CHAPTER 1

A Critical Introduction

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We now live in the geological epoch called the Anthropocene (Crutzen & Stoermer, 2000; Steffen et al., 2011; Zalasiewicz et al., 2008; Steffen et al., 2016; Morton, 2016; Sørlin, 2017; Ellis, 2018). In this age, Anthropos, through human activities, technologies and alterations of the global environment have begun to affect the whole life-critical zone of the Earth more than ever before, and more than anything else (Lin, 2010; Latour, 2017). The consequences are many: "the great acceleration" of technology, industry, agriculture, and an over-use of natural resources (McNeill & Engelke, 2016), mass extinctions (see for example Chap. 2), global warming (Oreskes & Conway, 2011), collapse of eco-systems

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(Steffen et al., 2006), and the spread of pandemics and multi-resistant bacteria. All this promises an ever more impoverished earth if we continue along the prevailing trajectory. Innovative, integrated, achievable, and inclusive pedagogical intervention into climate change and Anthropocene damage, form the two-pronged yet intertwined focus of this collection.

Integrated Pedagogy

Let us begin with the pedagogical stream of this collection. The overarching question for this aspect of the book is how transformations in pedagogy and education can change the face of the earth for the better.

We have intentionally invited scholars from pedagogy and beyond, to develop potent intersections with other scientific inquiries, and creative industries. For a more enlightened—or re-enlightened—sustainability praxis in the educational domain, in both the school and with the public, we engage inclusively with cultural and research fields, and ethico-political-critical pedagogy, as a significant focus of this collection of essays. Innovation and integration alongside disruption and challenge, form equally important parts of the book's direction and intention.

Pedagogy, and by extension language, ontology, and epistemology, is predicated by our social, cultural, and geographic situatedness and conjunctions. Even in the western world, the variance in teaching practice and curriculum is vast. But what has been observed in recent decades—partly because of the increase in digital cultures—is that learning and teaching is less-often enacted outside the classroom than in previous decades (Spannring & Hawke, 2021), and less-often cross pollinated with other cultural systems of knowledge. A return to First Nations' invitation to dialogue about cross-cultural sustainability learning practices is now increasing. This has perhaps been provoked by the planetary perils and catastrophes brought on by the Anthropocene Epoch and its hyper-productive agricultural practices, deforestation, and the residual effects of colonization and imperialism (Stewart-Harawira, 2012). While comprehensive cross-cultural engagement with pedagogical practices is beyond the scope of this collection, several chapters reference, and engage deeply with such ontology and pedagogy (see for example Chaps. 3 and 10) from the northern hemisphere to Australia in the deep south. Such critical pedagogies and cartographies of place, add valued dimensions to sustainable pathways in which culture and the environment converge.

The Anthropocene

'The 'Anthropocene' … is the current working term to describe anthropogenic changes since the late Holocene Geological Epoch. It is the language used by scientific and research organizations such as UNEP, and the European Commission, and refers to the current geological age, beginning with the Industrial Revolution' (Spannring & Hawke, 2021, 3). Yet not all fields agree on the term, its date of birth, or its applied application across the sciences. For purposes of delineation, we outline below some of the challenges and contestations about the term Anthropocene, and its understanding in both scholarly and everyday life, as they relate to the provocations presented in this book.

By manifold anthropogenic effects—including uncontrollable domino-effects, negative feedback loops, and further non-intended consequences (Tønder, 2020)—humankind has ended the geological epoch called "the Holocene", an unusual climatically stable period beginning about 11,500 years ago, after the last Ice age (Crutzen & Schwägerl, 2011). In the Holocene epoch (the forerunner of the Anthropocene), all human civilization—including cities, agriculture, democracy, science, and capitalism—developed, under climatically favorable conditions, which are now undermined by the very same development and its excessive consequences (see for example Chap. 11). DNA nanotechnology and other new inventions have made it possible to change and reshape the conditions of earthly life, to an incomprehensible and unpredictable extent (see for example Chap. 8). Thus, in all stratums of the life-critical zone, from nano to macro global planetary level, human activities now reshape the earthly conditions of life (Zalasiewicz et al., 2016, 2017). This has also led to the collapse of the old western distinction between cultivated land (the world of nomos and culture) and uncultivated wild areas (the world of physis and nature)—a distinction that has now deconstructed itself (Marris, 2011; Oppermann & Iovino, 2017; Emmett & Nye, 2017; Latour, 2018; Paulsen, 2021a). We now live in a world where the effects of humans can be found everywhere—result: the end of (untouched) nature (e.g., Mckibben, 2006; Morton, 2009) as we have known it.

The key ethical-political-pedagogical question of today is not so much how to change the world, but how to change it less, or in ways that are less harmful to it (see Purdy, 2015); to partner with nature rather than work against it (Spannring & Hawke, 2021)—towards a new earth. In a comparatively short time in Earth history, the zone slightly above and below

the surface of the earth (Latour, 2017) has been reshaped to meet human needs, pointing towards the making of an artificial and human manipulated world; a 'man's world' one could say—the world of Anthropos, where a total ecological breakdown, threatens to remove the foundation of this world. Thus, we live in a time of transition and risk, but perhaps also in a world that has moved off the edge of history (Giddens). We are no longer living in a late modern society, in distinction to modern and premodern societies. This self-understanding has become obsolete, because it does not take account of what it set in the background, our interrelatedness and entanglement (for good and for worse) with our environment, i.e., the rest of life's critical zones, the multi-species and more-than-human world. While the concept of late modernity places us only in human history, seeing 'nature' as a mere background as a 'scene' for human development, the story of the Anthropocene inscribes our species in a larger earthly history, which opens a whole new view of ourselves, our past, present, and future, here on Earth (Paulsen, 2021b; Spannring & Hawke, 2021). This story tells us that we have become re-shapers of the earth, but with many overwhelmingly negative consequences for the life of the planet, including ourselves.

The Contested Anthropocene

Yet, the Anthropocene is a contested concept (see Paulsen, 2021c) and rejected outright by some (e.g., Malm & Hornborg, 2014), while others argue that it is inadequate and needs to be complemented by other stories (Haraway, 2016). Thus, two of the main objections to the Anthropocene story are: (1) that it gives humans/Man too big a role in earth history, by focusing on Anthropos (Haraway, 2016) and (2) that it blames humanity as such, while some humans and some human activities are much more guilty/damaging than others. For example, the industrialized world and owners of fossil-fuel driven activities (Moore, 2015) (see also Chap. 2). Our retort to the first objection is that it is precisely human industry and activities that have created the negative effects (Morton, 2017). Against the second objection we would extend the contestation to include more-than-humans and marginalized human communities, globally (Spannring & Hawke, 2021). This creates a double entanglement in its specific asymmetrical and contemporary forms, e.g., capitalistic, consumer-oriented, with inequality between both 'humans and humans' and 'humans and

more-than-humans', that makes up the Anthropocene situation we now live in (Braidotti, 2013; Paulsen, 2021b).

