

Integrating affection, emotion, and aesthetics into a General Theory of Learning

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Abstract

Every learning process is an affective experience. Affect is central in experiencing learning as uncertainty. This article proposes an internal integration of affect into the learning process. The main concepts of learning are articulated with a take on the reflection framework and a dynamic and social understanding of affection, emotions, and aesthetic experiences, helping to integrate concepts like edge-emotions and liminal experiences into the learning process. These concepts support the idea that complex emotions play a central part in learning dynamics, while arguing for reflection as a self-regulatory movement of the learning process. It is argued that there would be no such thing as a merely cognitive learning process. Every time that people learn, they experience edge-emotions and liminal experiences. Furthermore, if the learning process occurs in educational settings, it is possible to think about learning experiences as being mediated by liminal affective techniques and so, open to transformation.

Keywords

affection, constructivism, emotion, learning, reflection

We hesitate not
because we are unsure but
because we love our craft.
Together we work like none would do alone,
we can round a square into any elliptical form,

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and we extend our little talks, reflections and stops,
the playful games we disguise as work.
Like friends from long ago we take a stroll
towards the puzzles we enjoy
to see how far we can go.
At times we may circle back to the start
but it just doesn't read like before.

The construction of a problem

Research on adult learning poses a problem for the psychology of learning as a whole: how can one explain the similarities and differences between the way children and adults learn, especially when it comes to the same object of learning (e.g., reading and writing)? Andragogy (Knowles et al., 2005) is arguably one of the most widespread traditions in adult education worldwide. However, its answer to this fundamental question has been criticized empirically by Merriam et al. (2007), and both theoretically, ethically, and, above all, epistemologically by Bourgeois and Nizet (1997/2007). By establishing an essential distinction between the ways in which children and adults learn, andragogy makes it impossible to explain what is common to these processes. Consequently, it may be impossible to explain the processes of transformation and development from how children learn to how adults learn and, in general, the transformations of learning throughout life. For Bourgeois and Nizet (1997/2007), it is an epistemology that sustains cleavages between adult education and the education of children and young people; between research on child and adult learning; between subdisciplines in the educational field; between traditions in psychology; between levels of analysis important for understanding human learning (intra-individual, interpersonal, organizational group); and between analytically oriented and prescriptive oriented work.

It could be argued that the andragogy approach is situated in a split epistemic framework that is incapable of explaining the processes of human development and learning (Castorina, 2006, 2009, 2010; Castorina & Baquero, 2005). An alternative to this issue could be the one proposed by Bourgeois and Nizet (1997/2007). They call for an epistemological shift in which the question of learning at different moments of ontogeny is situated within the framework of a general theory of learning. This would be one:

- (1) Which is coherently inscribed in a general theory of human functioning and development and, very particularly, of cognitive development;
 - (2) Which accounts for the nature of the learning process in general, that is, independently of the particular characteristics of the learner or of the learning context;
 - (3) Which allows for the identification of a priori variables susceptible of affecting this process, as well as the mechanisms by which they can act upon it.
- In reference to such a general theory of learning, we can then ask ourselves without preconceived notions about the role of some of these variables in different learning contexts, on different objects, and with different audiences of learners. (Bourgeois & Nizet, 1997/2007, p. 16; author's translation)

Sebastián and Lissi (2016) and Sebastián et al. (2021) propose a general theory of human learning based on a Piagetian–Vygotskian synthesis. This synthesis critically develops Bourgeois and Nizet's (1997/2007) neo-Piagetian proposal. It is explicitly

situated in the relational–dialectical epistemic framework that, as Castorina (2010; Castorina & Baquero, 2005) states, is necessary to explain human learning.

However, this proposal of a general theory of learning so far has not included an explicit development of the emotional and affective aspects of human learning. This is a shortcoming that is particularly notable in a context in which the emotional and affective aspects of learning have been discussed: as part of a broader understanding of student engagement (Loon & Bell, 2018; Macfarlane & Tomlinson, 2017), as a key element in learning (Booth, 2018; Mälkki, 2019; Mälkki & Green, 2018), or as an inherent aspect of the teaching experience (Chen, 2019; Zembylas, 2005), to name a few.

On the other hand, it is also fair to recognize that the “rediscovery” of affect in contemporary psychology has not necessarily led to an internal articulation of affect in the learning process. In the context of the affective turn that has taken place in psychology during the last few decades, the study of the relationship between affect and cognitive processes has advanced but still has a long way to go. At least that is the conclusion of Haye and Carballo (2017) after reviewing 950 articles corresponding to a decade (2001–2011) of the journal *Cognition and Emotion*. Although contemporary research has explicitly moved away from mind–body dualism, a cognition–emotion dualism, which would be related to the previous one, is still dominant. Current research understands cognition and emotion as independent and isolated entities that would maintain relations of double negativity between them: both processes would compete in the sense of mutual inhibition. “Research currently focuses on the impact of emotion on cognition in terms of bias, or inversely, the regulation and inhibition effects of cognition on emotion. Emotions distract thought and thus cognition, in turn, strives to keep them under control!” (Haye & Carballo, 2017, p. 116). In this framework, Haye and Carballo (2017) also note that the vast majority of papers were devoted to the relationship between emotions and basic cognitive processes, a growing number in the area of emotion regulation and very few focused on higher processes. The relationship between emotions and learning does not appear as an object of study in this review.

In this context, we think that an exercise of critique, analogous to that carried out by Bourgeois and Nizet (1997/2007) for andragogy, is a fruitful way forward in the task of solidly integrating emotions into learning theory. Analysing how and why one of the so-called best theories available may have problems integrating these aspects, would be a good starting point to understand what is the underlying theoretical difficulty in question. Such theory would explicitly name emotions as central to learning, but we would have to keep in mind that the question should not be solved by simply stating that emotion is essential in learning, nor by incorporating it as a variable or a factor of the transformation process.

