



The Uncanny Challenge of Self-Cultivation in the Anthropocene

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Abstract

Self-cultivation—taking pedagogical action to educate oneself—is an integral part of non-formal adult education. Ever since Greek antiquity, it has been a central ingredient in the western philosophical and educational tradition. However, we argue that the global challenges that have emerged in the present era of the ecological crisis call for a new kind of understanding of this basic educational phenomenon. Based in particular on recent work in dark ecology and its central concept of the ‘uncanny’, we outline a few key features of our time in relation to the contemporary challenge of self-cultivation. We then review extant literature on self-cultivation to ascertain whether the theoretical resources that have been used to conceptualise it in the past are capable of addressing these new aspects of self-cultivation. We conclude that each of the theoretical resources analysed here offer valuable insights into the novel challenges facing self-cultivation, though not all important questions can be answered. By specifying the contributions and limitations of these theoretical resources, we pave the way for future work on conceptualising self-cultivation for our times.

Keywords Ecological crises · Self-cultivation · Self · Literature review

Introduction

If there was ever a time when our present environmental crisis was the concern of a politically motivated few, that time is now long past. We live in an era when profound, human-induced ecological upheavals have become the inevitable backdrop for all human projects and actions. Such crises form what Bakhtin (1981) calls the chronotope, or ‘time–space’—from which our actions draw their orientation. Although the extent and intensity with which the chronotope forces itself on those living in the comparative safety and wealth of the global North are less than for those in the global South, it affects the whole world. No one can escape this chronotope—not even those who spend a lot of their time and energy denying its existence.

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As they provide the physical, psychic and social setting for all human action, ecological crises present a very real challenge for everyday life. A conscientious adult pondering one's life choices is faced with what could be seen as a Tolkienesque question of what to do with the time given to us. It makes little difference whether we understand this in the broad sense of what to do with one's life in general or in the mundane sense of what to do *tout court*. The basic question remains the same in both cases: how do I conduct my life in an era of ecological crises? This pressing question invites the self to take a reflexive stance—to act on itself. It is not so much about how to act in relation to others, but more specifically, about one's *position* in relation to others. At stake is thus the relation one has with oneself and the possibility of working out how one's self 'fits' in with an environment in full-blown crisis.

We understand this relationship the self has with itself to be an inherently pedagogical one. The self is no less than cultivating the subject of its existence on Earth. Of course, this task by itself is not unique to the present era. It would not be far-fetched to argue that self-cultivation, as a form of pedagogical action, has been a key ingredient in both the western philosophical canon (Foucault 2001; Hadot 2002; Saari 2020) and wisdom traditions of the East (Wang and King 2008). However, unique problems for self-cultivation are posed by the chronotope of ecological crises, a distinctive aspect of which is that it is at once strange yet familiar, in a word, *uncanny* (Morton 2016). This unsettles some of the basic frameworks through which culture and nature, human and more-than-human are differentiated in broader cultural theses as well as educational imaginaries. Perhaps this has something to do with the climate crisis being a 'hyperobject' (Morton 2013), which escapes exact localisation and temporal specification. This is why we prefer the plural form crises—there are always more crises than we can know. Hence, the time–space in which self-cultivation orients itself is remote and remains fundamentally ungraspable.

This review provides exploratory groundwork for conceptualising self-cultivation in the uncanny environmental context of the Anthropocene. We use 'Anthropocene' as a term, on the one hand, because it acknowledges that humankind has begun to wreak such devastation on Earth's ecosystems to warrant us our own geological epoch (Crutzen 2002) and, on the other hand, to the growing awareness of the complexities involved in acknowledging the political, ethical and epistemic aspects of such a change (Morton 2010a). We are also building on Morton's (2010b) use of the term 'uncanny' in this context to draw attention to the ungraspable, strange and uncontrollable elements present in our ecological experience. We argue that the uncanniness of the Anthropocene manifests itself as a three-fold challenge to conceptualisations of self-cultivation: (1) as the unconscious, or unthought, that haunts our self-awareness but remains ungraspable; (2) in the strangeness of the changes required by the ecological crises; and (3) in the ethical weight of every action implied by the interdependence of all life on Earth. To understand the unique challenge of self-cultivation presented by the anthropocene, theoretical resources need to be found that allow for conceptualisations capable of engaging with these three features.

As indicated by an earlier exploration of self-cultivation (Tennant 2012), there are numerous ways to conceptualise this phenomenon: self-cultivation (e.g., Heubel 2011; Sta. Maria 2017), technologies of the self (e.g., Hattam and Baker 2015), self-formation (e.g., Infinito 2003), self-realisation (e.g., Stern and Wałejko 2020), self-education (e.g., Gadamer 2001), self-transformation (e.g., Tennant 2005) and self-creation (e.g., Olssen 2006) are some of the more well-known examples. Extensive research grounds many of these concepts, yet it is unclear how much light they can shed on self-cultivation in the peculiar chronotope of the Anthropocene, since all these traditions emerged in socio-historical contexts quite unlike the present day.

Accordingly, our task in this paper is to review the current state-of-the-art of research on self-cultivation. We aim to map the theoretical resources available in the existing literature and to ascertain what are their potentials and limitations for conceptualising self-cultivation in the uncanny context of ecological crises. The specific research questions guiding our inquiry are as follows:

1. What resources for conceptualising self's pedagogical action on itself can be found in the literature?
2. What are the potentials and limitations of these resources with respect to the specific uncanny characteristics of the Anthropocene?

Formulating our task in this way contains background assumptions about the paper itself and its broader educational implications, both of which need to be spelled out already at this point. Our aim of mapping the current state-of-the-art of research on self-cultivation includes pointing out what are the blind alleys where current research is not yet on an adequate conceptual basis with respect to the problems of the Anthropocene. As such, it needs to be distinguished from an alternative and equally valid approach that could be taken on this topic. It would be possible to try to locate the conceptualisations well-suited to the Anthropocene already discoverable in extant research and the classical texts of self-cultivation in Western and Eastern philosophies. However, in this paper our focus is on providing a map of the current state-of-the-art of research so that it would be easier to direct such quests in the future.

In educational terms, much is already assumed by taking as a starting point a person for whom their coexistence with the world is a question. Some might even argue that the educational task is precisely to help another human being open themselves to this question (see Biesta 2017). It has also been argued (Slote 2016) that the very idea of self-cultivation all too eagerly assumes that a self would be able to cultivate itself. Further, in asking questions about self's action on itself, we are deliberately leaving aside deliberation on the differences in degree concerning the possible influence individuals in different societal positions could have. For the present inquiry such assumptions are necessary, for our concern is precisely the imperative placed on conscientious adults to cultivate themselves, irrespective of their particular societal situation.

Our article begins with fleshing out in more detail the distinctive and uncanny features of what we understand by the Anthropocene. This is followed by a short description of the methods used to conduct the review. Subsequent sections are then reserved for discussing the various traditions that have been used to conceptualise self-cultivation. We analyse how these traditions understand the self's action on itself and draw conclusions about their potential (or lack of it) for conceptualising self-cultivation in the Anthropocene.

The Uncanny Anthropocene

Our focus in this paper is on one particular aspect of ecological awareness we find to be central to the Anthropocene—the *uncanny*. This term has quite recently become the focus of interest across a range of disciplines from philosophy of mind to psychoanalysis and literary theory (Royle 2003; Trigg 2020, p. 553). A common point of reference is Sigmund Freud's work (1919). Freud's German *das Unheimliche* expresses the 'homely' (*Heimlich*), the feeling of a comfortable, safe dwelling, which has become permeated with something strange and potentially threatening. In this respect, the uncanny represents a 'return of the

repressed', or the unexpected resurfacing of those aspects of our mind, culture and the world that have been silenced and isolated from awareness—a return that temporarily dislocates our coordinates of experiencing reality (Dolar 1991).

