

“Fatties Cause Global Warming”: Fat Pedagogy and Environmental Education

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Abstract

Environmental education is one site of many that reinforces dominant obesity discourses and weight-based oppression through privileging fit, able bodies. Using personal narratives and insights from the nascent field of fat studies, we offer a critical analysis of obesity discourse in environmental writing in general and environmental education in particular. We argue that intersectional analyses of embodiment, abjection, and crisis rhetoric could be generative for both environmental education and fat studies.

Resumé

L'éducation environnementale est l'un des nombreux domaines qui fortifient les perspectives de l'obésité dominantes et l'opposition au surpoids en favorisant un corps sain et agile. En se servant de la narration et de l'expérience personnelle découlant de la sphère naissante des études sur le surpoids, nous présentons une analyse critique de la perspective de l'obésité dans les publications environnementales en général et en éducation environnementale en particulier. Nous avançons que les analyses multidimensionnelles de la personnification, de l'abjection et de la rhétorique de la crise pourraient dégager des enseignements intéressants tant pour l'éducation environnementale que pour les études sur le surpoids.

Keywords: environmental education, outdoor education, humane education, fat pedagogy, obesity discourse, crisis discourse, embodiment, intersectional analyses

Introduction

A newspaper headline blares, “Fatties Cause Global Warming” (Jackson, 2009). Respected environmentalists take up the charge: “Fat People Causing Climate Change, says Sir Jonathan Porritt” (Gray, 2009). To be fair, a few news writers such as Gorrie (2009) criticized the research that was the source of these headlines, but most of the press appeared to gleefully endorse the notion that fat people are responsible for climate change. That fat people are now being demonized in environmental circles would come as no surprise to those writing about fat shaming and stigmatization (Gard & Wright, 2005). Obesity discourse is becoming more common not only in environmental communications in general, but also in environmental education.

In Russell and Fawcett's (2013) introduction to the section of the *International Handbook of Research on Environmental Education* devoted to marginalized voices in the field, they note the sparse to nonexistent environmental education research related to class, disability, sexuality, and body size. Environmental education is not merely silent about body size, but actually reinforces dominant obesity discourses by privileging "fit" and "able" bodies. Taking inspiration from fat studies and feminist poststructuralism, we critically analyze the (re)production of privileged bodies in environmental education and point to ways in which the field could address such oppression. Following Newbery (2003), we wish to draw attention to how environmental education continues to "divide groups of people into strong/able/male and Other" (p. 205). We need to consider how bodies are turned into political sites of privilege and oppression through (self) regulation, disciplining, and degradation in mainstream Western society in general and in environmental education in particular. Further, we need to understand the culture of internalized oppression and commit to anti-oppressive practices that disrupt obesity intolerance and discrimination (Boling, 2011). As scholars in environmental education, physical education, and health promotion, we argue that one place to start understanding this culture of internalized oppression is to understand how we ourselves have (re)produced or resisted weight-based oppression. We thus will begin by reflecting upon our own (dis)embodied experiences in environmental education and related fields.

(Dis)Embodied Encounters in Environmental Education

We are four White women of different shapes and sizes. In our roles as student, teacher, and researcher and in our sport, recreation, and outdoor pursuits, we have struggled with body image and size privilege. Recognizing the power of story, we begin by sharing our own personal narratives, weaving in academic insights that have helped us understand how each of us has been inscribed by size privilege and dominant obesity discourse.

Hannah: It is as though fat does not exist in outdoor education. In the fall term, I was a teaching assistant for a BEd outdoor education course and a student in an MEd outdoor education course; in both, there was not a single fat participant and the topic of fostering an inclusive environment for all body sizes was never discussed. The complete lack of, and disregard for, size diversity perpetuates an assumption that the outdoors is a place only for bodies deemed fit and able. Other assumptions were also in play, including that participation in outdoor activities automatically means one is fit and that students interested in preserving the environment will eat only healthy organic foods. I had a classmate tell me that I could not be "outdoorsy" because I did not "look the part" and that my food choices did not support a "natural" lifestyle. That is when I realized that my own moments of feeling targeted could be one reason for the lack of fat representation within the field. It also reminds

