Facing Anxiety in Climate Change Education: From Therapeutic Practice to Hopeful Transgressive Learning

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Abstract

This article discusses the need for critical emotional awareness in environmental and sustainability education that aspires to result in transgressive learning and transformation. The focus is on the emotions of anxiety/worry and hope, and their role in climate change education. By disrupting unsustainable norms and habits, hope for another way of being could be evoked, but transgressive learning can also trigger anxiety due to the undecided nature of the future and the gravity of the climate problem. The objective is, on the one hand, to point to the importance of critical awareness of these emotions and the need to disrupt unsustainable emotion regulation strategies when aiming for transformation, and, on the other, to provide suggestions for including these dimensions in climate change education.

Résumé

L'article traite de l'importance de la conscience émotionnelle critique dans l'éducation à l'environnement et au développement durable lorsque l'enseignement vise à provoquer un changement et un apprentissage transformationnel. L'accent est mis sur les sentiments d'anxiété/inquiétude et d'espoir et sur leur rôle dans la sensibilisation aux changements climatiques. Lorsque l'on ébranle les normes et les habitudes non viables, il peut être salutaire d'évoquer l'espoir de trouver d'autres façons de faire. Toutefois, l'apprentissage transformationnel peut également être source d'anxiété, vu l'avenir incertain et la gravité de la situation climatique. L'objectif est, d'une part, de souligner l'importance d'acquérir une conscience critique des émotions et de se débarrasser des stratégies de régulation émotionnelle non viables si l'on veut occasionner une transformation et, d'autre part, de suggérer des façons d'inclure ces différentes notions à la sensibilisation aux changements climatiques.

Keywords: critical pedagogy, emotion regulation, hope, subjectification, transformative learning

Today many researchers focusing on environmental and sustainability education argue that since humanity is faced with very severe and complex sustainability challenges on a global scale, such as loss of biodiversity and climate change, there is a great need for pedagogical innovations (Johnston, 2009; Lotz-Sisitka, Wals, Kronlid, & McGarry, 2015; Sterling, 2004; Wals, 2007). There is a need to learn more than how to do things we do today in a better way; we

need a paradigm shift toward transformative learning aimed at critical aware-ness and changing unsustainable norms, habits, and structures (see Wals, 2010). In this regard, Lotz-Sisitka and colleagues criticize the focus on resilience and adaption that is quite common when discussing sustainability issues, and main-tain instead that we should aim for more transgressive learning and disruptive capacity building in order to deal with this pedagogical challenge (Lotz-Sisitka et al., 2015). In their article, some potential transgressive pedagogies for the environmental and sustainability education field are presented.

In this article I take my starting point in the above-mentioned accounts of environmental and sustainability education; however, though I am sympathetic to them, I will argue that transformative and transgressive learning in this field also could benefit from including emotional aspects, not only of a phenomenological kind as Lotz-Sisitka and colleagues (2015) suggest, but also of a critical kind. The objective is to show that if aiming for transgressive learning and transformation, it is not enough to disrupt unsustainable cognition/thinking, norms, and practices; there is also a need to include critical emotional awareness and to disrupt unsustainable emotion-regulation patterns. I concentrate on the two interrelated emotions of anxiety/worry and hope and their role in climate change education. The objective is, on the one hand, through theoretical argumentation and by referring to different empirical studies, to show the importance of being aware of these emotions and related emotion regulation strategies when aiming for transgressive climate change education, and, on the other hand, to give some suggestions as to how these emotional aspects and a critical awareness of them can be included in climate change education.

