

Transactive Teaching in a Time of Climate Crisis

CARL ANDERS SÄFSTRÖM AND LEIF ÖSTMAN

This article discusses three problems that need to be tackled when the climate crisis becomes 'a sustainability issue' to be taught in schools. The article highlights, first, how knowledge concerning sustainability in schools risks being reduced and made into knowledge about 'things'. Secondly, it also discusses how students in such a context risk being treated as instruments for ways of being in the world, rather than being subjects with ethical and political concerns for the world in which they live 'here and now'. Thirdly, as we explore through some empirical examples, such reduction and instrumentalism objectifies both students and nature, which makes an adequate response to the crises obsolete. As an alternative, the article develops a notion of grievability and its importance for adequately responding to all living beings within a project of sustainability. To this end, it develops suggestions for a transactive teaching approach in a time of climate crisis.

INTRODUCTION

The protest and heartfelt reaction and response to the escalating climate crises (Figueres and Rivett-Carnac, 2020) is coming most loudly and noticeably from children, from a generation whose future seems to be thwarted by the apparent passivity of elder generations, who at best cheer along and at worst place all our hopes on the young to fix everything. From the perspective of the young both reactions are an escape from responsibility at the same time as the lack of adequate response tend to be blocking any change of what is already the case; a crumbling capitalistic world order under the weight of its disrespect for nature and human life expressed among other things in its hunger for profit in a supposedly endless future (Berardi, 2017).

Capitalism then tends to be just another name for modernity (Wagner, 1998) and is as such embedded in an idea of time, progress and forward leaping that tends to overlook what *is* at hand and instead be directing oneself towards a future good. It is an idea of development without restrictions of being responsible for what is present, the climate crises as such, and whose motivation and justification are to fulfil its goal in a distant future,

regardless of the present crises. The problem is that according to this logic the goal is never completely fulfilled, it is always a bit further away, one more step down the line, slipping away into an elusive idea of the ‘future’ (Berardi, 2017). At the same time as the goal is dispersed and deferred into an ever-moving future, such a goal also gives meaning to the present order of things. Such an idea, in other words, tends to pervert the present order of things, blurring them from being seen in a clear light, since if the present is to be given meaning by what is to come, the present can only be an imperfect version of what is to come, never really fulfilled, always lacking – infinitely (Todd, 2009). But it is exactly this ‘logic’ that is challenged by the current climate crises, that is, people start to think and act as if things will not be better at all but worse, that there is no ‘future’ of this sort, and that the very idea of ‘always better’ is wrong in the first place (Butler, 2015; Säfström, 2014). Instead, we need to face what is right in front of us here and now: ‘Our house is on fire’ (Thunberg *et al.*, 2020).

The very institution in society in which the future as ‘always better’ is supposed to happen, or rather, where we all are to be included in the logic through which social and economic life, in general, is to be better, is the school. That is to say, schooling is the institutionalisation of a hope that your own life as well as the life of your community and society will be better and will progress in all conceivable ways. It is an institutionalisation of the desire of the state and nation to ‘produce’ functional citizens through schooling, who live their lives within the web of meaning defining the nation as well as the authentic self of such a nation (Säfström, 2014). Schooling distributes the place and role of such an (authentic) self within the social sphere of work and leisure to which he or she belongs, and according to an idea of a fundamental inequality between rich and poor, elite and precarious populations (Rancière, 2007; Säfström, 2020). That is, institutions such as the school are by necessity an expression of the inequality of the society. Schooling cements, rather than changes, the divisions between rich and poor, between good and bad consumers, between the elite and lives lived precariously (Säfström, 2018). That is, the climate crisis is at large an ethical-political inequality that cuts right through all our endeavours and all social and political settings, in all societies all over the world. At the same time as the climate crises are to be dealt with by schooling new generations to make things better, such schooling confirms an already existing inequality rather than working against it.

Also, children are walking out from schools to demonstrate, because, as the child activist Greta Thunberg has explained – Why go to school at all if what we learn in school is not taken seriously by grown-ups? Why go to school if no one is listening to the science one learns in school and acting on its warnings? The conclusion tends to be that what is taught in schools proves to be meaningless as knowledge of how to act here and, since it is refuted by many leaders as a condition for change, the only way to respond in the present is to walk out of school.

It is against this background that we ask, what happens when the climate crisis becomes a ‘sustainability issue’ to be taught in schools? In what way

is it possible, if at all, to respond in schools to the seriousness of the issues of climate crises collected under the term sustainability?

Before we develop our suggestions for the possibility of acting within schools, we will discuss three problems that need to be tackled when climate crises become 'a sustainability issue' to be taught. We call these in turn: the problem of reduction, the problem of instrumentalisation and the problem of normativisation.