The important thing here, however, is not whether some are right, and others are wrong, but rather that different understandings of the Anthropocene and different confirmations and rejections of the story—and so *eo ipso* of the time and situation we now live in—have political, ethical, practical, and pedagogical consequences. Or perhaps better stated: How one responds to the Anthropocene is framed by how one understands the world (and crisis) we live in. Depending on how we understand our current age, past and future, different solutions and paths might come to the fore, as many of the chapters in this collection demonstrate. Some chapters argue for the need of a radical change as a response to the Anthropocene (see for example Chap. 8), while others suggest more moderate rethinking and adjustments of our Holocene institutions (see for example Chap. 16).

There is also the further dimension of shifting away from *being* human-centred to *becoming* more life-centred (Chakrabarty, 2015). Numerous other options are available, such as: the hope we can solve the planetary crisis by advancing green technology, improving the environment-making state and regain our control of the spaceship/spaceshop Earth (Parenti, 2015) often found in political rhetoric, which others see as either human hubris or as an outright dystopic image of the world to come, a totally artificial and man-made *Technopolis* (to use a term coined by Postman, 2011). Some of the critics of such control-regimes want to roll back culture and thus "go back to nature", before we civilized everything (c.f. the re-wild movement); others (still!) deny that climate changes and other planetary calamities are serious problems, thus wanting to keep on with business as usual, in schools and elsewhere (see for example Chap. 15). There is also the backdrop of fossil fuel capitalism being the main driver, which creates the call for a needed solution that is a social revolution (Malm, 2014). Moreover, some of the chapters in this collection are optimistic and project utopias and active hope (see for example Chap. 12) or think that the 'anthropocene recognition' might open the space for cultivating and enjoying a wider range of life-possibilities and ways of life than in the late Holocene (see for example Chap. 11); while others are pessimistic and forecast dystopia and catastrophe, which might already have happened: we are 'in' it (see for example Chap. 6 and Morton, 2016). Such differences are reflected in the pedagogical responses to the Anthropocene, unfolding within a spectrum from light and optimistic

pedagogies to dark and horror-acknowledging pedagogies (Lysgaard et al., 2019).

The Anthropocene term, despite coming out of geological science, has also spread to other disciplines and areas, including humanities and social science. It has also become a popular concept and attractor outside of academia, for example in creative industry such as art exhibitions (Davis & Turpin, 2015) and in pop music (for example the 2020 album *Miss Anthropocene* by Grimes, and Bjork's 2011 album and app *Biophilia* that turns the focus the other way, to name a few). This means that we cannot take for granted what we understand by the term 'Anthropocene'. One might even conclude that the term is so ambiguous that it is not useful. Or, that we should settle for the geological definition of the Anthropocene only. Yet we take the ambiguity of the concept as an advantage because of its great rhizomatic and transversal capacity. It has become a meeting point of so many different understandings, enterprises, controversies, discussions, and conflicts, both within and across different sciences, and attracted huge attention outside of academia as well (Latour, 2017). The aim of this critical introduction to pedagogy in the Anthropocene is therefore to explicate its immanent complexity. Further, we indicate that different pedagogical responses to the age we are now living in depend on what parts of the Anthropocene story are narrated, accounted for, and legitimated based on different worldviews and outlooks, theoretical and practical inclinations, and preferences. We fulfil this task in the following, by emphasizing four controversies of the Anthropocene.

Controversy # 1: When Did It All Start?

Although there have been forerunners in the late Holocene, it is only now that we really see and acknowledge that we are in an earth-historical border situation, with several phenomena that signify a transition from the Holocene that is ebbing out, to the Anthropocene, which is about to open. It is not "only" about the climate crisis and global warming, but about the entire life zone transformed throughout the Holocene, the great acceleration, the sixth mass extinction, the biodiversity crisis and much more, including its full acknowledgement. Only today, when life is more threatened than ever in the history of mankind, do we begin—more comprehensively—to understand ourselves as also living in an earth zone, and not just as citizens of society. However, a question now arises: When exactly does the Anthropocene era begin?

In one sense, the Anthropocene (understood as man mega-influencing overall life on earth) begins with the agrarian revolution that unfolds at the beginning of the Holocene era. However, the Anthropocene is reinforced with the Industrial Revolution (from 1750) and further with nuclear explosions and the great acceleration (of, among other things, resource consumption from 1945). In a slightly different sense (namely understood as recognition of ourselves as earthly and in the process of destroying all earthly life), one might highlight events such as lunar landings (1969), where we see the earth from the outside and the very naming of the Anthropocene era (2000). For us, however, it is not important to settle upon one exact start date. You can also not set an exact date on the modern or late modern.

More importantly, the belief that we are *now* living in the Anthropocene, is more unshakable than ever before. Most importantly, should we be aware of how different start dates frame different historical understandings, and therefore also understand what has given rise to our current situation? If, for instance, one thinks that the Anthropocene started with the agrarian revolution, the inventing of agrarian religions and what Morton (2018) calls "agricultural civilization" and "agrilogistics", it most likely implies that the adequate political, practical, ethical, and pedagogical response today will be to cancel and/or rethink monocultural agriculture, including all the societal institutions build around agrilogistical values and worldviews. This, for instance, could also imply a critique of the mainstream western (idea of the) school (including academia) as being understood itself mainly as a kind of agricultural treadmill, treating students as seeds to be cultivated and sorted in artificially made "greenhouses"—schools—as auotomated instruments, separated from everything else. Here, an understanding of education as taming of what is otherwise 'wild' (see for example Chap. 3) becomes apparent.

If, on the other hand, the starting date of the Anthropocene is identified with the industrial revolution and the rise of modern capitalism, from 1750 an onwards, it is more likely that one responds by criticizing capitalistic structures and the tight link between a capitalistic society, the school, and the damaging effects on the environment. This might also include a critique of the industrial view of the school, framing schools as factory halls and students as products produced by the society to meet societal needs, especially in relation to the labor market; transforming human beings into a workforce, human capital, a mere manipulable resource (see for example Chaps. 7 and 8) on a production line of life. Finally, if one sets

the Anthropocene to start around 1945 or early 1950s, with nuclear proliferation and testing and many new technological inventions such as the modern computer (1936), the lunar landings (1969), and so-called modern agriculture, it is more likely to see modern science and technology as the great cause of the anthropogenic effects. This then enacts an option for political, practical, ethical and pedagogical responses that criticize and counter the increasing instrumentalization, technification and scientific management of both humans and the earth, as well as the school (see for example Chaps. 7, 11 and 13).

