Response to Malin and Malmberg’s article titled *Body talk – students’ identity construction while discussing a socioscientific issue*—

The shape of our bodies and health: deconstructing the panopticon of separation towards an empowered dance *through* the world

**Abstract**  This paper initiates a forum for Malin and Malmberg’s article titled *Body talk – students’ identity construction while discussing a socioscientific issue*. Malin and Malmberg explore issues of health and body through teachers’ use of a pedagogical approach that foregrounds exploration of a socioscientific issue (SSI). This paper explores how the Panopticon of separation is embodied in the language and approaches to learning discussed and employed in Malin and Malmberg’s article. It explores the concept of empowerment as integral to transformative learning and contrasts this to autonomy. Furthermore, it examines how educators and students can learn in ways that lead to greater health and empowerment through more ecological and connected forms of language and approaches to learning. Excerpts from Malin and Malmberg’s article are juxtaposed with other perspectives as a means of generating edges, making differences apparent, and deconstructing the taken for granted both for the author and for Malin and Malmberg. A feminist, poststructural approach is employed in this work as a means of embodying the uncertainty that students and educators are consistently learning to dance through with greater empowerment, which leads to improved health.

**Keywords:** empowerment, transformative learning, health, body issues, movement practices

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Two days prior to writing this response, a teacher candidate walked into my office to dialogue. He began describing his commitment to finding ways to “empower students” (his language) and shared a story of a series of interactions between himself and a small group of middle school students. During a few 15-minute mini-lessons this candidate facilitated, he began asking students what it was that they would like to see changed about their school. What is so important to students that they would be willing to go to the school board and voice their concerns? The students’ response: they wanted energy drinks to be available on school grounds. The candidate expressed concern because he just learned he would have one remaining mini-lesson with the students rather than two. He wondered how he would have enough time to get the kids’ ideas into some form he could take forward to the school board like he had promised.

I left this conversation feeling a sense of dissonance. As I wrestled with this conversation days later, Patti Lather’s description of empowerment became relevant. Empowerment is a “process one undertakes for oneself; it is not something done ‘to’ or ‘for’ someone: “The heart of the idea of empowerment involves people coming into a sense of their own power, a new relationship with their own contexts”” (Lather 1991, p. 4, emphasis added). Is it possible, then, within the aforementioned scenario for the students to come more fully into their power by successfully working with the school board to ensure energy drinks are available in the school cafeteria?
In this manuscript, I respond to Malin and Malmberg’s article titled *Body talk – students’ identity construction while discussing a socioscientific issue*. In *Body talk*, Malin and Malmberg explore issues of health and body through teachers’ use of a pedagogical approach that foregrounds exploration of a socioscientific issue (SSI). Throughout this study, the authors describe the ways in which race, gender, and class influence students’ participation in the various discourses associated with society’s relationship to health and the body. The first time I read this piece, I was struck by the ways in which dualism and cultural assumptions at the heart of Foucault’s Panopticon (Gergen 1999) were integral to the language employed and the frames (e.g., discourses, identity, etc.) used by Malin and Malmberg to explore issues of health and body. In this response, then, I explore how these frames and the language employed limit our capacity to work with youth in ways that result in greater health and well-being. The following questions frame this response: *Is greater health possible without increased empowerment? And how can we as educators work with youth in ways that make space for youth to become more healthy and empowered?*

The second paper as part of this forum, Wayne Melville’s response sits in tandem with my own response. In reading his words, a third framing question becomes relevant: *Is engaging with the moral and ethical nature of socioscientific issues through an evidence-based, cognitive approach one that will result in students and teachers living in ways that are more healthy and empowered?* Important to my own exploration of this question is Melville’s discussion of the nature of discourses: how they structure, construct, and constitute our perception of reality without determining our reality. This perspective allows us to explore potential openings: how people work to embody new ways of being rather than unconsciously reproducing dominant power relations. Furthermore, he teases out one of the interesting nuances of Malin and Malmberg’s work on students’ response to health and body during the SSI: the ways in which students within Vision II science resist engaging in this less authoritative form of science knowing and tend towards “wanting” a more commodified educational exchange between themselves and the teacher. This, too, will be explored through the lens of health and body and prompts the following question: *What are the implications of an internalized transactional approach to learning for health and the body?*

Now, I explore these issues more fully. I define empowerment and de/reconstruct autonomy and its relationship to becoming more fully empowered. Subsequently, I explore the notion of power relations and the ways in which we have internalized oppression. To conclude, I explore the connections between empowerment and health.

**Re/Framing the conversation: beyond separation towards empowerment**

In exploring the idea of empowerment over the last ten years, I have come to see that it

1) *lies within the harmonious fitting and flowing together* (Davis and Sumara 2008) of *agency/autonomy and structure* (Holland, Lachicotte, Skinner, and Cain 1998); The World Bank also emphasizes the essential nature of these two attributes in explorations of empowerment: “the role of agency of marginalized communities to exercise choice and transform their lives, and the role of opportunity structure, the institutional, political, economic and governmental context that allows or inhibits actors to create effective action”
(Wallerstein 2006, p. 19). Focusing only on how we negotiate our agency within structure traditionally focuses on our capacity to be agents within the ethnosphere, or the “sum total of all the ways we have imagined the world into existence” (e.g. culture, society, economy, politics) (David Suzuki in Shadyac 2011). Empowerment requires us to come into alignment in at least two additional spheres.