THE PROBLEM OF REDUCTION

By reduction, we mean the process through which an issue of great magnitude and impact is treated as 'a thing', as a set of facts abstracted from the ethical and political context in which they make sense. For example, when children in schools are taught about the destruction of the rain forests in Brazil, and the teacher explains to them how deforestation threatens life itself, but fails to set this phenomenon in the political and ethical context in which it is taking place, or provide the means to counteract such a threat and teach how one can act, the risk is to reinforce climate anxiety rather than set out the possibilities for action. The risk is in overwhelming the child with facts without context or meaning, thereby hindering action and change rather than helping it.

The transformation of societal problems (such as climate change) into content to be taught in school is nothing new. The history of environmental education provides examples where this transformation has been done, with the ethical-political dimension reduced in two particular ways that are characteristic of schooling and which we have called, respectively, Fact-based and Normative traditions of environmental and sustainability education (Öhman and Östman, 2019). They have their roots in different historical times (the 1960s and 1980s, respectively), but they are still present today. Although we will focus on the second tradition, we will start by giving a summary of the Fact-based tradition. This tradition is built upon the conviction that environmental and sustainability issues can be discovered and cured by scientific knowledge alone, although with the help of technology. The ethical-political dimension of these problems is perceived as something subjective and non-rational that should be avoided. In this tradition students learn scientific facts, mainly from the natural sciences, in the hope of making things better in the future, but without any actual tools to do so.

The reason why we want to focus on the Normative tradition is that it is the one mostly referred to when the urgency of handling the climate crises is brought up and because it has been criticised by researchers in the field of environmental and sustainability education (e.g. Jickling, 1994; Van Poeck and Vandenabeele, 2012). This tradition has clear connections to the Fact-based tradition since it is strongly rationalistic, but it differs mainly through recognising the importance of ethical-political dimensions of environmental and sustainability problems. It is here that the relation between 'is' and 'ought to' becomes pivotal. The rationalistic pathway can be explained as an overemphasis on the idea that true knowledge will lead to

right and correct ethical and political actions. This has the characteristics of what von Wright (1989) called scientism (cf. Reid, 2013). In terms of concrete education, scientism can be exemplified with this excerpt from a 1980's chemistry textbook.

In Sweden, seabirds are dying from oil-polluted waters, fish are poisoned, lakes become choked with weeds, the soil acidified, and so on. One could draw up a lengthy list of all forms of ongoing environmental pollution, yet man is constantly inventing and producing new substances whose environmental consequences are unknown. To preserve our threatened environment for future generations ought to be an urgent matter for all of us (Mårtensson and Sandin, 1988, p. 224, our trans.).

The difference with respect to the Fact-based tradition is that here a scientific description of the world is directly connected to a consequence of how we ought to act: 'To preserve our threatened environment for future generations ought to be an urgent matter for all of us'. What this quote illustrates is that the road from scientific descriptions to prescriptions – how to act as a citizen, a consumer and as a society – is an autobahn: if the knowledge is true then we automatically and with no (speed)limits can reach the ultimately correct way of acting ethically and/or politically. This scientism can be described as a scientific value-foundationalism, which can if we are to believe Rorty (1991) be accommodated within a positivist-coloured culture (Östman, 1996).

Furthermore, in this tradition nature is presented and approached as an object, a thing (cf. Chambers, 2008), and nature is given a value in the educational praxis as a means for learning generalised scientific knowledge and as a means for understanding the importance of nature for the survival of *Homo sapiens* (see Van Poeck, 2019; also Van Poeck, Goeminne and Vandenebeele, 2016): thus nature is given a value – epistemic and, respectively, ethical – only as an instrument for achieving the purposes of humankind (Östman, 1996). Connected to this instrumentalism we find a role for the scientist as the manipulator (von Wright, 1989), the one who can secure the absolute and universal foundation for the ethical-political decision. The result is a particular kind of post-politics, a politics that does not address the political as a negotiation over difference, but which rather reduce politics to a paradigm of distribution from a centre and which motivates this distribution with a certain moral, transforming political issues to moral issues instead (Mouffe, 2005).

INSTRUMENTALISATION OF STUDENTS

Above we illustrated some instrumentalisation tendencies reducing complexities of nature and knowledge and here we continue with the instrumentalisation of the students that occurs within schooling. By instrumentalisation, we mean the tendency to treat the child as a student on which the nation-state projects its desires and goals regardless of how the student understands his or her own life: The student is thus understood as a means to achieve something other than what concerns the student him or herself. The student as such does not matter as a person in their own right, other

than as an instrument for a goal outside the individual lived life as well as the accompanying reification of and objectification of what is taught in schooling concerning the view of nature: That is, the child as an object of desires, rather than a subject of its relationality, within an objectified and instrumentalised view of nature.