This article is divided into seven sections, including this introduction. In the second section, transformative and transgressive learning are introduced and related to the environmental and sustainability education and climate change education fields. In the third section, I maintain that there is a need for educators to be aware that anxiety/worry is often evoked when they teach students about climate change. The potential positive role of these emotions is discussed at the same time as it is argued that they can be hard to face and that students can cope in more or less constructive ways with them. This leads to the fourth section, where it is pointed out that teachers need to be aware that they influence their students' emotion regulation strategies at the same time as larger societal processes, or emotion-governing strategies, also have an influence on both students' and teachers' ways of coping. This coping, in turn, could have an effect on learning and environmental engagement. In the fifth section, it is maintained that we therefore need to include critical awareness of emotional aspects in climate change education, but we have to be careful not to end up in a kind of therapeutic education or education that borders on indoctrination. In the sixth section, I argue for the need to focus on a critical hope that is based in an acknowledgement of the negative, a positive view of preferable futures, the possibility of societal change, and that is related to concrete pathways

toward this preferable future. Here, the concept of meaning-focused coping is introduced. In the final section the main points of the paper are summarized and some more concrete suggestions are presented regarding how educators can include these dimensions in environmental and sustainability education/climate change education

Transformative and Transgressive Learning

Biesta (2013) argues that, besides focusing on knowledge and socialization, one important goal of education is to concern itself with a subjectification process in which the focus is on the emancipation of students from predetermined ways of thinking and being and the responsibility that follows with it. One pedagogical model that deals with subjectification processes is transformative learning (Mezirow, 1978). Mezirow, who formulated this theory, claimed that through critical reflection and a procedure of "perspective transformation," students can change their ways of thinking about themselves as well as their basic value systems and also alter their lifestyles in a way that is productive both for themselves and for society. Taylor (1998) elaborated this theory and pointed out that transformative learning is not only cognitive but also social. In the field of environmental and sustainability education, Wals (2007, 2010) has picked up this way of thinking, arguing for the importance of transformative social learning where a communicative process, which ideally should include a diverse set of actors, can help the actors involved to (a) critically examine their own values, habits, and norms (deconstruction), (b) listen to what others have to say (confrontation), and (c) co-construct new viewpoints, values, and action repertoires (reconstruction). Thus, challenging learners with alternative ways of interpreting their experiences is an important part of transformative social learning, and the aim is to break with unsustainable habits and practices and create new, and more sustainable, ways of thinking and being (Wals, 2007, 2010).

Lotz-Sisitka and colleagues (2015) go one step further and claim that it is important to aim at developing disruptive and transgressive, or even disobedient, competences if we are going to succeed in dealing with sustainability challenges such as global climate change. One of the first who used the term "transgressive learning" was hooks (1994), who argued that critical thinking and theory need to be anchored in practice to gain transformative power. In accordance with this way of thinking, in the broader educational literature transgressive learning is often about learning through practice (see Barnett, 2004; Biesta, 2013, hooks, 1994; Leonard, 2004; Saarnivaara, Ellis, & Kinnunen, 2012). People can transgress, or disrupt, deeply held and taken-for-granted norms, norms that are at the roots of oppression and unsustainability, by acting in surprising, creative, and boundary-crossing ways. By examining the inconsistency between these material practices and pre-existing beliefs, people learn that a different way of being is possible (Concepción & Thorson Eflin, 2009). Here there is a close

relation to theories about prefigurative politics that claims that critique is not enough to disrupt unsustainable systems and create more sustainable futures; one must also act and experimentally actualize one's political ideals in the here and now (Amsler, 2015; Kagan & Burton, 2000; North, 2011). As North (2011, p. 1592) states it in relation to climate change, in prefigurative politics people are "embodying 'the change they want to see', showing through their personal actions what is possible… and thereby inviting curiosity from others who might well make the same changes." Transformation thus takes place through the power of example, through *prefiguring* more sustainable futures.

Regardless of whether learning and transformation take place through critical thinking and dialogue or through transgressive action, one can argue that this process also includes emotional components (see Ojala, 2013). Educators and researchers who work with transgressive learning outside the domain of environmental and sustainability education point out that the persons included in the learning process often find it quite unsettling and anxiety-provoking (Amsler, 2015; hooks, 1994; Saarnivaara et al., 2012). Concerning transformative social learning, Wals (2007, 2010) has argued, although he does not explicitly point out that this is an emotional phenomenon, that dissonance is an important part of the learning process and that educators need to take this into account. Still, critical emotional awareness could be seen as a vital complement to these educational approaches, especially if they are applied to the deeply anxiety-provoking problem of climate change.

