



THE UNIVERSITY *of* EDINBURGH

Edinburgh Research Explorer

Facing loss

Pedagogy of death

Citation for published version:

Affifi, R & Christie, B 2019, 'Facing loss: Pedagogy of death', *Environmental Education Research*, vol. 25, no. 8, pp. 1143-1157. <https://doi.org/10.1080/13504622.2018.1446511>

Digital Object Identifier (DOI):

[10.1080/13504622.2018.1446511](https://doi.org/10.1080/13504622.2018.1446511)

Link:

[Link to publication record in Edinburgh Research Explorer](#)

Document Version:

Peer reviewed version

Published In:

Environmental Education Research

Publisher Rights Statement:

This is an Accepted Manuscript of an article published by Taylor & Francis in Environmental Education Research on 02/03/18, available online: <https://www.tandfonline.com/doi/full/10.1080/13504622.2018.1446511>

General rights

Copyright for the publications made accessible via the Edinburgh Research Explorer is retained by the author(s) and / or other copyright owners and it is a condition of accessing these publications that users recognise and abide by the legal requirements associated with these rights.

Take down policy

The University of Edinburgh has made every reasonable effort to ensure that Edinburgh Research Explorer content complies with UK legislation. If you believe that the public display of this file breaches copyright please contact openaccess@ed.ac.uk providing details, and we will remove access to the work immediately and investigate your claim.



Facing loss: Pedagogy of death

Abstract

Loss, impermanence, and death are facts of life difficult to face squarely. Our own mortality and that of loved ones feels painful and threatening, the mortality of the biosphere unthinkable. Consequently, we do our best to dodge these thoughts, and the current globalizing culture supports and colludes in our evasiveness. Even environmental educators tend to foreground “sustainability” whilst sidelining the reality of decline, decay, and loss. And yet, human life and ecological health require experiencing “unsustainability” too, and a pedagogy for life requires a pedagogy of death. In this paper we explore experiences of loss and dying in both human relationships and the natural world through four different types of death affording situations, the cemetery, caring-unto-death, sudden death, and personal mortality. We trace the confluence of death in nature and human life, and consider some pedagogical affordance within and between these experiences as an invitation to foster an honest relationship with the mortality of self, others, and nature. We end by suggesting art as an ally in this reconnaissance, which can scaffold teaching and learning and support us to courageously accept both the beauty and the ugliness that death delivers to life.

Keywords: sustainability; pedagogy of death; ecopsychology; ecological crisis; death education

Introduction

The opening lines of David Orr’s (1991) justly appraised book, *Earth in Mind*, set the context for this paper as well as any: “If today is a typical day on planet Earth, we will lose 116 square miles of rainforest, or about an acre a second. We will lose another 72 square miles to encroaching deserts, as a result of human mismanagement and overpopulation. We will lose 40 to 100 species, and no one knows whether the number is 40 or 100” (p. 1). Actually, if today is a day like any other, it is estimated that between several hundred and a thousand species will be wiped out of existence (Chivian and Bernstein, 2008), and while rainforest deforestation rates may have slowed slightly since Orr composed these lines, forest degradation has rapidly accelerated (FAO, 2015). Regardless of the details, the extent and acceleration of extinction, habitat destruction, and climatic instability is unlike any in human history. Death is all around us and the future is precarious. And yet, at least for those not suffering its effects, “life goes on.”

For now, anyway.

How the modern globalising culture¹ deals with *loss* is a fundamental problem for human sustainability, and transforming attitudes towards loss is an urgent matter. If education is at once

¹ We use the term “globalising culture” in place of terms such as “Western” culture, that on the one hand erase the cultural diversity present in the Western Hemisphere, while at the same time ignoring the many contributions that

a process by which culture perpetuates and modifies attitudes (Dewey, 1916), it may be seen as both a part of this problem and its solution. We argue that educators aiming to foster a more equitable, peaceful, and just 21st Century for humans and for the planet need to embrace pedagogies that address the fact of loss. Intrinsic to our experience but often covered over, lies the fragility and transience of life, and impermanence of all we cherish. To address this loss, educators will need to face their own mortality, the death of those around them, the destruction of animals, plants, and places, the extinction of species, and looming always on the horizon, the possible obliteration of a functional biosphere. Sustainability is a response to the precarious future of humans and the ecologies they depend on. Unfortunately, it is all too often treated as a technical issue, whether the search technologies to reduce environmental impact or the hunt for techniques to motivate environmental behaviour. We suggest that without engaging the emotional -indeed existential- dimensions of sustainability, educators remain ill equipped, ignorant of the many motivating and demotivating factors that stem from the heart and not the hand or head.

To advocate the need to feel, discuss, and dwell upon painful things seems a tall order for those who consider teaching primarily as the delivery of content. And there lurks obvious perils in making pedagogy painful. For those habituated to evade thoughts of mortality, a confrontation with death may lead to a very “unsafe” and uncomfortable learning space for both teacher and learner. For example, in a typical Western grade school, besides possible distress for the learner, the teacher exploring death in meaningful pedagogical ways risks facing angry parents, caustic performance assessments from disapproving line managers, and worry over the consequences of their allegedly “radical” or “personal” subject matter. Meanwhile, even in environmental education circles, popular pedagogical tropes often counsel that we avoid the allegedly abysmal clutch of “eco-despair” (ex. Sobel, 1995). Given the clear personal and social ramifications of broaching such a “dark” subject in any meaningful way, we suspect few environmental educators are going to seriously question the legitimacy of the psychological framework behind catchy memes like “no tragedies before ten.” Consequently, in our experience it is commonplace to direct pedagogical attention at fostering “hope”, “wonder”, and “love,” as though these apparently positive emotions could be experienced in any significant way absent of agony or bereft of loss.

And yet, the more death is shrouded or hushed, the less equipped people will be to feel it, and the more likely people will retreat when so confronted. This leads to an unfortunate paradox for sustainability educators: when we invite uncomfortable discussion of the imminent ecological crisis, we may be inadvertently pushing learners towards damaging cultural practices. The idea is lent weight by terror management theory (or TMT, Solomon, Greenberg, and Pyszczynski, 1991), which asserts that people often fall back on the security of their cultural norms, seeking a

diverse other cultures have made to even so-called Western society. In any case, the current globalising culture is now both the product of and cause of vast global socio-economic and technological processes.

sense of womb-like protection against feelings of vulnerability in the face of mortality². Considering that the ecological crisis is inherently about the precarious fate of our individual *and* collective existence, we wonder if environmental education may therefore be sometimes unwittingly driving people to consume, and perhaps contributing to the very problems it seeks to resolve³. A number of studies have pointed to the link between materialist consumer culture and the denial of death in various contexts (ex. see Becker, 1975; Solomon et al, 2004; Arndt et al 2004), so exploring the link between environmental education messaging and consumerism seems an urgent priority for future empirical work in our field. A pedagogy of death, in exploring mortality as an essential form of experiential education, aims in part at helping prevent such irrational abandoning of the tasks now calling upon us.