Instrumentalisation blocks the possibility of appearing as a subject within schooling and reduces the student to an object to be formed, within an already defined 'objectified' web of meaning (cf. Wals and Bob, 2002). Such a situation cannot be ethical since it does not imply a relation to another whose meaning is not already given externally to any relation with him or her, it does not involve a relation to the absolute other, for whom I am responsible (Säfström, 2003; Todd, 2003). A relation between objects is not ethical in this sense since an object is already given meaning regardless of its presence. Subjectification then is the process through which objects are turned into subjects through acknowledging their presence, and that such presence is verified as meaningful. A subject thus appears through subjectification.

On a systemic level, instrumentalism in education distributes places and spaces in the social sphere of inequality. That is, school systems are to identify and distribute that which will make society 'better', more efficient, economically stronger, healthier and sustainable. In the case of the normative tradition, it is a specific attitude to be distributed (the sense of urgency with environmental threats), decided beforehand (from the centre), as well as a specific view on the relation between is-and-ought to the scientific value-foundations that the students are supposed to learn. Therefore those abilities and talents that will support such aims need to be identified and circulated over the spectrum of the social sphere of work and leisure to be advancing the particular nation-state in which it operates.

NORMATIVISATION

By 'normativisation' we mean the tendency to not only teach or to educate the person in schools but a process through which an idea of an 'authentic self' is explaining who the student is already, or is to become, within school and society. It is the process through which a norm becomes nature, an 'authentic self', not any self, but a self that is recognisable as something that matters, as the true nature of a 'real' self. The process of 'normativisation' is one way in which an authentic self is produced through a 'fixion', in Lacan's sense: that is, as a 'fiction one chooses to fix' (Cassin, 2016, p. 38), and which as such operates as 'the bottom line', as that which gives the whole meaning. An 'authentic self' behaves as is expected from him or her in school and society. If there is an authentic self, there is also an in-authentic self, a self not being what one is supposed to be, seen as lacking in essential ways, lacking matter, not appearing on the scene, not being present but absent from (positive) meaning. Such authentication/un-authentication happens within the micro-cosmos of the class, as exemplified in the following case.

In their illustration of the theory of companion values, Garrison, Östman and Håkansson (2015) used an empirical example illustrating both 'aesthetic and the ethical spheres interrogating the epistemological' (p. 199). The illustrative conversation consists of 8 and 9-year-old students taking part in a field study: collecting animals in a lake and stream into containers for later investigations. The communication below¹ takes place while they are discovering that a salamander (a lizard) in a container is dying and they are trying to rescue it by releasing it back in the lake where they gathered it.

Olle: Now we hold it [the jar].

Max: Everybody?

Linus: No wait, you too.

Max: Careful.

Nellie: Bye-bye. [They pour the water and the salamander into the lake.]

Linus: Is he out (of the jar)?

Max and Olle: Yes!

Olle: I cannot see it! There (pointing at the water).

Nellie: No, it does not live.

Olle: Yes, it makes it, it makes it, it is swimming!!

Max: No.

Olle: Yes.

Linus: Yes, it swims.

Nellie: This is almost cruelty to animals.

Anton: He did like this [raises his hands in the air]. He is dead scared.

Viktor: It survives!

Teacher: Does it live?

In this conversation, which we will also come back to later, a lot of spontaneous feelings are involved and expressed. They are expressed in connection to the goal of their mission – to save the life of the salamander – and its success and non-success. What we here will pay attention to is what happened at the end of the lesson where all the groups gathered to share their work and their accomplishments. Olle, when sharing his experience of the whole day of work, said the following: 'When it is dying then it lays still and huddles as under a leaf of some kind'. The teacher responded by saying: 'But we do talk about the lizard now. Do you know why the male looks like that, with a little thornier skin?' The teacher redirected the conversation in the whole group from Olle's interest in sharing the mission of his group

trying to save the life of the dying salamander to a scientific conversation. We are certain that the teacher had many good pedagogical reasons for this redirection, for example, lack of time in this specific situation and therefore a need for concentration on the main goals of the investigation, and we only use this example to make concrete what we mean by the process of normativisation.