Climate Change Education and Anxiety/Worry

Besides acknowledging that transformation, disruption, and transgression can lead to feelings of unease and anxiety, educators aiming at transformative climate change education need to be aware that this problem in itself is related to emotions of worry and anxiety.[1] Empirical studies show that the most common emotion evoked by this problem is worry (Connell, Fien, Lee, Sykes, & Yencken, 1999; Klöckner, Beisenkamp, & Hallman, 2010; Strife, 2012; Taber & Taylor, 2009). Quite often, this is a worry that is mixed with feelings of guilt and/or hopelessness (Mead et al., 2012; Ojala, 2007). The reason that climate change is so anxiety-provoking may be because this problem touches upon the sources that the well-known existentialist Tillich saw as the root of existential anxiety (Tillich, 1952/2000). Tillich maintained that nonbeing, the root of existential anxiety, threatens the whole individual: the ontic part (anxiety about physical death), the moral part (anxiety about guilt and condemnation), and the spiritual part (anxiety about meaninglessness, loss of ultimate concern). Climate change is a threat to the future survival of humanity (the ontic part), it is related to moral questions about whether it is right to live the way we do in the Western world (the moral part), and raises questions whether there is any point in being an active citizen at all due to the seriousness and complexity of this problem (the spiritual part).

What effect, then, does worry/anxiety have on learning—is it a positive or negative force? Often, worry about societal problems is perceived as something only negative; worry distracts people from what is important, makes people resistant to outside information that could shake them out of their habits, and traps people in self-absorption that promotes self-interest, thereby paralyzing social change (Marcus, Neuman, & MacKuen, 2000). Some claim that it is worry/fear/anxiety that makes people subject themselves to neoliberal ways of coping with social problems through self-government (Isin, 2010). Because of worry/anxiety, people are unable to distinguish the structural grounding of social problems and are therefore more easily swayed to take individualized responsibility in a way that will not lead to any real change.

In contrast to the more theoretical claims presented above, empirical studies as well as newer theories of emotions have identified anxiety and worry as necessary preconditions for social deliberation and critical thinking (Brader, 2006; Marcus et al., 2000; Marcus, MacKuen, & Russell Neuman, 2011; Valentino, Hutchings, Banks, & Davis, 2008). Anxiety keeps people from doing what they are doing at the moment, activates the cognitive system, and makes people more focused on the outside world and more reflective, thereby motivating people to think critically (see also Ojala, 2013). In accordance with these studies in political psychology, climate change research has found that climate worry is related to an inclination to search for more information about the problem (Yang & Kahlor, 2012; Verplanken & Roy, 2013). Besides its role in motivating deliberation, one could argue that worry is a rational response to important values that are threatened by climate change and thereby, if it is verbalized in learning situations, could help people do something realistic about the problem (Ojala, 2013; Verplanken & Roy, 2013). Thus, worry/anxiety could be a first step towards breaking with unsustainable habits and practices or in becoming politically active in the climate change movement. Indeed, Zembylas (2013) even claims that "a pedagogy of discomfort" is both unavoidable and necessary if a major purpose of education is to unsettle and disrupt and that emotional aspects therefore need to be taken into account (see also Amsler, 2011, 2015).

Still one should not be psychologically naïve: worry/anxiety, unease, and dissonance are hard to face and bear, and whether or not they will help or overturn transformative learning may have to do with how these emotions are coped with and regulated at an individual level and in social processes (Ojala, 2013). As Wals (2007, 2010) reasons, dissonance is vital for transformative learning concerning environmental and sustainability issues, but too much dissonance could be devastating, so the educator needs to be aware of people's comfort zones when it comes to dissonance. This indicates that how educators react to emotional displays by their students could influence students' coping and hence the learning process (see also Ojala, 2015). Thus, one could ask: should learning about emotions and emotion regulation be a specific part of education that aims at transformative and transgressive learning?

