Negative Emotions and Learning

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Introduction

When Socrates and his friend Meno discuss the question of how we can learn something of which we do not have any prior knowledge (Plato 2006a, Meno), Socrates uses a living example to prove his point: He tells a slave to solve a mathematical task, which consists in calculating the surface of a geometrical shape – a task, the mathematically illiterate slave naturally cannot solve. By cross-examining him, Socrates lures the slave into a cognitive trap or aporia, a situation where he doesn't know what's right or wrong anymore and the slave cries out in despair: "Well, on my word, Socrates, I for one do not know!" (ibid., 84a). The philosopher has deprived the slave of his self-confidence, of the feeling of knowing something (or anything at all). He has humiliated the boy in front of spectators and, as Socrates calls it, has "caus[ed] him to doubt and [gave] him the torpedo's[1] shock" (ibid.), i.e. he has induced strong emotions and pathic experiences in the poor slave. But, being self-righteous as most experienced educators, Socrates sees no problem in inflicting such an emotional state on his student. He reassures himself: "And we have certainly given him some assistance […] towards finding out the truth of the matter: for now, he will push on in the search gladly, as lacking knowledge; whereas then he would

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[1] The "torpedo" Socrates is speaking of is not a means of marine warfare but a kind of electric ray, which numbs its prey by emitting electric shocks. Earlier in the conversation, Meno has compared Socrates' rhetoric technique (and his looks) to the features of such a fish: "I consider that both in your appearance and in other respects you are extremely like the flat torpedo sea-fish; for it benumbs anyone who […] touches it, and [this is what] you have done to me now." (Plato 2006a, 80a).

have been only too ready to suppose he was right…" (ibid.). Meno, his friend, does what Socrates' dialogue partners mostly do: he wholeheartedly agrees.

This brief episode, which might or might not have taken place in the fifth century BC in the *agora* of Athens is still considered a founding stone of philosophical inquiries in the nature of learning and also a blueprint for all didactical art (Bühler 2012, p. 132). It shows how closely emotions and learning are connected: The beginning of learning lies in a negative emotion – negative in the sense of an emotion (here: despair and shame) which we normally try to avoid and which does not leave us unchanged. However, we could argue that from a life-world-perspective, Plato's story doesn't make much sense: After going through an experience of inability (he can't solve the task), a major disappointment of his self-image (he is not a capable mathematician) and finally being put in a public situation of humiliation – why should the slave "push on in the search gladly" (Plato 2006a, 84a) instead of just resigning and giving up, especially as what can be learned through solving the task – mathematics – has no practical value for him?

In this paper, I will try to address these questions, avoiding to regard the relation of negative emotion as a simple problem of the transition from 'emotion' to 'cognition'. I will argue, that negative emotions (and emotions in general) have been separated from learning as a cognitive or intellectual process on a discursive level and that the two elements have been forced into a temporal order (1). In a phenomenological analysis of a short example from classroom research (2), I will try to show that both hermeneutic and psychological learning theories perpetuate this separation and temporalization of emotion and learning and thus fail to cover life-world emotional experience in learning in its complexity (3). In a phenomenological variation, I will point out alternative concepts of emotion, learning, and sociality to create a different picture (4). I will argue that learning and emotions are both rooted in a pre-predicative relation to the world, which combines embodied (emotional) and intellectual elements. Negative emotions in learning can then be seen as anchor points for disruptions in this pre-predicative world-relation, and also as starting points for understanding the Other and thus interacting pedagogically (5).

1   (Negative) Emotions and Learning—Inventory of a Discourse

To understand how the whole range of affective and emotional phenomena are related to learning, knowledge, and scientific rationales, we have to take a closer look at the changeable history of this relation.