In any case, the current globalizing culture is unabashedly death-denying. As Oaks and Bibeau (2010) put it:

We live in a death-denying society and try to shield children from the emotional pain of loss through death. Extended families in which children had the opportunity to experience aging, dying, and death of grandparents are no longer the norm. ... Even our death vocabulary is cloaked in denial. Rather than “someone has died,” we say the person “passed away...” (p. 420)

In the modern capitalist societies that both authors come from, diverse accomplices contribute to insulate the experience of mortality. Death has become “alien” to life through progress in medicine, making the loss of a child, sibling, or parent rare and seem unnatural. Few rituals survive for contemplating loss directly and those that persist are vanishing. Funerals are less common, grieving periods are replaced with intensive work schedules, and the pre-grieving and pre-care of dying loved ones is passed onto third party care providers, palliative care wards, and hospices. Even collective rituals celebrating death, like Halloween and Easter, have been reduced to entertainment and spectacle, the bitterness of mortality replaced with the saccharine pleasures of chocolate and sweets. Meanwhile, with the spread of supermarkets, the taking of life for sustenance, be it plant or animal, is no longer part of most of our immediate experiences. And

² In fact, TMT argues that thoughts of death are fled in two ways: by performing practices of one's dominant culture, and increase one's sense of self-esteem. It is easy to see that the former can lead to exacerbated ecological problems. The latter can as well, however, when one's self-esteem generating activities are themselves destructive. Often, both are interconnected. The authors would like to thank Rick Kool for alerting us to this phenomenon (see Kool & Kelsey, 2005).

³ Nevertheless, we suspect that although the TMT hypothesis is supported by over 300 empirical studies, it is itself a reflection of the culture it is studying and is not necessarily about the human condition writ large. While TMT has been confirmed in diverse cultural studies (Greenberg, Solomon, and Pyszczynski, 1997), these tend to be Western countries (TMT has been verified in a few Asian studies, such as Heine, Harihara, and Niiya (2002) in Japan, and Tam, Chiu and Lau (2007) in China). However, many cultures experience death routinely and process it in much more direct ways than the current globalising culture. Such cultures would have little reason to flee from thoughts of mortality where death is spoken and given space to be lived and transformed.

finally, we spend less and less time in nature where the drama of life and death plays out raw and free. These are some of the many manifestations that lead us to suspect the tendency to skirt thoughts of mortality is both a cause and a symptom of the globalizing culture's unsustainable trajectory. In some countries, this erosion of experience has been going on for several generations (see Gorer, 1965, for an early analysis). Devolved into rookies in the world of death, when messaging about the ecological crisis looms we are quick to change the channel.

It would be absurd to recommend the abolishment of healthcare so that we may be confronted with, and thereby cultivate, a less callow relationship with the fact of death. It would be equally foolish to call for a wholesale reversal of Sobel's warnings about tragedy and despair (1995). Nevertheless, we must acknowledge that as these many experiences of mortality disappear from modern life, their *educative* roles in human development and our understanding of ourselves as part of broader living ecologies, disintegrate as well. Education needs to compensate by cultivating learning experiences that enable people to grow to maturity while bypassing some of the hardships to which we should not like to return. This is a major challenge, but one intrinsic to sustainability. In other words, if ecology necessarily involves thanatology, then environmental education requires a *pedagogy of death*.⁴

As it turns out, in the quest to develop a sustainable education, we do have many resources available to experiment with as we work through a pedagogy of death. As outdoor educators, it is no coincidence that we both recognise the outdoors as a fundamental teacher in this regard. Even quotidian outdoor spaces reveal continuous perishing to those who engage with them: the old oak tree's limbs decaying, the warbler snatched swiftly from flight by an overhead hawk, annual plants withering into sludge as November's frosty hands descend upon them. Even gardening thrusts the cycles of life and death upon us once we expand past the merely utilitarian and aesthetic modalities of the experience (i.e. the compulsive lens implying they are beautiful food and plants *for us*). Preparing a soil for planting veggies is an ecological disaster for those making a living in that parcel of land. This experience lies awaiting contemplation. Moving into wilder settings, the outdoors affords even more opportunities to experience the ongoing co-presence of life and death. Paul Shepard (1973) made much of this in reference to hunting, but here we invite a broader consideration of the relationship between life and death. In addition, the dangers of the outdoors can make existence seem precarious, contingent, and therefore -not paradoxically- a blessing or a gift. As Robert McFarlane puts it, "Life, it frequently seems in the mountains, is more intensely lived the closer one gets to its extinction: we never feel so alive as when we have nearly died" (p. 71, 2003).

Russell (2017) argues that death ought to play centrally in the organization of human ecological identity. In this paper, we explore some ways in which the death of other humans, of

⁴ This term is not commonly used in death studies literature, which is mostly focused on "death education" predominantly for nurses, doctors and other caregivers who typically deal with dying people in their professions (see, for example Wass (2004)).

other species and places, and of ourselves, are all deeply interconnected and provide many important educational possibilities. We examine four different types of situations in which people are confronted with death in their lives,⁵ chosen because they happen to be death pedagogies that we have been engaging in our own personal and professional lives. In each, we explore how the death of people and death in nonhuman nature intersect. In particular, we consider the relationship between each, the cases where one might help us learn and grow with respect to the other, and how educators can intervene sensitively and appropriately in helping foster a healthier attitude towards death. We end the paper by considering the arts, which we see as integral for a pedagogy of death that takes seriously the ecological crisis and strives for a vital.

The cemetery

In our work with students, both of us sometimes engage cemeteries as a pedagogical space. We have used cemeteries for several purposes, only some of which relate directly to mortality. As cemeteries are often located in busy urban areas they offer a hiatus, a place to reflect upon and deepen our sense of time. Asking students to find a gravestone and then imagine what things were like when the buried person was living can be very effective because the materiality of the gravestone leads to a visceral sense that the person really existed (not easily afforded by words and numbers in books or computers). That the person's remains were under that stone (and may still be) adds to the felt experience. In this case, mortality obviously frames the activity, but it is not explicitly *about* mortality as such. At other times, mortality is backgrounded even further in pedagogical activities. Large cemeteries are often lushly biodiverse, teeming with tree species and wildlife, sometimes rivalling botanical gardens, and the headstones are home to lichens, algae, mosses and more. As such, these spaces present opportunities for studying urban flora and wildlife. We have even heard of teachers using birth and death dates as an opportunity for maths learning, and have come across "cemetery lesson plans," that advocate the use of graveyards for studying "fine craftsmanship," "artistic compositions," and "family history" as among the learning outcomes (see http://www2.vcdh.virginia.edu/cem/CemSearch_LessonPlan.shtml).

In other instances, we have tried to explicitly educate about death in cemeteries. For example, one of us brings philosophy students to the cemetery for class seminars on the inevitability of death and the ways in which death contextualizes and gives meaning (and perhaps meaninglessness too) to our sense of life.