The Importance of Emotional Awareness in Environmental and Sustainability Education

How then could a critical focus on emotions and emotion regulation become a part of transformative learning toward sustainability? First, it needs to be acknowledged that today it is quite common in different Western countries to include "emotional competence" as a part of the curriculum in order to enhance young people's well-being (see Amsler, 2011). This "therapeutic" turn in education has been criticized by, for instance, Ecclestone and Hayes (2008), who argue that the one-sided focus on "well-being" and "adaptation" to societal demands in these educational models is a way to undercut social criticism and instead turn the young into obedient consumers without the capacity to see the "real" grounding of their unhappiness. Thus it is a tool to govern and steer young people and to keep them in their place. This thinking is in accordance with ideas that the sociologist Bauman has put forward that people today find it hard to face moral emotions in relation to societal problems and to do something constructive with their moral pain because of a neoliberal society that only allows people to feel positive and pleasurable emotions that can most easily be increased through consumption (Bauman & Donskis, 2013). In this way people become insensitive to societal problems, and social change becomes much more difficult to achieve. In addition, Ahmed (2008) has argued that the "good" feeling of happiness is used as a political tool to exclude certain bodies (that is, persons) due to their association with "unhappy" feelings, an association that is made due to their simply being different or their questioning certain norms (see also Yoon, 2005). Empirical studies also show that in regard to climate change people often cope with this threat by distancing themselves from negative emotions of worry and despair (Norgaard, 2011; Ojala, 2012; Olausson, 2011).

Another way the neoliberal society steers and governs emotions is to privatize hope, to put forward the notion that larger structures are impossible to change, and that the only way people can contribute to society is to act at an individual level, which could easily breed a sense of impotence as people realize that private-sphere behaviour is not enough, yet are unable to find any alternative (Amsler, 2015; Thompson & Zizek, 2013). Concerning climate change studies have found that young people who acknowledge the problem and are willing to take action are inclined to cope in an individualized way, that is, they focus on isolated individual actions in everyday life (Ojala, 2012). Paradoxically, this can lead to both a feeling of empowerment that "there are things I can do" (Taber & Taylor, 2009) and a feeling that this is not enough, leading to frustration and hopelessness (Connell et al., 1999; Mead et al., 2012).

The regulation of emotions also takes place in social interaction in the classroom, or in other learning situations in more informal settings, and here teachers and educators play an important role (Kristjansson, 2000). According to Kristjansson, teachers are role models for their students when it comes to

emotions. Teachers could in their turn be influenced both by larger cultural and discursive rules about what emotions are appropriate to express in a classroom setting and in relation to issues such as climate change, but also by more personal meta-emotion philosophies. When it comes to educating younger children about more mundane interpersonal issues, empirical studies show that teachers more or less consciously create emotional norms or emotional rules in the classroom (Cekaite, 2013). For instance, they indicate the right way to regulate emotions, what emotions are appropriate to express, and whose emotions are worth taking seriously and whose are not. Zembylas, Charalambous, and Charalambous (2014) have studied pedagogical strategies with which emotions are schooled when educating students about larger societal issues, and they describe emotional rules as "the official or unofficial; explicit or implicit rules that regulate and guide emotional expression in specific situations…These rules classify certain emotions as 'legitimate' or 'appropriate' and others as 'illegitimate' or 'inappropriate'" (p. 71). In relation to environmental and sustainability education, a study on senior high school students demonstrates that students who perceived their teachers as not taking seriously their negative emotions concerning societal problems, and who felt that their teachers perhaps would even make fun of them if they expressed their emotions in the classroom, were more inclined to de-emphasize the seriousness of climate change than students who felt that their teachers respected and validated their emotions (Ojala, 2015). Thus, there seems to be a relation between the emotional rules that teachers enforce and individual coping strategies that young people use in relation to the climate problem. Since individual coping strategies have different impacts on activity or not concerning this issue, emotional awareness becomes even more important in environmental and sustainability education.

Beyond Therapeutic Education

What has been described above implies that there is a need to focus on emotional aspects if aiming at transformative learning in environmental and sustainability education. However, one must be careful not to fall into the trap of therapeutic education, or education that borders on indoctrination (see Öhman & Östman, 2008). Amsler (2011) points out some differences between a therapeutic pedagogy and a critical affective pedagogy: the former sees negative emotions as individual shortcomings, focuses on cultivating the "right" emotions in students, and lacks an awareness of power relations, while the latter sees negative emotions as normal or even healthy responses to problems in society, aims not at evoking the "right" emotions but to a critical understanding of why one experiences certain emotions and desires and not others, as well as pointing out alternatives, and has a critical awareness of how "power" steers and governs people's deepest desires and emotions, that is, sees emotions as discursive practices.