me of my elementary and secondary school physical education experiences, where teachers who used obesity discourse also tended to cultivate a jock culture, with students ranked according to their athletic ability (Sykes & McPhail, 2007). In high school, I was fat and developed serious self-hatred as teachers used numbers (i.e., grades and weight) to describe my ability to perform physically. Essentially, I was taught that my weight was a measure of my worth. I started to judge myself solely according to my weight, and it became an obsession leading to depression and more overeating. I opted out of outdoor activities because I thought I was too big to participate. While I loved canoeing, I started avoiding the activity because I was afraid I might slow everyone else down or sink the boat. I enjoyed climbing trees but was taunted that I would get stuck in a tree so I stopped. The negative experiences outweighed my passion for the outdoors and I only returned to outdoor activities when I finally was able to refuse to allow others to choose “appropriate” interests for me. If weight-based oppression continues within education, I fear other youth may avoid the outdoors as I did, and then miss opportunities to foster appreciation of, and connection to, the natural world.

Teresa: As a privileged, slim, athletic teenager and young adult, I unconsciously adhered to the moral and corporeal obligations of attaining/maintaining the “ideal” body yet resisted the dominant culture of femininity’s “inscriptions of weakness” by seeking a “strong body” (Evans, Davies, & Rich, 2010). I wanted to be slim as a stick and as strong as a man. As such, I viewed my embodied self within the biomedical perspective of “body-as-machine” (Gleyse, 2012). Anything could be fixed and achieved with a few more grueling workouts and the occasional purging after meals. I measured and monitored everything, my weight, workout distance, and time, and also my being against what were, at times, unachievable standards. If a guy can portage a canoe, so could I plus run the portage at the same time. If a guy can carry a heavy pack, I too could carry more than half my body weight up 1,800 feet on a Friday night. Unknowingly at the time, I was “enacting a particular masculinized performance of gender” (Newbery, 2003, p. 211) and embraced “technologies of the self,” primarily self-surveillance (Foucault, 1977), to achieve/maintain thinness. Embodying neoliberal agendas of scientism (Andrews, 2008) and healthism (Newman, Albright, & King-White, 2011) as a student in kinesiology, my body was further schooled through anatomy and physiology, biomechanics, motor development, psychology, and nutrition. I realized I had become a “functionary of the hegemony” (Fernandez-Balboa & Muros, 2006, p. 208) in physical education, myself fostering scientism and healthism.

Erin: Growing up, I was active and involved in many different activities. I particularly loved sports. In fact, I was told that someday I would be a great athlete and I believed it, so much so that when I began to achieve national and international acclaim, I not only accepted but embraced the regulation, disciplining, degradation, and monitoring of my body. I endured public weigh-ins where standing on the scale became a measure of my value and worth as a person and where I was at times

celebrated and at other times shamed. Everything I did and everything I was became measured, objectified, and individualized. Nutritionists calculated my calories-in-calories-burned ratio and physiologists calculated my power-to-weight ratio (the amount of power I was able to generate per pound of body weight). These numbers were then used to assert my potential success and/or failure as a person. Worse yet was how coaches employed these numbers and expressed them through animal characterizations, likening my large body size to an elephant, hippo, or whale. Not only did this rhetoric of anti-fat sentiment of animality work towards devaluing me as a human being, it devalued non-human animals as well (Hardy, 2011). It wasn't until after retiring from sport and beginning my BEd, majoring in physical education and environmental education, that I began to feel uncomfortable with the dominant discourses and ideologies perpetuated in both fields. I saw a privileging of fit, thin, strong, trainable, and able bodies (Andrews, 2008) and a marginalization of all other body types. I came to understand that no body is immune to weight-based oppression. With 13% body fat I was by all accounts underweight, but within the context of competitive sport I was deemed to be fat.