   While affects, emotions, and the pathic dimension of life had been an integral part of learning and knowledge in Ancient Greece, they got more and more neglected and driven out of the spheres of knowledge, as modern scientific thinking emerged in the wake of Descartes' philosophy. In Greek mythology, the Gods often inflict pain upon men as a reminder of right and prudent action. In the Hellenistic era, learning through suffering and negative emotion was superior to other learning since it was thought to penetrate "into the space of the heart" (Dörrie 1956, p. 325). For the Greeks, a man who acted imprudently could not be instructed by rational arguments, since his actions indicated a lack of *sophrosyne*, prudence, and rationality. In such cases, learning by suffering was the means of choice (ibid.). In Greek philosophy and mythology, we can find an example for the close connections of emotion or the pathic dimension of learning in the proverb or phrase *pathein – mathein*, suffering, and learning (Rödel 2019, p. 58). We even find traces of emotion and pathic learning in Plato's allegory of the cave (Plato 2006b, Republic, 514–517a), which was later to become the great narrative for all acquisition of knowledge and even the Enlightenment: The man escaping from the cave is painfully blinded by the light and goes through all kinds of emotional pain when he realizes, that all he believed to be true and real were just shadows and illusions. And, not to forget: The other prisoners in the cave react with hatred and violence as the fugitive returns to the cave and tells them what he saw (ibid., 517a). So, learning something new (and being forced to give up old ways) can also be a quite emotional and painful process (see also Plato 2006c, Theaetetus, 150a).

   Beginning with Aristotle's epistemology, this ancient understanding of 'higher' learning through emotions gives way to a reflexive and formalistic understanding of learning, as the rational element is put in the foreground and learning is seen as a mere activity of the *logos* (Meyer-Drawe 2013, p. 68, referring to Aristotle's *De Anima*, Aristotle 1931). In the centuries to follow, emotions and affects are considered unfathomable for the mind, hard to control, and potentially dangerous to virtue and rationality. With the rise of Christian morality, which set the aim of all learning in man's approximation to the ideal of Christ, emotions were finally banned from contexts of learning for good. As they were considered to be rooted in the darker, animalistic regions of human personality, they seemed to be an indicator of potential sinfulness.

   Looking at modern notions of the relation between (negative) emotions and learning, it is no wonder that the two spheres are clearly separated, as German phenomenologist Meyer-Drawe (2013) argues. In Western societies and economies aiming at performance and self-optimization, the affective and non-controllable elements of human learning – i.e. emotion – do not fit into the

picture. According to Meyer-Drawe, learning through *pathos*[2] or emotion as a synesthetic experience must first assert itself against a rational concept of learning. By bringing together pathos and emotion as a bodily moment with learning and knowledge, the occidental dual of mind and body, of active intellect and the passive-receptive, sensory dimension is called into question. Thus, arguing for a close relation between emotions and learning not only challenges a modern logic of knowledge, but also the concept of the modern subject itself (ibid., p. 68).

As we can see from this all too brief overview, emotions were not altogether expelled from the sphere of learning. With Foucault,[3] we could claim that in this specific discourse on negative emotions and learning, the sphere of rationality, logic, the mind, knowledge, and systematic learning was first clearly separated from the sphere of emotion, pathos, affect, and the lived body, in order to relate and to re-construct the relation between the two spheres anew.

If we are looking at contemporary discourse on negative emotion and learning, we find a variety of approaches which underline the importance of making negative experience and emotions in learning. In the Anglophone discourse, this encompasses Dewey's theory of experience, in which discontinuity and difficulty play a very prominent role (Dewey 2008; English 2013; Waks 2017). In cognitivist learning theories – e.g. Piaget (2003) – disruption and emotions of dissonance have a prominent place, as well as in constructivist theories of learning (Glasersfeld 2002; Neubert and Reich 2006). Not to mention all the pseudo-scientific and guidebook-literature, suggesting that we learn from failure, and that failure brings us forward (for a critical synopsis, see Rödel 2019). All these theories suggest, that failure, aporias, setbacks, and disappointments are inevitable in learning and even promote it in a special way. However, they are all built on a separation of negative emotion and cognitive-intellectual learning activity and a 'temporalization' of the relationship of the two processes – i.e. they cannot occur at the same time but stand in a relation of (causal) succession. As I will show in the following, this notion of negative emotion and learning goes hand in hand with a neglect of the sphere of the lived body and the social sphere. Both these dimensions are of major relevance for the experience of emotions, and by giving them away, learning would lose its connection to and foundation in the life-world, as the emotions

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[2] Following German phenomenologist Waldenfels (2007), Friesen has rendered *pathos* as that which "touches, affects and even violates" us (Friesen 2014, p. 72).

[3] Foucault mentions the process of "classification, ordering and distribution" (Foucault 1971, p. 12) which the elements or constituents of a discourse undergo in the formation of this specific discourse. These processes are again subject to change, however they delimit with a certain rigor which elements of the discourse are to be combined, and which aren't: "…discourse exercises its own control" (ibid., see also Foucault 1979, p. 15ff.).

in learning would have to be considered specific emotions, disconnected from the ones we are normally experiencing.