In addition, practically oriented transgressive learning theories and prefigurative politics, just like therapeutic education, can be criticized for not taking into account the relation between truth and knowledge, on the one hand, and power, on the other (Biesta, 2013; North, 2011). These theories seem to adhere to certain thoughts in critical theory that have long been criticized, for instance, believing that there is a "good and true human" deep inside that just needs to be emancipated through critical awareness, transgressive actions, or by reconnecting to the local or nature (see Amsler, 2011). Biesta (2013), with the help of Foucault, argues that educationalists working with subjectification processes need to acknowledge that there is no truth or knowledge that is separated from power. Transformation is possible, but we can never free ourselves from power; we merely work within different power/knowledge constellations. Hence, transgression means the practical confrontation of different power/knowledge constellations in order to show that things do not have to be the way they currently are (Biesta, 2013). Biesta (2013) argues that it is about the pluralization of truth, not demystification or speaking truth to power. This does not mean, however, that in an ethical sense all "truths" are equally good. Thus, there is a need to be mindful and critical of the new power relations that are created through transgressive education. In addition, I argue that this implies that transformative and transgressive learning in the environmental and sustainability education field always has to be related to ethical discussions and to humble self-criticism.

Complementing what has been pointed out above, I maintain that it also needs to be recognized that emotions are not only discursive but also bodily and psychological phenomena. The bodily part of emotions has been accepted in recent years by more researchers in the "critical emotion field" (see Ahmed, 2008; Lotz-Sisitka et al., 2015; Zembylas, 2013), but the psychological part is still dismissed. Instead it is often explicitly mentioned that emotions are not personal or psychological (see Ahmed, 2008; Yoon, 2005). I claim, on the contrary, that the very reason why emotions are so tempting to use as "governing tools" is precisely that they are a mixture of these three dimensions. Emotions reveal the dialectic relation between the conceptual/discursive and the material/bodily as experienced by concrete individuals. The psychological part has a great deal to do with identity or the self as an existential and social phenomenon, that is, something that brings order and meaning to a person's life, gives a person self-esteem, shields against the knowledge of one's own mortality, and so on (see Myers, Abell, Kolstad, & Sani, 2010). When education in some way threatens or disrupts these fundamental social-psychological and existential aspects, it will evoke strong emotions and also attempts to defend against this knowledge. For instance, according to Kahan (2013), people in such situations are often inclined to use a form of motivated reasoning; i.e., they take in information that supports their values and social identity while denying or ignoring information that threatens their social identity and the self-esteem attained by belonging to a certain group. In this regard, Amsler (2015) points out that therapeutic education

actually has some benefits, as it is more psychologically realistic concerning humans' need to cope and defend against identity threatening and thereby anxiety-provoking information. This implies that there is a psychological and existential need for positive emotions, and perhaps especially hope, in transgressive learning. The question is then whether this hope can be something more than a comfort; that is, whether it can also help people confront their worry about, for instance, climate change, and do something about it.

The Need for Hope in Transgressive Learning

Much of what has been described in this paper thus far implies that transformative and transgressive learning use different pedagogical approaches to show that a different world is possible. Claims that nothing is certain, that the material world is in constant change, and that the future is undecided, are not only a seed of anxiety/worry but also the seed for a sense of hope (see Amsler, 2015; Thompson, 2013). Thus, hope and disruption are not each other's opposite: hope, according to some critical theorists, requires a disruption of the stubborn neoliberal worldview that we live in the best of societies, a society that furthermore has no alternative and thereby cannot be changed (Daly, 2013).