Another classical reference point is Heidegger, who ontologised the uncanny, suggesting that it is an essential feature of human existence (Withy 2015). For Heidegger (1996, §40), the uncanny is the human condition of not-being-at-home (*unheimlich*), of being alienated or puzzled by the world—and this is a fundamental aspect of our being-in-the-world (Heidegger 1996, §40; 2000, pp. 1–3). Recently, ecopsychanalytic literature has drawn attention to the importance of the uncanny in engaging with the more-than-human environment which evokes an unsettling mixture of the familiar and the foreboding, the beautiful and repulsive, the human and the non-human (see e.g. Seppänen 2011; Saari 2018). Timothy Morton (2010a, pp. 16–17, 2012a) has connected the term to the fundamental weirdness of existence in the Anthropocene.

We take uncanny to be aporetic—both in the sense of indicating the fundamentally paradoxical nature of being, and in terms of losing direction. In Greek, *aporos* means literally 'to be without means'—and this is what one feels when faced with such aporias (Withy 2015). Uncanny indexes the tensions and symptoms, the disjointedness and untimeliness operating in human experience both private and collective, with historically and culturally changing contents and contexts (Masschelein 2011). We use the concept to underline three features of the relationship between the self and Anthropocene.

The first is that *the unconscious, or unthought, haunts our self-awareness but remains ungraspable*. The pedagogical relationship of the self to itself is inextricably enveloped by an 'unthought' insofar as what is most immediate and familiar to us (our selves) is uncomfortably mixed up with something irreducibly foreign. Our thinking as 'rational' beings is governed by an unthought that is not only our language and ideology, but also Life in its many forms, from the evolutionary past that structures our nervous system, to the countless microbes that form most of our body mass. Yet at the same time, it is clear that it is only by virtue of us being rational creatures that we are able to practice science and talk about evolution and life in the first place. 'Thinking goes into a loop [...] what appears to be the nearest—my existence *qua* this actual entity, the shorthand for which is *human*—is phenomenologically the most distant thing in the universe' (Morton 2016, p. 19). Thus, focus in human-non-human relations in our uncanny ecological awareness is not so much on how thinking succeeds in capturing its object as on a "thought that undermines thought" (Thacker 2015, p. 34), thought that encounters its own impossibility.

The second uncanny feature is *the strangeness of the changes required by the ecological crises*. If we are to avoid the worst consequences of our past crimes, we need to change our everyday habits in very specific and fundamental ways. However, there is an inherent ambiguity in this 'we'. After all, the present state of affairs is both the fault of all of us and no single person. By the same token, no single person, corporation or nation state can, by themselves, resolve the matter either—the actions of any person acting unilaterally are, to borrow again from Morton, 'statistically meaningless' (Morton 2016, p. 8). To find more sustainable ways of living, personal habits need to be transformed in a very profound fashion. At the same time, this transformation is impersonal, since it is societal order as a whole which is inherently unsustainable. There is thus a certain 'weirding' of the relationship between the self and the actions it needs to take with regard to the ecological crises. As Morton (2016, p. 9) puts it, we find ourselves to be both the detective and criminal.

Underlying this need to change is the third uncanny feature of the Anthropocene: *the ethical weight of every action implied by the interdependence of all life on Earth*. On the global level, the interconnectedness of all life has become apparent. The raw relationality

of existence and the imperceptible yet persistent traces left on things by other things have been brought to the fore (Næss 2016; Bennett 2010). The persistent dualisms of the putative west such as nature/culture, mind/body have been found to encourage instrumental and anthropocentric relations with the more-than-human world (Latour 1993; Bai et al. 2009). As these dichotomies have been the very grid of intelligibility for framing collective reality, the increasingly uncomfortable mixes of what precisely is ‘nature’ and ‘culture’ may also produce aporetic moments where a person’s ethical orientation becomes unsettled.

As a result of this interconnectedness, any act creates ‘ripples’ in the sense that it affects everything else on the planet—in one way or another. These ripples put a certain normative weight on each action. Whenever one of us chooses to act in a certain way, we commit to a plethora of consequences—both societal and ecological in nature. In this sense, the ripples form the ethical horizon in each of our lives—whether we lead a good life or not increasingly depends, at least in part, on what kinds of ripples our actions create.

As an index of the unholy mixtures of the familiar and the strange, the uncanny points to the futility of any attempt to fully understand the ripples of our individual actions. Thus, experiencing interconnectedness does not mean that we can intellectually overview and master our imbuement with the more-than-human. Instead, this interconnectedness remains weird, withdrawn, aporetic, and impossible to pin down. As a result, any ‘return’ from alienation to a state of balance or undifferentiated unity with ‘nature’ or ‘Gaia’ is thus revealed to be no more than a fantasy. (Saari and Mullen 2020.) Instead, we should perhaps cultivate a relationship between the self and the world that is attuned to the inextricably weird, unknown, and enchanting.

An Interdisciplinary Perspective on Review

Before looking more closely at the literature, a few words on how we conducted our review are in order. We synthesise some of the key features of the method of systematic review while at the same time taking heed of MacLure’s (2005) scathing critique of it. Our review is informed by the former in that it is built around a specific research problem—conceptualising self-cultivation in the Anthropocene. In accordance with our aim of mapping the current state of research, it also aims for a rigorous analysis of as broad a selection as possible of literature published on the subject. (Tranfield et al. 2003; Oakley 2003; Sigahi et al. 2020; Figueiró and Raufflet 2015.) However, particularly inspired by MacLure’s (2005) emphasis on reading, analysing, and writing, we take rigorous analysis to mean carefully reading and interpreting *all* available material in the light of our research problem—not applying the kind of exclusion criteria characteristic of a systematic review. Our approach is thus interdisciplinary in combining the ability of broad empirical reviews to cover a wide spectrum of studies with the ability of philosophical investigations to reveal conceptual details from the papers reviewed.

We also employ the concept of ‘theoretical resource’ (Varpanen 2019) as a tool for interpreting the literature. By theoretical resource, we mean a specific way of conceptualising self-cultivation. A theoretical resource is distinguished from the familiar notion of a theoretical tradition by its singularity in relation to the problem being addressed. A theoretical resource is a specific way of framing the phenomenon under scrutiny. In this respect it is a *sub-section* of the theoretical tradition underlying the resource. It can also be a *cross-section* of several traditions, however, if the same resource features in more than one tradition. Several traditions might frame the phenomenon in similar terms, indicating that they are using the same theoretical resource.

Using the concept of a theoretical resource indicates that we do not aim for an exhaustive description of any theoretical tradition and its variants. Rather, we want to discuss the resources offered by current research for conceptualising self-cultivation in the Anthropocene. It should also be emphasised that the theoretical resources we present are analytic constructs we created when reviewing the literature. Thus, when we indicate that a particular resource is found in several traditions, we are basing this claim on our interpretation of the literature rather than any similarity acknowledged in the papers themselves. Furthermore, the theoretical resources we construct inevitably hide some of the multiplicity inherent in the literature. This is a limitation peculiar to literature reviews, indeed to research in general. Every review leaves something unsaid—the literature always has more to say than can be included in a review, just as the world always has more to say than research can grasp. Thus, the analytical unity we impose on the reviewed literature with respect to our specific questions and methods should not be taken as indicating any claim on our part to the unity of these theoretical traditions with respect to other questions and issues.