2   Emotions in Learning: An Example from Video Classroom Research

In the following, I will present an example from video classroom research, which serves as the starting point for a brief phenomenological analysis. Phenomenology as a mode or style (Merleau-Ponty 1966, p. 4) of thinking and inquiry uses examples to create a richer picture of experiences and situations. We can suggest that in this example, an emotion of shame is central.

We find ourselves as observers in a German lesson of a sixth grade in a German comprehensive school. The students sit in a circle of chairs and are physically close to each other, everyone is visible to everyone. The subject of the lessons is Aesop's fable of the crow and the jug.[4] The teacher has just read a part of the fable, but without reading it to the end. She now asks the students in a class discussion to suggest solutions to the problem the crow is facing in the fable – it is thirsty but can't reach the water level in the jug. We are focusing on one student, who raises his arm and as the teacher calls upon him, he suggests that the crow in the fable should get some help. The teacher responds: "What should this help look like?" The student responds: "Other crows?" The teacher inquires again: "And what should the other crows do?"; whereupon the student suggests: "Eeeh, they could help thinking?" The other students start to laugh and the teacher hurries to comment: "Aha, okay, that's not so bad at all. We have often done the same, getting together, asking ourselves how to solve a problem. We have collected our ideas and mostly, at some point, we found a good solution."

Looking at the student's posture, we notice that after the pretty extensive gesture of raising his arm (Fig. 1), waiting to be called upon, he draws back further and almost 'withdraws into himself'. His shoulders are lowered and pulled inwards, his view is directed to the floor, his hands lie motionless in his lap (Fig. 2). His facial expressions are unstable – parts of the conversation with the teacher are accompanied by an insecure smile that quickly disappears again, his gaze moves restlessly between the teacher, his hands in the lap, and the classmates. Most of them are turned towards the boy and the laughter of the classmates, which follows the boy's last answer, draws even more attention to the conversation between him and the teacher: Some students now bend forward and literally stare at him.

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[4] In this classical fable by Aesop, the crow eventually solves the problem by throwing several stones into the jug—the water level rises and it can drink.

Fig. 1 Begin of the discussion, student raises arm to contribute (© S. Rödel)

Fig. 2 Student in a pose of shame, peers laughing and staring (© S. Rödel)

3   Questioning What We Take for Granted: A Phenomenological Reduction

I will now briefly suggest two 'classical' ways of reading this example through the lens of learning theory, in order to carry out what is called a reduction in phenomenological terms (Fink 1957; Brinkmann 2015). In a reduction, we are taking our subjectivity or "first-person-perspective" (Zahavi, 2007, p. 132) into question and critically examine it. Reading an example like the one above (or experiencing phenomena in general), goes along with thousands of subjective pre-judgements

and expectations, based on our life-world understanding of (pedagogical) situations, on scientific and pseudo-scientific theories, or biographical experience. In this context (and with myself being a researcher in educational theory), it is especially pre-judgments rooted in pedagogical theory, that come to mind naturally. For the sake of the argument, I will thus start with two theories of learning and try to put them 'into brackets' (Husserl 1950–2004, Vo. I, p. 56), in order to be able to describe the phenomena in more detail.

3.1   Learning and Negative Emotions in Hermeneutic-Phenomenological Learning Theory

The first reading is based on a hermeneutic-phenomenological theory of learning, which in the German discourse is closely related to Buck (Buck 1989, 2019). For Buck, experience (and thus learning) is a temporally structured process between prior knowledge or prior experience, anticipations, and new elements. In order to learn, we have to go through a so-called "negative experience" (Buck 1989, p. 57), which functions as a negation of anticipations or expectations. Through this first negation, a horizon of questions and problems is opened up – the learner cannot relate the new situation or experience to any previous experience. To complete the process of learning, the openness of the first negation is closed again in a "second, absolute negation" (Buck 1981, p. 73) and the new experience is dissolved in a changed, newly consolidated horizon. When we learn, patterns of meaning and assumptions about the world, which feed on previous experiences, are first interrupted and 'disappointed', then rearranged and transformed. Thus, Buck also speaks of 're-learning' (*Umlernen*[5]). This also means that the negative experience in learning is turned into a positive one: "The actually instructive experiences are those in which, as they say, one pays dues, i.e. the so-called negative ones" (Buck 1989, p. 15). Negative experience (and negative emotion) becomes "productive" (ibid., p. 80) precisely because it affects the whole person and goes beyond the correction of false assumptions or knowledge; it broadens the whole horizon of learning and knowledge. In a quite platonic manner, Buck speaks of a 'reversal' of the consciousness (ibid.), that takes place when we learn through a negative experience (in Plato's words: "turning round the soul", Plato 2006b, 521c). Re-learning through negative experience is then a higher form of learning,

