

## Situated Cognition and Communities of Practice: First-Person “Lived Experiences” vs. Third-Person Perspectives

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### Abstract

This paper considers the work of Martin Heidegger and its relation to situated cognition. The motivation for the paper springs from the perceived misconception that many educators have on situated cognition by applying situated learning strategies in a dualistic orientation, whereas situated cognition is fundamentally relativist (non-dualistic) in epistemology. Hence, we felt that the foundations of situated cognition have to be revisited. In the paper, we relate Heidegger’s work to the resurgence of interest in communities of practice and the notions of identity or learning *to be* (vis-à-vis learning *about*). We then draw implications to situated cognition and the complementary role of descriptions or representations to situated learning.

### Keywords

Situated cognition, communities of practice, first-person “lived experiences”, third-person perspectives, learning to be

### Introduction

In this paper we articulate our reflections on situated cognition which has been around for more than a decade since the late 1980s or early 1990s (Brown, Collins & Duguid, 1989). Since its advent, many researchers and educators have hopped onto the bandwagon of its “new-ness” and as with any proliferation of its use, personal understandings or appropriations of this concept may differ across individuals. Today many educators adopt the terminologies of situated cognition or its related notions such as authenticity, problem-based learning, anchored instruction, situated learning, and others. Returning to the foundations, we reiterate the fundamentally non-dualistic epistemology and relativistic philosophy of situated cognition. However, many educators seem to adopt it in dualistic terms or apply situated cognition strategies in a traditional dualistic orientation. Dualistic thinking connotes an objective interpretation of the world and an attempt to mirror it through mapping objective “interpretations” onto the minds of students. Such a thinking and approach is pervasive in all dimensions of society. Because there is a prevalent view that there is no means to verifying “objectivity”, philosophers are arguing for a relativist view where criteria for judging validity is based on common consensus and shared beliefs. This view does not therefore mean that there are no absolute truths about reality; however, it does imply that we cannot get down to a truly objective knowledge based on our human biases, beliefs, and interpretations.

The misunderstanding of dualistic thinking is pervasive and subtle. For example, many attempts are made in today’s society to model successful practices at all levels, including modeling the ‘Silicon Valleys’, ‘Harvard’s’ and ‘MIT’s’ which we know of, and creating similar institutes elsewhere by direct transplantation of these successful models. Countries pour huge investments in financial and infrastructural resources in attempting to simulate or model these successful practices, but fail to realize that the principle of emergence and *in situ* cognition, development, and historicity is missing. The greatest difficulty to our minds of situated cognition is in the implementation. Educators need to understand the fundamental emergence epistemology of situated cognition before they can attempt to implement situated cognition in their respective contexts. Such an epistemology is non-dualistic and the prevalent practice of strictly ‘mirroring’ or ‘transferring’ objective knowledge from one individual to another is a contradiction in terms (oxymoron).

In this paper, we reconsider the writings of Martin Heidegger, in particular: “Being and Time” (1962). When situated cognition was initially mooted more than a decade ago (see Winograd & Flores, 1986), Heidegger’s (1962) work was seriously considered. From the writings of Heidegger we relate the issues of identity to the notion of communities of practice and the concepts of learning. Finally, we argue for the dialectical role of “lived experiences” (first person experiences) and third-person perspectives in situated cognition and the necessity for a balanced view to learning.

## Situated Cognition and Martin Heidegger

Recent works in situated cognition reminds us that learning is an appropriation of “ways of seeing” meaning (or acquiring an interpretive lens)—related to identity formation of the individual within a social community. Identities are shaped through local interactions in which individuals confirm or disconfirm each others’ state of identity. In this sense, identity is always mutually constitutive, and re-constituted through local interactions within the community. As knowledge cannot be detached from the knower, it has no independent existence; it is part and parcel of the identity of the individual.

Situated cognition informs us of two tenets. The first is the inextricable interwoven nature of context and cognition (Bredo, 1994). In other words, meanings are perceived as inseparable from interpretation, and knowledge is linked to the relations of which it is a product. The implicit dimensions include epistemological and cultural assumptions underpinning a context. The second tenet which situated cognition offers is the *in situ* nature of cognition -- that is, every thought is a (re)construction, and that the memory we possess is not a 'stored' memory, but a process memory (Clancey, 1997), which in essence denotes the emerging nature of cognition-in-action. Clancey (1997) reminds us that it is impossible to capture the densely interwoven nature of conceptual knowledge completely in explicit, abstract accounts, which he calls descriptions. We basically can say (or make explicit) much less than we understand; and our understanding is much less than the “reality” (Polanyi, 1964).