To agree on one specific start date therefore, is not necessarily the 'most' crucial factor. Rather, it can be an advantage to think and act on the basis of a multi-stranded understanding of history, so that, for example, both agrarian logic, capitalist logic and technical-scientific logic, all of which are important layers in the Holocene, are exposed to criticism and constructive alternatives. These can then be translated into (among other things), better pedagogical practice, supporting future generations to dissolve these Holocene logics, and to replace them with better approaches to life here on earth.

Controversy # 2: The Name of the Game

Two key objections have been raised to *designating* the time we live in as the Anthropocene.

Firstly, it has been objected that not all humans are equally guilty of its negative consequences (Moore, 2015, 2016; Malm, 2016). Global fossil companies and rich people are especially guilty, much like the unequal distribution as to who should take responsibility for the problems. However, objectionists have asserted that it is not fundamentally humanity as such (and thus the species homo sapiens) that are the cause of global warming, but a capitalist way of relating to the world that has spread from Europe to the entire globe from around the fifteenth century onwards. The story of the Anthropocene is too superficial, as it does not dive into the specific capitalist relations between humans and the more-than-human world that capitalism exploits. Instead of such a specific mosaic of relationships, Anthropocene history speaks only of an abstract homogeneous acting entity—humanity—facing the great forces of nature. The concept of the Anthropocene therefore implies, critics say, a reductionist narrative in which humanity as a collective actor faces Nature. It means that one conceptualizes the Anthropocene from a catalogue of geological and

biospherical consequences, while what leads to these consequences appears as a black box consisting of categories such as industrialization, urbanization, population growth, and so forth.

These two features: (1) that humanity is abstractly seen as a cause, and (2) the Anthropocene is based on consequences for nature—implies a Cartesian dualism, where the world is divided into separate domains: human activities in one box, and nature in another. Such a narrative has political-pedagogical consequences: it draws attention to technical variables such as population growth and technologies for dealing with the challenges that have arisen. Part of this narrative is that the Anthropocene starts with coal and steam engines in mid-eighteenth century England. If, instead of periodizing based on external consequences, its emergence was placed in relation to capitalist structures and relations, then its decisive beginning is as early as the fifteenth century; politically, its these relations and structures that must be overcome. Having an eye for the origins of capitalism in early modernity and its extraordinary transformation of culture and nature before the steam engine, is therefore politically crucial, as our understanding of the origins of problems affects how we choose to respond pedagogically. Such a critique of capitalism questions the resource and technology determinism embedded in the concept of the Anthropocene. The concept of *the Capitalocene* focuses on the fact that today we live in a time shaped by structures that privilege an endless accumulation of capital. The hope in this critique is that the Anthropocene is not to be conceptualized by and through external consequences, but based on which structures produce these consequences.

We agree in principle—and to some extent—with this critique. *If* the Anthropocene is simply understood as a boxing match between Man and Nature, and viewed from the consequences, then one has both a weak and politically-pedagogically problematic concept of the Anthropocene. We have argued in this collection, one can well thematize that it is not Man abstractly theorized that is the cause, but specific assemblages of unequal and asymmetrical intricacies of 'humans and humans' and 'humans and non-humans' that result in negative effects. In the above critique, emphasis is placed on the fact that these intricacies have increasingly assumed a capitalist format since the fifteenth century. We do not necessarily disagree with this, but will nevertheless suggest that one should trace the cause a layer deeper, namely down to the underlying human-centred worldview developed especially in western culture, including and perhaps especially in the Renaissance (Paulsen, 2021b) (see further in Chap. 11). The

advantage of such deeper explanations, among other things, is that it becomes possible to explain that structures other than specifically capitalist ones can also rest on the same worldview, and therefore have many similar negative consequences; for instance, the major environmental deficits in the planned economic arrangements in the so-called communist countries. This also makes it clear why a mere critique of capitalism is politically-pedagogically inadequate as it does not really penetrate to the underlying worldview and the need to change it. Yet it must be considered as part of the bigger picture (see for example Chaps. 7 and 8). Furthermore, the concept of the *Capitalocene*—as an alternative term preferred by some to the Anthropocene—has the added problem that it only focuses on intra-human relations. Secondarily, the focus on human capital does not open the gaze to the diversity of non-humans, including their potential and capacity for creating symbiotic life and being part of new solutions.

Secondly, it seems inappropriate to name an era of the earth's history as Man's new age—which is what the 'Anthropocene' literally means. Such a designation overemphasizes Man and his role (which is also the case with alternatives like the Capitalocene) (Haraway, 2016). By designating the current epoch of the Earth as the time of Man, the anthropocentrism that some proponents of the concept of the Anthropocene try to do away with is simply confirmed. This is sheer hubris—insofar as the term fortifies an attempt to take control of a geohistory that is being co-authored by cosmological earthly forces (see Chaps. 2 and 7).

It is apparent however, that anthropogenic activities have led to the plastic waste in the oceans, so much so that yet another designation has emerged: Plastocene. The 'Anthropocene' can signify specific arrangements (or entanglements) between humans and non-humans that have begun to play a major role in Earth's overall geobiohistory, which are new and therefore might justify the name. However, if an understanding of the Anthropocene is solely based on the fact that we live in a time where mega-influences of the planet are attributable to humans, then it leans towards a problematic anthropocentrism. Alternatively, incorporating understandings of specific entanglements between humans and non-humans, and developing new dialogical sensitivity to the latter, then this anthropocentrism is countered. Furthermore, it is precisely the ambiguous, ambivalent, and controversial nature of the name that enables this term to do what no other term can currently do; on the one hand, it emphasizes the crucial role of Man, but on the other hand it problematizes this very claim by bringing together the cultural history of Man and

the geobiological history of the earth, so that Man (re)enters a geobiological time together with other beings. The Anthropocene invites thinking of the interweaving of the human species with other beings on a common fragile planet. Understood along such lines, the Anthropocene term does not involve a celebration of human impact on earth systems, but functions as a critical concept, which problematize our species' current earthly presence. The concept holds a critical potential—and now possesses a normative self-negating dimension; it points to a fictitious desirable post-Anthropocene future in which our species does not constitute a mega-influential centre, but has become one among other beings who stand in a dialogical relationship of care and co-existence. Alternative terms such as *Chthulucene*, proposed by Haraway (2016), only receive their meaning and role as supplementing the Anthropocene term. This is also the reason why Haraway (2016) tends to tell a three-fold story about the Anthropocene, Capitalocene and Chthulucene, arguing that all three narrative layers are important. We agree with such a multi-narrative starting point as it enables a way to counter too simple one-dimensional political-pedagogical solutions. The essays in this book can be seen as a contribution to such enabling, pointing to different dimensions of the Anthropocene and complementing solutions. Some chapters point out the need for education to address the current negative impact of human activities (see especially Chap. 15). Other chapters criticize the capitalistic structuring of the Earth (see for example Chaps. 2, 7, 8 and 16). But most chapters emphasize the need to pay more heed to entanglements and care for more-than-humans and interspecies relationships (see for example Chaps. 3, 4, 10, 11, 13 and 16), and take on the perspective of *Planetarianism* (see especially Chap. 12) and *Biophilia* (see for example Chap. 10).