The psychological and existential part of hope is often said to be about coping with problems (Lazarus, 1991). Without a "sense of lack" there is no need for hope. Thompson (2013) and Daly (2013) refer to Bloch's view of hope as starting in a "material hunger," in a realization that something is missing, which leads to a desire and subsequently to hope. Thus, it is a realization of the "negative" that gives rise to hope: hope is not happiness and pure optimism; hope is what gives us strength in the face of difficulty, "it is a light against the darkness" (Thompson, 2013, p. 10). Zimmerman (2013, p. 246) points out that Bloch saw that the persistent presence of existential anxiety makes it necessary to develop a strategy in order to "accept, endure, resist, and withstand it," that is, "the point is to learn hope." In the same manner, Freire (1992, p. 8) perceives hope as an ontological must: "We need critical hope the way a fish needs unpolluted water."

In psychology hope is often seen as a cognitive-emotional concept in which positive views of the future, or visions of preferable futures, are seen as being within reach (Snyder, Rand, & Sigmon, 2001). Hope is both about future-oriented thoughts about positive expectations and related positive feelings about the future. Hope is closely related to worry, as both emotions are connected with uncertainty: "to hope for something is also to fear that this something will not come true" (Fredlund, 2005, p. 342).

But for hope to become something more than a therapeutic practice or a consolation, Burton (1983) argues that one must both create images of what is possible and look realistically at the limits of our current society (see also Freire, 1992). According to Amsler (2015), knowing that there are alternatives out there

is a prerequisite but not sufficient for critical hope; we also need to develop paths and infrastructure for learning for a changed society. In the same way, the best known theory in psychology about hope emphasizes both the need for concrete and realistic pathways to preferred futures and working with agency in order for hope to motivate constructive action (Snyder et al., 2001). Educated hope, according to Bloch, is what can be reached through reflection, but foremost through acting in the material world so that one's hope could eventually become reality (see Zimmerman, 2013).

Often the emotional part of the hope concept is seen as a motivational force in itself (Snyder et al., 2001). But in relation to global environmental problems, Ojala (2007, 2008) has argued and shown through empirical studies with young people that it is rather the dialectical relation between hope and worry that motivates pro-environmental actions. Here, the concept of meaning-focused coping is of interest (Folkman, 2008; Park & Folkman, 1997). In the broader coping literature, this is about coping with difficult situations not by eliminating negative emotions, but by evoking positive emotions, such as constructive hope, that can give people the strength to confront and do something about the problem at hand. This way of thinking is inspired by Frankl (1988), who in his work showed that a sense of meaning can help people bear and confront hardships in life. In relation to climate change, Ojala (2012) identified different meaning-focused strategies. Of special interest is positive reappraisal, or cognitive restructuring, which is about perceiving the problem but being able to switch one's perspective and also see more positive aspects, thereby activating hope. This can be seen as a continuous process where a feeling of worry evoked by the problem requires hope, and where hope, in turn, through the uncertainty connected to this concept, evokes more worry that requires hope, and so on. This process seems to drive engagement (Ojala, 2007, 2008). Still, this is a demanding way of hoping. Another common complementary meaning-focused strategy that evokes hope in relation to climate change is trust (Ojala, 2007, 2012): trust in one's own capability (agency), trust in other societal actors doing their part (which is necessary if we are going to be able to manage climate change), and a kind of existential trust in humanity. Here, it is interesting to notice that, in relation to transformative social learning in the environmental and sustainability education field, Wals (2007, 2010) argues for the importance of both gestalt-switching (a kind of cognitive restructuring) and social coherence (a kind of trust) for this pedagogical approach to work optimally.

Practical Implications and Conclusion

How then can educators work more concretely with the thoughts presented above? In this section I will give some suggestions, although the intention is not to be authoritative since the ideas presented in the paper need to be embedded

in concrete educational settings with an awareness of the uniqueness of that specific situation. The suggestions are aimed foremost at senior high school teachers but can, to a certain extent, also be used by educators working with both younger and older age groups.

First, educators should not shy away from the enormous problems that humanity is facing in relation to climate change and the related negative emotions. In this regard, it is important to give space and time to formulate one's worries in words so that important concerns and values that lie behind this worry can be brought to the surface and critically discussed (Ojala, 2013). We need to discuss negative and pessimistic visions in a more profound way, as these contain both hope and hopelessness (see Nordensvard, 2014). Hence, to face the negative is a starting point for constructive hope.