We have noticed that some students feel uncomfortable entering cemeteries. We have also noticed that squeamishness subsides with exposure. On the face of it, this seems a good thing. If our educational purposes are to assist people in confronting the fact of mortality, it

⁵ These four situations are illustrative not exhaustive. The pedagogy of death invites explorations beyond those in this paper, including facing and dealing with complicity in the death of others, addressing the fear and pain handed down through intergenerational trauma, and the physical pain of illness, each which occur within humans and in our relationship within the natural world.

would appear such students are meeting our learning outcomes, especially when this translates into their no longer avoiding places that evoke awareness of death. Upon reconsideration, things are not so simple. Are these students more comfortable with death or have they merely learned to associate a place that once evoked death with a different set of experiences? With the cemetery now overflowing with thoughts of algebra, chaffinches, and Victorian parasols, have students really only desensitized themselves to the potent pedagogical mortality affordance of these unique places? Might these students' initial apprehension actually be somehow protecting the pedagogical potential of the cemetery?

Perhaps those who traipse blindly in the cemetery bear some similarity with those who dare not enter. Though the quality of their lived experience may vary drastically, both seem united in avoiding the contemplation, focus, and quietude that might bring the cemetery's more important lessons into focus. Of course, the pedagogical challenge for the educator is very different in both cases (which presents particular challenges for facilitating a mixed group of learners), and yet certain practices likely 'work' in both cases. Those fearful of cemeteries are more connected to the deep meaning of these places but they resist confronting these feelings. They are at once intimately bound to yet purposefully detached from what cemeteries can afford. Yet, those who can walk without concern are faced with a very different problem. They face a desensitisation to the experience of death which enables them to pass through without confrontation or consideration. Like the worker at the slaughterhouse (as much, ironically, as the shopper perusing the meat section of the supermarket), death has been covered over and a particular sort of phenomenological excavation is needed to bring the emotional dimension of the experience back to the surface. Much of this paper is a meditation on such an excavation.

It would be reductive to create a dichotomy here and assume that people are cast in one of two ways. In reality, there is a great deal of nuance and context dependence. We may be open to vulnerable emotive experiences amongst the company of some but not others, or depending on other factors in our lives, and these all collide with our experience in the cemetery and the extent to which we feel and are receptive to what it affords. We may also be sensitized to certain cemeteries but not others. This is particularly clear when we take students out into the forests, fields, and mountains. These spaces are -of course- cemeteries as much as anywhere else is, their soil bearing the remnants of eons of perishing, an interwoven matrix of dead people, animals, plants, and microbes. We have noticed that few students are squeamish about death in these contexts. One reason for this is perhaps the absence of obvious semiotic markers (like gravestones) to elicit such feelings. In addition, because the forest affords death differently to many people, it is an important additional venue for experiencing mortality. Educators can explore the relationship between all of these different spaces, to consider when and how each can serve as a scaffold to enrich the experience of the other. For example, we suspect that for many, cemeteries afford a stronger encounter with death than do other outdoor spaces, so it may be that those who are uncomfortable in cemeteries would profit from a discussion and exploration of the

fact of death in a natural place first. On the other hand, as sustainability educators, we also have the responsibility and the challenge of drawing attention to the waymarkers of death in these outdoor spaces. Opening awareness and discussion of the human role in ecological destruction requires not merely being exposed to open-pit mines, bleached coral, and other clearly scarred landscapes, but also demands that we sensitize to signs of death and dying that may not be so apparent. The shift in composition of flora in an area, for example, may be either an indication of ecological restoration or a harbinger of what's to come, but remains a mystery to those without the training to see it.

Cultural or pedagogical rules may be needed to protect the potent potential of cemeteries. In retrospect, we question the indiscriminate use of cemeteries for outdoor learning because merely desensitizing people to these spaces is not consonant with our pedagogical aims. What we are striving for is a sensitive attention to the places we inhabit, and an attention that abides the uncomfortable experiences these places may evoke⁶. One suggestion might be that we only use the cemetery sparingly and with great care, ritualized to provide an entry into the experience as well as closure to it, perhaps adopting a different manner of speaking when in the cemetery. Educators can lead the way by slowing down, allowing for more silence, making space for the uncomfortableness that may be experienced, and creating opportunities to reflect on the emotions evoked by the session.

Caring-unto-death

Our second case involves a relationship of care. When we care, we nurture and give life to somebody (or something) that we know will die. Sometimes, their death is far into the future and can be ignored and so our care can be directed to their flourishing (as in *agape*⁷). But other times we care even if (and perhaps even because) the one we care for is dying. Let us call “caring-unto-death⁸” the type of nurturing relationship that occurs when the carer cares for someone/thing that they know will die and persists in caring until death occurs. Caring-unto-death is distinguished from other types of caring by the fact that it is known to the carer that the cared for will die, and this awareness is wrapped into the very experience of the care given. The

⁶ Place-based education (Sobel, 2004) can profit from engaging with life and death more directly. The ecological and cultural elements of a place do not merely intertwine with the socioeconomics of patriarchy and capitalism (Gruenewald, 2003), but invariably involve existential dimensions as well. This goes well beyond merely considering the presence of death in the natural and cultural worlds around us. For example, consumerist capitalism not only increases the frequency of certain types of death (through habitat destruction, the proliferation of toxins, etc..) but also reduces our experiential engagement with death (through driving consumerism, and through creating environments devoid of death-eliciting experience). Understanding how these various elements conspire, and the tensions between them too, should give educators a platform through which to explore death in the places they work.

⁷ For example, in Peirce's conception (1893), *agape* involves the nourishing and caring for things that are still nascent. It is a particular kind of love that is concerned with bringing things into their potential.

⁸ We believe that this neologism, which combines Kierkegaard and Nel Noddings, describes an important and so far inadequately theorised phenomenological dimension of human experience.

most obvious example is caregiving for someone who is terminally ill, however many more subtle examples occur on a frequent basis in daily life that still carry important potential in learning about death⁹.

Caring-unto-death forces upon the carer the fact of death. Even if the carer attempts to deny death, as time passes increasing events and signs thrust this fact into consciousness. As a result, death remains a charged and present possibility that never disappears from the fringes of experience. While this undeniability seems morbid, it is because the carer cannot escape that they are given the opportunity to experience the power and beauty of the caring-unto-death experience, and in particular the power and beauty of death itself *as* an aspect of life. In such caring, the carer is offered the possibility of experiencing a certain preciousness to life itself, opened to the awareness that a horizon of death can frame life in a way that makes it seem all the more miraculous and astonishing. Like the magnolia blossom's furious explosion and swift departure from the world, that which is fleeting is for that reason cherished¹⁰. Families also often bind closely together, and ever more closely, until the sick member unfastens herself from the knot and leaves the rest behind. This experience, and the possibility of realizing it consciously, is part of the pedagogical *potential* of caring-unto-death. We do not claim that all carers will experience this. In many cases relationships become trying and stressful and tension flares. But we want to suggest that this tension is itself an indication that relationships are deepening and believe that the carer's capacity to deal directly with the death process is itself crucial in determining whether the tension resolves into a deeper relationship or instead collapses the burgeoning intimacy under its weight.