Connie: *I have been fat all my life. I look back now at photographs and marvel at the fact that I was usually only carrying a few extra pounds more than most, but those pounds mattered in a fatphobic culture. Being fat became an unwanted but integral part of my identity, with profound impacts. One coping mechanism was to emphasize my intellect over my body, which served me quite well in school. (Mind you, it got a bit tricky in grad school when I started reading ecofeminist critiques of Cartesian dualism and calls for embodied knowing, yet was not so keen to reclaim this particular body.) Another was to drop phys ed as soon as I could, after Grade 9. While I enjoyed team sports and was pretty good at them given I was a "tomboy" and taught how not to "throw like a girl" (so much to deconstruct, so little space), I despised track and field, gymnastics, and the annual federally mandated "Participation" activities that included public weigh-ins. Some of my phys ed teachers and coaches engaged in what would now be called "fat bullying." My experience of high school phys ed, alas, was not and is not unique (Sykes & McPhail, 2007). Years later, during graduate studies, I became interested in the role of nature experience in the social construction of nature, which led me to outdoor education. I started to attend conferences in the field and again felt that old shame as I found myself surrounded by "hard bodies" in snug outdoor gear. As I began to publish and people came to know me from my writing alone, things became more awkward as I often discerned surprise on the faces of people meeting me for the first time; my body simply did not meet their expectations. This still happens. Imagine my delight, then, when I attended a recent critical animal studies conference and Kristen A. Hardy (2011) gave a brilliant paper making connections between animal studies and fat studies. She began by stating that she was vegan, as were most conference attendees, but that many in animal advocacy circles found that hard to believe because she was fat. While I had been reading in fat studies and written my first words about obesity*

discourse by that time, I nonetheless was encouraged to find another scholar working in similar territory.

We have shared these narratives to personally contextualize our assertion that environmental education does indeed need to engage with fat studies to disrupt weight-based oppression in our field as well as to add another layer to intersectional analyses and to further complexify existing writing on embodiment. We now turn to a larger theoretical context, drawing in particular on fat studies and critical health and physical education literature.

Obesity Discourse and Fat Theory

Public health messages about physical activity and fitness permeate Western society. “Dominant obesity discourse” has been described as a framework of thought, talk, and action concerning the body where a “size matters” message fuels unwholesome narratives that suppress discussion of other dimensions of health (Evans, Rich, Davies, & Allwood, 2008; Gard & Wright, 2005). Erin and Teresa’s narratives attest to how this discourse impacts everyone, not just those who would commonly be deemed fat. The Western biomedical model of health objectifies and classifies bodies in terms of weight: underweight, normal weight, overweight, and obese. In recent years, obesity discourse, why it matters, and who it benefits has come under scrutiny (Brownell, Puhl, Schwartz, & Rudd, 2005).

“Obesity” has been a hot topic in both popular and scholarly venues since the late 1990s. In 1974 in *The Lancet*, it was described as “the most important nutritional disease in the affluent countries of the world” (Anon, p. 17). Since then, the rhetoric has grown increasingly hyperbolic: the “global epidemic” of “globesity” (WHO, 2012) is “the next tobacco” (Parloff, 2003, p. 50), “the terror within” and “a threat that is every bit as real to America as weapons of mass destruction” (Carmona, 2003, para. 68), a “time bomb” (Campos, Saguy, Ernsberger, Oliver, & Gaesser, 2006, p. 58), and “as big a threat as global warming and bird flu” (Anon, 2006, para. 2). The obesity “crisis” has been fueled by a vast abundance of biomedical literature on the topic, calls for public health interventions, and exponentially increasing media attention. Gard (2011) poignantly describes the current obesity obsession: “The obesity research community has managed to convince a significant percentage of the population that they should think and worry a great deal about their own and other people’s body weight” (p. 5).

Obesity discourse has turned fatness into a disease and a pandemic upon which we all must wage war. It is framed within neoliberal rationalities of self-governance and personal responsibility rhetoric, i.e., as an individual problem needing a personal solution (Campos et al., 2006; Gard & Wright, 2005). As such, fat people, particularly women, are demonized and characterized as weak, lazy, and indulgent (Bordo, 2003). As Hannah and Connie’s narratives demonstrate, to not acquiesce to the moral and corporeal obligation to attain the “ideal”

body is to invite social sanctions including weight-based bullying, harassment, stigmatization, discrimination, and even violence (Evans, Davies, & Rich, 2010). A tool that has been adopted and promoted as the “instrument of choice” to measure fatness is the Body Mass Index (BMI), a ratio of weight to height that classifies people into distinct categories of weight (WHO, 2000). Although the BMI is rife with flaws and highly contested (Anderson, 2012; Campos, 2004), it is ubiquitous and individuals are coerced to conform to society’s “normal” weight classification. Notably, more pressure is placed on those categorized overweight or obese than underweight. A heuristic proxy measure for fatness, the BMI is inexpensive, easy to use, and BMI calculators are widespread on the Internet, making it an ideal tool to “normalize” bodies (following Foucault, 1977).