The upshot is that the term Anthropocene is useful to gather and join a constellation of current forces and ideas that point towards new pedagogical practices suited for a better Earth and future.

Controversy # 3: A Narrow or Broad

Some argue that we today, due to the latest impact of human industrial manufacturing and urbanization on the global climate on Earth, live under Anthropocene *conditions*, characterized by global warming, extensive ecological destruction, biodiversity crisis/mass extinction and the loss of inhabitation. These conditions generate, among other things, a movement

where urban families begin to flow out of the cities to become permacultural (see especially Chap. 17). By designating the Anthropocene as the condition for a new situation, one might avoid the question of just when the Anthropocene epoch began (or ended), but that ultimately many forms of regernation are necessary now.

Yet, another question, which cannot be avoided, is how narrow or broad the Anthropocene should be understood. For example: if the Anthropocene is understood only as an age where, through natural science, we can detect that human activities profoundly affect the environment, and that we now realize that there is a risk to destroying the environmental conditions of human life as we know it, the pedagogical response would probably only be about learning to manage resources—and spaceship Earth—better; that is, to try and solve planetary problems with the same Holocene instruments and logics, understanding the world in the same way that created the problems in the first place. If on the other hand, the Anthropocene is understood as opening up a new "more life-friendly" world understanding, i.e., a new way of being-in-the-world, the pedagogical response would be to support and encourage the emergence of alternative ways of being present in the world, and paying attention to new ways of understanding ourselves, and the world (see for example Chap. 11). While many politicians, policymakers and established regimes might be attentive to global warming and the need to respond to the global environmental problems of today more inclusively, in our view there is an over emphasis on political rhetoric (Kopnina et al., 2021) and basing responses on arguably redundant late Holocene logics. This is primarily a *technical* worldview, a narrow scientific-geological understanding of the Anthropocene that attempts to *control* the new situation through instrumentalized means (see for example Chap. 2).

On the other hand, many eco-critics, eco-artists, and eco-critical researchers respond on the basis of a broader epistemological concept of the Anthropocene. They argue for the need to change dominant worldviews: how to understand ourselves as a species in the larger context of life and cosmos, situated together on a planet with other living beings (Chakrabarty, 2015, Paulsen, 2021a). It remains open as to how this new possibility to understand such inter-intra-relations should be encountered, actualized, and understood more precisely. On a theoretical-philosophical level, there are different implications for such a new life-centred world understanding.

A 'soft distinction' between two slightly different movements can be detected: the first movement, *new materialism* (Coole & Frost, 2010), mainly tries to map and understand how human and non-human bodies are entangled, and part of the same living earth (see for example Chaps. 6, 8, 9 and 17). One of the main theoretical references here is the differential 'cosmology' and rhizomatic conceptual framework and ideas put forward by Deleuze and Guattari, along with process-philosophical thinkers like Spinoza, Bergson, and Whitehead. It is important to notice that this kind of materialism is interested in creations, affections, relations, and what bodies can do together and to each other. The pedagogical consequence of this kind of thought, is perhaps most of all about creating new educational practices, in which students are encouraged to experiment with bodies (artistically), and develop ecological awareness of entanglements and affections (see for example Chap. 9). What is at stake is to see things as "vibrant matter" (Bennett, 2010), possessing virtual possible capacities for creating something new, possibly a 'new Earth' on a geopolitical scale (see especially Chap. 8) if these capacities are not suppressed and/or marginalized/restricted, but encountered with experimental openness and affirmative life affections. This might bring some hope. If the basic capacity for life and creation is not destroyed, and the actual possibilities of destruction are reduced, it might be possible to detect and further grasp the virtual life capacity of the Earth, and perhaps then have a direction to recreate a new and better Earth. Yet (as argued especially in Chaps. 7 and 8), the power of capitalism to reinvent itself and counter life and alternative movements is strong and should not be underestimated.

Aside from new materialism, there is a second movement, which makes it possible to talk of a *new idealism* (Paulsen, 2022). It mainly pays heed to the possibility and value of dialogical relationships between singular human beings and more-than-human creatures (see Chaps. 2, 3, 4, 5 and 10). This line of thought expands the realm of subjectivity and ethical beings to more-than-humans—animals and plants (see for example Chaps. 11 and 14), as well as other entities such as landscapes (see for example Chap. 3), waterscapes (see for example Chap. 9), and whole environments and collective entities (see for example Chap. 12). This way of thinking is often based on a reconceptualization of humanism and humanistic ethics, drawing on thinkers like Gadamer and Levinas as well as non-western thought. Ontologically speaking, it might involve a kind of pan-psychism (Skrbina, 2017), and overlaps with new materialism to the extent that

both movements treat 'all beings' as 'actors' that are able to 'do' things in relation to their environments.

The pedagogical consequence seems to be slightly different between these two movements. While new materialism invites educational practices that contain possibilities for the creation of differences and building new ecological awareness of entanglements and possibilities of connecting things differently—it recreates how we connect to the world—new idealism invites (1) a change to our own (self)understanding and ways of being-in-the-world, and (2) more specifically, begin to develop life communities in which both human beings and more-than-human-beings can participate and enter dialogue with each other as to how to live well together. One of the main motives of new idealism is to (educationally) establish valuable relationship with more-than-humans. In this way, it becomes more likely that such an attunement will enhance more care and responsibility for others—including more-than-humans. When we recognize the intrinsic value of more-than-humans, that is, recognize them as singular unique irreplaceable beings, and thus not only as resources or background for human life, we become ethically committed to become responsible for more-than-humans, de-centring ourselves.