The situated cognition perspective as advocated does not deal primarily with the relationship between entities as distinct and separate. Instead, it considers the system—context, persons, culture, language, intersubjectivity—as a whole coexisting and jointly defining the construction of meanings. The whole is not composed as separate entities but is a confluence of inseparable factors that depend on one another for their very definition and meaning. According to such a perspective, the mind incorporates person-environment interaction, where activity involves an interaction between person and environment that changes both. In this sense, learning means weaving into the perceived fabric of life as an authentic activity. For Martin Heidegger (1962), existence and interpretation are essentially the same thing, thus making interpretation key to all three aspects of situatedness. Existence is essentially the same as interpretation because human-kind cannot be divorced from interpretation. From a post-modern perspective, all ‘realities’ are interpretations.

The initial thrust in situated cognition research signals a shift from the study of how we *process representations* to how *representations are created and given meaning*. In other words, representations are used primarily for *communication* rather than for *processing* – our brains processing “if-then-else rules”. An essential idea in creating representations and meaning making is that this process is perceptual and inherently dialectic. As representations emerge from the interaction of mental processes with the environment, they are not the stuff of mental processing. Each time we create these representations, we are engaged in an act of perceiving and reconstructing; we are interpreting. Categorizations of things in the world are not retrieved descriptions, but created anew each time. In addition, representations may themselves be interpreted interactively, in successive cycles of perceiving and acting. Instead of an objectivist world view where the aim is to arrive at the one singular “truth,” the situated view is a relational perspective where knowing is a social process of continually seeking for explanations of holistic phenomena and yet preserving an awareness of the inadequacy of any unified conclusion.

Theoretical foundations for situated cognition can be provided by the writings of Martin Heidegger, in particular, his emphasis on the non-dualistic nature of mind and body, or the unity of mind and external reality. We discuss the writings of Martin Heidegger with emphasis on his masterwork, “Being and Time”. We do know that Heidegger’s major work, “Being and Time”, was dedicated to Husserl who is associated with phenomenology. Heidegger’s thought is complex, and any attempt to convey it in brief fashion must necessarily produce distortion. Confining our discussion to the more general concept of Being, Heidegger begins “Being and Time” with the question of Being, or of what it is “to Be”. “To Be” here is similar to the notion of learning *to be* or identity formation (Brown & Duguid, 2000). From Heidegger’s perspective, Being cannot be defined because Being is not an entity. In one sense, we could almost render Being as “human being,” since it is a way of understanding our human existence, and thus derivatively, of understanding being in general.

Heidegger says that modes of Being must be seen and understood a priori as grounded upon that state of Being which we have called ‘Being-in-the-world’. Being-in is not a ‘property’ which Being sometimes has and sometimes does not have. Being can only be understood in context and in relation with the world. This relationship between Being and World is intertwined, and although Being can be phenomenologically perceived separately from World, Being exists or takes meaning only in relation to the world. In other words, Being is a relationship, a quality of the way we are related to the world. The world here is being understood as our

environment, that in which we are found. Being then is a way of being so related to the world that its contents are not merely objects, separate from us with their own independent identities, but objects only in relation to us. Thus, to be situated means to be situated within Being -- within our experience of the world. Situated cognition must be considered as experiential. When we say cognition is situated, we mean that it is situated in the flow of experience that comprises Being.

Brown and Duguid (2000) similarly speak on learning as an identity formation -- distinguishing between learning *about* and learning *to be*. Learning *to be* (or just being) forms the essence of identity. Congruent to situated cognition, the authors argue that communities of practice (as rich situated contexts) are ideal learning environments for learning *to be*, and practice being the effective teacher. Practice, then, shapes and supports learning.

In learning *to be*, in becoming a member of a community of practice, an individual is developing a social identity. In turn, the identity under development shapes what that person comes to know, how he or she assimilates knowledge and information. So, even when people are *learning about* ... the identity they are developing determines what they pay attention to and what they learn. What people learn about, then, is always refracted through who they are and what they are learning *to be*. (Brown & Duguid, 2000, p. 138)

Identities are observed by others or by members of a community through local interactions in which they confirm or disconfirm each others' identities. In this sense, identity is always mutually constitutive or reconstitutive through local interactions within the community of practice.