To select the relevant literature, we proceeded in iterative search cycles where the findings of each cycle informed the next, with a total of three search cycles. In the first, we used several search terms (self-education, self-cultivation, self-formation, self-transformation, self-reflection, self-reflexivity, self-realisation, practises of self, technologies of the self) across several databases (ERIC, Education Database, Education Research Complete, Academic Search Ultimate, Taylor & Francis Online, ProQuest Central) to get as broad a picture as possible of what is going on in the field. At this point we limited ourselves to examining the abstracts of the works found, to get an initial idea of what theoretical resources were available in the existing literature. We then used this to structure our results—to get an overall ‘map’ of the field, if you will. In the second cycle we delved deeper into each theoretical resource, reading the material found in the first cycle in greater detail and searching for new material specifically related to that particular theoretical resource. At this point, we employed the further search terms of ‘Foucault’, ‘Hadot’, ‘Bildung’, and ‘subject’ which we paired with each of the terms used in the first cycle. In the third cycle we employed search terms derived from the three uncanny features of the Anthropocene (see previous section), such as ‘psychoanalysis’ and ‘deep ecology’. We also consulted our colleagues with the aim of finding any studies that might have escaped our gaze in the previous cycles.

Our analysis is limited to papers and books that directly address self’s action upon itself. This means we leave out more general discussions regarding the significance of the self in education. In the case of papers in which the main focus was elsewhere and self’s action upon itself was only discussed as part of a larger argument (e.g., Tan 2019), we included papers offering details of a theoretical resource not found anywhere else. Another important selection criterion in our choice of literature concerns the various classical texts which often play a major role in research on self-cultivation. In accordance with our aim of providing a map of the state-of-the-art of current research, our review is limited to contemporary research. Thus, we do not try to ascertain what kind of material relevant to the Anthropocene *could* be found in classical texts—a task that would take several books to even begin—but to show what *has been found* to date.

When analysing the literature, we focused on the twin issues of (a) what the self is thought to be; and (b) the kinds of activity enacted by the self upon itself. These loci of analysis were inspired by earlier work on self-cultivation (Tennant 2012). However, throughout our analysis—and in line with our second research question—we compared (a) and (b) above to the three features that are in our view characteristic of self-cultivation in the Anthropocene: (1) the unconscious, or unthought, that haunts our self-awareness but remains ungraspable; (2) the strangeness of the changes required by the ecological crises;

and (3) the ethical weight of every action implied by the interdependence of all life on Earth. In the results that follow, we focus on the potential and limitations that these theoretical resources have for conceptualising self-cultivation in relation to these three features.

Conceptualisations of Self-Cultivation

Four distinct theoretical resources were identified in the literature reviewed. We call these four (i) *self-education*, (ii) *self-transformation*, (iii) *self-formation*, and (iv) *care of the self*; with the last two proving the most prominent. In what follows, we will discuss all four theoretical resources in some detail. For ease of reading, we will use the term self-cultivation to refer to the overall phenomenon being studied, and the four distinct terms above (i–iv) to refer to the way that particular resource conceptualises it.

One particular aspect that should be mentioned before moving on is how theories of self-cultivation from western and eastern traditions of thought have converged in the literature (Reichenbach 2016; He 2013, 2016; Slote 2016; Wu and Wenning 2016; Tan 2018). Three of the four theoretical resources (except for *self-education*) found expression in both western and eastern traditions with the convergence being particularly striking in *self-formation*. This reflects a more general recent increase of interest in eastern philosophical perspectives in adult education (Ryu 2010). Our focus on the similarities between eastern and western thought evidently glosses over many of the differences that undoubtedly exist between them (e.g., Ryu 2010). However, enlarging the focus in the present paper's necessarily general analysis would run the risk of reproducing simple dichotomies (Reichenbach 2016). Furthermore, we maintain that drawing attention to the strong connections between these traditions is the more fruitful approach given the global nature of the Anthropocene.

Self-Education

The first distinctive theoretical resource identified in the review was *self-education*. The focus of this resource is on the acquisition of specific skills or knowledge often aiming to increase the person's work-related competencies (e.g., Boggs 1991; Podkalicka and Milne 2017; Griffiths 2014). Not that all self-cultivation in professional contexts is necessarily *self-education* (cf. Hufford 2007; Yagata 2018), but it is often tightly connected to the discourse of lifelong learning (Johnson 2014). Even though this resource was found to be present in most of the studies in this review, it seems ill-suited to the specific problem of self-cultivation we are trying to address. We therefore limit ourselves to clearly articulating the limitations we perceive in this theoretical resource.

The limitations in *self-education* become evident when its main features are placed in the time–space of the present ecological crises. First, acquiring skills or knowledge suspends questions about precisely which skills and knowledge are important to acquire and why. In this way, it has some of the same characteristics as 'learnification'—where it is argued that educational problems have been reduced to problems of learning (Biesta 2009; Stojanov 2017). When education is seen purely as a process of learning, attention is directed at the means of achieving the learning goals rather than questions about which ends are worthy of achieving (e.g., Biesta 2009, p. 39). The same applies to the notion of acquiring skills. Skills are instrumental by nature—having skills makes it possible to achieve particular ends. When self-cultivation is conceived in terms of acquiring skills, it narrows down the parts of the self that are the object of self's action upon itself.

Self-education thus obscures the questioning of the values, desires and thoughts that form the ends towards which self's actions on itself are directed.

This limitation of *self-education* becomes even more pronounced when the labour market dictates which skills and knowledge are required (Johnson 2014; Plumb 2014). Seeking a competitive edge presupposes that one adapts to the playing field and rules of play (e.g., Kordaczuk-Wąs and Sosnowski 2011), in which case education becomes a reproductive activity that simply reinforces existing ways of doing and being. As a result, *self-education* lacks the critical potential for change necessitated by the Anthropocene.

A second limitation is that this resource seems implicitly to convey the idea of human intellectual supremacy for understanding and leading one's self. Yet, as Morton (2010b) has noted, the uncanniness of the Anthropocene is the ultimate narcissistic insult to human intellectual mastery. Common ways of localising events in space and time, of differentiating between human and more-than-human agency, and the possibilities of predicting and realizing our collective future become increasingly problematic. As such, the present time-space does not easily admit of being controlled via relevant skills or knowledge. We can conclude from these limitations that *Self-education* is ill-suited to conceptualising the challenges peculiar to self-cultivation in the present ecological context. In particular, it falls short of acknowledging the ethical imperatives and experiences of disorientation we face in the uncanny Anthropocene.

Self-Transformation

The second theoretical resource identified was *self-transformation*. In part, the notion of transformation can be seen as a critical response to the kinds of approaches to education we labelled *self-education* in the last section: self-transformation indicates that education should lead to changes to the self that are more substantive than gaining new skills or knowledge (Tennant 2005; Yacek and Ijaz 2020; Taylor and Snyder 2012a, b; Tan 2020). In the past three decades, this idea has been connected to theories of transformative learning and education (e.g. Dirkx 1997; English 2014; Mezirow 2000; McWhinney and Markos 2003; for a review, Taylor and Snyder 2012a, b, Yacek and Ijaz 2020), and has been used to outline adult education responses to the Anthropocene (e.g., Wals 2015). However, the notion of education as a substantive personal transformation is much older and is argued to be present in some of the earliest eastern (Wang and King 2008) and western (Foucault 2001) texts on education.

Contemporary (western) theories of transformative learning have developed in phases, from a Mezirowian focus on the change in an adult's 'perspective' or 'frame of reference' to a more heterogeneous field covering interpersonal relationships, affects, power structures, and unconscious dynamics. (Taylor 2000, 2007; Taylor and Snyder, 2012a, b). Despite the prevalence of these theories in adult education, only a few of the papers in our review employed them as an explicit theoretical framework for conceptualising self-cultivation (Bainbridge and Negro 2020; Tennant 2005, 2012). However, transformation was highlighted as important in several texts that do not take the contemporary theories of transformative learning as an explicit theoretical framework (e.g., DeMarzio 2012; Moon 2017; Reichenbech 2016).