For that purpose, we will discuss how Jack Mezirow’s (1991) transformative learning theory seeks to accomplish this integration. Starting with a critique of this effort we will propose a hypothesis of how this internal articulation between cognition and affection/emotion could occur, consistently with a processual and relational approach to human learning: we will elaborate on the General Theory of Learning (GTL) developed by Sebastián and Lissi (2016) and Sebastián et al. (2021), unfolding through the work of Larraín and Haye (2019, 2020), Massumi (1995, 2002), Stenner (2017), and others, for explaining the affective, emotional, and aesthetic experience of learning. Altogether, the

reader will understand one possible articulation between an epistemologically sound learning theory based on a historical–cultural constructivist approach, and the affective experience of learning.

The general argument of this article is that the learning experience is an ongoing experience of meaningful change that unfolds through the movement between the mediated sociocultural tools for collective interaction and the individual's currently insufficient modes of operation. As such, it is a process experienced as being at the edge of previously articulated and systematized experience, leaving the learner going through a liminal experience, not fully available as a thought process. Hence, it is not fully available for reflection and learning. This experience of liminality of the learning process could be understood as an affective process, closely intertwined with the cognitive process.

In other words, at any given learning experience, the learner is not only dealing with the specific learning gap that led them to engage in the process, but at the same time, is experiencing, signifying, and articulating the ever-new experience of becoming as a changing individual. This complex and dynamic understanding of the experience of adult learning could help to understand why people engage or disengage in a learning process, adding a layer of complexity by stating that it is not only a matter of dealing with the cognitive, technical, and political challenges of learning, but with a broader experience of changing.

The place of affection and emotion in transformative learning theory: A critique

Nowadays, one of the major learning research programs in educational theory is the one led by Mezirow's (1991) Transformative Learning, a program that also has its origin in the question of adult learning. Mezirow's theory has made a very explicit effort to articulate the cognitive and emotional dimension in learning as per the following definition:

Learning may be understood as the process of using a prior interpretation to construe a new or revised interpretation of the meaning of one's experience to guide future action. Transformative learning may be defined as learning that transforms problematic frames of reference to make them more inclusive, discriminating, reflective, open, and emotionally able to change. (p. 22)

First, we need to address the idea of transformation, that contrasts with formative learning. For Mezirow (1991), the latter is a form of associative and cumulative learning process generated before adulthood: formative learning "occurs in childhood both through socialization (informal or tacit learning of norms from parents, friends, and mentors that allows us to fit into society) and through our schooling" (p. 17), and then "becomes transformative learning in adulthood" (p. 18). This would lead to thinking that either (a) humans learn essentially differently at different times in their lives, (b) the learning process itself is transformed to become of a transformative nature through a particular process, or (c) both types of learning are essentially the same and therefore both are associative/cumulative or transformative.

Bourgeois (2011) makes a sound argument against understanding any learning as nontransformational, especially within Mezirow's (1991) theory. To Bourgeois, any

understanding of the learning process as cumulative in opposition to transformative should be disregarded as it could not be even considered learning. His critique leads us to believe that the first two possibilities would not really be the case, thus aiming to inquire about the epistemic nature of this “transformational” learning theory, just as it has been addressed for andragogy.

According to Mezirow (1991),

The idea that uncritically assimilated habits of expectation or meaning perspectives serve as schemes and as perceptual and interpretive codes in the construal of meaning constitutes the central dynamic and fundamental postulate of a constructivist transformation theory of adult learning. (p. 18)

These uncritically assimilated meaning perspectives could be regarded as the “formative learning” process, but then it is hard to understand them next to the statement that “making meaning is central to what learning is all about” (Mezirow, 1991, p. 21). It is even expanded by saying that “in transformative learning, however, we reinterpret an old experience (or a new one) from a new set of expectations, thus giving a new meaning and perspective to the old experience” (Mezirow, 1991, p. 21). A closer look at these ideas could be useful, where a key element can be found in the author’s definition of learning.

Mezirow (1991)¹ summarizes the learning process as

the extension of our ability to make explicit, schematize (make an association within a frame of reference), appropriate (accept an interpretation as our own), remember (call upon an earlier interpretation), Learning always involves making a new experience explicit and schematizing, appropriating, and acting upon it. (p. 21)

If formative learning and transformative learning are explained by the same process, then Mezirow would be using association as the explanatory mechanism for learning in general. Following Pozo’s (1989) critique of associationism, this is problematic because such an approach (in any of its theoretical versions) is unable to properly explain the (trans)formation of meaning.

The difficulty of understanding meaning-making besides mere association and the conflictive conception of the learning process in the different moments of the lifespan leaves the theory in a diffuse comprehension of the relationship between the subject and their environment for learning. In this sense, this associationist theory should be situated within the split epistemic framework (Castorina, 2010; Overton, 2010), which assumes that forces or factors external to the psychological organism (biological or environmental), and essentially different from it, mechanically causes change (development or learning). This kind of theory would not be able to explain properly the meaning-making process as a construction of an authentic novelty (Castorina, 2006, 2009).

This complicated epistemic background could also serve to understand why there are so many ways of understanding the role of affect and emotion within the transformative learning theory. Yet, a case still needs to be made about how the transformative learning theory has not been able to properly articulate affection and emotion with the learning process.

In Mezirow's (1991) theory, emotions are understood as interpretations—driven by association—of feelings, and a cause of meaningful transformation. The author defines the role of emotions as a thought process called “introspection” (p. 68), distinct from reflection, leaving it as a not-good-enough process for his transformative learning theory. Later, he states that emotions are required for transformative learning, as cognition might not be enough (p. 100), and even in later development from Mezirow (2009), affection and emotion are conceptualized as products of transformation (see p. 22 onward), leaving them then as causes, factors, and products of learning. In all cases, emotions are understood as external and independent variables from the learning process (in the first two, emotions cause learning, in the third, learning causes emotions). This way of posing the question about the relationship between learning and emotions corresponds to the logic of “legitimate psychological explanation” (Brainerd, as cited in Castorina & Baquero, 2005, p. 240), which is clearly situated in the epistemic framework of the split (Castorina, 2010).