What happened in this situation is that the attentiveness of the collective group of students was redirected from moral experiences to the result of a scientific investigation and thereby to specific epistemic (epistemological) values: to ask questions that can be answered by objectifying the salamander. The one in charge of redirecting what makes sense in the situation is the teacher. In that way, the teacher can make the students learn specific ways of privileging (Wertsch, 1993), that is, making certain aspects of the world become present and others become non-present. Wertsch, one of the founders of the socio-cultural perspective on learning, introduced this term to highlight that one of the most crucial processes that determine the learning outcome is when students choose certain objects, way of reasoning, etc. and not others that are possible. The forming of attentiveness and ways of privileging in general not only includes certain ways of making specific aspects of the world sensible and intelligible and excludes other ways and aspects but also governs who matters in the classroom, etc., namely the one who has the qualities to add to the specific forms of attentiveness and privileging. Students who have these qualities are seen and matter in the teacher's attempt to form a specific collective privileging in the classroom. In this case, Olle was not 'helpful' in the work of the teacher of making all of the students privileged in a way that was following the goal of the investigations. Thereby Olle was made invisible in the collective. If such a process was dominating the teaching of the class, then certain selves would matter in the pedagogical process and others not. Thus, some selves are facilitated to appear – they become in that sense bodily and materially real, authentic. Another self becomes fictional, unauthentic – they are not supposed to appear. What is created is a hierarchy of not only *what* is valued but also *who* is valued, creating inequality as some appear on the scene at the cost of others who fade into the background.

CLIMATE CRISES THROUGH EDUCATION (ETHICAL-POLITICAL)

Having pointed out some of the obstacles we see in teaching sustainability issues in schools, we now want to suggest some building blocks for the possibility of dealing with such issues without reduction, instrumentalisation and normativisation, that is to make it possible, also, for children in schools be concerned about a possible future for themselves as well as for life itself and to mobilise schools as sites for urgent public concerns (Biesta, 2017a; Masschelein and Simons, 2013). We do not claim that we offer a value-free, neutral argument, but that we start in what we find to be fundamental to the climate crises, the denial of equality of grievability of all life (Butler, 2020), that all life is equally grievable, both human and animal as well as nature as such. The life of the salamander matters, and Olle's

concerns above, points towards such equality of grievability. He is also signalling concern for the here and now, for the world and nature as it appears in the present.

The Worldliness of the World, Change and Commitment

Education *is praxis*, that is education is about how to move within the world as such (Jaeger, 1939, pp. 295–300). Education as such is to be understood as the *instantiation* of change into social orders, as a certain form of presence and the making present of what have been absent, of turning objects into subjects of concern (Säfström, 2019). In other words, the individual in education is *emancipated* from a given destiny within the social order of objectification and is consequently not fixed beforehand but is *to appear as someone* through the engagement with the worldliness of the world, by being engaged with *praxis* through education and teaching. Teaching then, we suggest, means to be committed to the worldliness of the world and to make present what was before absent, to verify the student as present and to attach meaning to that presence, as well as meaning and value to objects (Rancière, 1991; Säfström, 2020).

Commitment, according to its definition in Cambridge dictionary,² is about constancy, dedication, devotedness, an enduring promise to do or give something to someone; it is as such *a gift* without claims of return, a promise to be loyal and to embody an attitude of someone who works very hard to support something or someone. In other words, commitment in education comes with certain ethics of teaching in which the interest is directed towards the other, not oneself. To be committed is to be for the other without any claim of return, while hope is for your benefit directed towards one or another future possession or salvation (Säfström, 2016). Commitment is open-ended, even though it has a precise direction and is embedded in particular ethics. In education, it is directed to the freedom of the other (Biesta and Säfström, 2011) and in responsibility for the other (Säfström, 2003). To be committed within the context of education is to be committed to a radical change in which freedom can emerge, freedom for the other, for the student, the freedom of living a liveable life together with others in this world and at this point (Biesta and Säfström, 2011).

Educational teaching is to be committed to the freedom of the other, and the verification of equality in every moment of its existence. It therefore also makes learning possible as other than acquisition, other than a tool for competition and comparisons. It is concerned with the present order of things within an ethical-political contextualisation of those things. In the following, we will extend this educational point of view with an example of a strategy of teaching in which the ethical-political approach transforms all involved in ways that make subjectification possible.

TRANSFORMATIVE ENVIRONMENTAL EDUCATION

How then, would sustainability teaching look if teaching is all about the world as it appears here and now, to make present what is absent and which verifies the commitment to the student as well as to the equality of

grievability of all life? (Bonnett, 2007; Butler, 2020; Säfström, 2014). Let us sketch such teaching by returning to the example of the lizard.