Difficult questions arise as we untangle a broad spectrum of interconnected issues. A number of the essays deal with these difficulties (see for example Chaps. 13 and 14), rather than completely resolve them. They are pedagogical-practical-ethical-political wicked problems, *fundamentally undecidable*. Also, there seems to be two strands in the new idealistic literature: on the one hand some seem to argue that we should pay attention to how many more-than-humans are *like* us. Given these similarities, we should treat them better, learn from them, and include them as near-equals (Fredriksen, 2020). On the other hand, others put forward a kind of Levinasian argument: it is precisely because the more-than-humans are *different* from ourselves than we are ethically called to take care of them as Others. It is precisely their radical Otherness as to why they cannot be totally understood or replaced by us. At the same time, it is also the reason that it might be profitable to be together with more-than-humans and learn with and from them (see for example Chap. 14 and Paulsen, 2021c). In our view, all these difficult questions presented by new materialisms and idealisms, generating exciting discussions, are part of responding to the current Anthropocene situation. These issues should be incorporated into educational discourses and practices, inviting new generations to

participate in their further thinking and experimenting without arriving at final answers. The essays in this book demonstrate ways to engage in such an enterprise.

Controversy # 4: A Good or Bad Anthropocene—or, Does It Ever End?

The last controversy we want to highlight in this introduction is about what kind of future we can hope for, dream about, or aim for. How is this better state to be conceptualized and understood as a post-Anthropocene state or a different kind of Anthropocene than we live in now? This includes the question of whether we should "stay with the trouble" or try to find "a way out" of the Anthropocene, or indeed go further to imagine a spectrum between these binary positions. This controversy is linked to others previously mentioned. If for instance, one thinks that the Anthropocene is rightly called the Capitalocene, an age started with the growth and spread of capitalism, then there is the inclination to think that the needed future is a post-capitalistic one. If this is not possible, we are doomed in one way or another (see for example Chap. 7). Our future imaginaries are linked to our views on the past and present, and our pedagogical responses are also framed by this in relation to what kind of imaginations are encouraged in our schools.

Some argue that the Anthropocene is a time of catastrophe: we are in it, right now! Gloomy and disastrous, it will only become worse and worse over the next years, until the end of the world as we used to know it comes to a halt (Scranton, 2015; Morton, 2013, 2016). The only sane pedagogical response to this will be to empower new generations to cope and make the most out of it; that is, if human life is still possible. This might include learning to protect ourselves against the worst effects and minimize the negative effects as much as possible. Afterall, nothing lasts forever, so what we can do is only to act so as to live well and as long as possible. In this dystopic story, the Anthropocene is the end of history. Part of this narrative is to expect 'worst case scenarios'—ecological breakdowns, but also societal breakdowns, anarchy and new totalitarian regimes, mass extinction, wars and global crime. Thus, the Anthropocene is 'bad,' and remains so. We better learn fast to realize this, to "know our enemies," to counter, resist and modify the best we can. This seems to be the lesson of much current dystopic literature, film, gaming, and music that young people today grow up with, paving the way for apathy and depression (see for example Chap. 12). The world, when it comes to both nature as well as

society, is bad, and cruel. When it strikes (back), it comes with death and terror. There is no way out. It's a strong narrative!

There is also a different kind of hope, proposed by a myriad of alternative storylines. Many agree that it all looks very hopeless, but that there is still "a good life" to strive for, even if there might not turn out to be a "good Anthropocene" as such. The Dark Pedagogy movement (see the essays in series II of this book) respond in this way: try to face the perceived darkness, at the same time, keep or remain sane and "stay with the trouble" in a broken world so as to create feasible solutions from within. From this point of view, it is not advisable to be too optimistic and have un-realistic utopian views of a "good Anthropocene." This ideologically erases—makes one blind to—the real troubles, dilemmas, deep structures, and wicked problems that are pressing, leading only to false hopes and dreams, which are yet but further disillusions and/or blind spots, inaction, and an incapacity to act and recreate or, even more fundamentally, to make necessary radical resistance and change possible.

There are other voices who are optimistic and think that the Anthropocene is an opportunity to create new ways of life, new world understandings, coming into dialogue with more-than-humans, so as to create a much richer life (see especially the essays in series III in this book). While it is true that many young people today grew up with dystopic narratives in mainstream culture, it is possible to find and relate educationally to a literature that possesses active hope. These are narratives that can help young people create hope for the planet, at the same time cultivate their anticipatory imagination, fostering ideas about how to act and create a biophilic society (see especially Chaps. 10 and 12).

Still others propose that it is possible to transition from bad to at least a better Anthropocene, but only if we can succeed by deviating from our current unsustainable monocultural habits and practices. This includes re-creating our educational institutions away from places where students are over-disciplined and controlled, but rather engaged, resilient and open to love and care of the planet. For example, this is the path that is envisioned and enacted by the Wild Pedagogy movement (see the essays in series I of this book), in which a 're-evaluation of all values'is called for, and human 'forgetting'of the more-than-human world is called to account (see for example Chaps. 3 and 5).

What almost all essayists of this book agree on is the bankruptcy of prevailing order of 'control societies.' As the old saying goes: the devil is in the detail. When it comes to details, and basic interpretations of the

Anthropocene situation and adequate pedagogical solutions, most of the essayists disagree with each other, more or less. This should *not*, in our view, be seen as a disadvantage, but reflects the complexity of the issues that call for multiple perspectives we hope readers will find both provocative and stimulating so as to further contribute and foster new and even better thoughts and practices that go beyond what we have dared to think in this book and exist today.

Structure of the Book

We have structured the book into four parts—series—that help navigate the collection thematically. Each series can be read on its own, but also as part of the book's chronology.

The first series, Wild Pedagogies, contains four chapters, which all relate to the Wild Pedagogy Movements, initiated by Canadian scholar Bob Jickling and others. Wild Pedagogies (WP) aims to renegotiate what it means to be human in relationship with the world by engaging in deep and transformational change using educational practices (see https://wildpedagogies.com).

The first chapter in this series introduces the main ideas of WP. Chapters 3 and 4 are independent contributions that relate to and can be viewed as part of the WP movement. Chapter 5 seeks to bring WP into new terrains. Together the four chapters capture the essentials of WP and demonstrate how WP ideas can be used to appreciate more-than-humans in educational contexts. All four chapters respond to the Anthropocene mainly by proposing that new more 'wild' educational practices are needed, which cultivate non-instrumental and non-control-seeking relationships with the world.

Chapter 2 argues that the Anthropocene reminds us of three critical ideas: (1) Earth is in a state that threatens myriad species, including our own; (2) any effective response will require a radical rethinking of ideas and ways of being that run counter to dominant cultural narratives; (3) we live in unprecedented times, meaning that we can no longer prepare students for an assumed world, with confident learning outcome. WP is an educational response to these challenges—and has arisen as concerns about the ways in which control does violence to many species and restricts the possibilities for change in an era of uncertainty. WP is based on at least two premises: first, that modernist relationships with the world must change; and second, that education is a partner in the project. WP argues

that the desire for control plays too big a role in education today, and brings too few possibilities for relational engagements within the natural world. As an alternative, WP suggests that teachers should be supported to become wilder, even rebellious, in their practices, and be supported to develop less mainstream, more non-linear, outdoor, and wilder forms of education.