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[5] The German prefix *um-* indicates, that something changes. Insofar, the translation of *Umlernen* with re-learning is not exact, as the prefix *re-* (not exclusively, but mostly) suggests, that something is simply repeated or restored.

in which the way of future experience changes and the learner gains a new form of self-awareness and self-relation.[6]

Applied to the example given, such a perspective would suggest that the student is experiencing the negation of his knowledge or his prior way of thinking, has to re-structure his horizon of experience and – going along with this – the structure of his self-relation. The emotion that was ascribed to the boy for the sake of the argument would then be a mere effect of the confrontation with a negation of his prior knowledge ('first negation'). Following this negation, the feeling of shame could be attributed to the insight and the massive deception of his earlier self-concept as a student, who is able to contribute relevant ideas: If shame is a reaction to the "failing relation between an individual and his/her ideal self" (Schäfer and Thompson 2009, p. 9), a protective mechanism for the "fragility of our existence" (Meyer-Drawe 2009, p. 49), the boy goes through a 'second negation'. With Buck, we would have to interpret the emotion of shame as a follow-up of a reflective process. Emotion would then be secondary to reflective learning, both in terms of temporality and hierarchy. And, if we furthermore assume that the student actually learned something (about crows or about himself), the negative emotion would have to be considered as something 'positive', whereas if learning didn't take place, it remains a 'negative' negative emotion. Labelling a painful emotion as 'positive' leads to similar problems of life-world incongruences as mentioned in the story of Meno's slave – why should something painful be motivating? On the other hand, the life-world congruency of emotional experience and pedagogical labelling (a negative emotion is negative for learning) is only to be had at the price of a failure in learning.

3.2   Learning and Negative Emotions in Educational Psychology

In a second perspective, I will take a look at psychological theories which try to connect learning to negative emotions. Hascher and Brandenberger (2018) describe emotions as related to "a cause or an incident" as well as "interrelated with cognition". In addition to the cognitive sphere, they also influence motivation and acting (ibid., 291). When it comes to learning, emotions do not affect learning directly (Efklides and Petkaki 2005, as quoted in Geppert and Kilian 2018, p. 234). Rather, (positive) emotions are considered to influence metacognition, motivation, and self-efficacy-beliefs and thus for example encourage students

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[6] This notion is closely connected to theories of *Bildung* (see Rödel 2019, p. 188).

to stay on task (Hascher 2010, p. 14). Negative emotions, on the contrary, lead learners to focus on themselves and their emotional experience, which hinders learning, as the necessary attention for learning and task solving is lacking: According to Hascher (ibid., p. 15) learners cannot focus both on the task or object of learning and on themselves. In order to foster learning (and learning skills), students should consequently try to avoid negative emotions or – if they arise – cope with them in a way so learning is not impeded. Also, students should be trained in emotion-regulating and coping strategies and in productive failure-processing strategies (Hascher and Brandenberger 2018, p. 303).

However, there are also opposite notions of negative emotion in educational psychology. Pekrun for example suggests, that negative emotions such as fear, anger, and shame can be potentially "activating" emotions (Pekrun 2018, p. 216f.). He argues, that the anticipation of shame after failure can work as a driving force for learning and motivate students to pursue their "performance goals" (ibid., p. 226). Similarly, D'Mello et al. (2014) classify confusion as a 'positive' negative emotion. They define confusion as an "epistemic" or knowledge emotion (ibid., p. 154, see also Pekrun and Stephens 2012), as it arises out of a cognitive operation. In this operation, learners determine whether new information aligns with existing knowledge structures or whether there are discrepancies in the information stream (D'Mello et al. 2014, p. 154). In the case of discrepancies, an affect – mostly surprise or confusion – in learning occurs and a learner can become "metacognitively aware of the state of his or her knowledge" (ibid. 166). What defines this process as an emotional one is the simple fact that an incident disturbing the regular cognitive processing of information cannot be considered as part of cognition itself. It has to be something else – an emotion (ibid.). Students then have to "effectively self-regulate their confusion", i.e. their emotion (ibid. 155). Otherwise, they are likely to fail or be frustrated after numerous unsuccessful attempts to solve problems, which then results in "negligible or poor learning" (ibid., p. 154). Broken down to a simple formula, D'Mello et al. speak of "the confusion-engagement transition" (ibid., p. 166), which means the leap from an experienced emotion or confusion to a (cognitive) engagement with the source of confusion. Thus, negative emotion (in this case: confusion) can be seen as an agent triggering a process of "deeper learning" (ibid., p. 154), as not only the information acquired is questioned, but the existing knowledge structures themselves.[7]