In the case of the lizard, it is interesting to notice that it is the lizard as a subject that becomes a matter of concern for the students and to which the consummatory experience – an experience of a fulfilment of a desire, purpose, etc. – is connected. Thus, the desire of the students to rescue the lizard can be seen as a commitment to the lizard. Commitment is open-ended, and ethical in its directedness to the other, and has a precise direction, that is the students did not know when they started to execute the commitment how it would evolve, but the activity had a direction towards the other, which in this case was the lizard as well as other students.

The negative (tragedy) and positive (relief) emotions expressed by the students are examples of the ethical co-relations (see below) created in the activity. Although it is the same lizard that is paid attention to, there is another lizard that becomes present in the activity than the one that was supposed to become present in the investigation, which was a ‘thingly’ lizard. The lizard nevertheless suddenly became grievable. One can even say that the non-human world becomes a subject within the event.

The example we have chosen is not an extraordinary example, where the students are creating an attached (ethical) relation to the world. In a transactional perspective (Dewey and Bentley, 1949/1991) we are from birth, and probably before, already connected to the world: we are in a co-relation with the world. That co-relation is never static, it develops as a co-transformation because, in any encounter, the world and the person are simultaneously and reciprocally influencing each other. Thus, all the participants and the actions become intelligible simultaneously and reciprocally in an event. From a transactional perspective, there is no such thing as non-attached and detachable relations to the world: the only thing that exists are different forms of co-relations or attachments to the world. However, it is important to recognise that we might, for practical reasons, want to analytically distinguish the participants in the co-relation.

A consequence of transforming this transactional way of understanding encounters, etc. into transactive teaching (Östman, Svanberg and Aaro Östman, 2013, pp. 30–37; Östman, van Poeck and Öhman, 2019) is that the praxis of encountering the world that students become part of or stage themselves becomes highlighted *as* a way of partaking in the world. Thus, we turn our attention to a ‘hear and now’ perspective – attention on the concrete encounters in the activity. In the vocabulary used above, we can say that what we do is to focus on the praxis of encountering the world as part of a specific way of privileging – ‘what’ in the world to pay attention to and how to transact with that ‘what’.

Moreover, although a praxis of encountering the world (e.g. a scientific inspired investigation, including manipulation of the world) can be seen as a means to master (e.g. the identification of species of lizards), transactional teaching pays equal attention to that praxis because it is about creating specific attachments to the world in action. And part of our way of partaking in the world is the ‘making’ of what is present and what is made absent, of what appears as meaningful and what is not given meaning.

Any partaking in the present includes a transformation of the self, through appearing as someone meaningful, as a self absolutely present, as someone who matters and as clearly distinct from others who do not matter, from those who are marginalised within the dominant web of meaning. The aim of the teaching we suggest is directed to the ‘what and the how’ of making the world present as well as all students part of such worldliness of the world, through the establishment of specific co-relations. Such praxis of teaching is crucial for paying attention to how we make the ethical-political aspects of environmental and sustainability problems present for the students.

The consummatory experience makes the activity an integrated whole – the living through the whole activity becomes *an experience* (Dewey, 1934/2005). As *an experience*, it stands out in the flow of experiences: the activity of saving the life of the lizard becomes embodied as something of high significance, something invaluable. The commitment, the practical actions, the flow between tragedy and relief and the re-wakening of the lizard are felt and remembered as something extraordinary – as having an aesthetic quality and as such having an intrinsic value, something that is invaluable and not replaceable (Garrison, Östman and Håkansson, 2015) – and as such it probably re-enforced the commitment that was the start of the activity. If we believe that education has to give students the possibility of developing and nourishing commitments within environmental and sustainability education (ESE), it is of great importance to pay attention to consummatory experiences and the aesthetical values (of likes and dislikes) that accompany such experiences, since they can be perceived as critical instances of such possibilities.

Although the example we use in this article illustrates events that are not so common, it points towards an important principle for any teaching, namely the possibility of making the students become artistically involved in the activity. The reason why we want to emphasise the artistic is the possibility for turning the student from an object of external educational desires into a subject for developing and nourishing commitments and interest, that is to be the subject of their own desires. Since there is no room for elaborating in depth on the artistic (see further Andersson, Garrison and Östman, 2018; Biesta, 2017b; Lewis, 2012; Säfström, 2014), we will here just briefly describe what we mean.