Chapter 3 calls for a shift in Western perception of human and more-than-human relations. The West's propensity to conceive of humans, plants, elements, and land as separate entities merely capable of 'interaction,' limits epistemological and relational possibilities. It is argued that standard (North American) educational practices do little to foster significant relationships between humans and more-than-humans or acknowledge their relationships. As an alternative, Chap. 3 reflects on relational ontology and the need to relearn to love more-than-human-entities, including deep listening to their responses and intrinsic values. This means shifting away from the object-oriented worldview towards more relationally oriented ontologies, whether through forms of new materialism (Bennett, 2010), animism (Stengers, 2012; Bai, 2015), posthumanism (Snaza & Weaver, 2015), making kin (Haraway, 2016) or a scientific recognition of deep interconnectedness of human development (Lieberman, 2013; Narvaez, 2014). Chapter 3 relates this to the nexus of love, and quotes Kimmerer's (2013) important saying: "Knowing that you love the earth changes you, activates you to defend and protect and celebrate. But when you feel the earth loves you in return, that feeling transforms the relationship from a one-way street into a sacred bond" (p. 125). Further, both Chaps. 3 and 5 argue that children have an intuitive entanglement with more-than-humans, but learn today in mainstream education to hide, suppress, ignore, or even unlearn this kind of knowledge.

Chapter 4 demonstrates how nature educational programs can be enriched to help to inspire an appreciation for non-human agency and values in learners. Levels of possible experiences are delineated: Level 1: Learning about non-human beings as isolated objects. Level 2: Learning about non-human beings as interconnected objects. Level 3: Learning about non-human beings as interconnected subjects with agency and interests. It is argued that the most important learning of all will not be the names of creatures or even their broad ecology, but the realization that the organisms being 'studied' are individuals with needs and with value that are independent from any instrumental benefits that humans might derive from them.

Finally, Chap. 5 turns toward children, and explores how it might help educators wild their pedagogies if children—and their capacities for wild thinking—is taken seriously as a starting point for educational activities. Thus the chapter claims that children and adults encounter their worlds in different ways. Children, the chapter suggests, relate to their environments with all their senses, emotions and skills. These relationships position children differently in the world both ontologically and epistemologically. In some senses, their thinking is wild; it isn't corralled or regulated—yet. In other ways, it is argued in the chapter that anthropocentrism is a learned positionality—and that children are taught to be so in the world.

The second series, Dark Pedagogies, contains four chapters, which all emphasize the need to educationally address the dark sides of our current situation and of the world of today. The concept Dark Pedagogies (DP) is used here in a loose sense. Only Chap. 6 explicates and elaborates the DP concept, while the 3 other chapters relate to dark issues and part of the same literature—French philosophy, especially Deleuze and Guattari, new materialism, speculative realism and Timothy Morton and his concept of *Dark Ecology* (2016). Based on this loosely shared frame of reference, we have chosen to bring these four essays under the same umbrella, *Dark Pedagogies.*

Following Morton (2016) Chap. 6 argues that the Anthropocene binds together different temporalities through humans, the planet, and other large-scale entities (called hyper-objects by Morton) into the form of a strange loop. We can no longer see ourselves escaping from being 'cut up' and compartmentalized. The Anthropocene signals to humanity: "Congratulations! You have now become aware of being part of an entity that operates at global scale and there is no way back or out." From this perspective, Chap. 6 argues that the Anthropocene shatters any notion of effectuated intentionality, and brings inherent contingency that leaves us educationally numb, but could also better be countered by approaches that accept the limitations of the human scope of perception and understanding. One could say, following this line of thought, that the Anthropocene makes us ridiculously small and unimportant. We must learn to accept this and form sane responses to the Anthropocene. Thus, education in the Anthropocene should, first and foremost, ensure an openness to the contingent intertwinedness of the world-for-us, the world-in-it-self, and the world-without us as developed by Eugene Thacker (2011).

Chapter 7 develops the concept *Dark Labour* and demonstrates how current mainstream educational thought and practice is pervaded by an industrial, capitalistic, and product-factory worldview that limits the possibilities of overcoming ecological problems of today. In this worldview, the world is seen as a site of potential value to be extracted through labour, including educational labour, linked to an image of human exceptionalism. Where the world is reformatted according to its extractible value for us, it founds a relation to matter that enables the conditions of exploitation and extinction. The world is thus understood within an all-too-human orders of significance and control. This pervasive commitment to production, resides everywhere, including as the orthodoxy of the school of today. Chapter 7 relates education of today to the *Capitalocene*, and argues that modern education is linked to an industrial imaginary. It has throughout its modern development conspired in the exploitation and control of the world by reformatting its value according to its very susceptibility to control; it has also conspired in the production of monocultures and the standard human. The ecological influence of the modern "Educacene" is its implicit 'cheapening' of the world reformatted into institutional value and capital. According to Chap. 7, this also goes for the field of Education for Sustainability Development (ESD), which aims towards the habilitation of an 'optimized productivity', while sustaining the very logic of productivity that today conspires towards the exploitative cheapening of the world. Chapter 7 also argues that the emergence today, in the Anthropocene, of non-human labour in the form of climatological catastrophe advances the understanding that one cannot do what one likes to do with the world; meaning that this alien productivity demonstrates the limits of productions for *organic life*.

Chapter 8 argues that the Anthropocene is not a future disaster that must be prevented. This is the fantasy of extending the Holocene indefinitely. Rather the epoch presents a changed ontology, a new geological and political era, a difference in kind and not degree, marked by the burning of fussil fuels. Chapter 8 also relates the Anthropocene to Moore's (2016) Capitalocene, but with two added features: (1) The Anthropocene understood as a new geological epoch *outdates* capitalism, as demonstrated by Anthropocene science, which studies shifts in Earth Systems far *beyond* the Holocene and the human impact on these systems; (2) The Anthropocene exceeds the geology of our species and should therefore not be equated with the geology of the system of capitalist power as Moore (2015) claims. Chapter 8 suggests framing the educational relevant

question of our time as how capitalism hinders or intensifies the state of the Earth System, and what then would be the educational imaginary adequate to this planetary condition. In connection to this question Chap. 8 investigates four paths 'out of the darkness,' so to speak: (1) Ecomodernist humanism, (2) Posthumanists, (3) Posthuman thinkers, (4) Deleuze and Guattari cosmology—and the 'cosmic artisan' as a conceptual persona. All paths are confronted with the dark reality of the Anthropocene, as it is influenced by capitalism. The fourth path is investigated more closely in relation to craft-bioart, biomimesis, and biosensing, where art, technology and biogenetics come together, and seems to be the most promising path if we want to rethink our species relationship to the Earth. Yet, in the end none of the paths seems very promising, all ending up being caught—or risking being caught—within a capitalistic mindset of a world-for-us, yet another form of nonhuman exploitation. Also, the cosmic artisan has been essentially captured by capitalism. Thus, the chapter argues that extreme difficulties for transvaluative change (e.g., movements beyond anthropocentrism and capitalism) persist in the world of today.

