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In this article we argue that drama can provide complementary knowing for climate change education and shed light on the complexity of related psychosocial issues. We bring together an interdisciplinary understanding of eco-anxiety, psychosocial responses to climate change, and drama education. We draw on performance narratives created with young people in Finland and explore the psychosocial dynamics of climate change education. Three key themes are discussed in more detail in relation to education: 1) psychosocial dynamics; 2) alienation; 3) tragedy. The performance workshops provided a safe and creative space for exploring young people's thoughts and images related to climate anxiety. Many relevant but often silenced issues became visible and were lived through in the process of performance making. This seemed to be fruitful both to the performers, teachers, and researchers, and suggests future, longer-term work would prove beneficial for engaging with these issues.

Keywords: Performance making, psychosocial, eco-anxiety, climate change education, tragedy, alienation

1 Introduction

After the last IPCC report in 2018, increasing awareness about climate change and its consequences have inspired young people to demonstrate all around the world. In Finland, young people have followed Swedish schoolgirl Greta Thunberg's example of school strikes. Adults have responded in various ways, while young people have received both encouragement and neglect. According to Finnish Youth Barometer 2018, uncertainty about global issues, such as climate change, global politics and international terrorism, has increased dramatically among young people over the past decade. Young people worry about the state of the world more than before, but believe in democracy and feel optimistic about the future (Piispa and Myllyniemi 2019).

Climate change and wider sustainability issues impact upon young people's everyday lives and future perspectives in many ways. They are constantly encountered in the media and in daily social reality. It is suggested that young people have extensive knowledge about climate change and are interested in various questions, including human and ethical issues (Tolppanen and Aksela 2018). Nevertheless, teachers in Finland find climate change education and these questions difficult to address in their teaching as they consider these issues to be political and value-laden (Aarnio-Linnanvuori 2018). Teachers consider that the emotional and ethical aspects are the most difficult to deal with (Hermans 2016; Aarnio-Linnanvuori 2018). In order to strengthen engagement and meaning, thoughts and experiences brought up by young students should be included in climate change education, it is suggested (Särkelä and Suoranta 2016).

Environmental education has traditionally focused on private-sphere responsibility, promoting responsible individual choices and not social or societal action. This may promote feelings of guilt and powerlessness, a focus on ineffective activities, and gendered responsibility (Aarnio-Linnanvuori 2019; cf. Jensen 2019). To change this,

teachers and environmental educators would benefit from better understanding of various psychosocial issues that prevailing sustainability crises and pressure to change evoke.

Since young people's questions about climate change and the various related psychosocial attitudes and coping strategies are difficult to address in education or investigate using conventional scientific methods, there may be a value in complementary arts-based methods (Lerzman 2015; Tait 2015; Law, Corbin, Wilkins, Harris, Martin and Lowe 2020; Lehtonen and Pihkala 2021). In this article we bring together performative methods of drama and climate change education, and interdisciplinary research on psychosocial responses to climate change. Our aim is to participate in a wider academic discussion about (1) the potential of drama as an arts-based approach to climate change education and (2) research on related psychosocial issues, such as climate anxiety. We draw on performance narratives created with young people in one-day drama workshops. The performance narratives manifest important information about young people's thoughts and reflections on issues related to climate change and its psychosocial aspects.

By utilising performance making as a method, we aim to enlighten the following question related to eco-anxiety and the intertwined psychosocial dynamics:
What kind of psychosocial issues emerge in performances created by young people and how are they encountered through drama?

The structure of the article is as follows. Since the topic of eco-anxiety is not yet well known, we first provide an interdisciplinary discussion about it and its prevalent form, climate anxiety. We then present our methodology for devising performances. Special attention is given to the design and structure of the performance workshops. We provide basic information about six workshops, but focus only on two of them, since these two provide insights into the chosen three major themes in relation to environmental education theory: eco-anxiety, tragedy and alienation. We end by discussing these themes, the needs for further research and developing the performance workshops' design.

2 Young people, climate change and eco-anxiety

In addition to its physical effects, climate change causes numerous psychological and psychosocial consequences (Clayton, Manning and Hodge 2014; Adams 2016). These have often gone unnoticed because most research on the impact of climate change has focused strongly on its physical aspects. However, as the climate chaos worsens, more and more psychological impacts have become evident.

Significant parts of the cluster of psychosocial impacts can be called "eco-anxiety" or climate anxiety. Eco-anxiety can be defined as "a chronic fear of environmental doom" (Clayton, Manning, Krygsman and Speiser 2017, 68) or "the generalized sense that the ecological foundations of existence are in the process of collapse" (Albrecht 2012, 250). Climate anxiety is that part of eco-anxiety which is significantly related to climate change (Pihkala 20202). The global ecological crisis, of which climate change is a major part and often practically functions as a synonym for it, causes deep feelings of anxiety in many people: they feel distress, strong fears, fluctuation of moods, and may develop various psychosomatic symptoms (Bodnar 2008; Searle and Gow 2010; Clayton, Manning, Krygsman and Speiser 2017).

Many studies have found profound feelings of distress among young people as regards climate change. Many of these studies do not use the concept of eco-anxiety or climate anxiety as their framework, but they still discuss the same phenomenon through other concepts such as "distress" and "worry" (Corner et al. 2015; Ojala 2012). Sometimes the word anxiety is used, but not eco-anxiety (Ojala 2016). Another important concept is grief. There is a growing literature on "ecological grief" (Willox 2012; Cunsolo and Landman 2017) and it is evident that repressed ecological grief can become transformed into paralysing eco-anxiety (Eaton 2017; Brown 2017; Pihkala 2017). Thus, research on eco-anxiety and climate anxiety is connected to research about various kinds of emotions and affect in relation to ecological issues (Verlie 2019).