Even if further development has come from later transformational learning theorists, the general approach remains the same. As an example of such, Taylor (2009) acknowledges that it is the “affective ways of knowing” (p. 4) that help identify the meaningful aspects of the experience for reflection, and so “affective knowing—developing an awareness of feelings and emotions in the reflective process—is inherent in critical reflection” (p. 10). Furthermore, he goes on to say that “by exploring emotional issues with students, the educator can address the dynamics that contribute to a resistance in learning, as well as potentially initiate a process of individuation” (p. 11). Adding to this, Taylor and Jarecke (2009) characterize the transformative learning process as emotionally charged, and so they argue that educators should promote safe spaces for learning, where students can explore new meanings that may bring about discomfort or unrest; or vice versa, emotional experiences can serve as an impulse for transformative learning (Quinlan, 2016).

Summing up, it can be stated that, while the core elements of the transformative learning theory include critical reflection (distinct from introspection) and a holistic orientation (which adds the emotional and social dimensions into the cognitive understanding of learning), emotions remain to be seen as an unexplained, emergent factor or as an object (or product) of learning (Illeris, 2013). It can be stated at this point that Mezirow and his followers are not comprehensive or systematic in their conceptualization of emotion nor with the process by which it aids meaning-making, arguably due to the epistemic issues described with the theory as a whole. Analogous to the works revised by Haye and Carballo (2017), in Mezirow's (1991) theory, affection and emotions are left unexplained and separated from the theorization of the learning process.

Although descriptively close to different constructivist learning frameworks, the transformative learning theory is not able to integrate affection and emotion to the learning process due to its position within the split epistemic frame, not only conceptualizing cognitive but also emotional processes. In the following paragraphs we will try a significantly different epistemic path. Our initial hypothesis would be that for affect/emotion and learning to be properly integrating, the learning theory available should be able to explain learning without an associationist substrate and within a relational epistemic

framework (Castorina, 2021; Overton, 2010), where meaning construction can be truly explained.

Towards a general theory of learning² (GTL): Integrating Piagetian and Vygotskian theories

In a constructivist framework, knowledge is constructed in the interaction between subject and object (Piaget, 1967, 1968/2007, 1975, 1981). Instead of talking about object, we could even refer to the pair as knowers and objects of knowledge. The objects of knowledge become so as the knowers can carry out certain actions that transform such an object into an object of knowledge: something that is know-able. These actions that are possible due to the dynamic systems of transformations of the pair widen and/or consolidate their ways of knowing through differentiation and integration.

In such a way, knowledge construction would entail an ever-dynamic movement of expansion and strengthening of particular ways of knowing. Over time, they can stabilize as cognitive structures that give recognizable forms to the conjunctions of knowers and objects of knowledge. This relational movement gives form to the progressive ways of knowing, as knowers can operate in increasingly dynamic and adaptive ways with a wider array of objects of knowledge. In other words, more objects become objects of knowledge through the actions that promote said expansion (Flavell, 1963).

Piaget calls this process of assimilation and accommodation “equilibration” (Piaget, 1975, 1981). As opposing pairs in the dynamic systems of exchange, objects can resist to be treated as knowledge objects according to the knower’s previous structures as a consequence of a gap or vacuum, or a confrontation or contradiction. Under certain circumstances, such can prompt a cognitive conflict, which in turn disposes towards the transformation of the previous structure through a process of accommodation (Piaget, 1975).

So, a structure is in conflict when it cannot operate and its possible actions do not allow it to adapt satisfactorily to the environment; due to this, it needs to accommodate itself and, therefore, to transform, executing a dynamic self-regulatory movement to transform the exchange system that keeps it alive. An important aspect to bring to light here is that within this framework, not every experience of cognitive conflict will promote transformation. Cognitive conflict needs to be experienced as a conflict that makes sense to the knowers, as it challenges the current partially successful adaptation with their environments. That is why meaning-making mobilizes the knower to achieve some sort of provisional resolution to the conflict by engaging in a learning process, implicating their learning, biographical, and identity trajectories (Bourgeois, 2009).

Nonetheless, following the issues raised by Castorina (2006) about the emergence of novelty in the Piagetian framework, how does a person construct new ways of operating that are actually new?

Following Vygotsky (2008), every operation that someone realizes on their own at some moment in their trajectories, was previously achieved within a social space. He states that any operation is initially carried out in a social space of joint action, and can later be carried out alone; so, people act as if they were still with others, reconstructing

the collective practices by guiding themselves, their own action, in the way others have guided it in the past in said conjunction. In a sense, individual construction means to progressively reconstruct the way in which people operate together.

This process of dynamic reconstruction and appropriation of psychological operations previously experimented in an interpsychic plane is known as “internalization” (Vygotsky & Luria, 1930/2007), but it does not necessarily mean that every or any collective practice will be appropriated in the future by the individual. Within this framework Vygotsky (2008) suggests the need for the configuration of a “zone of proximal development” through relationship with others.

Here, this space is created as conjunction, a dynamic system of exchange, and thus is not predicated of a subject “alone,” but of a knower that knows of and within a particular set of relations at a given time and place. In that sense it is situated within “the characteristics of the socially defined system of interactions” (Baquero, 1997, pp. 141–142), and throughout the history and development of thought process. Interestingly, the collective practices that can lead to individual reconstruction are such that can be recognized by the individual through the form they take within the collective. In that sense, they are formed and trans-formed.