Apart from the general imperative for change inherent in the Anthropocene, we can identify two very clear reasons why the emphasis on substantive transformations as a key element of education could be potentially useful for studying self-cultivation in the present chronotope. First, the notion of transformation accurately captures the overarching need

to transform the very foundations of human society (Tennant 2005, 2012), so that we can overcome the various social and personal mechanisms that continue to encourage unsustainable habits. Second, by framing self-cultivation as an activity that works on the individual as a whole, the idea of transformation allows for exploration of the first aspect of the uncanny—the unconscious and unthought (Bainbridge and Negro 2020; Semetsky and Delpech-Ramey 2019; see also Tennant 2012, pp. 55–72). As this aspect is usually marginalised in educational theory (Taubman 2012), the transformative approach is uniquely important in this respect. As transformative education theories have already engaged with the ‘desire not to know’ (Alcorn 2010; Saari 2020), the path is open for developing ways of being able to endure, be with and engage with traumatic truths, for instance with the help of the concept of ‘working through’ (Saari and Mullen 2018).

There are, however, also limitations to the way in which this resource conceptualises self-cultivation. Even if the notion of transformation makes it possible to explore the unconscious and extra-rational aspects of the self, the majority of studies drawing on this resource have had a narrower focus on the rational and cognitive aspects of the self. This is true even of those studies that are critical of the excessively cognitive take on transformation exemplified by Mezirow’s influential view (Dirkx 1997; Taylor 2000). Additionally, some of the studies reviewed (that address the unconscious, for example) limit themselves to the tension between unconscious drives and societal structures (Tennant 2012). Although this acknowledges the second aspect of the uncanny in self-cultivation, focusing on the tension between individual and society may nevertheless fail to address broader issues of environmental psychoanalysis, such as the internalisation and transformation of ideologies and power structures into psychic attachments, tensions, and pathologies, not to mention the role of psychic investment in the more-than-human world (Dodds 2012). Consequently, much of the potential inherent in the notion of transformation for addressing the specific challenges of the Anthropocene has not yet been explored in sufficient theoretical detail.

Another limitation is that *self-transformation* actually has some of the same problems as *self-education*. Although there is clearly a tight connection between personal and social (or societal) transformation in the literature (Cheng 2016; Yacek and Ijaz 2020), *self-transformation* might be seen as granting a privileged position for achieving that change at the expense of addressing questions about the direction of the change. This makes the resource susceptible to appropriation by forces that seek to maintain an ecologically destructive status quo rather than transform it. As a result, *self-transformation* has the potential not only to help us adapt to more sustainable ways of living but also to adapt to those which are unsustainable. It thus lacks the means to address the ethical weight of one’s actions and therefore falls short of addressing the third uncanny aspect of the Anthropocene.

Self-Formation

We call our third theoretical resource *self-formation*—although it was usually referred to as ‘self-cultivation’ in the literature—to distinguish it from our usage of ‘self-cultivation’ as a term describing the overall phenomenon. We found *Self-formation* to be tightly connected to two theoretical traditions: the *Bildung* tradition in the west and Confucianism in the east. It took on a remarkably similar form in both, highlighting two aspects of the self’s pedagogical action upon itself.

The first is the general potential for humanity found in everyone which the process of *self-formation* is to fully develop (Alves 2019; Kidd 2019; Hufford 2007; Ryu 2010). Various understandings of the hidden potential and its cultivation can be discerned in the literature. In the *Bildung* tradition, a historically important thread is the Christian interpretation of the human soul—if properly nurtured, this could develop into an image of God (Alves 2019); while in Confucianism, finding one's place in the cosmic harmony of the Tao is central (Sta. Maria 2017; Wang 2020). Contemporary formulations in the *Bildung* tradition are—arguably (see Tröhler 2011)—made in more secular terms such as with reference to the latent self (Forsberg 2019), a hidden self that has already formed itself (Gadamer 2001) or, more generally, simply as the potential for human flourishing inherent in each person (Lovlie and Standish 2002; Huajun 2013; Ryu 2010; Cheng 2016; He 2013; 2016). In each of these cases, however, the human potential is thought to already exist inside the person and only needs due attention to reach its optimal state.

The second aspect this theoretical resource highlights is that the hidden potential can only develop in engagement with culture. The uniqueness of the human self is perceived to lie in its ability to communicate (Gadamer 2001; Johnson 2014) and be part of a community (Lovlie and Standish 2002). Hence, formation is a process in which humans establish themselves in relation to greater external forces (Yagata 2018; Cheng 2016)—the self is defined and grasped in otherness (Schneider 2012). Even if *self-formation* involves self-criticism, and some would argue that it must always do so, the purpose is to find 'oneself in one's culture' (Forsberg 2019; see also Reichenbach 2016), or cultures (Simon-Martin 2016; Stephens 2014). This task of connecting the personal with the universally valued—the anecdotal to the theoretical (Loia 2019)—is at the heart of our third theoretical resource (Stojanov 2017; Deimann and Farrow 2013; Kidd 2019).

Self-formation thus interprets the self's action upon itself as a process in which the self turns itself into something universally valued. This indicates that *self-formation* has a built-in normative anchor which the first two theoretical resources lack. It is possible to give this anchor an ecological tone by considering the broader forces here in terms that include the more-than-human in it (see e.g. Johansson 2019; He 2013; 2016)—making it a potentially very useful resource for understanding self-cultivation in the Anthropocene. This is further emphasised by the newer concept of ecosocial *Bildung* (Salonen and Brady 2015), not to mention older strains of ecological awareness found already in some twentieth-century *Bildung* classics in the Nordic countries (see e.g. Hollo 1931; Salomaa 1950; Harva 1955).

Unfortunately, the relationship between *self-formation* and our present environmental crises is not as clear-cut as these connections and developments would indicate. *Self-formation* is inherently anthropocentric in the sense that its starting-point is the 'humanity' within each of us (He 2013, 2016; Reichenbach 2016; Forsberg 2019; Kidd 2019; Hufford 2007; Ryu 2010). As a result, despite its potential for situating the human in an ecological whole, it lacks the conceptual means of speaking about the non-human within each of us—the first feature of the Uncanny Anthropocene. There is also the danger of an ambiguity between 'humanity' and 'nation' which might lead to self-cultivation becoming an instrument of conservative power (Wu and Devine 2018). Of course, an entirely valid counter to such arguments is that human action necessarily presumes an anthropocentric perspective. Nevertheless, we cannot help asking if theoretical resources better able to attune to the value of the more-than-human could not be found elsewhere.

In the literature on *self-formation*, the self that acts on itself is invariably conceived of as a rational self (e.g., Alves 2019; Forsberg 2019; Maskivker 2014; Stojanov 2017). While the case is less clear cut in eastern traditions, with some authors (e.g., Yi 2017; Sta. Maria 2017) exploring the boundaries of what can be thought, there is also little

acknowledgement of the unconscious aspects of the self in the reviewed literature. The historical ties the *Bildung* tradition has with Romantic philosophy and its appreciation of creative, artistic and extra-rational aspects of subjectivity are rarely probed in approaching self-cultivation and ecological awareness as to its uncanny aspect. These avenues might aid in appreciating the ethical and political value of those aporous and emotional personal experiences of the environment difficult to pin down in rational discourses (Saari 2018; Lysgaard et al. 2019). In this respect, we suggest that *self-formation* lacks nuance in differentiating between various elements of the self's action upon itself (cf. care of the self). This is especially relevant for understanding how political ecological issues also have psychodynamic dimensions—the second and third aspects of the uncanny Anthropocene.

To summarise, *self-formation* offers a long-standing and robust framework for conceptualising self-cultivation. However, this framework perhaps implicitly places too much of an emphasis on all things human. Self-cultivation in the present day is more likely to need a form of post-humanism, or perhaps eco-humanism—approaches that take ecology as a starting point in trying to understand the actions of humanity. Further, this resource has an inherent focus on the rational self. Taken together, these limitations make it difficult for *self-formation* to address the intertwinement of human and non-human as well as the psychodynamic phenomena characteristic of the uncanniness of the Anthropocene.