We apply a psychosocial view to research these issues. In order to understand the dynamics involved, there is a need to account for both intra-psychological factors and social dimensions such as peer pressure, cultural politics of emotion, and dynamics of socially organised denial (Adams 2016). We also draw from our previous research on eco-anxiety (Pihkala 2017; Pihkala 2018; Lehtonen and Pihkala (2021); Lehtonen, Salonen and Cantell 2018). These phenomena have been difficult to analyse because much of this anxiety has been hidden beneath defence mechanisms, such as socially constructed silence or various forms of denial (Norgaard 2011). It has been pointed out that eco-anxiety often masks itself as apathy, but behind this "environmental melancholia" (Lertzman 2015) there are profound feelings of care and despair (see also Saari and Mullen 2018). Therefore, we need methods and research in education that bring out the questions hidden by young people behind veils of silence.

Young people are one group that suffers greatly from these impacts and dynamics (Berry et al. 2018; Clayton, Manning, Krygsman and Speiser 2017; Cunsolo and Ellis 2018, 278). Climate anxiety is, by definition, strongly future-oriented. Young people think a lot about the future, since they are at the beginning of their lives and have to make crucial decisions regarding their life choices. The ominous threat and reality of climate change affects all of these things. According to research, when asked to think and write about the future, young people in Finland are more likely to create dystopias than utopias. They regard desolation as a more possible and realistic scenario for the future than development (Särkelä and Suoranta, 2016; cf. the observations of Grund and Brock 2019).

Thus, climate change is likely to cause tensions and potentially conflicts between generations. Young people may feel that their future is being taken away from them by older generations, who do not seem to care enough. This can cause deep feelings of rage, despair and anxiety. Several teachers and scholars of education have emphasised that there is a great need to deal with feelings of anger, despair and pessimism in the classroom (Figueroa 2017; Wilson 2017; Szeman 2017; Winograd 2017). Feelings of helplessness and powerlessness, which are also prevalent among adults (Hmielowksi, Donaway and Wang 2018; Lertzman 2015), can be especially threatening and anxiety-provoking for young people, because they lack full political citizenship rights and have fewer resources than adults in many ways (Ojala 2012, 2019).

Certain scholars have discussed the challenges that the psychosocial dynamics related to climate anxiety and denial pose for climate change education (Pihkala 2020b).

Marie Eaton (2017) points out that, despite cultural factors which tend to cause educators to avoid discussing difficult emotions, people experience profound feelings of grief and loss because of climate change and other environmental problems. Unless educators acknowledge the existence of these emotions, they will not understand what the youth feel and what they would need in order to feel empowered. Sometimes educators use maladaptive coping methods themselves, for example by communicating "doom and gloom" to students (for maladaptive coping, see Clayton and Myers 2015; for experiences of teachers causing environmental despair, see Kelly 2017).

Another very common maladaptive strategy of educators is to keep silent about climate change and especially about its psychologically troubling dimensions. However, scholars, practitioners and psychologists have all warned that this strategy is damaging to young people and to intergenerational relations. Silence causes youth to feel isolated, alienated and sometimes angry or depressed (Brown 2017; Winograd 2017, 265).

According to a leading climate psychologist, Thomas Doherty, the two key psychological and ethical tasks regarding climate change are "(a) adjustment to and coping with changing ecosystems, and (b) acceptance of human causation of and responsibility for climate change" (2015, 201). Closely related to the second task is the acceptance of ambivalence, both in relation to a person's own possibilities, and to the nature of climate change and social change. According to Lertzman (2015), understanding and accepting ambivalence is a key challenge for environmental education and communication (see also Moser 2015).

These tasks should be pursued in social settings for many reasons. Discussing difficult emotions and ambivalence in public avoids the perceived danger of becoming stuck in the private sphere (Aarnio-Linnanvuori 2019; Grund and Brock 2019). Emotions have a strong social dimension, and emotions such as guilt or feeling acceptance need to be socially processed (Lertzman 2015; cf. Jensen 2019; Lockwood 2012). The challenge for education is to engage these affective dimensions wisely.

The ambivalence between environmental concern and social pressure to hedonistic performed consumerism and happiness is a huge psychological and educational challenge. It would help if the evolving emotions and psychological challenges of changing life-styles were encountered and named instead of merely telling people how they should behave (Lertzman 2015; Adams 2016). Thus, there is a profound need to provide resources for educators so that they can a) develop greater understanding of the psychosocial dynamics and b) provide safe spaces to share difficult emotions and explore contradictions (similarly Bryan 2020). Creating supportive spaces can encourage both personal and collective emotional reflection and enable creative psychological repair (see Lerzman 2015).

This does not mean that teachers or educators should become therapists: as Winograd (2017) argues, "Teachers who have no therapeutic training can play an important role in supporting children's recovery from the trauma and anticipated trauma stemming from environmental crises" (264) (see also Hicks 2014). Ojala (2016) explores the possibilities of transgressive learning, instead of therapeutic practice, in relation to anxiety and worry. In our research, we have tested the possibilities of art-based methods – drama education – in these kinds of tasks. We argue that it is important to encourage

educators and researchers to develop and utilise methods to help break the silence and create spaces for addressing the deeper human issues related to climate change.