In a take of the Vygotskian notion of concept, Larraín and Haye (2014) state that concepts inform thought as they are “generic ways of generalizing experience through which thinking and speaking subjects make a difference in their social and conflicting stream of experience” (p. 475). From their reading, accordingly to the Vygotskian framework:

The way people generalize depends upon how they use signs, we would say that the way in which people generalize depends upon the discursive practices in which they participate and have participated; people with different histories of discursive practices will use words differently to unify things in a generalized way. (p. 469)

Larraín and Haye’s understanding of meaning-making that rests on the notion of concept as a thought process has important consequences for a constructivist learning theory. The sense of continuity and consistency that follow the transformational process in meaning-making would rely on a sustained and unfolding internalization of mediated activity through a given speech form. This would account for a key feature of learning: the awareness of passage and stability in meaning construction as a trans-formation.

Taken together, learning can be understood as the dynamic process of expansion and consolidation of cognitive structures that is brought about through mediated joint actions in a specific sociocultural space, which paves the way and supports new expansions and consolidation of structures in the future. Summarizing, Sebastián and Lissi (2016) argue that

the participation of a subject in a collaborative thinking activity which is operated with a certain knowledge structure (a certain way of generalizing using words specifically) can be internally reconstructed and thus transform the knowledge structures with which previously the subject was operating with and had entered into cognitive conflict. (p. 37, author’s translation)

So, the learning process encompasses novelty insofar as it is a joint activity, where the operation is predicated for the bigger psychological unit distinct in form/structure. This is argued by Sebastián et al. (2021), who state:

The knowledge structure required to perform the task is not yet operating in the less advanced subject, but it is in the cognitive unit that is generated when the two subjects act together. Thus, those more advanced structures that are expected to stabilize in the subject at a given moment do not come only from the subject or only from the environment (from the more advanced subject, in this case) but from a system of activity constituted by the interaction between subject and environment. (p. 244)

It is important to say that change in people does not happen “right off the bat,” not once and for all: it is a process. For learning to take place, there must be mediated conditions in which cognitive conflict is promoted and, furthermore, spaces in which the conflict is sustained; in other words, it is mandatory that the cognitive structures are challenged and that the subjects do not get discouraged in the process given the malaise and difficulty that this conveys (Bourgeois, 2009).

Learning would entail a position-taking regarding the outer socially mediated practice where individual transformation takes place from the reconstruction of joint activities; the position taken can also be of conflict or uncertainty about the learning experience, including the cognitive conflict itself.

So, based on the general theory of learning summarized and reconstructed here, for transformation to take place it is necessary that social and symbolically mediated possibilities of action are being offered and sustained in time. Concurrently, they must be based within the limits of previous knowledge structures so that they can be deconstructed and socially reconstructed into something truly new, thus generating a progressive advance and active construction of knowledge.

Therefore, this process of significant change necessarily entails an experience of vacuum, gap, or “hiatus,” a sort of suspension in stability due to the processes of deconstruction of previously constructed meaning and concurrent reconstruction of collective mediated activities. In our understanding, this would be the “conflict” part of the “cognitive conflict” concept. Experiencing this gap as a tension in meaning-making could foster the search for stability/self-regulation either through persisting in learning—and so, changing—or by disengaging from the learning experience—and by doing so, trying to retain the stability of the previously constructed meaning-making. This will later be analysed as the affective dimension of the learning process.

Extending the general theory of learning: Reflection and meaning-making in learning

Deepening into this constructivist comprehension, to Bourgeois (2009), learning requires some degree of reflection. Creating sense out of a cognitive conflict experienced in everyday activities requires that the person knows what structure is operating at a given moment and how it relates to the problem presented: in other words, to be aware of the relationship between a specific action and a determined situation that resists its

realization in a feedback of sorts. Moreover, this means not only noticing what already is, but unpacking the operation and its potential (Berger, 2004).

As an example, higher education teachers learn to teach by reflecting on their own experience as students (Yuan, 2017). This has become a well-known problem among educators in different educational levels both in formal (García & Sebastián, 2011; Guerra, 2008) and nonformal settings (Sánchez & Berger, 2019), and has led to a wide range of research in higher education (see Ashwin, 2015; Rogers, 2001; Wald et al., 2012). Reflection, thus, has been identified as a turning point through which teachers can begin to change their ways of teaching—to learn—adapting to new and more attuned methods (van den Bos & Brouwer, 2014).

In general, reflection for learning has been defined and conceptualized in many different ways over the years (to expand on the matter, at different levels of analysis, see Boud et al., 1985; Calderhead, 1989; McCabe & Thejll-Madsen, 2020; Moon, 2004; Rogers, 2001). An important amount of research has been carried out, all reporting the many advantages reflection has in the learning process (McCabe & Thejll-Madsen, 2020).

Amongst the many related ideas and overlapping definitions, a broad concept of reflection is understood in this article as an integration of different elements drawn from the aforementioned articles addressing the concept. To us, reflection is based on the experience of doubt, challenge, and uncertainty, and guides the subject towards achieving a specific goal; it is situated in dialogue with the sociomaterial means for thought that allows the learners to be progressively more aware of their actions and their foundations, and so to achieve greater self-determination and freedom.³

In a nutshell, a working definition of reflection for learning can be understood here as the effects that the learner's actions—both internally and externally oriented—have upon themselves, their beliefs, and practices; reflection would always be found in a swing of thought oriented towards oneself and towards others, in the sense of ideas or practices and their effects on subjects themselves and their environment, in recursive and interdependent ways.

By incorporating the earlier theoretical development of learning, it could be stated that the sense of uncertainty and relationality between the learner and the learning situation as an unfinished process would motivate a certain awareness of the learning process as it unfolds. This conception of reflection is distinct from the concept of metacognition, as it is reflection on the interaction, on what Sebastián et al. (2021) refer to as the system of activity.