Care of the Self

The fourth and final theoretical resource identified in the reviewed literature was *care of the self*. Its origins go right back to Ancient Greece, although in the literature reviewed here, this history has usually been received via twentieth-century authors—Michel Foucault in particular. Strangely, only a few isolated papers reference similar works by Pierre Hadot (Hadot 2002; Heubel 2011; Dennis 2021) and Martha Nussbaum (2018). All three—Hadot, Foucault, and Nussbaum—have studied, albeit from slightly different conceptual vantage points, the ‘practices of the self (*pratiques de soi*)’. These practices (of the self) became widespread in Greco-Roman antiquity during the first couple of centuries before and after the beginning of the Common Era. They amounted to a systematic cultivation of various facets of one's self and have found many followers in contemporary literature on self-cultivation (e.g., Dennis 2020; DeMarzio 2012; Hattam and Baker 2015; Infinito 2003; Tennant 1998). Although there are evident similarities with certain Eastern practices (see e.g., Hattam and Baker 2015; Lin 2018), this resource is more tightly connected to the Western philosophical tradition than the previous ones.

Before delving any deeper into *care of the self*, let us first take a step back and consider an aspect that has been lurking in the background of each of the theoretical resources reviewed so far—‘self-knowledge’ (e.g., DeMarzio 2012; Forsberg 2019; Johnson 2014; Neiman 2000; Semetsky and Delpech-Ramey 2012; Tennant 2012). Knowing oneself is, in a way, the most obvious preliminary step for the self before it can take any action on itself. Whether it is in terms of asking oneself about the skills one currently possesses as a frame of reference (e.g., DeMarzio 2012; Tennant 2005), or seeing it as the motor of self-cultivation (e.g., Bohlin 2008), self-knowledge always seems to carry a certain weight.

However, *care of the self* has since Ancient Greek times (as *epimeleia heautou*) had an even more intimate contact with self-knowledge. It is often introduced in the literature as a holistic practice in which the more specific aim of self-knowledge (‘know thyself’, *gnothi seauton*) is embedded (Foucault 2001). As well as these aspects of self-knowledge, *care of the self* also includes connotations of healing (e.g., Burns 2020) and practices that aim to bring

about personal transformation. In Plato's dialogue *Alcibiades*, which Foucault cites as the first example of *care of the self* being philosophically discussed, Socrates notes that Alcibiades needs to know the limitations in his education and in his capacity to conduct himself so that he can properly take care of himself (Foucault 2001).

Besides its relationship with self-knowledge, another crucial observation of Foucault's relates to the context in which *care of the self* is introduced. Socrates suggests that, if Alcibiades ever hopes to become a ruler of others, he must first learn how to govern himself, and governing himself will only be possible once he has learnt to take care of himself. *Care of the self* is thus a form of self-governance, which in turn makes governing others possible (Foucault 2001); or, to look at it another way, caring for oneself allows you to care for others (Furman 2019; Higgins 2010). Practices of the self thus fit seamlessly with Foucault's analyses of power as the 'conduct of conduct' (Foucault 2000, 341; also Infinito 2003).

It is precisely at this juncture that many contemporary researchers have found *care of the self* to be helpful. With the possibility to place self-cultivation within societal power relations, practices of the self open a path for a nuanced analysis of the interplay between resistance and submission. On the one hand, work on the self is 'an inside operation of the outside', where the external relationships between forces are internalised and transformed into self-mastery; while on the other, practices of the self offer a means to resist such internalisation by making self-creation possible. Both these movements are apparent throughout the literature (Olssen 2006; Nietzsche and Haase 2012; Leask 2012; Infinito 2003; Hattam and Baker 2015; Tennant 1998; Bagger et al. 2018; Ball and Olmedo 2013).

Focusing on this movement also situates the self in action. Instead of a fixed self posited as both the subject and object of self-cultivation (as we saw to be the case with *self-formation*), there are practices directed at cultivating specific activities. Perhaps one could therefore say that instead of the self acting upon itself, it is more the case of an action being performed upon another action. Shifting the focus in this way allows for a very detailed analysis of the self's actions on itself, as shown by some of the existing literature (e.g., DeMarzio 2012; Dennis 2020). *Care of the self* thus goes some considerable way towards conceptualising self-cultivation in the Anthropocene, especially as it effectively addresses the last two of the three uncanny features of the Anthropocene that we outlined in the introduction: the self's need to change its relationship with the environment, and the ethical weight of one's actions.

This being said, these achievements come at the cost of avoiding some of the key meta-physical questions regarding the self. This, in turn, makes it difficult to extend practices of the self to address the unconscious dimensions of self-cultivation in the Anthropocene (the first of its uncanny features). The difficulty is emphasised when we take into account that Foucauldian approaches have tended to be suspicious of the power effects of psy knowledges (Rose 1996), and that Foucault's own relation to psychoanalysis was at times dismissive (see e.g. Foucault 2019), although the issue is certainly contentious. If *care of the self* were to be the framework used to conceptualise self-cultivation in the present chronotope, it would need to be complemented by a robust account of the psychodynamic undercurrents also present.

Conclusion

Despite their various merits, none of the conceptualisations covered here seem fully able to meet the uncanny challenge of the Anthropocene. Of the three uncanny features of the Anthropocene, it is the unconscious that haunts our self-awareness that proves most challenging. Individual studies have discussed the presence of the unconscious in learning

(Semetsky and Delpesch-Ramey 2012), in processes of healing (Hwang and Chang 2009; Bainbridge and Del Negro 2020; Wang 2020), and in practices of education (Brown 2013; Yi 2017; Wu and Wenning 2016; Sta. Maria 2017). However, as yet, these tentative gestures do not amount to a substantive theoretical resource. Where more systematic investigations have taken place (Dennis 2020; Tennant 2012), the framework has remained anthropocentric, with the result that the self's relation to the uncannier aspects of environmental awareness are difficult to conceptualise.

In closing, although the limitations of the present study are bound to be painfully obvious to the reader, two points deserve to be highlighted, if only to have a go at justifying them. Firstly, we have done our best to combine as broad a selection of literature as possible with as detailed an analysis as possible. This was necessary so as to remain true to our aim of mapping the current literature *and* evaluating its potentials and limitations with respect to the Uncanny. The decision to do so has, unfortunately, cost us the space to develop an alternative conceptualisation, one capable of meeting the challenges of the Anthropocene. Hence, this important task needs to be undertaken in a separate study. This might involve tapping in the potential of the classics, where one is likely to find elements speaking to the uncanniness of the Anthropocene that have so far not received the attention they deserve. For example, the Hellenic idea of the cosmopolitan, Buddhist concepts such as the no-self, and more ecological interpretations of the Confucian classics merit further study. Secondly, our starting point of a person for whom being in and with the world is already a question side-lines the perhaps more important question of how to arrive at this starting point. Looking at the bigger picture of responding to the ecological crises, we must ask how education could help make more people aware of their situatedness in the present chronotope of environmental crises.

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References

- Alcorn, Marshall W. 2010. "The desire not to know" as a challenge to teaching. *Psychoanalysis, Culture and Society* 15 (4): 346–360.
- Alves, Alexander. 2019. The German tradition of self-cultivation (bildung) and its historical meaning. *A Tradição Alemã do Cultivo de si (Bildung) e sua Significação Histórica*. 44 (2): 1–18. <https://doi.org/10.1590/2175-623683003>.
- Bagger, Anette, Lisa Björklund Boistrup, and Eva Noren. 2018. The governing of three researchers' technologies of the self. *The Montana Mathematics Enthusiast* 15 (1–2): 278–302.
- Bai, Heesoon, and Greg Scutt. 2009. Touching the earth with the heart of enlightened mind: The Buddhist practice of mindfulness for environmental education. *Canadian Journal of Environmental Education* 14 (1): 92–106.