3 Devising a performance as a method for learning and researching

Performance making is a specific, arts-based method for education and research as its intent lies in embodied and social reflection, providing evocative texts, provoking curiosity, awareness of conflicts, tensions, criticism and reflection. The procedure of performance making workshops presented in this article was based on the principles of devising theatre (Heddon and Milling 2015), which is a way of collectively creating a play without a given script. Performance making is part of a long and sometimes contentious history of drama education in schools. This article is not the place to explore the history of drama education or differences and definitions of its various approaches (see more e.g. Nicholson 2011; 2014).

The basic idea of the devising method is to enable multiple voices and perspectives and open-endedness, thus "to uncover attitudes, content, and experiences that may not fall into the typical parameters of acceptability in normal social interaction in the classroom" (Perry, Wessels and Wager 2013, 657). Even though there is a rich variety of ways to apply and interpret devised theatre practice, one of the main interests of devising in the field is in drawing attention to, and disrupting, comfortable notions of social reality: e.g. what is considered right or wrong (Perry, Wessels and Wager 2013, 653). Therefore, devised theatre offers a site for productive critical pedagogies as Perry (2011) has stated.

Devising has been much used for ethnographic research in order to engage young participants in creatively exploring representations of their lifeworlds and identities (e.g. Gallagher and Wessels 2013). These kinds of research and pedagogical settings have been regarded as having unique value in enabling unanticipated dialectical, non-hierarchical relationships between youth and adults (Gallagher and Wessels 2013, 42).

In the creative process of devising, the traditional roles of teacher and student and the distinctions between the "real" and the "performed" often become blurred (Perry, Wessels and Wager 2013, 657). Devised theatre depends on the participants' partial, incomplete, and incongruous ideas "as essential sources of collective creation" (Perry 2011, 73). Creating performances demands serious playfulness from the participants. This means both an attitude of playfulness as well as participants devoting themselves to the play seriously (Heikkinen 2016, 33). The quality of drama depends on the facilitation skills, relevance, the level of trust and situated engagement in creating ensemble (Rasmussen 2010, 537).

Performance making generates knowing that is practice-led, socially constructed, aesthetic and posits relational epistemology (Rasmussen 2014). The practice of performance-making guides and frames the evolving understanding of the phenomenon and integrates aesthetic, embodied, experiential, affective and narrative reflection. Knowing is conceived and adapted through self-reflection, dialogue, negotiation and contestation, but the personal and cultural backgrounds of the participants affect the collective process (Rasmussen 2010). Besides, the strategies of devising the performance,

the theatrical forms applied and the dramaturgical structure of the performance direct the scope of evolving understanding (Østern 2006; Allern 2008).

4 Performance-making workshops

The drama workshops were designed as a research-based practice to explore young people's reflections on climate change and other environmental issues in a creative, playful way. The pedagogical goal was to offer to the young participants meaningful experiences of participation in collective reflection, creating a performance and performing. The ideal was that the participants could experience their insights and initiatives as valuable in the collective process of creating a performance. For research purposes, the aim was to generate performative and dramatic data about young participants' reflections on climate change and other environmental issues. In addition, the methodological aim was to develop and try out if and how a short and easily applied workshop format of performance-making/ devising theatre, which is normally time-consuming and demanding, could serve both pedagogical and research purposes.

The drama workshops (N=6) were conducted as part of environmental school conferences in the metropolitan area of Finland between 2015 and 2017. The school conference days included 1) an introductory lecture about climate change and other environmental issues from different perspectives of various fields and 2) various creative workshops. At the end of the school conference day, all the creative workshops presented to all the conference participants and to external commentators what they had created.

7-12 participants from different schools took part in the drama workshops. The age of the participants of each group varied from 12 to 16 years. The time used for preparing the performance was only 2.5 hours. Thus, the emerging performances were improvisations created during the workshop, rehearsed briefly and then performed. The themes and emerging connections were quickly picked up and the structuring of the drama occurred intuitively, as there was not much time to reflect.

The results, the final performances, were draft-like and incomplete as there was not much time for practising or fine-tuning. However, both the performers and the spectators were quite positively surprised at the quality of the performances and the depth of the emerging reflection. All the drama workshops had a similar structure, which is presented in the following section through an example from a workshop.

The performance-making process was dependent on the willingness of each participant to share their thoughts and to involve themselves in the process of collective creation and performing. Thus, promoting a creative, respectful atmosphere of trust was the primary goal of facilitating a performance-making process. Otherwise, the facilitator's role was to listen sensitively to and bring together evolving ideas and participants' initiatives. The participants' ideas were not affirmed or denied as such, but were reflected on, developed collectively and transformed in the dialogues of the characters and other happenings in the scenes (cf. playbuilding Norris 2017). Naturally, the teacher-researcher's background in climate change education and interest in research on social, human and emotional aspects of climate change education guided the selection of relevant ideas, but the collective creation was dependent on the ideas, responses and initiatives by the participants.

The performance scripts were created some time after the performance workshops, based on transcriptions of performance videos. In addition to the transcribed lines, the scripts included descriptions of the happenings in the scenes based on watching the videos and the experiences of the teacher-researcher. The first author of this article (Lehtonen) acted as a teacher-researcher and was responsible for the design and execution of the performance workshops. The second author (Pihkala) joined afterwards to analyse the performances and discuss their meaning and value for environmental education and eco-anxiety research.