The last chapter of series II, Chap. 9, is more optimistic and demonstrates how Dark Ecology, speculative realism and new materialism can be applied to pedagogic and the field of aesthetic learning processes in constructive ways. It is argued that the speculative ideas and concepts of Morton (2016) and others can be used to support and understand in which ways human bodies might be involved in the transition from a well-known human-centred way of relating to the world to an unknown Anthropocene way. The chapter uses the example of an action by Fridays for Future Denmark in front of the Danish parliament to discuss this.

All in all, the four chapters of series II explore in different ways how one can develop new pedagogies that consider the dark sides of Anthropocene reality, and translate ideas of new materialism and speculative realisms into educational thinking and practice.

The third series, Interspecies Inclusion and Environmental Literacy, contains four chapters, which all thematize the possibilities and values of developing relationships to and with more-than-humans within educational practices. Yet, the four chapters move in different directions and base their investigations on different theories and assumptions. What they share is a positive interest in the same issue, and the belief and hope that relationships between humans and more-than-humans can be established, both educationally and as a general value. But how it can be done,

differs across the four essays, digging into different spheres—waterscapes, language games, literature, and human-machine entanglements.

Chapter 10 is situated within posthumanist environmental education research, which strives to give voice to humanism's Others. According to Chap. 10, this line of thought is not anti-humanist, since it retains the modernist notions of rights, justice, equality, and freedom. The chapter argues that the human species risks continued failure if nature is not recognized as both a sentient and intelligent creator and conveyor of knowledge, and seeks to decentre the human and explore how more-than-human actors can be invited into interspecies dialogue through rewilding, affiliation, deep listening, being-with, and re-newed connection with more-than-human worlds. The chapter focuses on waterscapes and water literacy as an example of environmental literacy, and examines the pedagogy of entanglements of natural and cultural everyday life within this context, with a special focus on youth engagement. It is argued that the mainstream western management system works against nature, not with it, controlling and managing it according to human economic needs. This has resulted in the planet's diminished capacity to continue to provide the service for *all* life. As a response, the chapter suggests new critical ontologies and pedagogies based on re-visiting and engaging with invitations, and practices from First Nations indigenous pedagogy\ies, which have been less anthropocentric and have a long tradition for working together with and learning from nature. When it comes to waterscapes, it is demonstrated that there is a strong bias within mainstream western culture and education towards an anthropocentric outlook on water (primarily economic) and an overemphasis of cognitive and western scientific approaches to knowledge. As an alternative the chapter presents projects which have developed slow pedagogy and place-based learning approaches that focus on local context, collective learning, interdisciplinarity and cross-cultural learning that convey historical hydrologies, cultural traditions as well as spiritual and ethic-based knowledges. Here students are invited to consider water beyond commodification purposes towards being more "worldly with water" and waterscapes.

Chapter 11 is based on critical-philosophical reflection of human practices and logics in the late Holocene and the beginning of the Anthropocene, and the results thereof—earth-forgetfulness among other things, which calls us to rethink humanity and pedagogy. The chapter argues that what is most lacking in the world today, in the Anthropocene, is the development of dialogical relationships and life communities between humans

and more-than-humans, especially, relationships and communities penetrated by mutual love. According to the chapter western educational thought and practice has been pervaded by a cultivation of general concepts, monologue, and monoculture, we-and-they-thinking, and has thereby paved the way for a Holocene mindset, unable to create dialogue and loving relations. Thus, the chapter argues for changing our world understanding from a scenic, monological, objectifying, and human-centred view, focused on resource management, towards a dialogical, loving, and zoë-centred view in which we pay heed to, and try to develop dialogue with more-than-humans. The plea is to join in life communities where both humans and more-than-humans can participate and enjoy, building up concepts and knowledge about each other as irreplaceable unique singular beings. Further, the chapter argues, it is reasonable to demand that educational institutions are changed to become places where we help each other in fostering good interspecies relationships and communities. The chapter, therefore, explores how educational institutions could be set up to enable new generations to gain experiences in trying to form careful communities and relationships, together with more-than-humans. The upshot is a concept of humanity and pedagogy that is not centred on humans alone, but reaches out to our 'life-fellows,' demanding different educational institutions than those of today. Where mainstream educational institutions are made primarily for human needs and only letting them participate as actors in the educational events, the chapter suggests that new educational institutions should be developed in which both humans and more-than-humans can participate, and where both interests are considered.

Chapter 12 is situated within literature studies. According to the chapter *ecocriticism* has shown that literature studies should pay attention to the global environmental crisis. Further, *environmental humanities* have stressed that science alone is not enough to engender a societal transformation of our world needs. Based on this, the chapter argues that one of the greatest challenges facing education in the Anthropocene is to empower young people *to believe* that we can transition to an ecological civilization brought about by the urgency of "the explosion of dystopia" in mainstream popular culture. Earlier, the dystopic imaginary only existed at the margins of mainstream literature. Now, the dominant response to the Anthropocene in literature and film today is dystopian, postapocalyptic, and filled with post-disaster narratives. Students today grow up reading dystopia, playing dystopian games, and watching dystopic films. They

grow up hearing that capitalism is unavoidable, even as it destroys the planet. Many young people have, therefore, internalized the belief that imaging a hopeful future is naïve, whereas imaging a postapocalyptic hell is reasonable. Thus, the dystopic narratives seem to erase hope, normalize expectations about dystopic futures and reinforce the belief that ecocide is unavoidable. As a countermovement, the chapter focuses on how non-dystopic literature for young people can be tapped to nourish hope for the planet. The assumption is that hope-oriented anticipatory imagination is a precondition for disrupting ecocide and enabling meaningful change. The chapter suggests *planetarianism* as a term for this anticipatory imagination focused on planet's biocentric future, as a mode of engagement with the issues of climate change in and trough literature for the young reader—and as a *biocentric philosophical commitment to stand up for the planet.* Thus, the chapter suggests that one productive way of engaging with the urgencies of the Anthropocene is through stories that mobilize active hope for the planet and tell stories about how to transit to an ecological civilization. Planetarianism is therefore to be understood as applied hope articulated through stories, that envision the planet as a living entity, imagine a non-ecocidal socioeconomic system, depict disanthropocentrized relationships among humanity and other living beings, and gesture at a biocentric, multispecies future that is worth living for. This keeps alive young people's belief that it is not too late, that we have agency for change, and that even a broken world is worth fighting for.