Caring-unto-death enables the carer to acknowledge and accept that the death of others is a part of life. This experience is possible in many different ways beyond that described in the previous paragraph. Many children will undergo the loss of a pet (Russell, 2017) and often this may be accompanied by witnessing and participating in their parents' caring process for that animal. It is in these experiences that the child is afforded the chance to abandon the taken for granted presence of the pet and to experience it with fresh gratitude. The experience also enables the child to feel the bittersweet joy of caring for a sick loved one, which is intrinsic to realizing that care is not 'sacrifice' -rather, it is instead the foregoing of care for a loved one which sacrifices meaning, love, and connection. Because advances in medicine have rendered the experience of losing a loved one rare for a child in a western country, the relatively short lives of pets ensure that they are most often the first encounters with mortality for children. How adults support the process of caring-unto-death of an animal will therefore also likely have important

⁹ The discussion that follows is deeply informed by the experiences of one of the authors (Ramsey) caring for both his dying parents.

¹⁰ The one cared for also often experiences powerful transformations in outlook on life, but that is obviously a different case with a different pedagogy and will not be articulated here.

consequences for how children internalize (or not) the caring process, and whether they seek it out or cautiously resist it in later life.

Gardeners know well that care for plants is often its own form of caring-unto-death. This is most particularly true in the case of annual plants, where the nurture, protection, love, and admiration for (say) one's 'veggies' is irrevocably entwined with the passing of the seasons. The bounty preceding the plants' death is only partial compensation for the tinge of loss that a gardener feels in apprehension of the death of those watered and pruned, healed and fed, with countless hours dallying, watching, touching, and smelling in true biophilia (forget Wilson's (1984) sociobiological abstraction). And yet, at the same time, the gardener also feels something *right* about the process. The death of these tomato plants is again integrated into larger cycles and a larger story of the gardener's life and of the life of the land they live in.

We are currently facing an ecological crisis of geological proportions. It may well be that we lose over half of all species by the end of this century. There seems to be nothing *right* about this process at all -it fits in with none of the cycles of the earth on any known time scale (though there is modest evidence of a 26 million year periodicity in extinction events (Sepkoski and Raup, 1986))¹¹. Natural or not, we are confronted with the fact that we may well be putting effort into protecting and caring for many species that will soon go extinct. We suspect that given the severity of the situation, many people will shut off. What is the point of caring for the rhinos or the cloud leopard if they are doomed by the great whirlwind of greedy globalization? How must we be effective in our allocation of resources? And why devote, money, time, sweat and tears for a lost cause? With these questions, the narrative of 'sacrifice' comes in, indicating how few of us have really learned much about the power and beauty of caring. A pedagogy of death asks that we explore this problem directly. Besides the fact that (like our loved one) there is always the *possibility* these vanishing species can be saved (but that both are sure to go without our care), we are confronted with the explicit question: how can our life and our species grow meaningfully and spiritually through caring-unto-extinction if that is the course that may be? How might people -and their places- bind together as families by facing, enduring, and supporting one another through this colossal interpersonal loss? To address these issues, educators need to engage in experiential activities that assist learners in feeling the various intrinsic instrumental

¹¹ While scientists examining this phenomenon often suggest exoplanetary factors, some posit internal ones related to the dynamics of complexity interactions in ecosystems (ex. Plotnick and McKinney, 1993). Considering the last extinction event was about this many years ago, a controversial hypothesis might be that humans are part of a giant cycle of diversification and simplification of the biosphere. However, paleontological data supporting extinction is sketchy. In any case, the results of this investigation miss a crucial point in the debate over what is natural or unnatural, and that is its "scale dependence." From the point of view of the last 26 million years, which is also the time in which humans came into existence, global mass species extinction has never occurred. It is therefore clearly an unnatural experience for us, as much as it is for all other creatures adapted to this phase of the Earth. *Humans will always need to "go against" nature at one scale to protect it at another*, because in the great scheme of things life (and death) are rare exceptional events in the universe, a transgression of former order that we rightly value.

values of care. Not only is care the means to an end (the protection, comfort, and the sustenance of the cared for, but also now the development of empathy, intimacy with the natural world, and a community of carers), it is also meaningful in itself. And the decisions we will make with respect to the remaining denizens of the earth will depend upon how much we have grown and learned from those species dying all around us.

In schools, educators can provide experiences for learners to care-unto-death and they can also work on lateral connections between subjects to mutually support such learning. For instance, school gardens and raising animals have obvious direct potential as long as educators can create situations that foster consideration of the meaning of relationships with plants and animals. Learners could read literature that evokes the significance of care-unto-death relationships (such as the poetry of Norman McGaig, work by Mitch Albom, Julian Barnes and others) in language class planned in conjunction with these outdoor lessons. Lessons in biology could go beyond the mechanistic physiological approach (such as recent empirical advances in plant behaviour and intelligence showing the communicative and learning dimensions of these overlooked creatures (ex. Trewavas, 2014; Gagliano et al. 2016)) can help sensitize learners to the life of plants. Combined with a sustained attention to the plants' daily lives, from the subtle changes in physiognomy when dehydrated or refreshed, to the more permanent physical differences that they take on from naive 'childhood' to confident maturity (as a tender dichot becomes a towering tree with fluted trunk), science lessons and direct experiential encounters can synergise to foster the empathy needed caring-unto-death. However, if educators remove the reductive language that often accompanies their mode of 'explaining' biological phenomena (which often is really 'explaining away'), these dynamic and responsive growing beings can usually speak for themselves and generate a lot of enthusiasm. The deeper the empathy and the more active and sustained the care, the more significant the care-unto-death relationship will be, and the better it can afford important learning experiences. Pronouncements about the virtues and beauty of nurturing the dying amount to didactic blather without a grounding in feeling and practice. Educators can help students make sense of their experiences caring for plants and animals through explaining the nature of the relationship and through eliciting dialogue but the timing of these activities must be taken into account.

Sudden death

Life can also, however, be suddenly taken away. A car accident, a heart attack, a suicide - each severs a sense of continuity and stability¹². Our relationships form the basis of lives, our identities and activities are brought about in and by them. As long as other people constitute our daily worlds, they provide a taken for granted matrix that undergirds our unreflected upon being-in-the-world. This is true regardless of whether others provide us with security or joy, fear or jealousy, or little tangible emotion at all. In any case, they are part of how the world 'is' and

¹² This case emerged from conversations between the two authors where Beth shared her experience of dealing with the murder of a family member.

therefore who we are too, so even casual acquaintances like, say, the server at the coffee shop, will still send shock waves across their web of relations if they suddenly die. While an empathetic dimension contributes to the experience, the shock invariably reveals and ruptures order and stability. This disruption has important implications for sustainability education, which we shall explore in what follows.