The artistic refers to the whole process from an idiosyncratic (subjective) and bodily felt imagination to the fulfilment of that imagination, through actively and personally engaging with the material (concepts, wood, paint, etc.), that is, in the focus of the educational activity. In short, the artistic concerns the wish to express your ‘self’ in the activity with aid of the media that are offered in that activity (Dewey, 1934, p. 65) and where the ‘what’ you want to express is more of a vague bodily feeling than a clear idea. This type of bodily feeling James (1912/1976) called pure experience and Dewey used the term *anoetic experience* (1925/1981). This personally felt imagination and the desire to explore and express it functions as a motivational force in the activity, that is, the anticipation of an appreciation of a consummatory experience functions as the main source that guides the

activity of the person (Andersson, Garrison and Östman, 2018, p. 113). This is the reason why it is only at the end of the process of realising the imagination that it has turned from a bodily feeling to a clear idea: the artistic concern, the grasping of the possible in the actual. The artistic can occur in any activity and thus is not limited to art. What we here want to emphasise is that an artistic engagement of the students in the educational activity involves creativity regarding acting in the world, as well as involving the student as a subject: it is him or her as individuals who are expressing themselves in the process of being creative in the world and of the world. In the case of the young children in the example above they certainly were involved as creative artistic subjects and they experienced a fulfilment through the event.

What this example illustrates is the possibility for the teacher to commit themselves to education by facilitating students' creative imaginations and self-expression through the 'media' that is in the focus of the activity. It is not only of importance that the teacher in different ways encourage students to own creative imaginations (regardless of whether the activity is inspired by science, practical practices or art), but it is also crucial that the teacher can assist them by offering transactions with the world that bring the artistic process to a consummation, that is to facilitate a praxis of encountering the world that will make the activity to become *an experience*, an experience with aesthetic quality.

If the desire is developed and executed in an ethical-political inquiry of some sort – a specific praxis of encountering the world – the student will be given possibilities for developing ethical-political co-relations and commitments to the world, as the students did concerning the lizard. Furthermore, as the process of artistic inquiry, transactionally involves the subject, and not (only) as a student (as an object), the individual and the world will be transformed simultaneously and reciprocally in events of encounters. One can say that the individual is *emancipated* from a given destiny within the social order (family, classroom, society, etc.) and is consequently not fixed beforehand but is *to appear as someone* (Biesta, 2006; Säfström and Månsson, 2015) through the transactional engagement with the worldliness of the world (the concrete lizard).

Above we wrote '*suddenly* became grievable', because what happened in the activity was nothing that was calculated, or planned for – it just happened to the lizard as well as for the students (Öhman and Östman, 2008). One ethical reflection occurs in the activity, which otherwise overflows with the immediate responses of the students, namely Nellie's comment: 'This is almost cruelty to animals'. What this comment shows and what impregnates the whole activity is the interrogation of values spheres that takes place (Garrison, Östman and Håkansson, 2015).

Any activity includes a hierarchisation of values – that one value sphere is in the forefront and others are in the background as companion values. For example, in the example, epistemological values are in the forefront, so as to create objective observations of the salamander, but other values are in the background as necessary for the foreground to be a foreground.

One example is the value of the need to manipulate nature. That value is a necessity for the activity the students are involved in, but it is situated in the background: it is not present as something to discuss, etc. But this companion value is elevated to the forefront by Nellie's reflective statement and through that elevation, it turns from a background value to an explicit ethical one.

Students actions in the activity as a whole can be characterised as a dismantling of the hierarchisation of the values that the activity is built upon and as such it constitutes a potential educative moment of equality (Säfström, 2020): a moment where students and teacher have an opportunity for 'changing value domains, inverting them, refusing value hierarchies altogether, creatively transforming values into each other, or even blending them'. (Garrison, Östman and Håkansson, 2015, p. 192; see also Håkansson, Van Poeck and Östman, 2017).

An educative moment not only offers possibilities for critical imaginary inquiries on values, but it is also a possibility for creating new values and thereby radically breaking with the cultivation of scientism with its rationalisations and moralisation. Furthermore, it creates a possibility for the subject to appear differently as well as figuring the order of what and who is to be present, together with what and who matters. We strongly believe that it is crucial in the context of the climate crisis to be facilitating and sustaining 'artistic activities' through a transactive teaching approach that can extend grievability to all Life on our planet (cf. Grange, 2004; Payne, 1999; Stables, 2010). To extend grievability to all Life is not only ethical but as Butler (2020) explains, it forces us to rethink political organisation and the place and role of equality in such politics. It motivates action as well as informs transactive teaching with direction and purpose for sustainability issues in schools. It opens up possibilities for a multi-layered response to the complexities of climate change, political as well as social, ethical and epistemological changes.

Correspondence: Carl Anders Säfström, Centre for Public Education and Pedagogy, Maynooth University, Maynooth, Ireland.

Email: carlanders.safstrom@mu.ie;

Leif Östman, Department of Curriculum Studies, Uppsala University, Uppsala, Sweden.