The phases and considerations of the analytical process was as follows. First, the content of the performances was theoretically analyzed as a whole. Second, the psychosocial dynamics and the scale of climate emotions in the performances were more carefully elaborated on and some of these were selected as ones to focus on. Third, special attention was given to the theatrical forms that were taken in the performances. Elements of tragedy and parody emerged as elementary. Fourth, these theatrical elements were more closely analyzed, and it was analysed how the key psychosocial issues were manifested through the theatrical forms. The scripts and the video recordings of the performances were scrutinized many times by the researchers.

Certain themes emerged as especially poignant due to the resonance between the scripts [/performances] and existing research. Naturally, other themes could have been selected, due to the richness of the performances, but space limits restricted our selection. We also analyzed how the themes of the performances that the participants had chosen became selected and elaborated in the creative process. In this article we present a preparation process of one performance. In addition, some scenes of various performance scripts have been selected to illustrate specific psychosocial challenges of climate change education and how theatrical forms shed light on them and make them alive.

In this article we present a preparation process of one performance. In addition, some scenes of another performance script have been selected to illustrate specific psychosocial challenges of climate change education and how theatrical forms shed light on them and make them alive. [More information about the performances is found in Table 1.]

5. An example of a performance-making procedure

Here we present the procedure of performance making during the workshops through an example of a workshop that generated the performance called #Nothing Matters. Before the performance-making workshops, the participants of all the workshops listened to an introductory lecture about the school conference's theme of the day. The performance-making process consisted of phases of self-reflection, involving writing and drawing and sharing, warm-up games, sharing ideas and transforming them into a performance, rehearsing, and performing.

Self-reflection and the sharing of thoughts

Before this particular workshop, the participants (age 11-12, N=10) had listened to a lecture by a Green Peace activist and toured freely around an exposition aiming at youth

participation presenting issues chosen by young people. At the beginning of the workshop, the participants were asked to think about, write or draw what they had heard and seen during the day. This was followed by the sharing of evoked thoughts in turns: What kind of thoughts came to your mind? What did you think about it? The following thoughts were expressed by the participants:

- People throwing garbage in the sea where fish were living.
- A man throwing garbage; the need to switch off lights
- Sun rays and forest/ Do not destroy, please! Do not throw away garbage!
- We have a common climate and we need to protect it, otherwise everybody will suffer!
- A superhero, helmet covered with cockroaches and a snow leopard, "we have our strengths"
- A globe – "we can practise acting like superheroes; we have our personal strengths".
- Glaciers are melting as the sun is shining, People are dying and polar bears say: Bye, bye!
- Climate change is a bad thing, but it is nice to be here, because it's not a normal school day and we can try out new things.
- There should be all the different recycling options in the parks for paper and biowaste, etc., so that not all stuff would end up in wastelands.
- When glaciers melt in the sea, there will be no more water to drink. Why couldn't we freeze water to have artificial icebergs?

Not all of these individual reflections that participants expressed were selected to become a part of the final performance, but as they were shared they were a part of the collective process.

Bodystorming and transforming evocative attitudes into performance

The self-reflection was continued with a *warm-up exercise*, which this time was a 'follow the leader' parkour activity in the Helsinki City Hall auditorium. This practice, including walking on desks, seemed to work as "bodystorming" as it provoked provocative thoughts among the participants.

The participants seemed to be willing to speak about issues related to climate change that are not often spoken of in normal classroom settings. A couple of participants expressed questionable and challenging thoughts by blaming refugees and fat people for pollution and climate change. This required intervention by the facilitator and these topics and their ethical dimensions were discussed with the participants.

Even though the main principle of making drama was to respect all the evolving ideas, in the context of the school conference the message expressed and communicated to the audience through the performance needed to be carefully considered. In other kinds of drama processes than performance making, it is simpler when there is no audience to give space to working with all kinds of challenging issues and attitudes. In this case, the themes of war, world politics and overeating were integrated into the performance as

causes of environmental destruction, but without pointing to any specific groups of people being the cause of the situation.

The participants also brought up critical power issues and the dilemma between the rhetoric of sustainability education and actual, unsustainable practices and models of behaviour at schools. Two participants made the following initiatives on how the idea of war and terrorism could be integrated into the performance: 'Wars produce pollution and students will help, they can teach others how to act. Students can participate in wars, have a war against teachers and then make a peace', one participant reflected. Another participant continued 'Students can throw away their books, as producing them has consumed energy. If we didn't have school books, it would be better: no consumption of paper, as paper is made of trees.'

Sharing ideas about the performance and choosing them

The performance-creating process followed these guiding questions: What kind of performance would you like to create together? What could our performance be about? How could the individual ideas come together? The participants made the following initiatives of combining tragedy with humour

- Could it be a story with different kinds of people, decision-makers, students and teachers?
- No need to have a Cinderella story with a happy ending.
- A very dramatic end, something bad happens, something that can't be changed.
- A priest could come who brings peace.
- Students make a terror attack on the school staff room.
- I want to make a funny play.
- At the end there needs to be a lesson.
- An angel arrives: Look around, what is happening! What could you have done differently?

The process continued by deciding what to include in the play and by choosing who would take what part. Teacher: Let's decide upon our plot: In the beginning, we have a problem...

A participant: "The world is coming to an end", the priest shouts to a teacher and students.

Teacher: Who else could there be?