In cases of sudden death, our threads of relationality have suddenly been cut. We had not the time to imagine who and what the world would be without the newly deceased and are now confronted with a relational void. After a sudden death, the relation still exists, like a phantom limb, and our thoughts circulate back and forth trying to repair the ontological error that has seemingly erupted. When someone close to us disappears, there may be so many threads that the wound may never fully heal, not even with undifferentiated and less functional scar tissue. A hole persists and it sometimes peers back at us like a silent question mark, like an abyss. And it reverberates across our remaining relations shaking the seeming fixity of them too, reminding us that in this world all shall perish. While entertaining the notion that all phenomena are impermanent is often seen as a healthy (such as in Eastern traditions), what matters is the pervading emotional tone that holds this sense of uncertainty. It is not an abstract conceptual fact or some mere empirical detail about the nature of the universe. Impermanence can fill us with deep gratitude and appreciation if couched in a certain felt experience, but great distress and anxiety in another. Sudden death wrests from many of us the possibility of appreciating impermanence. Unlike our relationship with someone while caring-unto-death, in our daily relationships we treat those we engage as though they were immortal. And reciprocally, these people and beings provide a sense of immortality to our own life by virtue of the constancy of their presence, the typicality of the encounters, and the little ways in which we have come to know who we are through how we interact with them. The shock is therefore also part of being confronted with the fact that this immortality is an illusion, that its cycles are but transient eddies, that the river will flow in very different ways, and eventually dry up entirely.

Of course, a sudden death need not actually mean a sudden death for the one dying. Indeed, estranged loved ones, old friends who we have lost touch with, perhaps parents who have kept their disease from their children for fear of upsetting them -all may be sick for a long time but still confront us with the experience of a sudden loss. What matters is only that the news comes 'out of nowhere.' There was no space for pre-grieving¹³, for imagining the future, for

¹³ Not all who consider the differences between sudden and anticipated loss accept the existence of "anticipatory grief". For example, while Parkes and Weiss (1983) observe that those who face unanticipated loss have poorer recovery. They argue that this is because of the trauma of the suddenness of the loss. For them, grief only happens in response to an actual loss. To some extent, such a debate is merely semantic. Parkes and Weiss acknowledge that someone dealing with anticipating a loss recreates their identity and sense of the future, which makes it easier to go through the bereavement process when it occurs. We prefer to view anticipatory grief as real, with different aspects of loss grieved at different stages and rates. Because the dying are not merely 'other' people, but parts of ourselves and

reconceiving the nature of the relationship, or for reconstructing it. Similarly, a sudden death may not necessarily involve a human either. Imagine a return to a childhood home. Witness the stream where you used to play now filled in, its mossy banks, the fallen tree you'd use as a bridge, the brambles pecked by blackbirds in the mid-morning sun, and all those 'skipping stones,' now submerged under hundreds of tonnes of backfill, and rows of iron, concrete and drywalled edifice. Sudden ecological death is increasingly a phenomenological fact during this period of global economic turmoil, and it can be equally debilitating as the unexpected loss of a human counterpart (see Sbrocchi (2007) for an evocative meditation on "domicide" in an increasingly urbanized world).

What can educators do to support learners living in a world where sudden death is a fact? Where opening yourself to love other people, animals, trees, or places leaves you vulnerable to these wrenching experiences of dislocation and loss? Where each rupture risks parasitising openness to love with detached fear? How do we prevent people from eventually shutting off from these sources of potential torment, loving only that which cannot die, like the fictional characters on their televisions? Or that seem so much more permanent than our threatened ecologies, like Starbucks, which provides a constant security in a world overwrought with change, a quiet unintended advertising strategy expected to flourish all the more when the soils around us wash away or burn. And sudden death is exploited in the strategy of the terrorist too, weaving a psychological web between the logic of capitalism and the logic of shock and disruption¹⁴.

While caring-unto-death provides time for integrating the experience of death into one's conception of a meaningful and beautiful existence, sudden death strikes as a heinous violation of the 'natural order.' This is because our sense of the natural order is based on the matrix of co-dependencies and expectations that stitch together our daily lives. The trauma lingers unresolved as we return to the grind. Deprived of pre-grief, we ought to be given the additional time for post-grief, but the social world does not treat sudden death as different *in kind*. As a result, it is likely that many of us harbour a sense of loss which muddies our sense of the natural order, gives us a sense that the universe is morally, aesthetically, and spiritual unsatisfactory, and we may begin to long for our utopias (the magical days of childhood or a heavenly kingdom beyond). This presents deep and complex educational challenges. Providing experiences to "help our learners feel the wonder of the earth" is impotent when provided a contrasting lesson with such potent veto power. We suggest that learners suffering from sudden death need to be given the time to process these unresolved experiences, and that their apparent neglect to either care for or appreciate nature is a symptom whose cause actually has little to do with "environmental issues"

our worlds, the reconstruction of one's sense of self and of the world indeed seem to be the grieving and readjustment to loss.

¹⁴ See Klein (2007) exposition of how capitalism exploits trauma. Whilst she does not (as far as we know) consider the particular linkages between environmental-crisis induced terror and the exploitation of vulnerability, this seems an analogical extension of her argument.

traditionally conceived. This implies that the educator's domain must cross over in some ways with that of the therapist, which is messy in our segregated professional lives, but not to be dismissed on that account.

Some learners may have already experienced the trauma of sudden death of a loved one or place. Others surely will. While there is often little 'educative' about these experiences (in fact, because of the sustained grief they invoke they are more likely to be miseducative in a Deweyan sense¹⁵), there are educative things that educators can do to help soften the edge. Often, creating a space where people can talk about their pains and fears (or not) in safety is itself already a significant and meaningful educational intervention. The process of articulating feelings often transforms them and is therefore potentially an important part of processing past trauma but also of dealing with the fear and anxiety of the unknown ahead. On the other hand, the social context of this articulation can generate not only a deepened social bond, but a feeling like "we are all in this together" which provides a slight antidote to the loneliness characteristically swirling about in either the memory or prospects of sudden death. These activities may seem minor, but practicing helps normalize them and this is crucial in societies burdened with social habits that silence those in pain. Although we cannot hope to heal such grief (it often stays with us in some way for the rest of our life, as that limp "you learn to dance with"¹⁶) we can minimize the extent to which it suffocates life and constricts our capacity to love and revere deeply a world that is sometimes devastatingly impermanent. And it is this quality that we need more than ever.

One's own mortality

Terror management theory (TMT), mentioned in the introduction, is not primarily about the death of others. As an approach to social psychology rooted in existentialist theory (such as Heidegger, 1962, and more specifically Becker, 1973), TMT has focused on the anxiety an individual faces confronted with their *own* mortality, and the strategies employed to evade this emotional distress. For Heidegger, common ways of speaking either evade death entirely or objectify it so that it becomes a generic impersonal topic and is not experienced as an impending fact. This leads to a safe but inauthentic being-towards-death. However, for Heidegger, death also offers the chance for an authentic way of being. This is because when we confront the imminent possibility that our being will *not* be ("the possibility of the impossibility of any existence at all" (262)), our being is not taken as an irrevocable given but we instead experientially grasp that we may either exist—or not. Death is not the opposite of life but frames and gives meaning to life, as it is intrinsically part of the lived experience of a conscious being¹⁷.