Email: leif.ostman@edu.uu.se

ACKNOWLEDGEMENT

This article was written within the project, *Manners of Teaching About Controversial Sustainability Issues and Students Learning*, financed by the Swedish Research Council, Drn. 2017–03662.

NOTES

1. Translated from the original dialogue in Swedish.
2. <https://dictionary.cambridge.org/dictionary/english/commitment>

REFERENCES

- Andersson, J., Garrison, J. and Östman, L. (2018) *Empirical Philosophical Investigations in Education and Embodied Experiences* (London, Palgrave MacMillan).
- Berardi, F. (2017) *Futurability. The Age of Impotence and the Horizon of Possibility* (London, Verso).
- Biesta, G. J. J. (2017a) *The Rediscovery of Teaching* (New York, Routledge).
- Biesta, G. J. J. (2017b) *Letting Art Teach. Art Education 'After' Joseph Beuys* (Arnhem, Artez Press).
- Biesta, G. J. J. (2006) *Beyond learning. Democratic education for a human future* (Boulder, Paradigm).
- Biesta G. J. J. and Säfström C. A. (2011) A Manifesto for Education, *Policy Futures in Education*, 9.5, pp. 540–547.
- Bonnett, M. (2007) Environmental Education and the Issue of Nature, *Journal of Curriculum Studies*, 39.6, pp. 707–721.
- Butler, J. (2015) *Notes Towards a Performative Theory of Assembly* (Cambridge, MA, Harvard University Press).
- Butler, J. (2020) *The Force of Non-Violence* (London/New York, Verso).
- Cambridge dictionary. Available online at: <https://dictionary.cambridge.org>.
- Cassin, B. (2016) *Nostalgia. When Are We Ever at Home?* (New York, Fordham University Press).
- Chambers, J. (2008) Human/Nature Discourse in Environmental Science Education Resource, *Canadian Journal of Environmental Education*, 13.1, pp. 107–121.
- Dewey, J. (1925/1981) Experience and Nature, in: J. A. Boydston (ed), *John Dewey: The Later Works*, Vol. 1. (Carbondale, Southern Illinois University Press).
- Dewey, J. (1934/2005) *Art as Experience* (New York, Perigee).
- Dewey, J. and Bentley, A. F. (1949/1991) *Knowing and the Known* (Carbondale, Southern Illinois University Press).
- Figueres, C. and Rivett-Carnac, T. (2020) *The Future We Choose: Surviving the Climate Crises* (London, Knopf Publishing Group).
- Garrison, J., Östman, L. and Håkansson, M. (2015). The Creative Use of Companion Values in Environmental Education and Education for Sustainable Development: Exploring the Educative Moment, *Environmental Education Research*, 21.2, pp. 183–204.
- Grange, L. (2004) Embodiment, Social Praxis and Environmental Education: Some Thought, *Environmental Education Research*, 10.3, pp. 387–399.
- Håkansson, M., Östman, L. and Van Poeck, K. (2017) The Political Tendency in Environmental and Sustainability Education, *European Educational Research Journal*, 17.1, 91–111. Available online at: <https://doi.org/10.1177/1474904117695278>.
- Jaeger, W. (1939) *Paideia: The Ideas of Greek Culture: Volume 1: Archaic Greece: The Minds of Athens* (New York, Oxford, Oxford University Press).
- James, W. (1912/1976) *Essays in Radical Empiricism* (Cambridge, MA, Harvard University Press).
- Jickling, B. (1994) Why I Don't Want My Children to be Educated for Sustainable Development: Sustainable Belief, *Trumpeter*, 11.3, pp. 2–8.
- Lewis, T. (2012) *The Aesthetics of Education: Theatre, Curiosity and Politics in the Work of Jacques Rancière and Paulo Freire* (New York/London, Continuum).
- Masschelein, J. and Simons, M. (2013) *In Defence of the School. A Public Issue* (Leuven, Education, Culture & Society Publishers).
- Mouffe, C. (2005) *On the Political* (Abingdon/New York, Routledge).
- Mårtensson, G. and Sandin, H. (1988) *Kemi Försök & Fakta. Faktabok för högstadiet* (Malmö, Liber).
- Östman, L. (1996). Discourses, Discursive Meanings and Socialization in Chemistry Education, *Journal of Curriculum Studies*, 28.1, pp. 37–55.
- Öhman, J. and Östman, L. (2008) Clarifying the Ethical Tendency in Education for Sustainable Development Practice: A Wittgenstein-Inspired Approach, *Canadian Journal of Environmental Education*, 13.1, pp. 57–72.
- Öhman, J. and Östman, L. (2019) Different Teaching Traditions in Environmental and Sustainability Teaching, in: K. Van Poeck, L. Östman and J. Öhman (eds), *Sustainable Development Teaching: Ethical and Political Challenges* (New York, Routledge), pp. 70–82.