## Communities of Practice

Researchers are advocating a return to communities of practice (CoP) as the *de facto* contexts for situated cognition (for example, see Barab, Squire, & Dueber, 2000). In this sense, the emergence in situated cognition takes a firm stand on the role of communities of practice as situated contexts through which cognition and the context are always co-determined. A community of practice is a sustained social network of individuals who share a common set of core values and knowledge, including a past history, grounded on common practices. As communities are central to the changing and evolving nature of persons acting (situated cognition), we cannot escape the issue of changing phenomena and practice. Similar to Heidegger's thought of "being-in-the-world", Polanyi (1964) observes that the primitive sentiments of sharing values, experiences, and joint activities in the community are *prior* to formal articulation – that is, reflection. By fully participating in a "ritual," the members of a group affirm the community of their existence, and at the same time identify the life of their group with that of antecedent groups, from whom the ritual has descended to them. The assimilation of great systems of articulate lore by novices of various grades is made possible by a *previous act of affiliation*. Hence, identity is formed within the individual but co-constructed with other members of a community. This implies that each community has a set of beliefs, values, and "way of seeing" which characterize the members. An individual will only be able to get access to this set of beliefs, values and "way of seeing" through assimilation as a member of the community.

Many efforts have been made to 'build' communities (in particular, online communities) but many of these efforts fail to recognize the historical and evolving nature of communities. Situated cognition reminds us of the historical and evolving nature of cognition in context-communities. Due to the need to understand phenomena such as the success of CoPs, researchers engage in a third-person observer theoretician's perspective of such instances, and describe in terms of descriptions, patterns, and principles the context and interactions of CoPs. Books and papers are generated as a consequence. A follow up action could well be to initiate or build a CoP elsewhere to mirror or model the success of a described CoP as explicated in a well-known book. The problem with such an approach is that without the *a priori* community-interactions, structures are put in place to "simulate" a CoP. When we try to simulate a CoP, the historical emerging processes are missing.

The interesting recognition of situated cognition methodologies is the increasing emphasis that the descriptions identified of phenomena in context cannot be over-generalized and that transfer of descriptions and principles across contexts needs to be carefully done – or better known as petite generalizations (Stake, 1995). This is due primarily to the importance of emergence, historicity, and growth within any particular context. So, according to the emergence growth principle, Being (Heidegger, 1962) is human emergence, existence, or life. The next principle is in how we can learn from descriptions and patterns laid out by others such as researchers and inform an already existing phenomena or growth. To reiterate, there is nothing wrong with descriptions and narratives of

successful practices *per se*, but we need to make sure that there is contextual and *in situ* nature of cognition. Descriptions can serve as patterns or objects to be scaffolded towards. The patterns and descriptions can serve as a dialectical lens for learners and for practitioners to reflect upon their own practices.

Research in situated cognition can more fully account for an intricate balance between the evolving nature of cognition and the role of descriptions and representations. The original thrusts of situated cognition was not on how we process representations (as in the cognitivist paradigm) but on how representations are created and given meaning within an emerging and in-situ context. Narratives and descriptions can be very much a part of the historical nature of cognition from a first-person interpretation of meanings perspective (rather than a third-person perspective). But third-person descriptions can be appropriated by the 'first-persons' within communities as they engaged in the interactions among members. Third-person descriptions are used as artifacts and tools by the 'first-persons'.

Another emphasis of the nature of historicity in situated cognition is the necessity for the social construction of meanings and interpretations by the 'first-persons' themselves. The epistemological basis of a relational and situated view of meanings is where intersubjectivity can be established through negotiation of meanings. Although these constructions may approach very similar positions as established 'truths', the process through which these meanings and interpretations are constructed is the essence – as Heidegger reminds us that existence and interpretations are essentially the same thing. Instead of a dualistic position where meanings are imposed from the 'outside' (third-person's descriptions), interpretations need to be emerging from the 'first-person'. As a result of these first-person constructions, identities are formed within the context of these interpretations. Similarly, Ricoeur (1997, 1998) uses hermeneutics as the process through which readers are transformed by text or descriptions-narratives. He denotes the process as appropriation. Extending this transformation from texts to collective communities, Ricoeur adopts the position of bi-directional appropriation. Bi-directional appropriation transforms both individuals within a collective membership, yet denotes the individual bearings of influence in transforming the collective activities and goals (both individual and collective are transformed).

