural, sectorial and local factors that impact the learning in each organization. This is particularly problematic if one considers that the organizational quotidian has many barriers – also arising from the broader institutional setting – to the development of the learning processes; barriers such as too many priorities, fear of taking risks, pressure for short term performance, and lack of internal communication (BASTOS; LOIOLA, 2003).

Among the theoretical approaches one can use to investigate the learning phenomenon in enterprises, the practice-based approach seems to be a good tool towards this direction. Bringing more deeply into analysis the role of the practice and the social environment where learning takes place, including industry and society levels, is still to be further analysed in the literature though. That is the attempt of this paper. Especially in the decarbonizing debates, where contextual factors and local characteristics play a key role in fostering mitigation initiatives, social accounts and situated inputs into the OL discipline – namely situated learning theory – stand as the right approach to be used.

Organizational learning as a situated social practice

The past decade has witnessed a "stronger emphasis on socially oriented approaches to the understanding of learning and knowing" (EASTERBY-SMITH et al., 2000, p. 788). Following a social oriented and constructivist perspective[2], situated learning was first proposed as a model of learning in a community of practice. Simply saying, it is learning that takes place in the same context in which it is applied. It is the opposite of decontextualized knowledge. Here one analyses the influence of the context and its identities, ideologies, rules, language and interests on the learning process socially understood.

[2] Merriam and Caffarela (1999) point out five learning perspectives in the literature: behaviorist, cognitivist, humanist, social learning and constructivist. These approaches vary according to the understanding of what learning is and whether the stimulus to learn comes from the external environment or from an internal construction of meaning.

Abstract knowledge has always been considered superior to other kinds of knowledge such as the one based on experience and practice. As pointed out by Brown and Duguid (1991, p. 40) "in a society that attaches particular value to abstract knowledge, the details of practice have come to be seen as nonessential, unimportant, and easily developed" and 'education, training, and technology design generally focus on abstract representations to the detriment, if not exclusion, of actual practice" (BROWN; DUGUID, 1991, p. 40)

The situated learning literature refuses this idea and considers that "practice is central to understanding work" and learning (BROWN; DUGUID, 1991, p. 40). It understands learning as a process of attributing meaning to social practices and experiences and as a result of interaction with and observation of others in a social context / environment. This view of organizational learning "provides a challenge to the traditional idea that learning takes place within the heads of individuals. It starts from the assumption that learning occurs mainly through conversations and interactions between people" (EASTERBY-SMITH et al., 2000, p. 787).

The social sciences had a key role towards the shift to this practice approach:

The social sciences have been influential in encouraging a general shift away from Cartesian notions of the human being, and organization studies include a range of work that has been influenced by, or has contributed to, this trend (BLACKLER, 1993, p. 864).

Because initial theories of learning (based on documentation and training) "view learning from the abstract stance of pedagogy that specifically exclude the complexities of practice and the communities of practitioners, the setting for learning is simply assumed not to matter" (BROWN; DUGUID, 1991, p. 47). Therefore, later on learning theorists have "rejected transfer models, which isolate knowledge from practice, and developed a view of learning as social construction, putting knowledge back into the contexts in which it has meaning" (BROWN; DUGUID, 1991, p. 47) as well due to the fact that "organizations, like other social institutions, are socially constructed" (CROSSAN et al., 1999, p. 525).

As very well mentioned by Fenwick (2001, p. 3) "strong concerns

about knowledge embedded in action, interrelation of contexts […] and knowledge processes in work and organizations are moving workplace education practice in new directions." Learning literature has begun to be more concerned with the social practices surrounding the phenomenon. The idea that OL is an individual and mental process was substituted by the assumption that it is mainly a social and cultural phenomenon (GHERARDI; NICOLINI, 2000). The participation approach "brings learning into the social world of organizing and organization, and OL becomes a social activity" (ELKJAER, 2004, p. 423).

This approach in the learning literature is to a certain point a non-generalizing and non-abstract approach because it considers learning can only be explained according to the very specific conditions of the context in which it occurs (GHERARDI; NICOLINI, 2000, p. 331).