¹⁵ How Deweyan, for example, is Walter Benjamin's observation: "[w]as it not noticeable at the end of the war that men returned from the battle-field grown silent—not richer, but poorer in communicable experience?" (2016).

¹⁶ This image is widely attributed to an article by Ann Lamott that is not currently accessible online.

¹⁷ For Heidegger, "Dasein" is the technical term for this sort of conscious being, a being for whom their own being is a question.

As beings that project ourselves into the future, we are filled with the sense of possibility, but knowing that this very openness towards the future will be annihilated by an end leaves us filled with anxiety, which we seek to relieve by distancing ourselves from this felt experience. However, for Heidegger, facing this anxiety has its own existential dividend because an important sort of freedom comes out of it. This emerges because one's own death is one's unique personal event and so experiencing being-towards-death brings us into direct contact with the particularity of our own existence. Generic social strategies that objectify death prevent us from experiencing this authenticity, and give us a false sense of freedom, but death offers the possibility of unveiling this illusion.

Although Becker was less optimistic about the type of freedom that Heidegger promised would come about through an authentic contemplation of mortality, he also spent considerable time exploring the different ways in which we evade experiencing being-towards-death. Becker conceived of culture as something like a giant and elaborate Rube Goldberg machine (our metaphor, not his), wherein people contrive evermore intricate symbolic and physical apparatus to hide the experience of their own death from themselves. He also argued that many wars were waged in defense of particular immortality conceptions (like religion and other cultural tropes). TMT develops some of Becker's observations into testable psychological hypotheses.

From one perspective, care for the self and the planet may be evaded precisely because they challenge our daily operating assumptions that are based on a sense of personal immortality. Eating unhealthily and not exercising assert the irrelevance of death in one's routine. In this way, they may be seen as psychological defenses against death. The same might be said for the general neglect we witness in taking seriously the ecological crisis: if we engaged in the radical transformations required to bring human culture into sustainable relationship with the biosphere, the extent of the changes would only serve to remind us of the extent of the problem. Similarly, other pedagogical fixes such as *ad hoc* tinkering to existing structures (like adding a unit on sustainability into existing curriculum) need critical examination, as they can tranquilize any sense of impending doom rather than catalyze energy towards action. One might say, adapting Heidegger, that we are behaving inauthentically with respect to our ecological mortality and will continue to do so until we confront our being-towards-ecological-crisis directly and experientially¹⁸. Part of our work as educators might therefore be to disable the main ways in which people flee from experiencing their personal mortality directly. The two main strategies identified in TMT (falling back on dominant cultural norms and seeking self-esteem garnering experiences) can either be rerouted towards ecological ends or challenged altogether. For an example of the latter, we might help to remind people that the often sought after surrogate immortality in the secular age (i.e. cultural immortality) is itself at risk as well. So, while Banksy

¹⁸ It is not suggested that these two cases are directly analogous. In particular, Heidegger's dichotomy between the free individual being-towards-death and the inauthenticity of the distracting "herd" breaks down when the threat is a collective one. A second difference is (hopefully) that ecological death is avoidable whereas individual death is not.

tells us that we all die twice, once when our bodies perish and a second time when our name is uttered for the last time, Herman Feifel reminds us “that with the advent of the H-bomb [conveniently also serving as an appropriate acronym for the current state of affairs], which can provide all of us with a common epitaph, even our concept of social immortality is becoming a thin reed” (1977, p. 6).

Many grieve the loss of the natural world in a way that actually evades thoughts of personal destruction. We grieve with the assumption that we will continue to live. But the mortality problem we face concerns the increasingly real possibility that chain reactions have already been set off, and our own fates now too are written on the wall. Over a century ago, and in response to insights in cosmology, philosopher Bertrand Russell (1903) wrote:

all the labours of the ages, all the devotion, all the inspiration, all the noonday brightness of human genius, are destined to extinction in the vast death of the solar system, and that the whole temple of Man's achievement must inevitably be buried beneath the debris of a universe in ruins.

This threat no longer dethrones our species in a gloomy fate a billion years hence, it is rather part of the cyclone sweeping up our current generations, and to which we may stand powerless and exposed. Our mourning the loss of other species and places cannot simply perpetuate a human-nature dualism that helps us manage our terror. The suggestion is not that we do not find a place for such grief work, but rather that it not replace the existential dimensions of thinking about our own death as a result of environmental destruction, and perhaps the importance that this perspective might play in healing the impervious dichotomies that have so far proved resilient against attack. Environmental educators often seek to decenter or expand humans' circle of concern beyond the self, recognising self-centeredness as implicated ecologically destructive behaviour. This may be so, but it is also likely rather the problem is more about what *kind* of centering we are engaged in. Because we share such strong continuities with the natural world, we are called upon pedagogically to make time to contemplate the fact of our own personal mortality in our practice. One of us sometimes engages in an activity borrowed from Seed et al. (2007), which has people hold hands, look into each other's eyes, and contemplate silently the fact that the other will die from an 'environmental' disease, like cancer. After the initial uncomfortability of staring into each other's eyes is worked through, this is usually a profound experience that simultaneously exposes vulnerability and strengthens empathy. A variation of this activity can have students sit silently for ten minutes and contemplate the fact that they themselves will die. So simple, but again so alien to the lessons we normally encounter in schools. Followed by a reflective discussion, this is also a powerful way to shake off distractions, while building trusting and communicative relations as well.

On the other hand, some learners may be already gravely ill or have had near-death experiences that have profoundly transformed their experience of life. Carel (2016) argues that illness is being-towards-death in its “most intense form” (p. 150). As such, sickness has an important pedagogical function in fracturing the lockhold that death-evading apparati have on life. It also might mean that those who have been or currently are sick may be important teachers. Because they are unavoidably faced with finitude in a way that many people more easily deny, they are often on the other side of a crucial psychological bump, rich with sustainability implications. While being-towards-death often wears the zest out of one’s life, some people approach their condition with renewed gusto. It is important for them to share these perspectives, and how their being-towards-death leads them to work with and for life with deep love and passion. It is also important to understand how priorities are metamorphosed through these experiences. One of us (Ramsey) remembers how her mother immediately quit her job and spent more ‘quality time’ with her friends and family once doctors had spotted her bones pocked with metastasized cancer. How might each of us, individually and collectively, reconstruct our lives if handed a diagnosis? How might we learn to see the ecological crisis as a diagnosis? And how might our ‘elders’ in this regard help guide us towards a healthy relationship with our own mortality?