To Ricoeur, a hermeneutic circle exists between human experience and narration: experience has a pre-narrative quality that can be meaningfully and coherently organized into a story. Ricoeur accepts the distinction of Dilthey that there two mutually exclusive forms of knowledge: explanation in the causal world of facts and laws, and understanding in the human world of intentions and desires (Dilthey, 1976). He maintains that these perspectives of explanation and understanding must be integrated into a general theory of interpretation. The type of knowledge prevalent in the human sciences consists of objective structures and theories that must be explained, while the type of knowledge characteristic prevalent in natural sciences is not crudely objective but has a history and pre-understanding like any other interpretation.

From a situated cognition point of view, the individual's only epistemic contact with the world or anything outside the individual is his/her interpretation (Bopry, 1999). To experience is to interpret meanings via the individual's senses. In essence, situated cognition reminds us that any instructional context designed for learners should be sufficiently broad in order to accommodate learners' own constructions and interpretations. The task for instructional designers is to create learning environments which learners can form interpretations which would be as accurate as possible with norms and established knowledge which are progressive – that today's knowledge is better than yesterday's. The task of the instructional designer is also to facilitate learners' creation of shared worlds which exhibits learners' abilities to interpret meanings congruent to practitioners such as scientists, mathematicians, artists, etcetera. In other words, the task is to scaffold learners towards 'interpretive lens' which would enable them to enter into conversations with experts in the field. Instructional designers have the task of enabling learners to express meanings via representations and descriptions and to guide them in directions which would facilitate future entry into CoPs. Thus, the instructional practices in schools should serve as bridges to CoPs rather than develop practices that are tangent to societal demands as represented by CoPs. Moreover, schools can develop identities and skills of interpretation to be overlapping with identities of practitioners. These skills could include skills in making observations, recognizing patterns, making hypothesis or conjectures, conceptualizing and visualizing, exploiting analogy and metaphor in thinking (abductions), and experimenting and testing which are required for both the sciences and the arts.

Situated cognition also needs to account for persons who enter into different communities – home, work-practice, religious, and others – and yet are able to balance the identities formed within these respective communities. We posit that there are perhaps overlaps in these identity-formations. Heidegger's conceptions of Being are in the context of the world (Heidegger refers to Worldhood) in general – perhaps here the world is larger than communities of practices. Extending the work of CoPs and situated cognition, can there be identities that span the world as a generalized context? In this sense, "being-in-the-world" extends Being beyond specific

contexts and that there are identity-general formations which can transcend specific contexts. We conjecture that perhaps these general traits of identity are non-context bound and thus individuals can move from one community to another and yet maintain a balanced identity.

Concomitant with 'organism' metaphor, communities cannot be pre-designed *per se* but largely evolved. In other words, as in our earlier emphasis, all the processes within the community undergo an evolution, albeit gradually. In Ricoeur's (1997, 1998) hermeneutical understanding of learning as transformational, both 'reader'-learner and 'text'-environment are 'transformed'. In this co-transformational process, identities are formed based on the dialectical interaction, and the essence in learning is the 'dialecticism' rather than a 'mirroring' or 'transferring' of something onto another. It may appear from a 'third-person' observer-theoretician's perspective as transfer, but in essence, nothing escapes the 'first-person' *in situ* emergence of meanings or cognition-in-action. It is timely that Heidegger (1962) reminds us that all existence is interpretation from the 'first-person' perspective of any phenomena – texts, environments, people, descriptions, tools, artifacts, representations, even virtual worlds.

### **“The Map is Not the Territory”--Phenomena, Observations, and Descriptions**

Situated cognition makes the distinction between descriptions and the 'reality out there'. Knowledge can be represented, but "knowledge is never in hand" (Newell, 1984). "The map is not the territory" (Korzybski, 1941). The reality is the territory and our minds create maps of the world through our sensory systems and the historical paths they have treaded. These maps are with respect to the frame of reference of the beholder who operates in the world from these maps. Each map is a representation of reality but the map is not the territory. Each person has his or her own versions of reality.

Communication takes place when the persons can develop shared worlds of understanding and make meaning from their conversations. When enough social consensus is reached, we establish norms in established fields of knowledge. Much of teaching in schools is about communicating these established fields of wisdom. However, an over-emphasis on teaching at the "map" level – the level of description results in the learners not having a chance to experience the phenomenon themselves, and thereby not being able to understand nor exploit the knowledge provided at such a description level.

Representations or versions of "maps" (based on interpretations of a known reality or "territory") have a role in learning as it serves to act as a basis to validate learners' own interpretations or created representations of their understanding. In fact, there are also learning experiences that perhaps learners cannot physically experience the phenomena or "territory" because it may be too expensive, dangerous, or non-feasible. "Maps" can in essence form as a tool for reflection of experiences where further knowledge can be derived and implications drawn from practice.