A growing number of scholars, particularly those working in fat studies, have begun to challenge dominant obesity discourse, claiming that it ignores the historical, cultural, social, and political roots of obesity and perpetuates contested “facts” such as body fat being unhealthy, that more people today are obese than in the past, and that today’s youth will have shorter lifespans than their elders because of obesity (Gard & Wright, 2005; Rail, Holmes, & Murray, 2010). Increasingly, weight obsession is seen to have its roots in inequalities based on gender, sexuality, race, class, and ability; for this reason, obesity has been described as a social justice issue. As Aphramor (2005) states, “to treat it as a fixed, biologically specific parameter is to perpetuate pseudo-scientific rationalizations of fundamentally social constructs” (p. 326). Encouragingly, Gard (2011) suggests we may now have turned a corner in obesity epidemic discourse and may be near the end of its “unchecked rhetorical dominance” (p. 10); indeed, critical writing about fatness is increasingly appearing in Canadian popular media (e.g., Anon, 2013; Ashenburg, 2013).

“Fatties Cause Global Warming”

At the same time that obesity discourse is coming under increasing scrutiny, we have noticed an increase in such discourse in environmental circles. Below, we review some of the recent literature that blames fat people for environmental problems. We have chosen to share the titles of the books and articles as well as to quote liberally from the sources rather than paraphrase to illustrate the nature of the discourse.

In the article, “Population Adiposity and Climate Change” that led to the “Fatties Cause Global Warming” newspaper headline mentioned above, Edwards and Roberts (2009) argue that obesity is a grave environmental problem. In their epidemiological model, they calculate that overweight people require 19% more food energy than “normal” people. They also assert that “[w]alking is an effort for heavier people and therefore some reluctance to walk would not be surprising.... one might reasonably expect that heavier people would replace walking trips with motorized transport” (p. 1138); they also hypothesize that

overweight people own bigger cars that use more fuel. As well, the authors argue that, “additional jet fuel [is] required to transport the additional weight ... resulting in a further 2MT of CO₂ emissions” (p. 1139). They conclude that fatness “should be recognized as an environmental problem” (p. 1139) and they recommend that “maintenance of a healthy BMI has important environmental benefits in terms of lower [greenhouse gas] emissions” (p. 1140).

The editor of the *International Journal of Epidemiology* in which this article was published was so impressed with this study that he led off his editorial with the following: “The world is getting fatter and apart from the usual reasons for being worried about this—vast increases in diabetes and cardiovascular diseases—Edwards and Roberts have given us a new one” (Ebrahim, 2009, p. 895). He also chose to reprint *The Sun*’s “Fatties Cause Global Warming” front page in his editorial, not to critique the newspaper for sensationalism or fat shaming, but to use it to illustrate one of his own points. Powles (2009), in his response paper in the same issue, also agreed that the research was important and was pleased that the authors were directing attention to diet, particularly meat consumption.¹

Many environmental and science reporters jumped on this research. For example, Jackson (2009) wrote, “Moving about in a heavy body is like driving in a gas guzzler” (para. 1) and “scientists say providing extra grub for them to guzzle adds to carbon emissions that heat up the world, melting polar ice caps, raising sea levels and killing rain forests” (para. 1). As far as we could tell, these reporters did not later share the subsequent criticism of the study. Gallar (2010), for one, wrote a scathing critique of Edwards and Roberts’ research on methodological grounds and also took the authors to task for “obese stigmatization” (p. 1398):

It is unacceptable to elude the ethical consequences of this study. The fact that the authors have not even considered them is clearly offensive. Concluding that obesity worsens climate change is as absurd as defending that poverty and malnutrition help prevent this change. (p. 1398)

Butler (2010) too criticized the methodology and added, “Elite sportspeople and military recruits also consume disproportionate amounts of food and other resources, but these harder targets were not mentioned. Singling out the obese seems simplistic and discriminatory” (p. 485).² Canadian science writer Gorrie (2009) called the study “nonsense” and concluded that, “The study wouldn’t be worth comment except that, as the news coverage demonstrates, it contributes to unfair stereotyping of obese people and is yet another example of silly research that can make genuine concern about climate change seem ridiculous” (para. 1).