Second, to evoke hope it is important to show that things can change, that we are aiming for a future that is undecided (see Thompson, 2013). This can be done by disrupting taken-for-granted thinking, norms, and habits, for instance through critical discussions in heterogeneous groups, or by using art, literature, and drama. But this can also be done by inviting into the classroom different societal actors that transgress unsustainable norms in diverse ways. They could be people who are active in environmental and climate change organizations, but also for instance, politicians, civil servants, or business people who care about these issues, and work to combat climate change despite the inherent complexity of this problem. They thereby can disrupt the rather common view among young people that adults do not really care and the cynicism related to this outlook. To encourage students to do something outside the classroom that breaks with an unsustainable habit or norm, alone or together, and then discuss in the classroom the reactions and feeling evoked, could be another way to practice transgressive learning.

Third, educators should be aware that students can come to grips with the emotions evoked by both the focus on the negative and the disruption that occurs through transgressive learning in more or less constructive ways. Furthermore, these ways of coping are influenced by larger social processes. These emotional aspects need to be dealt with educationally in a way that helps students, and teachers, dare to go through transformation and confront "the beautiful risk of education" (see Biesta, 2013). There is a need to critically discuss for instance what emotions are allowed in climate change education. Whose emotions are taken seriously and whose are not? Why do certain groups of students mainly feel ashamed while others grow angry? If we to a large extent distance ourselves from negative emotions, are there any other ways of coping with these emotions? In this regard, different meaning-focused strategies could be discussed.

Fourth, to evoke hope it is important to also discuss future dimensions in the classroom (Hicks, 2014). Thus, climate change educators should allow time and space to consider probable, preferable, and possible futures. For instance, when imagining the personal, the local, and the global futures X years from now, what

are the probable scenarios in relation to climate change? It is also important to work with visions of preferable futures. In discussing how these futures ought to look, it is vital to acknowledge that people will not necessarily agree about what a preferable future should be (see Hicks, 2014). Thus, one needs to discuss ethical and normative issues about what constitutes a fair and just society.

Finally, to promote constructive hope there is also a need to compare the "probable" with the "preferable" and come up with materially grounded and realistic "possible" futures. In this regard it is important to discuss concrete pathways (both societal and individual) to this possible future and to promote agency, so that young people can take part actively in these pathways (Snyder et al., 2001). "Unrealistic hope" could backfire and lead to disengagement and cynicism. Therefore, it is important to combine utopian and critical perspectives and "create images of what could be possible while exploring and documenting the actual limits imposed by the current system" (Burton, 1983, p. 67).

To conclude, in this article I have argued that when applying transformative and transgressive forms of education in the environmental and sustainability education field, and more specifically in climate change education, there is also a need to include critical emotional awareness. By rupturing the order of things, by disrupting and transgressing, you also evoke negative emotions of worry, for instance. These feelings could be constructive forces in the learning process; however, educators should not dismiss the fact that they are also very hard to confront and deal with and therefore can be coped with in more or less constructive ways. By realizing this, a whole new network of power relations opens up for scrutiny. It is not enough to critically examine unsustainable thinking, norms, and practices; one also needs to be aware of unsustainable ways of dealing with emotions and of how "power" governs even what seem to be our most private feelings and emotions. But in order to be able to face the worry and the dissonance evoked by these pedagogical models, I have also claimed that there is a need to include hope, a hope that is both (a) a positive feeling, a light in the darkness, or rather a light that illuminates the darkness and gives people the strength to face the problems that are at the heart of our globalized society, and (b) a concrete activity grounded in visions of preferable futures and well-deliberated pathways to reach these futures.

Notes

1   Worry is about cognitive ruminations concerning uncertain future negative events, accompanied by an anxiety-like negative affect (MacLeod, Williams, & Bekerian, 1991). Worry is a negative emotion related more to uncertainty than fear is and is also related more to cognitive aspects than anxiety is. These concepts are, however, often used interchangeably in studies about emotional reactions to societal issues.

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