Here, reflection would mean the process of becoming aware of the movement of the system of activity, aiding to the description of the thought processes as a sort of self-regulatory action or feedback. In a sense, this idea would be analogous to the awareness needed to engage in any learning space. As Gallardo and Sebastián (2016) stated:

The practical “decision” to participate or not, to engage in the specific learning activity (a choice that is not necessarily assumed to be conscious or rational), is the culmination of a complex and active mediated development process, which demands: a) a dynamic system of exchange relating the specific learning situation with internalised practical modes of performed actions, useful for getting engaged in it and b) the use of means of support or transformation in order to initiate and sustain the motivated action: self-instructions, positive mood, beliefs about intelligence . . . among other forms of self-regulation. (p. 295, author's translation)

Having said this, it has been acknowledged that the perception of difficulties or constraints to change may lead to the conclusion that reflection is not enough, and so discourage it altogether (Mälkki & Lindblom-Ylänne, 2012), supporting the hypothesis that reflection needs to be socially constructed, as the means to think about oneself often come from sociocultural practices.

Up to this moment, we have been arguing for an understanding of reflection as a self-regulatory movement, consistent with the emergence and unveiling of conflict in the equilibration process, and therefore could be integrated as a key feature for learning just drawn from other empirical backgrounds but phenomenologically and theoretically coherent with the broader general theory of learning.

Affection, emotion, and aesthetic experiences as constitutive of human learning

Recognizing the conflictive nature of learning and the tensions it entails does not only challenge the learner from a cognitive perspective, but rather from a holistic perspective. Coherently, some studies have argued in favour of raising awareness about the affective nature of learning, adding complexity to the conceptualization of the whole process (Barer-Stein, 1987; Fossa & Cortés-Rivera, 2023; Loon & Bell, 2018; Mälkki, 2019; Quinlan, 2016).

As a starting point, it seems appropriate to discuss a general way of understanding the concepts of affection and emotion, extending into the concept of aesthetic experience for a further exploration of some research literature in adult learning. Then, a rereading of some research done within the framework of the transformative learning framework will serve as a conceptual anchor to argue in favour of an affectively liminal and edge-emotional understanding of learning.

In line with Teo (2015), and consistent with the General Theory of Learning elaborated earlier, subjectivity is based on a relational and intersubjective background and “needs to include agency, reflexivity, and praxis, as well as the body and the possibilities of resistance, and, of course, thinking, feeling, and willing” (p. 246). This axiological inclusion of both “mental and physical” elements in a relational manner towards understanding subjectivity, sets up the necessity of including other aspects of the learning experience for its proper comprehension.

According to Greco and Stenner (2008) there are several ways to account for the emotional and affective aspects of experience and subjectivity, that vary throughout history and between different theoretical perspectives. Next, some distinctions are presented between the two.

Through the dynamic, ever new, and diachronically bounded experience of learning, the events that unfold elicit a suspension of the subject’s explanatory systems, and so emerges the inexplicable. In Massumi’s (1995) understanding, this could be called *intensity*, corresponding as/to affect; as such, intensity can relate to its qualification in a manner of interference or resonance, reduction, or increase.

To Massumi (1995), “linguistic expression can resonate with and amplify intensity at the price of making itself functionally redundant” (p. 86) and therefore, in a sense, affect

is limited to its actual expression while being its unactualized—virtual—potential. Following Stenner (2017), affect is virtual in the sense that “the virtual is an undifferentiated potential whose openness is necessarily closed down as soon as it is actualized as some concrete occurrence or entity” (p. 209).

In this emergent movement, the focus is on the process itself, prior to the actualized coding or signification. In a way, the affective experience is that of passage, prior to the reconstruction of a resting movement, finalized and so transformed (Massumi, 2002).

On the other hand, Massumi (1995) proposes that emotion is

the socio-linguistic fixing of the quality of an experience which is from that point onward defined as personal. Emotion is qualified intensity, the conventional, consensual point of insertion of intensity into semantically and semiotically formed progressions, into narrativizable action-reaction circuits, into function and meaning. It is intensity owned and recognized. (p. 88)

This conception of emotion can be complemented with Gilmore and Anderson’s (2016) psychoanalytic view, where emotions are more than an individualized reaction to a specific event, but interpersonal, situated, and collective experience. Similarly, DiPardo and Potter’s (2003) Vygotskian perspective supports this view, such that “emotions develop in concert with the whole of a person’s cognitive and social life, continually constructed through social interaction and progressively internalized” (p. 320).

Following their reading of Vygotsky, Larrain and Haye (2020) state that through form and imagination, discourse and sociocultural means transform the affective experience. Here, the cultural means of excellence for systematizing and transforming affection would be art, not simply by enabling spaces for expression but by organizing and generalizing them and making them available to be responded to and contested. In a sense, through the art form, affection can be performed in a specific mediated manner that is recognizable as emotion. To the authors, emotions that “are individually felt but socially shared aspects of our bodily experience, become publicly organized in such a way that we can have an experience of them by taking a perspective toward them” (p. 804).

Elaborating on the idea of aesthetic, Larrain and Haye (2020) claim that “with aesthetic experience, emotions become more than just bodily states: they become objects of experience” (p. 804). Every human action presupposes an aesthetic dimension as it produces future-oriented meaningful actions to be realized (Tateo, 2017). Meaning is constructed into the artwork from the work of experiencing it, and conversely artwork as structured and coherent objects created from muddled and disorganized experiences becomes a device for meaning-making (Grierson, 2017) through transforming an experience.

Emotions as a transformation of affection through specific culturally mediated forms can open up the idea of devising particular ways of feeling and experiencing that are themselves learned and developed relationally and over time. In this case, the way we feel about learning can be transformed through art and aesthetic production.