- Bainbridge, Alan, and Gaia Del Negro. 2020. An ecology of transformative learning: A shift from the ego to the eco. *Journal of Transformative Education* 18 (1): 41–58. <https://doi.org/10.1177/1541344619864670>.
- Bakhtin, Mikhail. 1981. Forms of time and of the chronotope in the novel: Notes toward a historical poetics. In *The dialogic imagination. Four Essays by M. M. Bakhtin*, ed. Michael Holquist, 84–258. Austin: University of Texas Press.
- Ball, Stephen J., and Antonio Olmedo. 2013. Care of the self, resistance and subjectivity under neoliberal governmentalities. *Critical Studies in Education* 54 (1): 85–96. <https://doi.org/10.1080/17508487.2013.740678>.
- Bennett, Jane. 2010. *Vibrant matter: A political ecology of things*. Durham: Duke University Press.
- Biesta, Gert. 2009. Good education in an age of measurement: On the need to reconnect with the question of purpose in education. *Educational Assessment, Evaluation and Accountability* 21 (1): 33–46.
- Biesta, Gert. 2017. *The rediscovery of Teaching*. London: Routledge.
- Boggs, David L. 1991. Campaigning and community development: The self-education of a political candidate. *Community Development* 22 (2): 22–32. <https://doi.org/10.1080/15575339109489938>.
- Brown, David Hugh Kendall. 2013. Seeking spirituality through physicality in schools: Learning from 'Eastern movement forms.' *International Journal of Children's Spirituality* 18 (1): 30–45. <https://doi.org/10.1080/1364436X.2013.776521>.
- Burns, Jim. 2020. Chopped to pieces, I write myself together. *Taboo: The Journal of Culture and Education* 19 (5): 4.
- Cheng, Chung-ying. 2016. A theory of learning (學) in Confucian perspective. *Educational Philosophy and Theory* 48 (1): 52–63. <https://doi.org/10.1080/00131857.2015.1084222>.
- Crutzen, Paul. 2002. Geology of mankind. *Nature* 415 (3): 23.
- Deimann, Markus, and Robert Farrow. 2013. Rethinking OER and their use: Open education as Bildung. *International Review of Research in Open and Distributed Learning* 14 (3): 344–360. <https://doi.org/10.19173/irrodl.v14i3.1370>.
- Dennis, Matthew. 2020. *Cultivating our passionate attachments*. London: Routledge.
- Dirkx, John. 1997. Nurturing soul in adult learning. *New Directions for Adult and Continuing Education* 74: 79–88. <https://doi.org/10.1002/ace.7409>.
- Dodds, Joseph. 2012. *Psychoanalysis and ecology at the edge of chaos: Complexity theory, deleuze, guattari and psychoanalysis for a climate in crises*. London: Routledge.
- Dolar, Mladen. 1991. I shall be with you on your wedding-night: Lacan and the uncanny. *October* 58: 5–23.
- English, Andrea. 2014. *Discontinuity in learning: Dewey, Herbart, and education as transformation*. New York: Cambridge University Press.
- Figueiró, Paola Schmitt, and Emmanuel Raufflet. 2015. Sustainability in higher education: A systematic review with focus on management education. *Journal of Cleaner Production* 106: 22–33. <https://doi.org/10.1016/j.jclepro.2015.04.118>.
- Forsberg, Niklas. 2019. From self-reliance to that which relies: Emerson and critique as self-criticism. *Educational Philosophy and Theory* 51 (5): 498–507. <https://doi.org/10.1080/00131857.2017.1389271>.
- Foucault, Michel. 2019. *The history of sexuality: 1: The will to knowledge*. Penguin.
- Foucault, Michel. 2000. The Subject and Power. In *Michel Foucault, Power. Vol. 3 Essential works of Foucault, 1954–1984*, ed. James Faubion, 326–348. London: Penguin Books.
- Foucault, Michel. 2001. *The Hermeneutics of the Subject. Lectures at the Collège de France 1981–1982*, ed. Frédéric Gros, trans. Graham Burchell. New York: Palgrave MacMillan.
- Freud, Sigmund. 1919. The 'uncanny.' In *Standard Edition* 17, 217–256. London: Hogarth Press.
- Furman, Cara E. 2019. Descriptive inquiry: Care of the principal self. *Ethics and Education* 14 (3): 298–315. <https://doi.org/10.1080/17449642.2019.1617390>.
- Gadamer, Hans-Georg. 2001. Education Is Self-Education. *Journal of Philosophy of Education* 35 (4): 529–538. <https://doi.org/10.1111/1467-9752.00243>.
- Griffiths, Morwenna. 2014. Encouraging imagination and creativity in the teaching profession. *European Educational Research Journal* 13 (1): 117–129. <https://doi.org/10.2304/eeerj.2014.13.1.117>.
- Hadot, Pierre. 2002. *What is ancient philosophy?* Cambridge: Harvard University Press.
- Harva, Urpo. 1955. *Aikuiskasvatus: johdatus aikuiskasvatuksen teoriaan ja työmuotoihin Suomessa*. Helsinki: Otava.
- Hattam, Robert, and Bernadette Baker. 2015. Technologies of Self and the Cultivation of Virtues. *Journal of Philosophy of Education* 49 (2): 255–273. <https://doi.org/10.1111/1467-9752.12140>.
- He, Ming Fang. 2013. East~ West epistemological convergence of humanism in language, identity, and education: Confucius~ Makiguchi~ Dewey. *Journal of Language, Identity and Education* 12 (1): 61–70. <https://doi.org/10.1080/15348458.2013.748430>.