The participants' initiatives:

- Students who throw garbage into the sea.
- Fat people who eat hamburgers.
- Students who throw rubbish into the sea.
- At the beginning, students ask if they can throw rubbish in the sea.
- The teacher says: it's all the same. Nothing matters.
- The teacher tries to teach, but, like in the future, with a big mobile phone.
- Students against the teacher, a revolt.
- Let's include [Vladimir] Putin, I could be Putin and swear!

The rest of the time was used for rehearsals. The content of the final performance is explained in the section titled "Various dimensions of alienation".

6 Findings and discussion

An essential finding of our project was that these youth were open and capable of exploring and brought up a number of psychosocial themes in a relatively brief amount of time. This was in line with our expectations, but the richness of the performances and their creative processes were greater than we presumed. There were more psychosocial themes in the performances than can be adequately discussed in one article, and the data suggests further research would be valuable. Here we will focus especially on two performances, called #Nothing Matters and Bypassing, for closer scrutiny. These performances provide several reflection points in relation to our chosen key themes for this article: psychosocial dynamics, alienation and tragedy. The themes, the theatrical forms that manifested psychosocial issues, and reflections raised in the performances are presented in the following table. The names of the performances, which are used here, were chosen by the researchers to emphasize the interpreted focus of the performances.

Table 1: The themes and main contents of the various performances

Performance: Name	Participants	Introductory lecture	Performed psychosocial issues/ theatrical forms	Reflections raised
#Nothing Matters	11-12 year-old	Climate change mitigation	Responsibility and splitting manifested through tragedy of powerlessness, indifference and alienation, and parody of authorities	Responsibility, "What do you think about our end?"
Bypassing	16-17-year-old	Finland's future in 100 years	Tragedy of bypassing and climate change denial, parody of climate activist.	Awakening in the presence of a flood and drowning, "Could we do something?"
Mystery of Awakening	14-15 year-old	How climate change impacts on animals	Parody of littering, taking selfies with wild animals and shopping hysteria	What do we really need? Why do we buy useless stuff?
Everything Seems Crazy	15-16-year-old	Invasive species	Invasive species and absurdity of climate change, parody of hunters and hunting	Climate change and related human responses feel absurd and strange
Poaching Snow Leopards	13-14-year-old	Snow leopards and global warming	Parody of poachers	"Save the snow leopards"
Space for Shopping Mall or for Animals?	13-14-year-old	Finnish wild animals	Construction of a shopping mall. Juxtaposition of roles: animals treating humans like humans treat animals	How could both human's and animals' living circumstances be considered in urban planning?

Table 1 clearly shows in the case of the four last performances, how the introductory lecture, which the students heard before performance-making, had a profound impact on the performances. This was to be expected. In the last four performances, the introductory lecture dealt with animals, and it is notable how human-animal relations – or, multi-species encounters – were manifested in several creative ways in those performances. This general theme of interspecies living, which is much studied in contemporary research about art and environmental education (Foster, Mäkelä and Martusewicz 2019; see also Haraway 2016), is beyond the scope of this article.

Psychosocial dynamics in the performances

The performances dramatized multiple psychosocial aspects of climate change by combining the theatrical forms of tragedy and parody. Tragedy offers a means by which to question human rationality and control through the radically open, negative and critical form of theatre (Lehmann 2016). Parody as a theatrical form, on the other hand, aims to provoke laughter and expose power and authority through allusive imitation (Dentith 2002, 9). As Tam (2010, 176) writes 'the spontaneous and elemental nature of laughter is capable of defeating routine and doctrine, as well as the seriousness and abstractness of an oppressive social world'.

The #Nothing Matters and Bypassing performances were structurally tragedies and demonstrated climate change as a tragic situation from which people tried to distance themselves but awoke in the presence of death and final destruction. However, these performances varied in their structure. Bypassing explored people's distractions through dialogues between an activist and several passers-by and through the characters' reactions to rising water. #Nothing Matters explored indifference and various related issues by means of different scenes. It is these performances that we have chosen to focus on in this article.

Both of these performances typified ways of maladaptive coping – socially constructed silence and indifference – and manifested various other psychosocial responses to climate change. These aspects are interesting to compare with the results of several studies. The performances embodied and made visible typical behaviours of people who disregard the inconvenient truth of climate change and the related pressure to reduce consumption, change lifestyles or participate in social or political action. The silence, denial, and by-passing that environmental matters often meet with were depicted particularly through the character of the teacher in #Nothing Matters and several passers-by in Bypassing. We will present and clarify these scenes in more detail below.

The Bypassing performance creatively manifested several ways in which people try to avoid climate change. Such activity can be called denial, disavowal, or distancing. The reasons for such activity can be manifold, ranging from selfish economic interests to apathy caused by too strong anxiety (Hoggett 2019; Jylhä 2017; Weintrobe 2013).

The characters in Bypassing were disoriented and kept their distance from the activist, who tried to tell them about climate change, but they avoid him by chatting on cell phones and taking selfies. One manifested the hedonistic pleasure of shopping and another over-optimism. The ambivalence of trying to be and look happy while being hostile and rude

towards others was depicted by one passer-by, who threw an apple at the disturbing climate change activist while taking selfies.

Similar distraction and indifference were also personified in the #Nothing Matters performance in the character of the teacher and how she communicated with her students using only her mobile and sending #commands. It seems common for contemporary people to escape the troubling aspects of reality by focusing on cell phones or other electronic devices (Carleton et al. 2018).

The theme of intergenerational divides related to the social norms, values and perspectives of climate change (O'Brien, Selboe and Hayward 2018) was brought up in a dialogue between the activist and an old lady in Bypassing. The old lady argued that activism is not socially acceptable and young people should be doing other things. Even though the activist tried to get in contact and have a conversation about forests, his initiative was not accepted.