The map has a prominent role in the natural sciences for describing phenomena or abstractions of phenomena. The field of mathematics is lot about different maps of the world, and languages and notations for representing and manipulating these maps. Paradigms in such fields do change, and when they change, there will come about different maps or mapping techniques. When it comes to the human sciences or about achieving inter-subjectivity, we need to be especially wary that one's map is but an interpretation open of appropriation and re-appropriation.

We communicate our maps through various forms of representations, not limited to natural language. An observer will perceive at this level of description. In order for learning to be meaningful, this experiencing needs to be brought down to the observational and phenomenon level (Bopry, 1999). Having experience the phenomenon, the observer should articulate his observations and experience at the description (through representations) level, making explicit his knowledge for her own self-introspection as well as to provide a basis for communicating to develop common understanding. A first-person interpretation for one becomes a third-person perspective for others but there needs to be this dialectical cycle between interpreting and experiencing within the person.

According to Bopry (1999), organisms experience phenomena at the phenomenon level of experience. Observations are made based on interpretations of phenomenon through activities, but these observations are not necessarily isomorphic to the phenomena. According to Polanyi (1964), we can hardly fully articulate what we know. In other words, we know much more than we can tell, and what is in reality is much more than what we can know or understand. Our observations are put versions or instances of actual reality. Beyond the level of observations, we make descriptions, accounts, or representations of observations.

A situated cognition perspective puts the balance back between experiencing, interpreting and communicating. Maps serve as descriptions and abstractions, and are themselves useful. There are domains where not every experience can be easily made or not every territory can be experienced. There are domains where it is not practical for all learners to experience the phenomena. Therefore, maps serve a useful scaffolding role for experiential learning. We recognize that some fields of study for example theoretical physics and mathematics particularly specialize on representations and abstractions. Mathematicians and physicists are particularly interested in “maps” and how such abstractions lead on to other theories which would make advancements in their discipline.

Situated Cognition has in the last decade emphasized on the rich nature of contexts through which learning occurs. Implied in these rich contexts, meaningful “lived experiences” and “third-person observations” (personal and others’ interpretations) can dialectically inform each other. Information and knowledge representations are useful for learning, but doing and “living out” the knowledge sharpens understanding and practice. The scope of all practice is useful knowledge; and the object of knowledge is advancements in practice. Both “maps” (knowledge representations in practice) and “territory” (actual practice and the lived activities within it) serve to enhance personal understanding within the context of the advancements of knowledge in communities of practice.

Schools based on the traditional objectivist epistemology would specialize on “maps”. Textbooks, media, and other forms of representations commonly attempt to objectify knowledge and contain abstract meanings in forms and descriptions. Schools and examinations are organized in relatively efficient ways to bring students into forms of established “maps” with the danger of insufficiently providing students with rich experiences of the “territories”. There is a real need to rethink schooling and how “maps” and “territories” can be dialectically balanced. The relativist epistemology of situated cognition suggests learners to be enculturated in actual contexts such as communities of practice where identities can be formed and learning “to be” as a way of Being (Heidegger, 1962). But such an approach may not always be feasible seeing the large numbers of students. Schooling remains a viable and necessary function in society. What educators need to consider is how schooling can be made to emphasize more on actual “lived experiences” and abstractions as a central means for reflecting of experiences and communicating for understanding. Schools should foster opportunities for learners to experience phenomena by doing; trigger learners to make meaningful observations (as inferred from behaviors and descriptions); and stimulate learners to express in multi-modal and emotive ways by describing through authoring tools, the creative arts, concept maps, etcetera. Importantly, teachers should not “steal” experience from learners by focusing too much on the “maps” *per se* and prescribe the learning activities too rigidly such that there is little room for alternative solutions and creativity.

## **Implications to Educational Technologies**

We can draw implications for the role of educational technologies for learners to experience “being.” If learning happens from experiencing the territory, then opportunities must be provided to simulate such experiences. Educational technologies can be used to try to re-create or simulate experiences in rich context, providing a simulated “lived experience” for the users. This can range from low fidelity environments such as communicative technologies which connect learners together to form communities of learners, and beyond that, communities of practitioners. Learners “live” in the kinds of situations discussing the kinds of issues which practitioners care about. For a while, the Internet has supported the emergence of such communities. Interactions through prevalent technologies such as hand phones and portable devices have become interwoven into the daily lives of practitioners. These technologies are suitable for promoting intersubjectivity in Dilthey’s realm of the subjects.