- He, Ming Fang. 2016. Exploring an East~ West epistemological convergence of embodied democracy in education through cultural humanism in Confucius~ Makiguchi~ Dewey. *Journal of Curriculum Studies* 48 (1): 36–57. <https://doi.org/10.1080/00220272.2015.1088066>.
- Heidegger, Martin. 2000. *Introduction to metaphysics*. Yale Nota Bene: Yale University.
- Heidegger, Martin. 1996. *Being and Time*. Trans. Joan Stambaugh. Albany: SUNY Press.
- Heubel, Fabian. 2011. Kant and transcultural critique: Toward a contemporary philosophy of self-cultivation. *Journal of Chinese Philosophy* 38 (4): 584–601. <https://doi.org/10.1163/15406253-03804008>.
- Higgins, Chris. 2010. Human conditions for teaching: The place of pedagogy in Arendt's vita activa. *Teachers College Record* 112 (2): 407–445.
- Hollo, Juhó. 1931. *Itsekasvatus ja elämisen taito*. Porvoo: Werner Söderström osakeyhtiö.
- Hongyu, Wang. 2013. Confucian Self-Cultivation and Daoist Personhood: Implications for Peace Education. *Frontiers of Education in China* 8 (1): 62–79. <https://doi.org/10.3868/s110-002-013-0006-0>.
- Huajun, Zhang. 2013. Individuality beyond the dichotomy of “small self and big self” in contemporary Chinese education: Lessons from Hu Shi and Liang Shuming. *Frontiers of Education in China* 8 (4): 540–558. <https://doi.org/10.3868/s110-002-013-0036-1>.
- Hufford, Don. 2007. Confucian Thought: A Humanist Philosophy for the Teacher as a Continuing Learner. *Journal of Philosophy & History of Education* 57: 83–90.
- Hwang, Kwang-Kuo., and Jeffrey Chang. 2009. Self-cultivation: Culturally sensitive psychotherapies in Confucian societies. *The Counseling Psychologist* 37 (7): 1010–1032. <https://doi.org/10.1177/001100009339976>.
- Infinito, Justen. 2003. Ethical self-formation: A look at the later Foucault. *Educational Theory* 53 (2): 155.
- Johansson, Viktor. 2019. Wildly wise in the terrible moment: Kant, Emerson, and improvisatory Bildung in early childhood education. *Educational Philosophy and Theory* 51 (5): 519–530. <https://doi.org/10.1080/00131857.2017.1389270>.
- Johnson, Adrienne. 2014. Authenticity and self-cultivation as learning to be: The hermeneutics of lifelong education. *Philosophical Studies in Education* 45: 66–73.
- Kidd, Ian James. 2019. Admiration, attraction and the aesthetics of exemplarity. *Journal of Moral Education* 48 (3): 369–380. <https://doi.org/10.1080/03057240.2019.1573724>.
- Kordaczuk-Wąs, Marzena, and Sebastian Sosnowski. 2011. Police in-service training and self-education in Poland. *Police Practice and Research* 12 (4): 317–324. <https://doi.org/10.1080/15614263.2011.563967>.
- Latour, Bruno. 1993. *We have never been modern*. New York: Harvester Wheatsheaf.
- Leask, Ian. 2012. Beyond subjection: Notes on the later Foucault and education. *Educational Philosophy and Theory* 44: 57–73. <https://doi.org/10.1111/j.1469-5812.2011.00774.x>.
- Lin, Yuanbiao. 2018. Confucius's view of learning. *Educational Philosophy and Theory* 50 (13): 1180–1191. <https://doi.org/10.1080/00131857.2017.1408007>.
- Loia, Donato. 2019. Bildung between praxis and theoría: a philosophical study of an exemplary anecdote. *Studies in Philosophy and Education* 38 (5): 499–516. <https://doi.org/10.1007/s11217-019-09665-0>.
- Løvlie, Lars, and Paul Standish. 2002. Introduction: Bildung and the idea of a liberal education. *Journal of Philosophy of Education* 36 (3): 317–340.
- Lysgaard, Jonas Andreassen, Stefan Bengtsson, and Martin Hauberg-Lund Laugesen. 2019. *Dark pedagogy: Education, horror and the Anthropocene*. Springer.
- MacLure, Maggie. 2005. ‘Clarity bordering on stupidity’: Where’s the quality in systematic review? *Journal of Education Policy* 20 (4): 393–416. <https://doi.org/10.1080/02680930500131801>.
- Marzio, De., and M. Darryl. 2012. The pedagogy of self-fashioning: A foucaultian study of montaigne’s “On Educating Children.” *Studies in Philosophy and Education* 31 (4): 387–405. <https://doi.org/10.1007/s11217-011-9282-3>.
- Maskivker, Julia. 2014. Self-cultivation and moral choice. *Journal of Moral Philosophy* 11 (2): 131–158. <https://doi.org/10.1163/17455243-4681015>.
- Masschelein, Anneleen. 2011. *The unconcept. The Freudian Uncanny in late-twentieth-century theory*. US: SUNY Press.
- McWhinney, Will, and Laura Markos. 2003. Transformative education: Across the threshold. *Journal of Transformative Education* 1 (1): 16–37. <https://doi.org/10.1177/1541344603252098>.
- Mezirow, Jack. 2000. *Learning as transformation: Critical perspectives on a theory in progress*. San Francisco: Jossey-Bass.
- Moon, Seunggho. 2017. Donghak (Eastern learning), self-cultivation, and social transformation: Towards diverse curriculum discourses on equity and justice. *Educational Philosophy and Theory* 49 (12): 1146–1160. <https://doi.org/10.1080/00131857.2016.1216386>.
- Morton, Timothy. 2010a. The dark ecology of elegy. In *The Oxford handbook of elegy*, ed. Karen Weisman, 251–271. Oxford: Oxford University Press.
- Morton, T. 2010b. *The ecological thought*. Cambridge, MA: Harvard University Press.

- Morton, Timothy. 2012a. Ecology without the present. *Oxford Literary Review* 34 (2): 229–238. <https://doi.org/10.3366/olr.2012.0043>.
- Morton, Timothy. 2012b. The oedipal logic of ecological awareness. *Environmental Humanities* 1 (1): 7–21.
- Morton, Timothy. 2013. *Hyperobjects: Philosophy and ecology after the end of the world*. Minneapolis: University of Minnesota Press.
- Morton, Timothy. 2016. *Dark ecology: For a logic of future coexistence*. New York: Columbia University Press.
- Naess, Arne. 2016. *Ecology of wisdom*. London: Penguin Books.
- Neiman, Alven M. 2000. Self examination, philosophical education and spirituality. *Journal of Philosophy of Education* 34 (4): 571–590. <https://doi.org/10.1111/1467-9752.00195>.
- Niesche, Richard, and Malcom Haase. 2012. Emotions and ethics: A Foucauldian framework for becoming an ethical educator. *Educational Philosophy and Theory* 44 (3): 276–288. <https://doi.org/10.1111/j.1469-5812.2010.00655.x>.
- Nussbaum, Martha. 2018. *The therapy of desire: Theory and practice in hellenistic ethics*. Oxford: Princeton University Press.
- Oakley, Ann. 2003. Research evidence, knowledge management and educational practice: Early lessons from a systematic approach. *London Review of Education* 1 (1): 21–33.
- Olssen, Mark. 2006. Foucault and the imperatives of education: Critique and self-creation in a non-foundational world. *Studies in Philosophy and Education* 25 (3): 245–271. <https://doi.org/10.1007/s11217-006-0013-0>.
- Plumb, Donovan. 2014. Emotions and human concern: Adult education and the philosophical thought of Martha Nussbaum. *Studies in the Education of Adults* 46 (2): 145–162.
- Podkaliccka, Aneta, and Esther Milne. 2017. Diverse media practices and economies of Australian home renovators: Budgeting, self-education and documentation. *Continuum* 31 (5): 694–705. <https://doi.org/10.1080/10304312.2017.1281882>.
- Pulkki, Jani, Jan Varpanen, and John Mullen. 2020. Ecosocial philosophy of education: Ecologizing the opinionated self. *Studies in Philosophy and Education*. <https://doi.org/10.1007/s11217-020-09748-3>.
- Reichenbach, Roland. 2016. The Source of Learning is Thought” Reading the Chin-ssu lu (近思錄) with a “Western Eye. *Educational Philosophy and Theory* 48 (1): 36–51. <https://doi.org/10.1080/00131857.2015.1084223>.
- Rose, Nikolas. 1996. *Inventing our selves. Psychology, power, and personhood*. Cambridge: Cambridge University Press.
- Royle, Nicholas. 2003. *The Uncanny*. Manchester University Press.
- Ryu, Kiung. 2010. The teachings of Confucius: Reviving a humanistic adult education perspective. *International Journal of Continuing Education & Lifelong Learning* 2(2).
- Saari, Antti. 2018. The experience of the Uncanny as a challenge for teaching ecological awareness. In *Art, ecojustice, and education: Intersecting theories and practises*, ed. R. Foster, J. Mäkelä, and R. Martusewicz, 36–46. New York: Routledge.
- Saari, Antti. 2020. Transference, desire, and the logic of emancipation: A psychoanalytic approach to transformative learning. In *Handbook of theory and research in cultural studies and education*, ed. P. Trifonas. Cham: Springer.
- Saari, Antti, and John Mullen. 2020. Dark places: Environmental education research in a world of hyper-objects. *Environmental Education Research* 26 (9–10): 1466–1478.
- Salomaa, Jalmaari. 1950. *Tie ihmisyteen. Kansalaisen itsekasvatuksen perusteita*. Porvoo: WSOY.
- Salonen, Arto O., and Marjatta Bardy. 2015. Ekososiaalinen sivistys herättää luottamusta tulevaisuuteen. *Aikuiskasvatus* 35 (1): 4–15. <https://doi.org/10.33336/aik.94118>.
- Schneider, Käthe. 2012. The subject-object transformations and ‘Bildung.’ *Educational Philosophy and Theory* 44 (3): 302–311. <https://doi.org/10.1111/j.1469-5812.2010.00696.x>.
- Selwyn, Neil, Stephen Gorard, and John Furlong. 2006. Adults’ use of computers and the Internet for self-education. *Studies in the Education of Adults* 38 (2): 141–159. <https://doi.org/10.1080/02660830.2006.11661530>.
- Semetsky, Inna, and Joshua A. Delpech-Ramey. 2012. Jung’s psychology and Deleuze’s philosophy: The unconscious in learning. *Educational Philosophy and Theory* 44 (1): 69–81. <https://doi.org/10.1111/j.1469-5812.2010.00670.x>.
- Seppänen, Janne. 2011. Lost at sea: The Freudian uncanny and representing ecological degradation. *Psychoanalysis, Culture & Society* 16 (2): 196–208.
- Sigahi, Tiago Fonseca, Albuquerque Cavalcanti, and Patrícia Saltorato. 2020. Academic capitalism: distinguishing without disjoining through classification schemes. *Higher Education* 80 (1): 95–117. <https://doi.org/10.1007/s10734-019-00467-4>.