Despite the methodological critiques, the study has become foundational for other work claiming obesity is a threat to the environment (e.g., Egger & Swinburn, 2010; Forastiere, 2010; Goodman, Brand, & Olgivie, 2012; Gryka,

Broom, & Rolland, 2012; Porritt, 2010; Reisch & Gwozdz, 2011; Walpole et al., 2012). Reisch and Gwozdz (2011) write in the article, “Chubby Cheeks and Climate Change: Childhood Obesity as a Sustainable Development Issue,” that “the obesity epidemic is not only impairing individuals’ lives, but also societies’ sustainability” (p. 3). Walpole et al. (2012) report in the article, “The Weight of Nations,” that,

Our scenarios suggest that global trends of increasing body mass will have important resource implications and that unchecked, increasing BMI could have the same implications for world energy requirements as an extra 473 million people. Tackling population fatness may be critical to world food security and ecological sustainability. (p. 6)

Gryka, Broom, and Rolland (2012) answer yes to the question in their title, “Global Warming: Is Weight Loss a Solution?” and suggest that,

...the shift from seeing weight loss as beneficial for an individual’s health to also being beneficial for the planet may change attitudes toward healthy lifestyle. If such benefits were persuasive to governments across the world, a significant impact on global warming might be achieved as a consequence. (p. 476)

egger and Swinburn (2010), in their book, *Planet Obesity: How We’re Eating Ourselves and the Planet to Death*, examine the links between “pressing” issues of fatness, economic growth, and greenhouse gas emissions. Ignoring these, they argue, will have “serious, potentially catastrophic consequences for the worldwide population. We need to act *now* to keep ourselves and our environment healthy and happy in both the short- and long-term future” (p. 2).

Roberts and Edwards (2010) themselves expanded their study into a book, *The Energy Glut: The Politics of Fatness in an Overheating World*. In an excellent critical review, Evans (2012) asserts that, “significant portions of this book are based on anecdotes and (cultural and racial) stereotypes rather than evidence” (p. 335). She concludes,

Whilst it may be tempting to reproduce arguments that connect obesity and climate change, since fatness provides an “abject” object useful to epitomise over-consumption, the social and political realities surrounding obesity do not support this and these arguments fail to really address the political economies surrounding fatness and climate change. (p. 335)

As Evans and others have noted, the purported link between obesity and climate change is based on questionable research. Nonetheless, it initiated a cottage industry that further stigmatizes fat people.

Environmental education is not immune to obesity discourse, although mostly it is used in a throwaway line about childhood obesity being one of the dire consequences of lessening contact with nature. For Louv (2008), however, it is more than an offhand remark. In his popular *Last Child in the Woods: Saving our Children From Nature-Deficit Disorder*, Louv declares that childhood obesity

is partially caused by children spending less time playing freely in natural areas. While we too share his concern about the amount and quality of children's time outside, we nonetheless find his use of obesity discourse problematic. Mention of the obesity "epidemic" and "crisis" is sprinkled throughout and used to promote the book on the back cover and on his website. He repeats the disputed "fact" that "today's children may be the first generation of Americans since World War II to die at an earlier age than their parents" (p. 47) and declares childhood obesity "life-threatening." While obesity is not necessary for his main argument, clearly he found this discourse to be a powerful tool.

Another recent example is an article by Strife (2010) in the *Journal of Environmental Education* that is disturbing not only for its fatphobia but also its ableism and anthropocentrism. In the article, she approvingly cites a blog by Borenstein (2007) titled, "Fighting Fat and Climate Change" and a report that links "obesity mitigation strategies to climate change solutions" (p. 181). She makes the now common argument that environmental education has much to offer other social movements, adding the fight against fat to this list. She does not offer an intersectional analysis but instead reproduces problematic discourse:

Given the alarming health trends of depression, obesity, ADHD, and cognitive disabilities facing people in the United States, the implementation of EE in all forms is critical not only for the ecological health of the planet, but for the well-being of today's society. (p. 188)

Apparently, the fat, those facing mental health challenges, and people of various (dis)abilities are "alarming" and do not contribute to society. As both Hannah and Connie's narratives illustrate, fat people already feel enough shame without adding purported environmental irresponsibility to the list.