To Larrain (2015), aesthetics can be broadly understood as the sensory dimension of meaning-making, materialized from social, historical, and conventionally fabricated semiotic forms. Thus,

aesthetics, as a dimension of discourse, plays a crucial role in experience insofar as it is a mode of affecting through which it is possible to take a position toward emotions, and some hidden aspects of social life. The aesthetics of discourse produces emotions and affects through the semiotic fabrication of artificial compositions, which form conveys emotional value that is not easily conceptualized and needs to emerge in an individualized way. In this sense aesthetics is a mode in which particular co-affectations occur. One may say that rhetorical and logical aspects of discourse provoke some sort of affection (are other modes of affecting) while aesthetics provokes others, in the same stream of life. (p. 150)

Further, aesthetics play such a central role that, according to Larraín and Haye (2019), the self is constructed “as an effect of the aesthetic activity involved in everyday discursive life” (p. 8), underlining that aesthetic activity, as the production of new means and finished objects, promotes both the experience of alterity and of singularity in the ongoing and technical process of becoming.

In all the concepts mentioned above, there has been some research undertaken over the years to establish their relevance in learning: a good example is Loon and Bell (2018), who argue that learning’s effectivity relates partially to the learner’s feeling and emotions while learning. In their research, they related emotion with motivation for learning, and they established that changes in emotions (positive or negative) ultimately alter skill development, and therefore, those who adequately regulate their emotions may also be more effective learners. This argument matches the overall idea that positive emotions relate to better outcomes and positive general learning experience (Quinlan, 2016).

From another perspective, concerning the central role of aesthetics in psychological dynamics and emotional elaboration (Larraín, 2015), their role in learning processes has been related to the formation of articulated concepts out of affective experiences. These concepts “become available for later reflection and further learning” (Grierson, 2017, p. 1247).

Thus, aesthetics has been elevated as a way of enhancing learning (Tordini, 2018), broadening thought processes (Gulla, 2018), and of fighting standardization and opening the learner to discovery (Greene, 1980). More recently, Doddington (2021) argued in favour of an educational practice based on aesthetics experiences as a way to “both promote human flourishing and foster better forms of cohesive and enriched social living” (p. 273).

By understanding the complexity of affective experiences and their relevance in learning processes, this article sets up to argue for an integration of affection and emotion into the GTL, where learning is understood as a truly novel experience and a change process that is transformational and meaningful by definition. The processual mode of understanding affection, taken together with the relational and socially constructed conception of emotions and the role that aesthetic experiences have in meaning-making as a tool for thought leads to a plausible introduction of these aspects as part of the overall learning process while maintaining its relational epistemological solidity.

How does learning feel? Conceptual articulations and bridges

As discussed earlier, the transformative learning theory, alongside its own problems, understands affection and emotion as playing different adjacent roles in learning, both

not being integrated to it within the central dynamic of the process and therefore left as a surplus (even if a possibly beneficial one). We have also argued that the reason for this problem lies in its positioning in the epistemic framework of the split. Therefore, we think that in order to take advantage of some of the powerful intuitions that have been developed in this tradition about the role of emotions in the framework of learning, it is necessary to reread some of its proposals from the relational epistemic framework in which the general theory of learning that we have synthetically presented is situated.

Among transformative learning theorists, Illeris (2013) points out that the learning process should always try to take people out of their *comfort zone* (a concept further developed by Mälkki, 2010); this would mean that people are partially engaged and partially willing to disengage as change may endanger their identity and bring about chaos and anxiety. If this assumption is accepted as part of the GTL by resting on the concept of equilibrium, it would lead to understanding learning as a paradox, a contradiction of desirable and undesirable cognitive and affective experiences.

As stated in Mälkki (2010),

when we are able to maintain the coherence and continuity of our meaning perspective, we may be seen to be functioning on a comfort zone. Correspondingly, when this is not the case, we are out of the comfort zone, or at the edges of it. Furthermore, I propose the term edge-emotions to refer to the unpleasant emotions which arise at the edges of the comfort zone, that is, when the meaning perspective becomes challenged. (p. 49)

Understanding comfort zone from the general theory of learning as the operation of the current knowledge structure of the learner when assimilation preponderates, edge-emotions would be another dynamic in the effort of conserving the identity of the structure/learner, thus giving a specific place to affection in learning. In her own words, Mälkki (2010) follows Damasio, suggesting that “challenging this continuity can be experienced as a threat to the functioning of the organism” (p. 53).

The effort to avoid edge-emotions and stay close to the limits of the current knowledge structure would explain the necessity for reflection to learn, that is, to recognize the self-regulatory movement, make the conflict conscious and interrupt the tendency of meaning-making (Mälkki & Green, 2018). Although this would suggest that reflection is not a pleasant or an easy thing to carry out regularly and that it is even a threat to the current functioning of the learner, it would also mean that reflection is a type of work needed to transform affection in the experience of learning in a way that promotes learning.

If we reread these ideas from our own framework built so far, this notion of a necessity for reflection would help to further integrate what was previously stated as affect and emotion. Both would account for similar phenomena, but emotion could be referring to affects that are culturally traversed, transformed in a certain way that makes them recognizable, controllable, workable, conscious, and so forth. Thus, the point of reflection as a taking consciousness of the conflicts would also serve to understand how “conflicting affects” are transformed into complex emotions. This will be explored more later in this article.

As we can see, transformative learning theorists treat edge-emotions as an individual mechanism affecting the learning process, neglecting the sociocultural nature and construction of the emotional experience. At this point it is productive to turn to another perspective that deals with the experience of meaningful change and borrow the anthropological concept of liminal experiences as a socially supported and affectively charged transition.

Anthropologist Victor Turner (1967) characterizes transitional beings as polluting⁴ because they are “neither one thing nor another; or may be both; or neither here nor there; . . . and are at the very least ‘betwixt and between’” (p. 97). In times of liminality, individuals are deprived of previous habits, thoughts, or feelings, and alternatively forced to reflect upon what may be.