- Simon-Martin, Meritxell. 2016. Barbara Bodichon's travel writing: Her epistolary articulation of Bildung. *History of Education* 45 (3): 285–303. <https://doi.org/10.1080/0046760X.2015.1127431>.
- Slote, Michael. 2016. Moral self-cultivation East and West: A critique. *Journal of Moral Education* 45 (2): 192–206. <https://doi.org/10.1080/03057240.2016.1174674>.
- Sta. Maria, Joseph Emmanuel D. 2017. Acting without regarding: Daoist self-cultivation as education for non-dichotomous thinking. *Educational Philosophy and Theory* 49 (12): 1216–1224. <https://doi.org/10.1080/00131857.2017.1364157>.
- Stephens, William C. 2014. On being a good neighbor, or things I learned in the field. *Anthropology & Education Quarterly* 45 (2): 203–211. <https://doi.org/10.1111/aeq.12059>.
- Stern, Julian, and Małgorzata Walejko. 2020. Solitude and self-realisation in education. *Journal of Philosophy of Education* 54 (1): 107–123.
- Stojanov, Krassimir. 2017. *Education, self-consciousness and social action: Bildung as a neo-Hegelian concept*. Routledge.
- Tan, Charlene. 2018. To be more fully human: Freire and Confucius. *Oxford Review of Education* 44 (3): 370–382. <https://doi.org/10.1080/03054985.2017.1391763>.
- Tan, Charlene. 2019. Rethinking the concept of mindfulness: A neo-Confucian approach. *Journal of Philosophy of Education* 53 (2): 359–373. <https://doi.org/10.1111/1467-9752.12343>.
- Tan, Charlene. 2020. Beyond high-stakes exam: A neo-Confucian educational programme and its contemporary implications. *Educational Philosophy and Theory* 52 (2): 137–148. <https://doi.org/10.1080/00131857.2019.1605901>.
- Taubman, Peter Maas. 2012. *Disavowed knowledge: Psychoanalysis, education, and teaching*. New York: Routledge.
- Taylor, Edward. 2000. Fostering transformative learning in the adult education classroom: A review of the empirical studies. *The Canadian Journal of the Study of Adult Education* 14: 1–28.
- Taylor, Edward. 2007. An update of transformative learning theory: A critical review of the empirical research (1999–2005). *International Journal of Lifelong Education* 26 (2): 173–191. <https://doi.org/10.1080/02601370701219475>.
- Taylor, Edward, and Melissa Snyder. 2012. A critical review of research on transformative learning theory, 2006–2010. In *The handbook of transformative learning: Theory, research, and practice*, 37–55. New York: John & Wiley Sons.
- Taylor, Edward W., and Melissa J. Snyder. 2012a. A critical review of research on transformative learning theory, 2006–2010. In E. W Taylor, P. Cranton (ed) *The handbook of transformative learning: Theory, research, and practice*, pp. 37-55.
- Tennant, Mark. 1998. Adult education as a technology of the self. *International Journal of Lifelong Education* 17 (6): 364–376. <https://doi.org/10.1080/0260137980170603>.
- Tennant, Mark. 2005. Transforming selves. *Journal of Transformative Education* 3 (2): 102–115. <https://doi.org/10.1177/1541344604273421>.
- Tennant, Mark. 2012. *The learning self: Understanding the potential for transformation*. London: John Wiley & Sons.
- Thacker, Eugene. 2015. *Starry speculative corpse: Horror of philosophy*. Hampshire: John Hunt Publishing.
- Tranfield, David, David Denyer, and Palminder Smart. 2003. Towards a methodology for developing evidence-informed management knowledge by means of systematic review. *British Journal of Management* 14 (3): 207–222. <https://doi.org/10.1111/1467-8551.00375>.
- Trigg, Dylan. 2020. The uncanny. In *Routledge handbook of phenomenology of emotion*, ed. Thomas Szanto and Hilge Landweer, 553–563. London: Routledge.
- Tröhler, Daniel. 2011. *Languages of education protestant. Legacies, national identities, and global aspirations*. London: Routledge.
- Varpanen, Jan. 2019. What is children's agency? a review of conceptualizations used in early childhood education research. *Educational Research Review* 28: 1–10. <https://doi.org/10.1016/j.edurev.2019.100288>.
- Wallin, Jason J. 2017. Pedagogy at the brink of the post-anthropocene. *Educational Philosophy and Theory* 49 (11): 1099–1111. <https://doi.org/10.1080/00131857.2016.1163246>.
- Wals, Arjen. 2015. Beyond Unreasonable Doubt. Education and Learning for Socio-Ecological Sustainability in the Anthropocene. Inaugural Address Held Upon Accepting the Personal Chair of Transformative Learning for Socio-Ecological Sustainability at Wageningen University on 17 December 2015. https://arjenwals.files.wordpress.com/2016/02/8421200972_rvb_inauguratie-wals_oratieboekje_v02.pdf
- Wang, Chia-Ling. 2020. Trauma as the turning point in opening up self-education: Embracing sorrow and this world through no-self realisation. *Educational Philosophy and Theory* 52 (13): 1400–1408. <https://doi.org/10.1080/00131857.2020.1777852>.

- Wang, Victor CX., and Kathleen P. King. 2008. Transformative learning and ancient Asian educational perspectives. *Journal of Transformative Education* 6 (2): 136–150. <https://doi.org/10.1177/0002764208322760>.
- Withy, Katherine. 2015. *Heidegger on being uncanny*. Cambridge: Harvard University Press.
- Wu, Bin, and Nesta Devine. 2018. Self-cultivation and the legitimation of power: Governing China through education. *Educational Philosophy and Theory* 50 (13): 1192–1202. <https://doi.org/10.1080/00131857.2017.1395737>.
- Wu, Jinting, and Mario Wenning. 2016. The postsecular turn in education: Lessons from the mindfulness movement and the revival of Confucian academies. *Studies in Philosophy and Education* 35 (6): 551–571. <https://doi.org/10.1007/s11217-016-9513-8>.
- Yacek, Douglas, and Kailum Ijaz. 2020. Education as transformation: Formalism, moralism and the substantivist alternative. *Journal of Philosophy of Education* 54 (1): 124–145. <https://doi.org/10.1111/1467-9752.12366>.
- Yagata, Katsuhide. 2018. Bildung as an essential disposition in becoming a reflective practitioner: Practical application of philosophical hermeneutics to second language teacher education. *Reflective Practice* 19 (3): 322–332. <https://doi.org/10.1080/14623943.2018.1437409>.
- Yi, Xiaoming. 2017. Understanding curriculum based on the study of Chinese “Gu Qin.” *International Journal of Music Education* 35 (3): 403–413. <https://doi.org/10.1177/0255761416667468>.

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