Towards a Fat Pedagogy in Environmental Education

So, what might be done to disrupt fat oppression within environmental education? Obviously, a first step is monitoring our use of obesity discourse. Do we really need to use this discourse to make our points? If we are committed to both environmental and social justice, surely reproducing oppression of any sort, including fat oppression, is problematic. Further, as Hannah and Connie's narratives illustrate, we need to critically examine our pedagogical practices to determine whether we are turning off or excluding some groups. Outdoor education and food education, in particular, are two sites where bodies deemed fit, able, and healthy likely are being privileged and thus where there may be wonderful opportunities to deconstruct these categories, embrace and engage bodies of all sizes and abilities, and disrupt fat oppression.

In addition, below we briefly describe three other areas where we speculate

that the comingling of environmental education and fat studies may be particularly generative: intersectional analyses that include fat oppression, expansion of discussions of embodiment, and critical examinations of crisis discourse.

Intersectionality

Environmental and humane educators who see environmental and social justice to be intrinsically linked often make use of intersectional analyses (e.g., Kahn & Humes, 2009; Russell, Sarick, & Kennelly, 2002). So too do those working in fat studies; obesity discourse has been shown to be sexist, heterosexist, classist, racist, and ableist (Boero, 2009; Boling, 2011; Campos et al., 2006; Evans, Davies, & Rich, 2008; Sykes, 2011; Sykes & McPhail, 2008). As one example, Boero (2009) describes how working class women, particularly women of colour, are blamed for contributing to the obesity crisis by not being home to feed their children. (Men rarely are blamed in this way.) Another good example of an intersectional analysis is Hardy's (2011) work on fat oppression in animal advocacy. She uses a People for the Ethical Treatment of Animals (PETA) ad featuring an image of a fat woman in a bikini on a beach with the tagline: "Save the whales. Lose the blubber. Go vegetarian." Hardy offers an excellent analysis of how such ads dehumanize fat people, particularly women;³ are problematic both for humans and other animals alike; and are only possible in a sexist, fatphobic, and speciesist context. A promising line of inquiry for both environmental and humane education, then, would involve drawing on discussions of dehumanization and abjection already occurring in animal studies, fat studies, and gender and sexuality studies (e.g., Braziel & LeBesco, 2001; Hardy, 2013; Sykes, 2011; Weil, 2012). Including fat oppression in intersectional analyses will add another important layer of complexity.

Embodiment

Environmental education has paid some attention to issues of embodiment. Those working at the intersection of environmental and humane education, for example, have discussed the need to acknowledge the ontological and epistemological implications of our species embodiment (Fawcett, 2013). Evans, Davies, and Rich (2009), making one of very few references to post-humanist scholarship in fat studies, argue that "the body's presence as a flesh and blood, thinking, feeling, sentient, species being ... has remained rather a shadowy presence" (p. 392). We suspect that further work at this intersection could be generative not only for environmental and humane education, but also fat studies.

We also imagine that there are rich possibilities for our teaching. For example, we have found discussing what we put *in* our bodies generative in our environmental, outdoor, health promotion, and physical education courses. Indeed, food is an excellent entrée to all sorts of interconnected issues, including

ethics (treatment of animals), social justice (food security, labour conditions), globalization (migrant workers, transport, industrialized food production), place (what grows here, 100 mile diet), and climate change (what might or might not be able to grow here, impacts of meat eating). Adding fat studies into the mix adds another important dimension. While we have only begun using fat studies in our teaching, our experiences resonate with that of Boling (2011):

...students are drawn to the topic. We live in a society that incessantly discusses size and weight, idealizing trim, toned bodies and simultaneously marketing tasty, high-caloric foods at every turn. We have bodies, we eat and diet and binge, and many of us worry about whether we have the right balance between the calories we eat and those we burn, whether we're too fat, whether we're acquiring unsightly bulges, and so on. (p. 110)