Social interaction is very important here. "Knowledge and ideas are shared and common meanings are developed through interactions. Knowledge is socially constructed, and organizational learning involves a complex social process" (TSAI, 2001, p. 1003). Rather than being interested in the outcome of learning, with the focus on skills and knowledge acquisition, the 'process' is the focus of analysis now by means of participating and interacting in communities of practice. It is recognized here that learning does not occur in a vacuum – "learners as social beings who construct their understanding and learn from social interaction within specific socio-cultural and material settings" (EASTERBY-SMITH et al., 2000, p. 787). In the words of DeCarolis and Deeds (1999, p. 956) "social interactions, both formally and informally, stimulate information exchange about such topics as competitor's plans, and developments in technology". The importance of interactions is reinforced by Dodgson (1993): "learning occurs throughout all the activities of the firm. It occurs at different speeds and levels. Encouraging and coordinating the variety of interactions in learning is a key organizational task" (DODGSON, 1993, p. 377).

It is also agreed that learning occurs in relation to the activity, context and culture where it occurs. That means it is a situated process

(LAVE; WENGER, 1991). In accordance with Brown and Duguid (1991) knowledge is always situated. Learning here is "situated in the system of ongoing practices […] always rooted in a context of interaction and it is acquired through some form of participation in a community of practice, continually reproduced and negotiated, and hence it is always dynamic and provisional" (GHERARDI; NICOLINI, 2000, p. 330). One can interpret then that what organizations learn inevitably reflects the social context in which they are immersed.

The concept of practice is fundamental to the comprehension of the situated learning and "in contemporary organizational research there has been an increasing interest in recurring actions patterns such as practices" (COHEN, 2007, p. 7773). Although the concept is rich in meaning, it is as well ambiguous. It can be defined as "experiences that include both the explicit and the tacit. Practice involves the language, tools, documents, images, symbols, well-defined roles, codified procedures, regulations, and contracts" (TORRACO, 2002, p. 455). "Practice also includes the implicit relations, tacit conversations and so on" (TORRACO, 2002, p. 455). Simply stating, it is the way things are done. Wenger sees practice as embedded in a historical and social context. For the author, practice is always social practice (WENGER, 1998 apud TORRACO, 2002). Practice in Wenger's theory of learning is "the shared historical and social resources, frameworks, and perspectives that can sustain mutual engagement in action" (TORRACO, 2002, p. 454). In accordance to that, Gherardi and Nicolini (2000, p. 331) assert that "knowledge always manifests itself as social action [*practice*] sustained by symbolics, technologies and relations. Action is always mediated. Action is always social action."

In an attempt at definition, Brown and Duguid (2001, p. 203) affirm that 'by practice we mean, as most theorists of practice mean, undertaking or engaging fully in a task, job or profession'. Therefore, there is no difference between learning and practice. By participating in the social practices within and across organizations, practice is regarded as learning. "When we view learning as an integral and inseparable part of social practice, it implies that the learned skill is a result of actually engaging in the process of performance" (ELKJAER, 2000, p. 13).

Within the corporation sphere, the comprehension of the importance of social interactions to foster learning can be utilized to raise interesting analysis about the role of context. Also here, knowledge is not a pre-existent reality but it is generated as a result of interactions between firms and their external environment. Thus, knowledge is dependent on the context and previous history of organizations (JUNIOR, 2009, p. 2). Various interactions (intra-firm, inter-firm, firm-society) are considered to be part of the learning context, as said by Fenwick (2001).

Next, the main concept of the situated learning theory is described and analysed: communities of practice. How situated learning is developed through communities of practice is the aim of analysis.

Communities of practice

Since beginning of history, human beings have been creating communities that share cultural practices and, consequently, reflect the collective learning. These communities range from the reunion of a remote indigenous tribe to an informal meeting of a group of engineers, and participating in them is essential to learning in a way that it contributes to apprentices to make sense of the knowledge to which they are exposed (WENGER, 2000).