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[7] For a complete description of the 'flow' and dynamics of different affective states during processes of deep (or shallow) learning, see the elaborate model of D'Mello and Graesser (2012).

If we are taking a look at our example from the psychological perspectives presented here, the boy would have to evaluate the incoming information first and check for incongruences, before experiencing an emotion. If we take one step further, his behavior could also be described as a struggle for a transition between the emotion experienced, and new metacognitive strategies of reorganizing his knowledge – he obviously fails to do so and according to D'Mello et al., this results in poor learning. Following Hascher's perspective, the experience of confusion and maybe even shame is so overwhelming that the boy focuses on himself, his individual experience, and strategies of escaping from the emotion so that he is not able to focus on the task anymore. Being overwhelmed does not go along with the idea of a strong subject who willfully engages with negative emotions and autonomously chooses to activate cognitive resources. If educational psychology were to explain what happens to the student, it had to introduce an artificial separation between cognitive aspects, meta-cognitive mechanisms of control, and emotional experience which is rendered as completely different from the two other aspects – both in its temporal succession and its nature: what is cognition cannot be emotion and vice versa.

4 Variation: Broadening Perspectives, Approaching the Phenomenon

After having presented two 'classical' perspectives of learning theory and having pointed out the shortcomings of these perspectives in terms of describing the phenomenon of emotion in learning, I will now try to create a richer picture of the experience reported in the example. In a phenomenological analysis, this step is connected to a so-called 'variation'– the act of "playfully" (Husserl 2012, p. 46) trying out different perspectives and pluralizing meaning. The researcher thus tries to open new approaches to the phenomenon or example. Applying different perspectives also helps in achieving a temporary estrangement from one's own point of view and an opening up for the world in a mode of passivity. In the following, I will present three theoretical angles to re-conceptualize emotions, learning itself, and the social dimension of emotions.

4.1 Philosophy and Phenomenology of Emotions

According to German philosophers and phenomenologists Landweer and Demmerling (2007), emotions in a narrower sense have intentional correlates and are

related to the world. Intentionality in the context of feelings and emotions should not be misunderstood as intentionality in the sense of a theory of agency or purposefulness. Being intentional here just means: being directed towards something, relating to something.[8] We feel shame for an inappropriate remark in a social conversation, we envy a sense of ambition and determination someone else shows or we grief over the death of a loved person. In their intentionality, feelings and emotions can also be distinguished from physical sensations such as heat or cold and pleasure or pain. In such sensations, we experience a certain quality or stimulation in all its immediacy, without the correlative structure. Furthermore, we can distinguish emotions from moods: Moods have no intentional objects or at least are related to diffuse objects and ends – such as the mood of angst (ibid., p. 5).[9] The backside of the intentional structure is the propositionality of emotions (ibid., p. 6): In their intentional relationality, emotions not only are directed towards something, but they add a certain quality, statement, or proposition to this directedness: We are not only neutrally relating to our departed grandfather or the event of death itself, but we also relate to him in a certain mode – the mode of grief – and thus give this relation the nature of a proposition (ibid.).

When it comes to the question of cognition and emotions, Landweer and Demmerling argue that we have to assume a simultaneity of physical or embodied experience and cognition. When we look at emotions on a phenomenal level, they are interwoven with cognition in an almost chiasmatic structure, much more than, say, a structure of succession, where one process precedes the other. Emotions are experienced holistically, not as the sum or dynamics of individual processes. It would therefore be misleading to raise the question, how embodied emotions and cognitions 'interact' in feelings, as if they were ontologically delimitable phenomena. According to the authors, "an ontological separation of the two spheres is phenomenally not possible" (ibid., p. 21).