Crisis Discourse

Both environmental education and the “fight against fat” often rely on crisis discourse; critical analysis of how this discourse works in each realm could add complexity to our understanding. Epstein (2005) argues that the “constant use of the term ‘epidemic’ does more to inflame than inform. Whatever the problems with obesity, it is not a communicable disease, with the fear and pandemonium that real epidemics let loose in their wake” (p. 1367). Evans, Davies, and Rich (2008) make a sarcastic comparison to climate change crisis discourse in their critique of obesity discourse:

... faced with a crisis on the scale of global warming, piecemeal action is deemed futile. Only cradle-to-grave intervention into the actions of communities, families, parents, pupils, teachers and the practices of food producers and advertisers, in effect reaching into every aspect of our private and public lives, will correct our bad behaviours and alter the state in which we find ourselves. Nothing short of totally pedagogised societies, communities and schools in a future in which “weight” features in the mindset of everyone, everywhere, as a cradle-to-grave concern, will save us and miscreant others from dying prematurely before being globally warmed. (p. 123)

Others have noted the “moral panic” associated with obesity discourse, especially in calls to “save our children” (Campos et al., 2006; Evans, Davies, & Rich, 2008). In one recent disturbing example, Callahan (2013) argues that an “edgier strategy” of fat shaming is required to deal with this “public health crisis” and he advocates “a carefully calibrated effort of public social pressure” to ensure that fat people truly understand that “excessive weight and outright obesity are not socially acceptable” (pp. 34, 37, 40). Insightfully, Boling (2011) asks “what our widespread preoccupation with the size and shape of our bodies reveals about larger cultural anxieties” (p. 110). Following Bordo (2003), she wonders:

if we have turned our attention toward problems that seem to be within our own control (like the size and shape of our own bodies) because we feel helpless to tackle global or social problems that seem too big and complicated to have any hope of bringing about change, like the arms race, terrorism, environmental degradation, or global warming. (Boling, p. 110)

In environmental education, there also has been some attention to the potential implications of crisis discourse. Kelsey and Armstrong (2012) note the “growing concern about children’s emotional responses to ‘doom and gloom’” (p. 188) and they describe one group of environmental educators self-reporting as angry, discouraged, hopeless, alienated, and ashamed of the contradictions between their knowledge of climate change and their behaviour. Kelsey and Armstrong assert that we “need to let go of a ‘shame and blame’ approach to environmental messaging” (p. 191) and argue that “an educational movement that leaves its participants in despair, hopeless, [and] immobilized by dread ... is neither morally defensible nor likely to lead to sustainability outcomes” (p. 190). Newbery (2012) also argues that we need to come to terms with emotional responses to “difficult knowledge” although she approaches this somewhat differently:

In general, when affect arises in contexts of learning, it might better be viewed as a tell, as a volatile or unpredictable beacon pointing to an insight to explore, rather than as something to chase away or smooth over.... [E]ducators need to be prepared to help students work through their affective responses and to allow time for understandings to develop, for language to emerge from inchoate reactions. (pp. 40-41)

The ideas of Newbery and Kelsey and Armstrong deserve further attention and, we suggest, need to be held in creative tension. The four of us admit that we retain a sense of urgency when it comes to climate change, but our recent explorations have given us pause for thought.

Conclusion

Environmental education, like education in general, tends to reinforce dominant obesity discourse by privileging “fit” and “able” bodies. We do this, for example, when we marginalize fat learners and when we name obesity as one of the dire consequences of less time spent outside. There are rich opportunities for applying a fat pedagogy to environmental education, such as including fat oppression as one factor in our intersectional analyses, delving into the implications of abjection and dehumanization in our explorations of embodiment, and critically examining the save-our-children, blame-and-shame, crisis discourse associated with obesity, nature-deficit-disorder, and climate change.

We also encourage readers to reflect upon and share their own biopedagogical (Cameron et al., 2014; Harwood, 2009) experiences and practices. As our

personal narratives illustrate, this is important for *all* of us, not just those living in bodies currently deemed fat. Certainly, for the four of us, the act of writing this paper has transformed our embodied selves.