Conventional learning theories are based on documentation and, mainly, on training. Training would be the transmission of explicit and abstract knowledge from someone who knows to someone who does not (a cognitivist perspective) in environments where the role of practice and practitioner's communities are excluded (BROWN; DUGUID, 1991).

Differently, Lave and Wenger (1991), for example, reject the conventional theoretical models that isolate knowledge from practice and develop an approach in which learning is a result of social construction and interaction, placing knowledge in the context of practice. This context encompasses what the authors call communities of practice (CoP).

Easterby-Smith et al. (2000) affirm that an increasing number of studies about OL are becoming more interested about phenomenons

directly related to practice and Roberts (2006) declares that since it was identified as a mechanism through which knowledge can be created and transferred, debates about communities of practice have been more influent in organizational literature.

Lave and Wenger (1991, p. 98) define communities of practice as "a set of relations among persons, activity, and world, over time and in relation with other tangential and overlapping communities of practice". The authors add that "participation in the cultural practice in which any knowledge exists is an epistemological principle of learning. The social structure of this practice define possibilities for learning" (LAVE; WENGER, 1991, p. 98). In such communities, learning occurs primarily through participation in social practice (TORRACO, 2002, p. 454). These communities can also be comprehended as a work practice, or social practice, where knowledge and abilities are acquired and developed in a continuous process of negotiation and interaction (LAVE; WENGER, 1991).

The existence of a community for times cannot be evident to all members involved mainly because these communities are not static and stable entities (ROBERTS, 2006). They develop and evolve within the time with the entrance and exit of members. In agreement with Lave and Wenger's (1991) idea that communities of practice cannot be deliberately formed, Roberts (2006) says that because enterprises cannot stablish the formation of a community, they can facilitate the spontaneous emergence of CoPs as well as support their development.

As mentioned by Wenger (2000) there are three central elements in the notion of CoP: first, community members are mutually connected by their understanding – collectively developed – of what a community is (joint enterprise); second, the members interact among themselves stablishing norms and relationships that reflect their interactions; third, communities of practice produce a common repertoire of resources such as language, routines, stories, and being a competent practitioner is to have access to this repertoire and be able to utilize it appropriately (WENGER, 2000).

Consequently, in accordance to the notion of communities of practice, to learn is to be included in a CoP, is to become a member, a competent practitioner, "in which individual learning is inseparable

from collective learning" (BROWN; DUGUID, 1991, p. 46). Elkjaer (2004) corroborates it when saying that to learn is a practical process and consequently it has to be understood as knowledge situated within a CoP. Learning is not a consequence of abstract knowledge but a result of participation in communities of practice that can be internal or external to the work environment. In fact, varied communities coexist emerging from private and professional networks.

The importance of the notion of communities of practice to the social learning perspective is something widely accepted by authors in the area. In the view of Torraco (2002, p. 450) "communities of practice allow workers to reach pragmatic solutions through mutual engagement. Communities of practice foster adaptation and sense making in changing work environments".

However Roberts (2006) emphasizes some aspects that deserve attention in order to avoid misinterpretations. These aspects refer to power, trust, size, spatial reach and the community's nature.

Roberts (2006) points out that communities of practice include members with diverse characteristics in terms of experience, age, personality, authority, and knowledge, and that power structures are normally more evident depending on the degree of participation in accordance with these characteristics. Trust is another factor that deserves attention. Without trust, members of the community can feel reluctant in sharing knowledge. Trust, familiarity and mutual understanding, developed in social and cultural contexts, are preconditions to the efficient knowledge transfer in a CoP (ROBERTS, 2006).