Overall, it can be said that eco-anxiety was explored in many creative ways in these performances. Instead of explicitly recognised anxiety, the characters manifested several kinds of implicit forms of anxiety responses.

Responsibility, ambivalence and splitting

While preparing #Nothing Matters, the participants pondered issues related to the distribution of responsibility, political participation, and making a difference through their actions (as presented in the previous section). The students had different views about these matters. The participants pondered who is responsible and whom one could accuse for climate change (on climate change and the ubiquity of blame, see Rees 2015). A sense of both responsibility and powerlessness were apparent.

On one hand, the thoughts of the participants on world political issues showed a consciousness of the systemic level of environmental problems: the responsibilities of average citizens and those of global leaders were quite different (Rudiak-Gould 2015). On the other, there were still endorsements of and accusations directed towards individuals, by asking the members of the audience and the participants about what they would have done differently. These reflections on moral authority touched upon issues of guilt and shame, the problems of indifference and hedonism, and upon political participation and its problems.

The participants of #Nothing Matters seemed to ponder the contradiction between being aware of how people should act concerning the environment and how people actually behave. They seemed to struggle with this challenging ambivalence as this issue had already been brought up in the pre-reflective discussion. According to psychosocial researchers, this ambivalence is a huge psychological challenge for environmental education and communication, provoking anxiety and a need for coping. People will need support to deal with this ambiguity and be able to bear their frustration (Lertzman 2015; Adams 2016).

In #Nothing Matters, the participants manifested frustration and resentment towards adults, represented by the teacher, who did not pay enough attention to the ecological crisis. On the other hand, such positioning resembles the psychological defences of splitting and projection. The adults were depicted as not taking responsibility

even though they had power, whereas the young people were presented as powerless victims or heroes; thus, the goodness of the young people was emphasised. Scholars have noted that this kind of binary thinking can often result from the psychological complexities related to climate change (Weintrobe 2013), and young people often have a tendency to make strong distinctions between generations. In relation to climate ethics, this phenomenon has lately been much discussed in relation to the Fridays 4 Future climate movement of young people, in which Greta Thunberg has been a notable figure (Holmberg and Alvinius 2020). However, it should be noted that the performances did include some elements that assigned blame and shame to all people, young and old. For example, in #Nothing Matters, nobody picked up the garbage and everyone ate too much.

We feel that these elements in the performances point to the need to discuss further in environmental education the difficult questions of guilt, blame and responsibility. Another affective dimension which clearly needs more attention relates to anger and frustration (cf. Jensen 2019; Verlie 2019; Ray 2018).

Various dimensions of alienation

The performances of "#Nothing Matters" and "Bypassing" seemed to address transdisciplinary issues of alienation. There were manifestations of a lack of connections and encounters between people. There was disconnection from nature and from social reality. Alienation from nature was demonstrated in the #Nothing Matters performance, in which nature was suffering due to human indifference and irresponsible behaviour. This was linked with social alienation, a lack of connections between people. The teacher of #Nothing Matters was not present on an emotional level, but instead was alienated from her students, communicating with them only through #messages as illustrated in the following scene:

"# Nature excursion!, the teacher leads the students in single file on a nature excursion by the sea. "Teacher, where shall we put our rubbish? Can we throw it in the sea?" the students ask. "# Whatever. Do what you want," the teacher responds.

A priest arrives to talk about the danger of littering and over-consumption. "Wake up! Act! Otherwise our planet will be destroyed," the priest shouts. However, neither the students nor the teacher pay attention to him, bypassing him and his moral endorsement. Contrarily, the teacher leads the students to a McDonald's fast food restaurant to eat hamburgers. Together they gulp hamburgers down and throw the rubbish everywhere.

Both the pupils and the teacher seemed to ignore their responsibility for environmental pollution, believing that they had little control over the situation. The students, standing rebelliously and empowered on their desks at the beginning of the performance, ended the performance by manifesting powerlessness, only questioning what to do with their garbage and following their teacher in over-consumption and environmental destruction. The control was distanced and authorised. Only the priest character, a source of morality, tried to give a sermon about the evils of pollution, but no one listened. Nothing could be done, while birds screaming amid the polluted nature after the students had eaten their hamburgers. At the end of the #Nothing Matters, a sense of powerlessness was demonstrated, when the "invisible hand" (Vogel 2015) of world politics, war and authoritarian leaders – Vladimir Putin, being depicted in the scene –

completed the destruction. Thus, there are excessive elements in the narratives of the performances.

#Nothing Matters seems to manifest social assumptions of climate change as a collectively produced, unintentional common result, in which individuals are driven to contribute as part of social systems as, for example, philosopher Steven Vogel has discussed. Vogel's (2015) three key arguments are as follows. First, the central focus of environmental education should be on human relations with socially constructed environments. Second, environmental education should promote an understanding of climate change as a collective, unintentional, socially produced issue that all of us are involved in, a result of our individual actions that are supported by social structures (cf. the discussion about "implicated subjects" and "affective pedagogy" in Bryan 2020). Third, a question should be raised about what kind of reality we want to live in and construct together. In keeping with this third point, #Nothing Matters ends with the appearance of an angel. A student climbs on a desk and asks in the role of the angel: "What do you think about our end? How was it?" After a short silence the angel continues: "What could we have done differently?" Then the students stand up and ask the audience and walk directly to the commentators of the presentation and ask: "What would you do differently?"