Pedagogy of life and death

Following Freudian psychoanalyst Otto Rank, Ernest Becker (1973) cautions the therapeutic community against indiscriminately helping patients reveal their ‘true selves’ by exposing the meaningless of their daily projects and motivations. He argued that our daily attempts to feel like our lives are significant keep in check the existential neuroses imminent for a species that knows it, and all those around it, will die. However, trite, these are necessary illusions. But Becker was also aware of what this implied: destruction is not the craft of madmen, but rather “‘normal, average men’ who, like locusts, have laid waste to the world in order to forget themselves” (p. 187). In this paper, we have rejected this presumption, and argued that facing the death of ourselves, our loved ones, and the natural world, are linked and linkable in various ways, and that sustainability will not be possible without a pedagogy forging, nurturing, and supporting such linkages.

But the question arises: if becoming sustainable requires facing death more honestly and directly, it also involves shedding those necessary illusions we erect between our fragile consciousness and impending doom. Is sustainability, then, possible without neurosis, -and if so, is that sustainable? It seems that this is the conclusion Becker would like us to draw, and yet we would like to resist the temptation of this logic. We do not believe that most people will so easily or permanently shed their necessary illusions. Even when confronted with the starkness of our precarious mortality and even if our distractions are temporarily unveiled, the emotional intensity of such a state ensures that our projects, familiarities, hopes, and creature comforts flood back in. Very rare is the soul who can dwell in existential angst by day and not watch Netflix at night (so

to speak). Becker acknowledges this metaphorically when he writes that “the sun distracts our attention, always baking the blood dry, making things grow over it, and with its warmth giving hope that comes with the organism’s comfort and expansiveness” (p. 283). And because depression is correlated with apathy, this is a *happy fact* for sustainability too. The paradox suggested is that some destructive distractions may be necessary to avoid some of the worst consequences of our destructive trajectory. But where is the balance, and how might we find it?

How to teach, learn, support, and grow in ways that can foster a healthful relationship between destructive distraction from, and destructive engagement in, the terrors of existence? With the globalizing society committed to distraction, and buttressed by the greed of consumerist capitalism, we can speak generally and advocate for the urgent need for more engagement with experiences of mortality. But the pedagogy of life and death cannot be a ‘one size fits all’ adjustment. For this reason, it is also something that cannot be the sole responsibility of the professional educator who is given class sizes and responsibilities that lend themselves to standardized approaches instead of relational transactions. However, because each of us is an informal educator (and an informal student), we are all able to responsively reconstruct the ways we engage with this topic in our daily lives. And much of the most important work that lies ahead may well consist in fostering safe and supporting relationships where we can work through pain when called to, and that we may experience the precious joy of existence too when we need to.

Exploring death through arts education

We close this paper with a discussion of the arts, which hold promise for a pedagogy of death. The great tales in literature show how pleasure and pain, joy and sorrow, entwine in meaningful life. The setting of a sun, caught in the painter’s hand, reveals the glory of an “end.” Examples are too plentiful for enumeration¹⁹. More particularly, the “environmental humanities” have taken up telling stories and exploring other literary forms to help humans address, understand, communicate, and transform the global disruptions and mass extinctions underway (ex. van Dooren, 2014; Bird Rose 2011). We situate this paper in that context too.

However, beyond mere *content*, the *structure* of all arts are intrinsically about the dialectic of life and death in a more fundamental way. A delicate melody, perishing as soon as it comes into existence plays with the passing of time, is a constant reminder that beauty and creation and destruction are in intimate partnership. Birthing and dying are suffused into temporality, as the present ever emerges and ever recedes. Words have been used to exalt or execrate this partnership, though none easily fit. In Lorca’s (1988) seminal lecture on the experience of *duende*, an awareness of death permeates art forms “that are born, die, and open

¹⁹ In the final editing stages of this paper, it came to our attention that David Greenwood has been exploring literature as a way of engaging with death in environmental education (Greenwood & McKee (*in press*)).

their contours against [the] present.” In the delicate beauty of the artistic process, the emergence of the new, with all its possibilities and hopefulness, is simultaneously the ending of that from which it has emerged. “The bud was opened to let out the rose,” Southwell put it centuries ago. In this way, art can heighten our awareness of an essential aspect of the nature of time itself: that the passage of time is the ongoing perishing and rebirth of the world.²⁰ We catch something fleeting and vulnerable in the crack of a singer’s voice, and even as she twists out new melodies the music has a pervasive nostalgic quality. Temporality characterizes artistic processes, all of which develop through the process of “passing away”, and therefore all in some way are “musical.” The musicality of all art is the art of time. It relies on, depends upon, and accentuates our conscious awareness of time’s structure. It is in this musicality that we can “hear death sing” (Zwicky, 2005). And what is that? That every event, every thing, every being, is born only to slip away. That time itself is at once the giver and the taker away. That “enduring” or “sustaining” means to be continually reborn through the perishing. Above all, such art draws the human heart deep into the heart of the world itself, a heart that beats hope and melancholy in its every throb. We may no longer be in an era where lofty metaphysical proclamations seems tenable, the epistemology police (as Latour (2004) would call it) were long ago unleashed and still cast doubt upon every relation between humans and the vast otherness of the more-than-human world. But art doesn’t care. Art re-minds of decay, of death, of creation, of change, of irrecoverability, of the eternal fact that what was has now eternally disappeared, whether or not our conceptual schemes admit the fact that the world “is” like this or not.

But the educator needs to consider how to avoid mere aestheticisation. If we allow ourselves to acknowledge and feel the beautifully ugly unity of life and death only in aesthetic contexts, we risk sequestering our emotional development away from actual conditions. As William James (1890) noted, we cry at the homeless man’s plight in the theatre but are numb as we walk past him on the street. This is because art can sanction the full experience of the human spirit in a context without real consequences. According to Aristotle (1984), in art sufficient detachment from our lives offers catharsis, so it can draw out feelings below the surface and release them in a safe, perhaps aseptic, way. This is why we crave pain, horror, and tears in the story but resist them otherwise²¹. The pedagogical value of art is in this context contingent upon its capacity to either engage or disengage the one experiencing it from the conditions of their world. Further, no clear relationship prevails between the apparent factual truthfulness of art and its ability to assist people in responding to their worlds more authentically. Many documentaries, for example, can reveal the wonders or the tragedies currently playing out, yet do little to engage

²⁰ The soul of time can be felt in differently throughout life ways at different stages of our lives. For one of us (Beth), the passage of time was starkly felt in a doubly literal sense when she gave birth to her son and instantly became a mother, and her mother a grandmother. In a flash, it seemed as though everything had suddenly jumped forward, the spinning wheel of the world skipping to a new stage -and one with death much closer on the horizon

²¹ Discussions since Hume (1874) have explored the reason behind the so-called “paradox of tragedy,” the contradiction between the fact that humans avoid negative emotions and yet seek out negative experiences in art such as tragedies.

the watcher in the issue beyond providing the experience that they have felt something strongly with respect to it. On the other hand, some fairly abstract aesthetic experience may continue to haunt one's life, informing and re-informing our capacity to feel and see things anew.