Examples of high fidelity environments (where “lived” experiences are made more real) are the kind of immersive environments where users interact in virtual space with various kinds of haptic authenticity. We have seen educational experiments of these kinds on a small or moderate scale, but they have not taken off in a significant way for various reasons not excluding issues about cost and access, and the immaturity of these technologies for scaling up. Immersive environments such as these in which the learner immerses herself and manipulates objects in the world seem suit for understanding Dilthey’s realm of the object such as for the natural sciences.

Rich practices out there have to be captured in their fullness using video technologies – to record descriptions which learners can “steal” from. Tools can be provided for learners to make sense of their interpretations and achieve common consensus, and to articulate these understandings for further interpretations and building upon.

Tools can be used to create different views or abstractions of phenomena which make the concepts and skills clearer to the learner. Technologies can be used to allow learners to articulate their understanding of descriptions by annotating *in situ* visual and timeline-based representations.

Educational technologies can also be appropriated to facilitate opportunities for learners to reconstruct, articulate, or express meanings at the level of descriptions. When meanings are articulated or made overt through multi-modal forms of expressions, these constructions can be brought into the open for individual and social reflection and knowledge is built upon by others. Opportunities for learners to articulate these meanings would be a process in which shared worlds of meanings can be established. Technologies for helping learners express meanings can be at the cognitive, emotive, and social levels of meaning articulation and description. We are more familiar with cognitive and social expressions through environments such as concept-maps and mind-mapping tools, and Computer-Supported Collaborative Learning (CSCL) environments; however more recently, there are tools which help learners express emotions and design-aesthetics through artifacts.

Learners can be assisted to draw implications from their learning experiences at the observations level. These observations can be one's own constructions or descriptions of phenomena or experiences or observations at the social level – others' descriptions, accounts, and articulations. Accounts describing successful stories, patterns, theories, and principles are important for learners to reflect upon. These observational tools include reflection logs, concept-mapping tools, discussion forums, and visualization mechanisms to express data and information, and others. From these observations, learners can also be assisted to draw implications such as issues related to the observations as applied to particular contexts. These implications are again articulated and described for further reflection by oneself or by other individuals. Educational technology can also be designed here to assist the learner(s) to organize observations, logs, resources, and other artifacts to aid in the thinking and discussions.

The current software tools that support concept-mapping and map-making emphasizes relational links which engage a higher level of abstraction. More can be done to support more idiosyncratic links such linking beyond or outside the map to other maps and resources, recommending relevant and possible links, and improving their usability. The vision of the Semantic Web (see <http://www.w3.org/2001/sw/>) is full of concepts about interlinked worlds with semantic associations facilitating search, retrieval, and access. Research in pedagogical agents has explored the use of such proactive agents to automatically suggest relevant semantic links or similar items of interest to a learner which is trying to make sense of maps. Technologies like XML promote the inter-operability of maps developed by different people at different places.

Ultimately every experience of the learner is an interpreted experience – interpreted either from himself-herself or from another-self. The self interprets the experience from accounts of the past in a reflective-dialectical fashion in order for learning to occur. Educational technology can assist and mediate these processes of interpretation of both experiences and accounts-maps. What we hope that the learner would achieve is increasingly accurate and progressive understandings and interpretations based on established reasoning and rationality derived from communities (CoPs) which have “survived” through their networks of knowledge and beliefs.

## Conclusion

In essence, learning *about* is learning the “maps” or from the descriptions and representations articulated by persons and found in books and artifacts, while learning *to be* is about acquiring the dispositions and identity to see and interpret meaning. Learning *to be* is thus congruent to the “territory” (based on our metaphor) where practitioners are able see to the criss-crosses in the landscape and develop expert understandings of the terrain. It is the personal knowledge which one has acquired by having lived in a city or “territory” – the alleys, the rush hour traffic, the pubs, the interesting spots, the parks where one has personally enjoyed or disliked, etcetera. These are the lived experiences which cannot just be described in an account or representation of a “map”. Any particular representation or map signifies one particular interpretation or version of a reality. We need to be aware that any representation denotes a certain version of reality and other non-explicit perspectives exist. Finally, both lived experiences (first person) and descriptions made by personal and others' observations (third person) can be appropriated in order to account for a balanced view of situated learning. Both “map” (texts) can be hermeneutically interpreted along with “territories” (lived experiences) in a dialectical manner that transforms both. In other words, we have argued for a balance between learning *about* and learning *to be*. We hope that this paper has been able to rekindle interest in situated cognition where the role of representations and cognition complement each other.

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