Hannah: Being considered fat most of my life, I never objected to or thought critically about my exclusion from activities; I simply accepted it. In my third year of university, I gave in to society's expectations and lost a significant amount of weight over a two-year span. I was proud of this weight loss and became addicted to the positive attention I was receiving for "accomplishing such a feat." I enthusiastically continued losing weight using the standard "eat right and be active" strategy, despite feeling nauseous if I stood up too quickly. I started my MEd with the intention of conducting thesis research related to promoting health and preventing obesity in schools. It is now apparent to me how I was naive to the larger systemic forces at play. After encountering fat studies for the first time in a critical pedagogy course and with subsequent reading and reflection, I realized what I had been subjecting myself to and how the education system I had so wanted to be a part of had failed me. Sharing some of my story and being involved in the development of this paper has renewed my optimism about the possibilities of education as well as given me a new focus for my thesis research: fat bullying of girls in school. My end goal is to alert other educators to the negative long-term implications of fat oppression and to develop strategies for preventing fat bullying.

Teresa: When invited to join this project I was daunted by the thought of writing a personal narrative that would publicly expose my personal and professional struggles with and against fat oppression. In the end, it was a cathartic exercise, one that confirmed our collective struggle. My journey toward (un)learning and (re)constructing my embodied self and my professional beliefs and actions began some time ago with the birth of my daughter. I threw away my bathroom scale. I wanted my daughter to have a healthy relationship with food, physical activity, and her body. To be successful, I too had to change. Undoubtedly, it is a lifelong journey with its inherent tensions and struggles as I pursue socially just pedagogies in my teacher education courses in health promotion and physical education. I am now particularly fuelled by experiences with student resistance to more critical approaches to health and physical education, primarily from students with a jock mentality who have learned the hidden curriculum all too well.

Erin: Due to the fat oppression I faced as an elite athlete, the harmful discourses I witnessed within the fields of health and physical education, and through the process of writing this paper, I now, more than ever, identify as a fat activist committed to addressing a system of weight-based oppression that would literally weigh our value as people. As a result, my doctoral research is focused on identifying teaching strategies to address discrimination based on size. I want to help create safe learning spaces for all students, regardless of size, and promote anti-bullying practices

that disrupt fat intolerance, insensitivity, and discrimination. Not only has research shown that weight-based discrimination begins in childhood, as early as three years of age (Harriger et al., 2010), but weight-based bullying is now identified as one of the most common forms of bullying in schools, more prevalent in some contexts than bullying based on race, gender, and sexual orientation, with harmful long-term consequences (Latner, O'Brien, Durso, Brinkman, & MacDonald, 2008; Puhl & Brownell, 2001). It is the time for educators to throw their weight, so to speak, into this important social justice issue.

Connie: *It has taken me a long time to have the courage to write this paper. Teresa and I have been talking about these issues since 2002 when we decided to combine and co-teach her health and physical education course and my outdoor education course. I suffered some pre-course anxiety around how students would respond to my presence; having Teresa as a thin ally helped greatly. While Teresa and I took a critical approach to both content and pedagogy, we had not yet encountered fat studies. At the 2006 AERA conference, I heard about fat theory for the first time in Heather Sykes' presentation. In a generative conversation afterwards, she told me more about her research (see Sykes, 2011). From then on, I kept telling my friends that I was going to write a paper on fat theory and environmental education, but never quite got round to it, partially because the thought of it made me feel vulnerable. Thankfully, things have shifted for me. I am older and more comfortable with my body now and I am relieved to find that the "facts" I had internalized despite them being untrue in my case (e.g., fat people eat more, are less active, are less healthy) are contested in the research literature. Fat studies is becoming increasingly popular and more interdisciplinary, fat oppression is being discussed in mainstream media, and new scholars like Erin and Hannah are conducting research in this area. There are more of us now, in all shapes and sizes, working in a variety of fields, naming the oppression that we have experienced or witnessed. How exciting!*

We hope that our narratives and our analysis of fat oppression within the environmental movement generally, and environmental education specifically, will provoke discussion of obesity discourse, fat oppression, and size diversity in our field. Both fat studies and environmental education have much to gain through mutual engagement.

Notes

- ¹ Meat consumption has been linked to climate change (D'Silva & Webster, 2010), although most writers do not make the leap to asserting that fat people therefore must eat more meat and be particularly responsible for climate change.
- ² It is also important to note that the "fact" that fat people eat more than others has been disputed (Hoyle, 2010).
- ³ PETA has long been criticized for sexism in many of their campaigns (Glasser, 2011).

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