To Stenner (2017), liminal experiences happen “during occasions of significant transition, passage or disruption” (p. 14). They can be understood as “becomings” (p. 14) and are experienced “in a paradoxical logic that is both ‘both/and’ and ‘neither/nor’. . . . liminal occasions tend to be highly affective in nature because they are formative moments of great significance: leaps into the unknown” (p. 15). The idea of being “both/and” and “neither/nor,” resonates both with the relational–dialectical understanding of Piaget’s transformation process in knowledge structures and with the conflicting affects involved in learning.

Thus, these edges of dynamic and moving ways of understanding are the “most precarious—and important—transformative space” (Berger, 2004, p. 338). While being on the edge of knowing “relative certainties of one’s previous conceptual system dissolve as one moves into a liminal zone” (Green, 2012, p. 209), thus encompassing two alternatives, the insufficient previous knowledge structure and the yet-to-be known. As a liminal experience, this is a process that anyone “must go through” (Stenner, 2017, p. 24).

According to Stenner (2017), the spontaneous processes of transformations as liminal experiences “throw us, as it were, into an unpredictable, ambivalent and volatile situation and condition” (p. 23). On the other hand, liminal experiences can be devised through “liminal affective technologies” (p. 24), like a ritual or rite of passage, “that helps us to navigate and manage spontaneous liminality” (p. 25). These techniques, like rehearsing and practising collectively, would become possible pathways to systematically internalize collective ways of experiencing uncertainty through rehearsing/preparing for the transition and thus, ways of experiencing in advance with others via performed practices to progressively appropriate a way of experiencing individually. The author states that:

To be concerned with process and liminality is to insist that the transitions, borders, gaps, voids, fissures and movements between states, positions, systems and disciplines are not nothing but are crucial zones or space/times in which new forms are created and experimented with: the quick of culture. Between the liminal and the ordinary there is an incessant weaving of the fabric of a living, psychosocial culture. (p. 25)

By integrating the ideas of edge-emotions and liminal experiences, we propose that the learning process (as operating beyond the edge of current knowledge, individual, and/or collective) is also leaping at the edge of articulated and systematized experience and therefore rendering it as liminal: not fully available as a thought process/utterance,

and hence not fully available as a learning material because it is not yet constructed or signified as an emotional and cognitive experience. An amendment to this would be via the mediation of liminal affective technologies, and thus strengthening the place of collectively mediated practices for learning.

Agreeing with Stenner (2017), the learning process would be utterly affective, where “the realm of the ‘this is not’ (the not quite, not yet and no longer) is celebrated as the liminal zone of real becoming” (p. 209).⁵ For a person, to cross the threshold that leads to learning conveys also moving past the affection involved in the preservation of previous self and knowledge; in other words, every equilibration process is affective in the sense that it unveils the struggle between adapting to the new and receding to the prior—the unadaptative.

The possibilities of integrating an affective understanding of learning into the transformational experience would be through art and aesthetics as a technical effort to articulate experience into shared, *reflectable* learning material: emotions. This way, we argue that although learning could feel in a particular way—uncertain, strange, anxious—it does not need to stay like that as it can be collectively appropriated and transformed. That leads the way into noting the self-regulatory movement in the learning process when affection is still rendered as virtual intensity and the general meaning-making is suspended as it is being transformed with others.

This idea follows that of Stenner and Zittoun (2020) of devised liminal experiences (liminality 1) in relation to spontaneous liminality (liminality 2), where “art and life reciprocally interpenetrate one another” (Stenner & Zittoun, 2020, p. 245), through Stenner’s (2017) concept of liminal affective technologies.

Rereading Massumi’s (2002) concept of affect from a relational epistemic framework, because the liminal experience is occurring, it cannot be understood as a predicable affective experience. It is not an antecedent, cause, or independent variable of learning. In fact, learning can be understood as liminal only if it is also understood as a constructive and generative process that is not self-contained from the start to its end point, being truly open, and so, in need of closure, which is exactly the experience of cognitive conflict described by the general learning theory. At a certain level, learning always feels uncertain and confusing.

In contrast, to make this experience bearable, as proposed by Vygotsky (1925/2007), the social technique of emotions that is art would allow negative and positive feeling to be combined in unitary and manageable experiences for human beings and thus transform the experience of learning in situated, mediated cultural ways such as enjoyment, curiosity, playfulness, and so forth. Art would enter as a social-cultural affective technique to aid the construction of meaning, sense, and direction of the unknown in its unknowability and thus, enabling reflection as a means for learning that is both emotional and cognitive.

Final remarks: The experience of conflict for learning, cognitive and emotionally

This article proposes that every learning process is, in itself, an affective experience. As such, there would be no such thing as a merely cognitive learning process. Every time

that people learn they are experiencing edge-emotions and liminality. Furthermore, we argue that if the learning process occurs in an intentionally structured setting, it is possible to think about such learning experiences as being mediated by liminal affective techniques.

It has been stated that affect takes a central place in the unfolding experience of change, conflict, and contradiction as uncertainty, and so, it should be accounted for in the dynamics by which the learning process is understood. If learning is experienced as confusion and uncertainty and, at the same time, it also requires engagement through “positive” emotions, what we have developed here is a way to sustain that for learning to take place, there has to be some form of complex emotions in which opposing, and even contradictory “valence” can make up and be integrated into the same experience. For us, this is what art and the various cultural forms would produce: transforming uncertainty into curiosity (understanding that in curiosity, uncertainty and the desire to be involved coexist in an articulated way).

Of course, such a hypothesis that we have conceptually articulated here should be the subject of further research, both theoretical and empirical. The transformation of complex emotions that would be characteristic of the various processes of human learning should also be investigated carefully and yet, we suspect that this development of the emotions in/for learning could partially explain the transformation from children learning into the way adults learn, in a way that is consistent with the proposal of general learning theory.

In contrast with Mezirow (1991, 2009) and his followers’ transformative learning theory, in this article we have tried to conceptualize both affection and emotion, and learning from a dialectic–relational epistemic framework (Castorina, 2010), and with that, we propose a way of integrating them internally in such a way that they participate in the same process, as part of the experience of conflict and uncertainty for learning.