The last chapter in Part III, Chap. 13, also explores the potentials of literature, but Science Fiction (SF) and stories about Artificial Intelligence (AI). The chapter argues that surviving the Anthropocene is a problem that encompasses the totality of human existence. A pedagogy for the Anthropocene should therefore strive to build people up as holistic problem solvers. Further, the chapter argues that achieving a good Anthropocene requires a shift not merely in political economy and science/technology, but in ontology as well. To turn the Anthropocene around, we therefore need to cultivate richer capacities for being-in-the-world than in hitherto dominating western metaphysics. The chapter explores alternative metaphysics and how these could make room for inclusive political subjects open to human-nonhuman entanglements. To that purpose, the chapter dives into a corpus of fictional texts with AI characters and narrators that can be used as starting points—or illustrative examples—for a poetical ecopedagogy for the Anthropocene. It is argued that reading SF can lead to a deconstruction of one's worldviews, and to the construction of new

ones. SF holds this specific potential as it flows around three poles: the world, the text, and the SF world. The de-construction of current mainstream worldviews is, so to speak, immanent to the SF genre. The chapter compares this to the decolonization of thought, when anthropologists unravel indigenous ontologies as different than western ones, and thereby open alternative perspectives on the relation between body and soul. According to the chapter, the SF genre does some of the same. A pedagogy which incorporates SF readings will therefore be able to function as exercises in *perspectivism* and *alternative worlding*.

The fourth series, Critical Rethinking and Future Practices, is more heterogeneous, containing four chapters that are all critical in relation to the current Anthropocene situation and suggest alternative ways to rethink education and shape the future world differently.

Chapter 14 argues that in an educational context the Anthropocene draws attention to challenges pedagogy faces such as human practices, structures and notions that threaten and damage life, landscapes, earth systems and ecosystems. According to the chapter these challenges converge in a transformational task that involve critical thinking, identifying, and addressing what must be transformed. The chapter therefore explores the position of critical thinking in environmental and (post) sustainability education, especially the possibility of a 'critical place-based pedagogy'. It suggests that the ethical grounding of critical thinking may be located within a place-based education that explores the ontological condition of living with other beings. According to the chapter, this is the basis insight brought in from an ethics of proximity (Levinas and Løgstrup). The implication is, among other things, that education in the Anthropocene should include an accommodation of student's experiences and existential concerns of anxiety, sorrow, and loss.

Chapter 15 articulates what the authors—as educators—observe as some of the on-the-ground challenges and opportunities in science education in teaching for sustainability at a rural Midwestern high school. In particular, the chapter outlines the ways that fundamentalist anti-social movements threaten the actual doing of teaching. The chapter explores from this point of view rurality as a site of extraction within global capitalist economies. Further it illuminates fundamental tensions in rural education in the United States. These two contexts lead to a discussion of the daily political barriers that rural teachers face in educating for science. What also emerges from their chapter is that ecological sustainability and the realization of planetary care is overwhelmingly ideological, and that

praxis is complicated by geo-political differences in democracy and representation. Yet, the chapter also argues that rural places offer unique opportunities for climate education that have potential to further evolve in favour of the earth.

Chapter 16 argues that according to *the ecopedagogical movement* formed after the Rio-conference in 1992—building on the critical pedagogy of Paulo Freire—the origin of our current Anthropocene crisis can be tracked back to Greek education (Paideia-thinking). The anthropocentrism of the Greek mind stemming from an oppressive slave-based society has allegedly paved the way to the Cartesian dualism between nature/culture and the technical rationality underlying our current ecological crisis. It is argued that this story is partly wrong, insofar it involves an unwarranted claim that classical civilization, as such, must be superseded. Instead, an ecological mindset of today must address our classical heritage, and aim at recovering practices and a mindset which were once made possible by means of slavery, and raise the question whether we can reformulate the conditions of this mindset in a modern world without its oppressiveness. The chapter looks for solutions to our current problems in the conceptual landscape of ancient Greek time, especially in the hostile inclination towards labor and work, and its ideas about *theoria* as a non-interfering spectating attitude towards the world. According to the chapter, these ideas hold a critical potential to thinking and developing a relation to the world not dominated, as today, by the demands of work, productivity, and utility.

Chapter 17 ends the book, by presenting and discussing an un-finished current project that explores *Mycelic pedagogies in the Anthropocene*. The question the project, and the chapter, seek to answer is: how do you lead the way into a culture of re/generative education in the Anthropocene? The educators/leaders of the project (and authors of the chapter) try to change the world locally, in Copenhagen, for the better, through experimenting with and applying ideas proposed by thinkers such as Latour, Stengers, Haraway and others. Yet, as demonstrated in the chapter, their efforts are met by tremendous challenges, among other things by apathy/depression and in-action from the locals they try to involve and interact with (under the pandemic conditions). The chapter shows how difficult, but not necessarily impossible, it can be to do real changes, and how locally and concretely, it is necessary to rethink, resituate and try out new ideas than those one has from the start, and think about how reactive citizens can be transformed into active ones. This involves a shift of focus,

vocabulary and concepts. For instance, it is explained in the chapter that the educators were forced to shift focus from a smaller group cartographing their area to the birth of a new pedagogical concept, "the Pollination Academy". This demonstrates nicely how relevant pedagogical concepts must be developed in practice as they cannot be thought-out beforehand.

A Non-conclusive Conclusion: The Diversity of Anthropocene Pedagogies

As it by now clear, this book brings no *final* or unitary answers to the table, but a diversity of Anthropocene Pedagogies, suggestions and new questions and issues. As stated several times, we do not see this as a disadvantage. Problematising the complexity of today's world and its anthropogenic issues, is a landscape in constant flux. Hence, final answers are not possible nor sought in this collection. What we have sought to do is map out the pedagogical problematic, and to develop and re-imagine concepts that are adequate to such a task. It is our unified hope that the sixteen different voices represented in this book can inspire, enrich, and change current educational thought and practice in directions that are worth striving for. To quote the author from Chap. 12, the slogan for this whole book and all it has suggested could be: Anthropocene Pedagogies—*Planetarianism NOW!*

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