If we read our example from this perspective, it becomes obvious that the emotion of shame has an intentional correlate: The boy is ashamed of the gaze

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[8] Husserl's concept of intentionality is central to phenomenological thinking. In an intentional act of perception, we perceive the intended phenomenon *as something specific*. Perception is neither an act of reception nor of construction, but something in between: In its intentionality it is (actively) directed towards the world and at the same time (passively) open to experience and impression (Waldenfels 1992, p. 16).

[9] Moods can be defined as being of longer durance, having a more encompassing social dimension and – most importantly – as being foundational for understanding (in the sense of a hermeneutic of *Dasein*). Moods in learning can thus be said to pre-determine how we communicate, how we understand given learning contents and which possibilities for learning in general open up or close (Rödel 2020).

of the others resting upon him, of being the center of attention in an unwillingly comic situation. The intentional character of the emotion does not need to have an 'objective' correlate. In this situation, the others as a source of shame and the sha-red, social norms as a means of comparison (Schäfer and Thompson 2009, p. 9) are not explicitly given, they emerge and become relevant over the course of the interaction and the embodied relations of the participants. Taking the perspective of embodied emotions, i.e. the chiasmatic connection of emotion and cognition into account, the posture and mimics of the boy can be read as 'embodiments' (Plessner). Embodiments are bodily expressions of a certain self-relation, which is itself based on relations to others and their embodied expressions.[10] The boy in the example – or, more precisely – his gestures, mimics, and posture show us a certain emotional engagement, which becomes accessible and understandable through "taking part in each other's feelings" (Scheler 1923, p. 1): We all know the emotion of shame and the embodied reactions such as blushing, sweating or tunnel vision, and sometimes observing someone else living through this emotion even triggers it in ourselves. Given this, one could not claim (as in the perspec-tives presented before) that negative emotions are secondary to the intellectual elements of the situation, or that they are hindering or supporting learning. Nega-tive emotions are built on a wholly different logic, and at the same time, they are fundamental and pre-predicative to the situation as they are *embodied emotions.*

4.2   Learning and 'Not-Readiness-To-Hand'

The next variative perspective invites us to cast a different light on learning by referring to Heidegger. In his lecture "What is a thing" (Winter Semester 1935/36), Heidegger briefly talks about the nature of learning and describes it as the "taking of what one already has" (Heidegger 1967, p. 73). A famous quote from this lecture reads: "The μαθήματα [*mathémata*, S.R.] are the things insofar as we take cognizance of them as what we already know them to be in advance, the body as the bodily, the plant-like of the plant, the animal-like of the animal, the thingness of the thing and so on". (ibid., p. 72f.) Heidegger calls this kind of learning *mathesis* and describes it as the transition from knowing things in a life-world sense to knowing things in the sense of questioning and going to the bottom of them. Heidegger's view of learning as "taking of what one already has" (ibid.,

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[10] Embodied expressions cannot be grasped with a simple hermeneutic approach or a semiotic notion of signifier and signified. For a theory of pedagogical understanding of embodied expressions see Brinkmann (2020).

p. 73) also functions as a link between a phenomenology of hermeneutics of the dasein and a phenomenology of the lived body, in which being-in-the-world (or 'being towards the world'[11] with Merleau-Ponty) is mainly mediated by things and us dealing with them (Meyer-Drawe 2000).

In this concept of learning, negative moments and maybe negative emotions play a decisive role. The transition from a simple, lifeworld knowledge to "taking cognizance of things" is marked by moments of negativity. According to Heidegger, we normally see and deal with the surrounding world in the mode of "in-order-to" (Heidegger 1996, §15, p. 65), and things are given to us in a certain "handiness" (ibid.) or 'readiness-to-hand' ("*Zuhandenheit*", Heidegger 2006, §15, p. 69). This status can be interrupted by experiences of not-readiness to hand, i.e. when something is missing or something doesn't function the way it is supposed to according to its status as 'equipment' or "useful thing" (Heidegger 1996, §15, p. 68). In these moments of "unhandiness" (ibid., §16, p. 68) or 'not-readiness-to-hand' (Heidegger 2006, §16, p. 73),[12] our attention is drawn to the world as a whole. Breaking the routine and the everyday use of things, they become "present" or "objectively present" (Heidegger 1996, §16, p.70) and the world or being as such shows or announces itself in inner-worldly, everyday modes of concern (ibid., § 15). Coming back to learning, we can see how experiences of not-readiness-to-hand can help us to look differently at what we already take for granted. This can lead to a broadening of horizons, which can be described as a special form of learning and as an extension of experience.