Wenger (2000) and Roberts (2006) affirm that the size and spatial reach of the community vary a lot according to the organizational context, and "while certain features may be common to all communities of practice, others may be sensitive to their scale and geographical spread or their nature and purpose" (ROBERTS, 2006, p. 631). "There is a need to differentiate communities of practice in terms of size and spatial reach as it is not possible to expand all communities beyond certain limits" says Roberts (2006, p. 631). Also, the notion of communities of practice is somewhat controversial taking into consideration the actual process of individualization in society. The cultural

richness and the multiplicity of contexts in which the communities of practice are inserted generate significant fluency and heterogeneity that disprove the belief in literature that these communities are homogeneous 'social objects' (HANDLEY et al., 2006). Following this thought, there is a recent tendency in the studies about the topic to attribute less homogeneity to the notion of CoPs.

While Roberts (2006) declares that there are communities that last longer than others, Handley et al. (2006) say the potential for tension and conflict inside communities exists because individuals participate of various communities of practice throughout their lives which have different practices. That is why it is agreed that learning is situated in a specific context and according to characteristics attached to each community – that means learning is extremely situated.

The adoption of a situated approach on learning aims to explain how the social interaction provides the appropriate context for learning. At the same time, the locus of the learning process is the social practice and learning is not anymore an individual phenomenon but rather a social activity. Learning, understanding and interpreting include many aspects that go beyond those described in manuals. They involve a collective practice in a specific context. Therefore, central to the process is the recognition and legitimacy of communities of practice (BROWN AND DUGUID, 1991, p. 50).

Final Reflections

Following the learning literature applied to the organizational studies, this paper suggests the social context in which organizational learning occurs has a great influence on how corporations learn about and develop mitigation technologies.

Firms have a crucial role on decarbonizing initiatives not only because they are central players in developing mitigation technologies but also because they have the opportunity, with or without direct national subsidies, to spread those technologies into other regions in the globe.

In accordance to the situated approach of learning, the attempt to learn about and with other firms is stimulated by social interactions among enterprises and its members. "Social interactions, both formally and informally,

stimulate information exchange about such topics as competitor's plans, and developments in technology" say DeCarolis and Deeds (1999, p. 956).

Because knowledge is not easy to spread across different regions, especially tacit knowledge, "social dynamics are agreed to affect network effectiveness far more than technology" (FENWICK, 2008, p. 233) and "the involvement of an organization in multiple interactions with others, customers, suppliers, university research centres, provides it with opportunities to mediate a range of local, situated practices" (ARAUJO, 1998, p. 328). Consequently, social exchanges are important for learning to occur and be diffused (MUTHUSAMY; WHITE, 2005) and "technical discourse alone will not, in all likelihood, provide a framework for a dialogue between both parties" (ARAUJO, 1998, p. 329).

Organizations differ systematically in the mode or process by which they interpret the environment (DAFT; WEICK, 1984). "Many activities in organizations, whether under the heading of structure, decision making, strategy formulation or innovation may be connected to the mode of interpreting the external environment (DAFT; WEICK, 1984, p. 293). Moreover, as already explained before, social relations among companies and a propitious environment interfere in the learning process in that "the exchange of expertise and information is highly dependent on social and affective relations in which trust, social confidence, credibility and interests play a pivotal role" (EASTERBY-SMITH et al., 2000, p. 793).

Although the climate change problem is a global problem, global solutions are difficult to be reached and contextualized mitigation initiatives seem more doable on a short- to middle-term basis. Looking more specifically to the development of mitigation technologies, analysing the corporations' role in this process from a social learning perspective can bring good insights on how these technologies have been developed and put into the market locally and whether they can be spread to other regions.

Because "developments in the companies that constitute the chain, and the learning that takes place within them necessary to create innovations that facilitate greening, is stimulated either by government regulations (actual or expected) or by market demand" (COOPEY; BURGOYNE, 2000, p. 875), social based assumptions and context oriented theories can add important contributions.

By means of all that, this paper links organizational learning initiatives to the development and diffusion of mitigation technologies. Following a social oriented and practice-based perspective of learning, it considers social practice and interaction central to the phenomenon of developing and diffusing technologies, in which the broader institutional setting surrounding companies influences (positively and negatively) the learning initiatives among the firms and in which organizational learning subsequently acts as a provider of technology diffusion.

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