Arts have been considered by numerous thinkers to have a central role in promoting critical awareness about societal problems and injustice. Intriguingly, philosopher Franco Berardi (2009, 23) suggests that the arts play a crucial part in promoting a special and useful form of alienation, "positive estrangement"[1]. According to Berardi, becoming aware of alienation makes it possible to distance oneself from it, a process which he calls estrangement. From this perspective, the performance workshops could "construct bridges over the absence of meaning", as Berardi (2009, 129) describes the task of art. This resonates with the research on environmental education which emphasises the importance of meaning-making or meaning-focused coping (Ojala 2012, 2016; Pihkala 2017).

Awakening

The performances did indeed include interesting "awakenings", when important issues were illuminated. Some of these awakenings were accompanied with critical reflective questions that were posed either directly or indirectly to the audience; this happened in one way or another in all of the performances. The contents of these critical reflections are given in Table 1.

In some performances, the motives or incentives for awakenings were explicitly performed. In the Bypassing performance, the state of bypassing was challenged due to changing conditions. When climate change became observable, consciousness of the crisis arose and a certain awakening or realisation occurred (cf. the discussion of shock in Edwards and Buzzell 2009). The rising waterline appeared on the scene as a symbol and manifestation of climate change, and people awoke and tried to escape. This refers to the challenge of the abstract nature of climate change: it is difficult to consider climate

[1] Alienation and estrangement in theatre originally raised by Bertol Brecht (1940).

change as a real, imminent problem, when it has no concrete, visible impact on daily life (Stoknes 2015, 39-43; cf. Howard 2013). In the performance, the rising water made climate change tangible and concrete. The following transcript depicts this moment of awareness.

The passers-by wonder: "Hey look, water! What's that?" "Oh my God! Why is it coming here?" The activist proclaims that the water level is rising. "The water's at ankle height!" The passers-by climb to stand on chairs. The old lady asks for help: "Let me on! Help me climb up, too!" When the water level starts to rise, the passers-by begin to panic, but when it goes down they calm down and live again in the wishful thinking that climate change does not exist. Passers-by: "Oh, there's no climate change here. No need to worry, Climate change isn't real!" However, the sea-level starts to rise again. The theme music from the movie *Titanic* plays in the background; the passers-by fall to the ground as if they are drowning and are in the presence of death. The bypassing stops and the passers-by start to question their behaviour. The final awakening occurs in this performance only after destruction, in a transcendental heaven which is enacted on stage. The passers-by wake up, raised from the death, and stand up holding decorative wreaths representing halos on top of their heads. They dance. However, climate change is still present in heaven in the form of water. The passers-by ponder:

"Where are we now? In heaven?"
"I can't believe there's so much water in heaven."
"What's happened to our world?"
"It drowned."
"Did anybody notice this happening?"
"Should we have done something?"
"Yes, we should have done something!"
"You can do something," one of them says to the audience.
"Can I do something?"
"Yes you can! We can all do something about this!"

Overcoming alienation through tragedy

A sense of tragedy was strongly apparent in the performances #Nothing Matters and Bypassing. They dealt with human fallibility and ended in destruction and death. Traditionally, tragedy questions the myths of human rationality and control and is a radically open and critical form of art (Lehmann 2016; Nivalainen 2018). In the performances, evolving social critique was linked with ambivalent feelings of responsibility, powerlessness and fear, and the issue of whether environmental action matters or not. In both performances, feelings of fear, guilt, and shame became intertwined in visions of dark environmental futures, whether in the form of the flood and drowning in"Bypassing" or in the polluted waters and final apocalyptic end (the Putin scene) of #Nothing Matters.

Tragedy is sometimes viewed in environmental education and communication as a deterministic genre that de-emphasizes motivation and the courage to act (Smith and Howe 2015). Tragic plays can also provide catharsis, make visible issues that are otherwise difficult to encounter and promote questioning of prevailing modes of

behaviour through awakening. An ancient aim of tragedy has been to generate compassion for those who suffer, including self-compassion. In addition, the global ecological crisis is so severe that it actually includes many tragedies and is itself essentially tragic in nature (Pihkala 2017; Foster 2015, 2017). We see, however, elements of the constructive dimensions of tragedy in the performance-making of the young people discussed here.

We join Selby and Kagawa (2018, 314) in their emphasis on "confronting despair as a prelude to authentic hopefulness". The tragic nature of the youth performances provides valuable insights into the participants' experiences of the social reality of climate change. The young people seemed to be able to express socially relevant themes. Problematic forms of normality, such as socially constructed silence, were shattered, at least for a moment. The awakenings of the performances emphasised that the young students were aware of tragic social circumstances but found them difficult to solve.

Combining the theatrical forms of tragedy and parody performance-making allowed tragic negativity to be challenged by carnivalistic laughter that raised a critical awareness of how we might be oppressed by the social world. Especially the #Nothing Matters performance had carnivalistic features: students stood on desks and the authorities' rationality was questioned. This kind of carnivalistic approach could "give a birth to freedom and renewal of meaning" through "relaxing cultural and social orders, conventions and hierarchies" (Tam 2010, 177, referring to Bakhtin (1984).

Thus, performance-making seemed to respond to the needs which were delineated by scholars such as Eaton (2017), Brown (2017) and Lertzman (2015), whose work we discussed in the section about eco-anxiety. At least in these cases, performance-making enabled creative encounters with eco-anxiety dynamics; similar results were found by Law et al. (2020). Living through tragedy through performance-making could inspire the dismantlement of alienation, transforming it into a positive state of estrangement (see Berardi 2009). We wonder whether something similar might be achieved with other kinds of audiences and participants, but this promising issue requires further research and experiments.