- Östman, L., Svanberg, S. and Aaro Östman, E. (2013) *From Vision to Lesson: Education for Sustainable Development in Practise* (Stockholm, WWF).
- Östman, L., Van Poeck, K. and Öhman, J. (2019) A Transactional Theory on Sustainability Teaching: Teacher Moves, in: K. Van Poeck, L. Östman and J. Öhman (eds), *Sustainable Development Teaching: Ethical and Political Challenges* (New York, Routledge), pp. 140–152.
- Payne, P. (1999) Postmodern Challenges and Modern Horizons: Education ‘for Being for the Environment’, *Environmental Education Research*, 5.1, pp. 5–34.
- Rancière, J. (1991) *The Ignorant Schoolmaster: Five Lessons in Intellectual Emancipation* (Stanford, California, Stanford University Press).
- Rancière, J. (2007) *On the Shore of Politics* (London/New York, Verso).
- Reid, A. (2013) Normalising Catastrophe in Environmental Discourse: On Educational Values, Responses and Critical Imagination, *Environmental Education Research*, 19.2, pp. 154–160.
- Rorty, R. (1991) Pragmatism and Philosophy, in: K. Baynes, J. Bohman and T. McCarthy (eds) *After Philosophy. End or Transformation* (London, The MIT Press), pp. 26–66.
- Säfström C. A. (2003) Teaching Otherwise, *Studies in Philosophy and Education*, 22.1, pp. 19–29.
- Säfström, C. A. (2014) The Passion of Teaching at the Border of Order, *Asian Pacific Journal of Teacher Education*, 42.4, pp. 337–346.
- Säfström, C. A. (2016) The Legacy of John Dewey: Educational Change and Teacher Commitment, *Utbildning & Demokrati*, 25.3, pp. 41–49.
- Säfström, C. A. (2018) Liveable Life, Educational Theory and the Imperative of Constant Change, *European Educational Research Journal*, 17.5, pp. 621–630.
- Säfström, C.A. (2019) *Paideia* and the Search for Freedom in the Educational Formation of the Public of Today, *Journal of Philosophy of Education*, 54.4, pp. 607–618.
- Säfström, C. A. (2020) *A Pedagogy of Equality in a Time of Unrest. Strategies For an Ambiguous Future* (New York, Routledge).
- Säfström, C. A. and Månsson, N. (2015) The Ontology of Learning, or Teaching the Non-Person to Learn, *Interacções*, 11.37, pp. 66–82. www.revista.recaap.pt
- Stables, A. (2010) Making Meaning and Using Natural Resources: Education and Sustainability, *Journal of Philosophy of Education*, 44.1, pp. 137–151.
- Thunberg, G., Thunberg, S., Ernman, M. and Ernman, B. (2020) *Our House is on Fire: Scenes of a Family and Planet in Crises* (London, Penguin Books).
- Todd, S. (2003) *Learning from the Other. Levinas, Psychoanalysis, and Ethical Possibilities in Education* (New York, Suny Press).
- Todd, S. (2009) *Toward an Imperfect Education. Facing Humanity, Rethinking Cosmopolitanism* (Boulder/London, Paradigm Publishers).
- Van Poeck, K. (2019) Environmental and Sustainability Education in a Post-Truth Era. An Exploration of Epistemology and Didactics Beyond the Objectivism-Relativism Dualism, *Environmental Education Research*, 25.4, pp. 472–491.
- Van Poeck, K., Goeminne, G. and Vandenabeele, J. (2016) Revisiting the Democratic Paradox of Environmental and Sustainability Education: Sustainability Issues as Matters of Concern, *Environmental Education Research*, 22.6, pp. 806–826.
- Van Poeck, K. and Vandenabeele, J. (2012) Learning From Sustainable Development: Education in the Light of Public Issues, *Environmental Education Research*, 18.4, pp. 541–552.
- von Wright, G. H. (1989) Science, Reason and Value. *Documenta*, 49 (Stockholm, Information Department, Royal Swedish Academy of Sciences).
- Wagner, P. (1998) *A Sociology of Modernity. Liberty and Discipline* (New York, Routledge).
- Wals, A. and Jickling B. (2002) ‘Sustainability’ in Higher Education: From Doublethink and Newspeak to Critical Thinking and Meaningful Learning, *International Journal of Sustainability in Higher Education*, 3.3, pp. 221–232.
- Wertsch, J. V. (1993) *Voices of the Mind. A Sociocultural Approach to Mediated Action* (Cambridge, MA, Harvard University Press).