Summary

The continuation of a rich and viable biosphere seems to depend on us coming to terms with the imminent ending of all we might wish to remain eternal. A deeply existential dimension to sustainability goes well beyond the teaching of alternative knowledge, worldviews, or values, which can be supported through exploring impermanence and death in the natural world and in personal relationships. While only just touched upon here, in our view, each can enrich the other. How might we become more mature in dealing with our own mortality and that of our human peers through encountering death in the natural world? And how can we stop hoodwinking ourselves about ecological destruction through by averting the urge to flee the experience of mortality in our personal and social relationships? How, as educators, might we facilitate the scaffolding between these arbitrarily separated worlds?

References

Aristotle, 1984. *Poetics*, in *The Complete Works of Aristotle*, Volumes I and II, J. Barnes (ed.), Princeton: Princeton University Press.

Arndt, J., Solomon, S., Kasser, T., & Sheldon, K.M. 2004. "The Urge to Splurge: A Terror Management Account of Materialism and Consumer Behavior." *Journal of Consumer Psychology* 14(3), 198-212.

Becker, E. 1975. *Escape from evil*. New York: Free Press.

Becker, E. 1973. *The denial of death*. New York: Simon and Schuster.

Benjamin, W. 2016. *The storyteller*. New York: Verso Books.

Bird Rose, D. (2011). *Wild dog dreaming: Love and extinction*. Charlottesville, VA: University of Virginia Press.

Carel, H. 2016. *Phenomenology of illness*. Oxford, UK: Oxford University Press.

Chivian, E. and A. Bernstein (eds.) 2008. *Sustaining life: How human health depends on biodiversity*. Center for Health and the Global Environment. Oxford University Press, New York.

Dewey, J. 1916. *Democracy and education*. New York: MacMillan.

FAO 2015. FAO assessment of forests and carbon stocks, 1990-2015. Retrieved from <http://www.fao.org/3/a-i4470e.pdf> on November 5, 2017.

Gagliano, M., Vyazovskiy, V.V., Borbe'ly, A., Grimonprez, M., & Depczynski, M. 2016. "Learning by association in plants." *Nature Scientific Reports* 38427(6), 1-9.

Gorer, G. 1965. *Death, grief and mourning in contemporary Britain*. London, UK: Tavistok.

Greenberg, J., Solomon, S. & Pyszczynski, T. 1997. "Terror management theory of self-esteem and cultural worldviews: Empirical assessments and conceptual refinements." In: Zanna, M., ed. *Advances in Experimental Social Psychology* 29, 61 – 139. Academic Press, San Diego, CA.

Greenwood, D. & McKee, M (*in press*). "Thanatopsis: Death literacy for the living," in H. Bai and D. Chang (Eds.), *Ecological virtues*. Regina, Canada: University of Regina Press.

Gruenewald, D. 2003. "'The best of both worlds': A critical pedagogy of place." *Educational Research* 32(4), 3-12.

Feifel, H. 1977. "Death and dying in modern America." *Death Education* 1(1), 5-14.

Heidegger, M. 1962. *Being and Time*. Translated by John Macquarrie & Edward Robinson. London: SCM Press.

Heine, S.J. , Harihara, M., & Niiya, Y. 2002. "Terror management in Japan." *Asian Journal of Social Psychology* 5, 187-196

Hume, D., 1749–1751, "Of Tragedy," in *The Philosophical Works of David Hume*, vol. 3, T. H. Green and T. H. Green (eds.), London: Longman, Green.

James, W. 1890. *Principles of psychology vol.1*. New York: Henry Holt & Co.

Klein, N. 2007. *The Shock Doctrine*. London, UK: Penguin Books.

Kool, R., & Kelsey, E. (2005). "Dealing with despair: The psychological implications of environmental issues." Presented at the Third World Environmental Education Congress, Turin Italy, October 2005. Retrieved from http://elinkelseyandcompany.com/yahoo_site_admin/assets/docs/Dealing_with_Despair.160131905.pdf

- Latour, B. 2004. *Politics of nature*. Cambridge, MA: Harvard University Press.
- Lorca, G.F. 1998. *In Search of Duende* (Maurer, Christopher (Ed.)). New York: New Directions.
- McFarlane, R. 2003. *Mountains of the mind*. London, UK: Granta Publications.
- Oaks, J. & Bibeau, D.L. 2010. "Death education: Educating children for living." *The Clearing House: A Journal of Educational Strategies, Issues and Ideas* 60(9), 420-422.
- Orr, D. 1991. *Earth in mind*. Washington D.C.: Island Press.
- Parkes, C.M., & Weiss, R.S. 1983. *Recovery from bereavement*. New York: Basic Books.
- Peirce, C.S. 1893. "Evolutionary love." *The Monist* 3(1), 176-200.
- Plotnick, R.E., & McKinney, M.L. 1993. "Ecosystem organization and extinction dynamics." *PALAOIS* 8(2), 202-212.
- Russell, B. 1903. "A free man's worship." Retrieved online from <https://www3.nd.edu/~afreddos/courses/264/fmw.htm>.
- Russell, J. 2017. "'Everything has to die one day': Children's explorations of the meanings of death in animal-nature relationships." *Environmental Education Research* 23(1), 75-90.
- Sbrocchi, S.L. 2007. *Remembering place: Domicide and a childhood home*. Big Tannock Island, Canada: Backalong Books.
- Seed, J., Macy, J., Fleming, P., & Naess, A. 2007. *Thinking like a mountain: Towards a council of all beings*. Gabriola Island, BC, Canada: New Society Publishers.
- Sepkoski, J.J. 1989. "Periodicity of extinction and the problem of catastrophism in the history of life." *Journal of the Geological Society, London* 146. 7-19.
- Shepard, P. (1973). *The tender carnivore and the sacred game*. Athens, GA: University of Georgia Press.
- Sobel, D. 2004. *Place-based education: Connecting classrooms and communities*. Northampton, MA: Orion Society.
- Sobel, D. 1995. "Beyond ecophobia: Reclaiming the heart in nature education." *Orion*.

Solomon, S.; Greenberg, J.; & Pyszczynski, T. 2004. Lethal consumption: Death-denying materialism. In: T. Kasser & A. Kanner (Eds.) *Psychology and consumer culture: The struggle for a good life in a materialistic world* (pp. 127-146). Washington, DC: American Psychological Association.

Solomon, S.; Greenberg, J.; Pyszczynski, T. 1991. A terror management theory of social behavior: The psychological functions of self-esteem and cultural worldviews". *Advances in Experimental Social Psychology*. 24 (93): 159.

Tam, K.-P., Chiu, C.-Y., & Lau, I.Y.-M. 2007. "Terror management among Chinese: Worldview defence and intergroup bias in resource allocation." *Asian Journal of Social Psychology* 10(2), 93-102.

Trewavas, A. 2014. *Plant behaviour and intelligence*. Oxford, UK: University of Oxford Press.

van Dooren, T. (2014). *Flight ways: Life and loss at the edge of extinction*. New York: Columbia University Press.

Wass, H. 2004. "A perspective on the current state of death education." *Death Studies* 28(4), 289-308.

Wilson, E.O. 1984. *Biophilia*. Cambridge, MA: Harvard University Press.