Limitations of the study and critical insights

Our study had a number of limitations that would require further critical reflection. Both tragedy and parody are argued to play essential roles in our cultures in (self)reflection, but they are multifaceted. Tragedy can end with an awakening phase that questions what kind of reality we want to collectively promote. However, there is the danger that if the audience does not understand the parodic aim of questioning, then the parody does not meet its parodic intentions, leading to unanticipated consequences (Dentith 2002). Therefore, the importance of reflective discussion about the aims of these theatrical forms should be emphasised.

A key limitation in our project was the lack of time for further reflective discussions with the performers or spectators after the performances. The aim of promoting social reflection through tragedy and parody can be helped by being emphasized to the audience. A reflection zone after drama activity is useful to raise

critical consciousness and deepen learning experiences. Thus, the performance-making workshop practice needs to be redesigned to include a post-reflection session on the content of the performance. Post-reflection is critical for research: it would enable researchers to gain more understanding of the meaning of performance-making and narratives for the participants.

In addition, more intensive, longer-lasting devising processes would have offered more meaningful experiences for the participants and would have provided further insights for the participants. While less intense approaches are able to reach larger audiences in a shorter time, their impact and individual meaning may remain limited or superficial (Heras and Tàbara 2014, 393-394). To explore and reflect young participants' personal experiences of eco-anxiety would require a longer, more intensive process that would better allow the creation of an atmosphere of trust in which personal thoughts and feelings could be expressed. However, we argue that the short workshops produced interesting material and thus could serve as an indirect approach for exploring eco-anxiety dynamics and related issues in the context of school conferences. The participants were capable of participating actively in collective creation as they were selected representatives at the school conference and they had chosen to participate in the drama workshop; expanding the experiences would offer further data.

A key ethical question related to eco-anxiety is if the performance-making alleviated anxiety, or did it make it worse. We cannot fully know the answer to that since there was no proper follow-up. Nevertheless, the teacher-researcher observed the moods of the participants, asked at the end of the workshop about the participants' feelings and did not notice any increase in anxiety or low mood. Instead, most of the students participated actively and expressed satisfaction and a feeling of happiness, especially after presenting the performance. The teacher-researcher did hand out a post-reflective feedback form at the end of first workshops, but the participants' written answers were brief and provided little information about the participants' experiences. The assessment of the impact of this kind of performative approach is not simple, therefore, and needs to be considered carefully, as Heras and Tàbara (2014) have indicated in their review study.

Nevertheless, these performance-making processes enabled participants, both students and researchers, to explore various social aspects of climate change, eco-anxiety, and the related psychosocial dynamics. Building on the research base that we discussed in the section about eco-anxiety, we believe that these kinds of opportunities to explore eco-anxiety dynamics in a safe space, under the protective forms provided by narrative distancing and humour, are beneficial (cf. Winograd 2017).

Concluding remarks

Within the field of sustainability education lies a need for collective and creative approaches, such as performance-making, that can address the complex psychosocial issues and young people's ideas of climate change. This article demonstrates how by applying devising theatre principles for performance-making enables the integration of students' experiences and reflections in collective creation and thus raises an awareness of psychosocial responses to climate change and promotes critical reflections on environmental education. Even given this limited research experiment, performance-

making appeared to provide interesting insights for educators and transdisciplinary research on climate change.

In the workshops, the students' encounters with climate change and its psychosocial aspects – denial, bypassing, ambivalence and alienation – became materialised, embodied, visible and reflected in the scenes. The performances brought to light socially constructed silence about these issues and the many emotions that they evoke, illustrating the potential that drama has to bring such difficult subjects to the fore (see also Tait 2015). Normally invisible, the unspoken issues between people became visible and tangible, embodied through making drama. The drama workshops offered dialogical spaces that provoked critical insights into the prevailing responses and experienced ambivalence of the young participants. These responses were manifested through theatrical forms of parody and tragedy. Prevailing responses to climate change were manifested as irrational, leading to crises and destruction in the tragic performances. The maladaptive coping, absurdity and ambivalence of prevailing ways to respond and act related to climate change were encountered in a serious playful way and were questioned through consciousness raising.

Our arts-based research confirmed the need to develop methods for education that would help to break socially constructed silences. Performance workshops seemed to offer a valuable space for reflection, criticizing authorities and challenging negativity through the theatrical forms of parody and tragedy. In the carnivalistic scenes of parody and tragedy, the meanings and meaninglessness of prevailing ways of thinking and living were reflected upon. In the tragic performances, when destruction became embodied, real and concrete, the characters started to question their responses. In the eventual "awakening" the characters reflected on whether they could do something differently, have some impact and prevent this destruction from happening.

As Berardi (2009) puts it, performance-making seems to enable becoming positively estranged from prevailing alienation. The embodied and affective confrontation in making a performance may generate new kinds of connectedness and reflective distancing that are valuable in environmental education for ecological sustainability and for promoting hope. This hope is based on an awareness of the circumstances of the crisis but relies on human creativity and a sense of interconnectedness. We suggest along with Gallagher and Wessels (2013) that performance-making can generate productive pedagogical encounters that foster connections between adults and young participants. These creative encounters are valuable as they provide opportunities to move towards more adaptive coping.

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