Applied to our example, we can ascribe a moment of not-readiness-to hand to the boy: based on a Dasein that is always already interwoven in structures of understanding and being-towards-the-world, he relies on a certain structure of in-order-to and according to this structure he answers the teacher's question: to find a solution, we can ask fellow students to 'help us think'. The teacher's reply and the reaction of the classmates mark a moment of (intersubjective) "conspicuousness" (ibid., p.68), as Heidegger calls it (*Auffälligkeit*). The boy has to ask himself why his solution to the problem seems valid to him, but not to the others. In this short episode, an opportunity opens up to question the things in the world – in this

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[11] English translations of Merleau-Ponty's *Phénoménologie de la perception* translate the ambiguous French phrase "puisque exister c'est être au monde" (Merleau-Ponty 1945, p. 414f.) with "to be in the world" (Merleau-Ponty 2012, p. 378) or "being in and of the world" (Merleau-Ponty 2005, p. 421). I stick to the German translation (*Zur-Welt-Sein*, Merleau-Ponty 1966, p. 413).

[12] Heidegger's distinction between different modes of "unhandiness" – i.e. "conspicuousness" (*Auffälligkeit*), "obtrusiveness" (*Aufdringlichkeit*), and "obstinacy" (*Aufsässigkeit*) (Heidegger 1996, §16, p.68) – is hard to present unambiguously in translation.

case, the nature of the task and the kind of solution(s) marked as relevant by both teacher and fellow students. The emotion of shame can be attributed to the elementary experience of difference the boy goes through. By being exposed to laughter and the gaze of the others, he feels alienated in what he considered as a most stable state – his existence as an interpretation of Dasein, and – in the words of Meyer-Drawe – shame can be considered a "shield to the fragility of our existence" (Meyer-Drawe 2009, p. 49).

4.3   Emotions as Social and Valuing Experience

In a third and last perspective, I will refer to Scheler and put the focus on the sociality of emotions. For Scheler, emotions are a pre-condition for experiencing and understanding the Other. The experience of the Other is only possible because we can relate to his state of mind and participate in his feelings and emotions. Feeling with the Other creates the Other as a human being that is both similar and different from ourselves (Scheler 1923, p. 69). However, this specific process of relating to and creating the other is not based on a notion of intellectual or rational understanding, but rather on the experience of 'encountering' the Other (ibid.). According to Scheler, an encounter as a special form of inter-subjectivity is created by unconsciously imitating the expressive movement of the other and thus creating the same or a similar emotion within oneself (Schloßberger 2013, p. 299). This makes the experience of the Other an original and immediate one (Scheler 1913), and – what puts Scheler clearly in the phenomenological tradition of Husserl – does not allow to break apart this experience in an internal (psychological) and external (physical) sphere. It is the experience of an embodied expression of the Other (Schloßberger 2009, p. 256; Brinkmann 2020). Scheler thus rejects a Cartesian division of inner and outer spheres and conceptualizes understanding the Other by a process of intercorporal conclusion (Scheler 1923, p. 281).

However, Scheler does not fall back into a simple, esoteric theory of empathy. He suggests a systematics of emotions, of which only the higher classes qualify as emotions leading to understanding the other. By using a distinction Husserl introduced – between the sensatory and intentional qualities of emotions – he ranks emotions according to the relation between these two qualities. The emotion of shame, for example, would be a "psychological emotion", which means that the sensory elements stand in a direct correlation to the intentional ones, thus enabling our social surroundings to take part in this emotion (Scheler 1916, p. 344–357).

The specific social quality of emotions guarantees that they are not only solipsistic sentiments or experiences but are tied to a judgmental function. Unlike Kant – and unlike the psychological theories of emotion mentioned earlier – Scheler combines emotions and judgments. He argues that judgement does not take a detour via justifications such as the *categorical imperative*, but must be thought of lying within emotion itself. In an emotion, we are not only relating to the world (which would be intentionality, see above), but we are judging the correlates of our perception before we cognitively dissect, categorize and legitimize them. In analogy to the epistemological term *Wahrnehmen* (to perceive something, which translates directly as 'taking the truth') he speaks of "*Wertnehmen*" – 'taking the value' – (ibid., p. 209f.) through emotions. Experiencing an emotion is, in Scheler's phenomenology of affects, an act of evaluating the world around us, and vice versa: Judgments and the formation of values are only possible when they are connected to emotions.