Overall, it is proposed that emotions are not merely individual but also collective and always mediated pathways to conceptualize and understand affective experiences. Following a Vygotskian perspective (DiPardo & Potter, 2003), they are learned but they also must be transformed and integrated into the experience in such a way that they can be used for reflection. The means for doing this is by incorporating affective liminal devices into the learning experience as an aid for sustaining cognitive conflict and mediated collective practices that are unfamiliar for the learner.

This article puts reflection as a self-regulatory movement at the heart of the learning process by understanding it as the way in which the learner sustains awareness of the learning process when learning and suggests that for any learning theory to be comprehensive of the experience it must account for a dynamic that explains the affective experience of learning integrated into the whole process.

In Gilmore and Anderson’s (2016) view, “learning involves more than cognitive accommodation and assimilation” (p. 695); it involves all the learner’s ways of experiencing life. Here, we agree with them that emotion can be productive or unproductive as a result of the collective emotional practices that are involved in learning. On the other hand, we are not talking about eliminating, suppressing, controlling, or managing emotions of any valence for learning. In this paper, we are discussing complexly integrating emotions into the work and experience of learning since contradictory emotions—typically those of negative or positive valences—are part of the learning itself. Learning

would always feel, at least, affectively uncertain since in order to learn it is necessary to “produce” and experience some conflict. The experience of learning should not be understood as an extra factor interfering with cognitive learning or an aid for easy remembering (as in Mezirow, 1991), but as a tendency to preserve previous ways of knowing that feel comfortable and make the world understandable (Mälkki, 2010), and therefore, as a tendency to conserve previous knowledge structure and/or disengaging in the learning process, as an experience of conflict. Now, what is interesting is how this uncertainty is indeed experienced and, therefore, how it is worked through and transformed.

Thus, learning is an invitation to give in to the transitional contradictions and conflicts of changing something that has worked in the past (Bourgeois, 2009; Mälkki, 2020). As experienced by the learner, learning “is more like travelling trackless ways illuminated only by commitment and the anticipation of discovery” (Barer-Stein, 1987, p. 100), if it is not well supported affectively.

In the words of Barer-Stein (1987), “learning in everyday life may be expressed as a process of experiencing that which is different or unfamiliar. The briefest personal reflection will reveal to each of us that we do not learn what we already know” (p. 89). In this sense, learning deals with what is at the edge of current knowledge, and so, encompassing an affective experience of unease or unfamiliarity which is a constitutive aspect of the learning process; learning is a liminal experience of difficulty, transition, and disruption, in other words, of conflict.

Moreover, learning is “a choice to move toward the unknown; a position always clouded with anxiety if not fear. Above all, to make a choice to shift away from what is known and familiar, is a deliberate movement to the possibility of change” (Barer-Stein, 1987, p. 102) and so, it requires pedagogical support not only in a cognitive sense.

The understanding of learning as a liminal experience of change and transition can account for both the affective and cognitive dimensions together as a process. As a deep dive into the unfamiliar, it is at the same time and for the same reasons an experience of unactualized potential and of disequilibrium that needs to be sustained by cultural practices and/or socially mediated tools for transformation and integration into prior structures.

This article discussed learning research by stating that a sound cognitive understanding of learning is not the only aspect required to understand the broader and ample phenomenon of the learning experience. A synergetic integration and profound understanding of affect that is inherent in the process of meaning-making should inform any pedagogical intervention intended to bring about change in others, as affection is inexorably bound to the process of learning. One of the clues in this article is that art, as a cultural medium, would make it possible to articulate, to synthesize these complex emotions necessary for learning.

With this paper, we argue that the experience of learning can be transformed through liminal affective devices as emotions are transformed by art through form and imagination. As such, structured educational settings (whether formally organized or not) can provide such means of transformation in specific, contextually relevant and intentional ways. As clues for further theoretical and empirical exploration, a case could be made to dive into the field of art-based educational and research practices (Sánchez, 2023), or playful stances to learning (Mukherjee et al., 2023), to address ways in which the

experiences of learning can be devised and transformed to support complex emotions. Furthermore, rereading the work in epistemic emotions and epistemic cognition (Muis et al., 2018, 2021) as something that is formed and transformed culturally could be worthwhile as it could lead to further integration of both fields of inquiry through a complex understanding of learning.

Hopefully, this article may help in amending—even if slightly—the oversight in the literature and learning theories regarding how learners experience the process of becoming familiar with something or someone (Barer-Stein, 1988), that is, how learners experience learning.

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Notes

1. For a summary made by Mezirow (1991), see pp. 32–33.
2. As mentioned before, the works by Sebastián and Lissi (2016) and Sebastián et al. (2021), titled “The Vygotskian Contribution to the Construction of a General Theory of Human Learning,” both serve as a larger and sound argumentation to defend a general theory of learning, considering the necessity of a relational–dialectical approach defended by Castorina and Baquero (2005). The articulation of the Piagetian and Vygotskian theories is by itself a general theoretical framework due to the epistemic grounds and purposes of both theories. The aim of this article is not to revisit their conceptual discussions but to present the salient elements of their framework to construct and understand the learning process and therefore will necessarily miss some interesting points and arguments in favour of parsimony. For any other interest in the specific or metatheoretical discussions undertaken for this notion, please refer to the aforementioned authors.
3. In line with Vygotsky’s thesis (Vygotsky, 2008; Vygotsky & Luria, 1930/2007) about the development of voluntary control and awareness thanks to the learning of sign systems that make it possible to make thought the object of thought. This thesis is also consistent with Freire’s (1971/1998) postulates about the development of critical consciousness, within the framework of liberating education.
4. See Douglas and Douglas (1996).
5. Noting that “affectivity is, in one sense, a constant: it does not just appear in situations of disruption or transformation, but threads through our lives at every conceivable point” (Stenner, 2017, p. 239).

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