If we take one last look at the example, applying Scheler's theory of emotions, we can describe the relation between teacher, student, and classmates in more detail. The answer of the student can then be re-framed as a potentially shaming remark, and the reaction of the classmates can be interpreted as an expression of them experiencing the boy as the Other on the level of emotions. Of course, this sounds somewhat cruel because it would imply that the classmates laugh at the boy because they feel his emotion of shame and not the other way round (he is ashamed because they laugh). But the simultaneity of the events and the fact that there is no other communication between them suggests that the students are somehow connected to each other on a sphere of emotions. A similar interpretation applies to the relation of teacher and student: The teacher can try to rehabilitate the student on a level of contents – she tries to make what he said look relevant and meaningful. But she can only do so because she already understood his experience on a level of shared emotions and is primordially connected to his subjective, emotional dimension. And finally, Scheler's idea that we are 'evaluating' (*Wertnehmen)* through emotions, can also be applied to the example – the student is somewhat overwhelmed by his emotions before he can actually value or justify on a rational level what was awkward or special about his answer. The classmates, who burst into laughter, also judge the remark without analyzing or criticizing it on a linguistic level.

5   Summary

At the beginning of this paper, we could see how negative emotions and learning have been separated from one another over the centuries, only to bring them together afterwards in different discursive manifestations. Thus, the relation of the two spheres can be described as a separation and temporalization, i.e. an artificial introduction of a formalistic, processual logic. In a short phenomenological reduction of an example from classroom research, I have hinted towards two of the discourses relating negative emotions and learning in the mode of separation and temporalization. To put it in other words: The hermeneutic theory of negative learning presented by Buck and psychological theories on negative emotions and learning (Hascher, Pekrun, etc.) can only relate the two components in a causal structure. Either, emotions are the consequence of cognitive processes or a cognitive pre-conditioning or the emotions work as a trigger or impediment to motivational processes leading to learning. Both these ways of relating emotion and learning have their roots in the notion of a strong subject, being in full awareness of his/her reflective processes and in control of metacognitive strategies to suppress emotions or to turn them into productive learning processes. As a consequence, these perspectives not only neglect the lived body, but they are generally not appropriate when taking the phenomenal level into account, i.e. the way we experience emotions in a life-world setting. The shortcomings of a separation and temporalization of emotion and learning have been localized in the discrepancies between certain qualities of an experienced emotion and their value in learning theory as well as in the neglect of the pathic and overwhelming dimension of emotions.

Following this critique of 'classical' views on learning and emotion, I suggested three changes of perspective: a philosophical theory of emotions, an alternative theory of learning by experiencing what Heidegger calls 'not-readiness-to-hand' and Scheler's socio-emotional theory of understanding and judgement. When applying these theories, it becomes apparent that emotions in learning have a pre-predicative and pre-reflective feature. We have seen that emotions touch the lived body and at the same time, they become alive in embodied expressions and enable others to connect with these emotions in a process of embodied understanding[13] that does not follow the logic of grammar and language. In analogy to the concept of readiness and not-readiness-to-hand, where learning does not begin with a rational negation of previous knowledge but with disruption and uncertainty, the negative emotion in learning is not fully transparent to the learner and

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[13] For a theory of embodied pedagogical understanding see Brinkmann (2020).

even though the emotion has an intentional correlate it might be hard to pin it down as it is based in embodied structures. But in both cases, negative emotions and experiences of not-readiness-to-hand point to a deeper understanding of the process of learning: be it in Heidegger's phenomenology, where not-readiness-to-hand can be the cause for raising questions or in Scheler's philosophy, which suggests that we can explore the process of valuing that lies within emotion.

Thinking of social interaction – which in this case means teaching and interaction with peer learners – negative emotions can provide the key to understanding the other and feeling-with-one-another. And, as I have pointed out, understanding the emotion of the other is a first step to understanding how the other understands, learns, and thinks – in my opinion, this is one of the most important and most difficult tasks in becoming a good teacher.

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