2) results in coming more fully into alignment with our deeper nature and wholeness (Orr 1994; Palmer 1983), - our coherent unity (Davis and Sumara 2006); and

3) always requires a felt connection with the Earth (Davidson 2009)

Empowerment requires us to continually achieve greater alignment and coherence throughout the various spheres that are part of our life. The following story of my own experience in yoga is intended to further explain this concept. Imagine embodying a yoga pose, like Warrior 2. To be empowered in this pose, the legs are, at the same time, engaged and expanding. The engagement, or connection with one’s structure, provides stability and strength, which makes expansion possible and safe. Being empowered in this pose also requires a connection with the ground. Energy can be felt moving from the ground through the body. An empowered Warrior 2, then is an integration of the complementary opposite actions of being in one’s structure and expanding all the while being connected with the ground. Once this empowered position is felt, a pose that might have previously felt strenuous quite suddenly becomes strikingly easy. Tremendous energy is conserved as we learn to embody the complementary opposite energies of being located within a structure (the body, community, and Earth) and expanding (agency and autonomy from a place of wholeness rather than just cognitive thought).

Integration of complementary opposites (structure and agency) does not ensure empowerment. It is only as we connect with our deeper nature and wholeness, our coherent unity, that empowerment is possible. Taking the yoga example one step further will elucidate this point. Prior to last year, I had always challenged myself in my yoga practice. The key to success, I believed, was working hard. However, one day a yoga instructor startled me when she asked: “Molly, you do know it is possible to be strong without straining?” That question has stayed with me and has shaped my understanding of agency/autonomy as it relates to empowerment. How? Broken and run down after an intensely challenging year, my body would not allow me to do a yoga pose called lunge. Each time the instructor asked me to come into the pose, I made an attempt, felt my body say “not yet,” and came out of the pose. For almost 8 months I was unable to engage with this pose. Until one day, all of a sudden, I found myself in the pose with virtually no effort or strain. I had made the autonomous decision to honor my structure, which ultimately allowed me to embody the opposing forces through my connection with the ground: empowerment. Pushing myself while disconnected from my structure and without a capacity to honor my intuitive wisdom about what the body needed would have worked against empowerment.

Agency/autonomy, then, leads to empowerment when our actions are connected to our deeper nature. When autonomy is discussed within the literature, however, this principle is often not apparent, limiting its power to us as educators. For example, Melville draws from Lovat et al.’s conception of autonomy as a principle that “assumes that the
individual is responsible for, and should therefore determine the direction of, his or her own life” (p. 128). This description of autonomy begins with the basic assumption that people are “isolated and insulated individuals” (separation) rather than recognizing that people are “simultaneously a coherent unity, a complex of interacting unities, or a part of a grander unity” (Davis and Sumara 2006, p. 14).

Furthermore, in order that autonomy results in greater empowerment, the actions we take must be rooted and connected with the Earth and biosphere. Lorraine Code discusses the limitations of autonomous actions separated from our physical locatedness (coherence/structure):

The autonomous knower escapes the governance of the body, thus transcending reliance on the senses, to cultivate reason freed from distracting influences. Neither for a Cartesian disembodied reasoner nor for a merely incidentally embodied empiricist knower can knowledge-productive effects derive from the specificities – the physicality and physical locatedness – of embodied existence. Epistemic autonomy celebrates an escape...from the particularities of location, experience, and identity. Hyperbolized, it shapes the stark objectivism of twentieth-century scientistic positivism, where it is abstract individuals who know, each a potential surrogate for every other...autonomy is also about thinking for oneself, having the courage to use one’s own understanding. Epistemic self-reliance is its watchword: freedom from dogma, opinion, or hearsay and from subjection to the heteronomy of higher authority, whether sacred or secular. In its everyday moments, it translates into a reluctance to consult, and especially to rely on, other people in knowing, thinking, and doing. The appeal of epistemic autonomy is clear. Transcending the confusion of sensory, social, emotional, locational particularity promises the certain knowledge that only objective detachment can deliver. As the histories of paternalism and colonialism in white western societies amply demonstrates, it is but a short step to the place where autonomous man in his epistemic robes claims a responsibility to think and know for Others too immature to escape the constrains of heteronomy, thus to know their own interests or understand their experiences” (Code 2006, pp. 171-172).

Autonomy without a connection to our coherent unity and the Earth, then, often leads to an unconscious internalization of the external (culture, society, economics, politics, etc.), or disempowerment. As we embody actions that work against coherence (ours and planetary), we unknowingly erode our power (Rosado 2007). Revisiting the yoga example, had I continued acting “autonomously” by challenging myself within yoga, rather than honoring what my body needed, I would have eroded my physical structure by my embodiment of an external belief that I had internalized: This belief was that strength and power come from pushing and working hard. In the case of the students who wanted energy drinks in the school cafeteria, empowerment was also an impossible outcome. By engaging in the process of asking the school board to approve energy drinks, youth disconnect themselves from their own coherence, - masking their true energy levels and their awareness of their body’s (their structure’s) capacity. Lather and other postmodern scholars refer to this disconnect between our coherence and what we are embodying as
false consciousness, or “the denial of how our common sense ways of looking at the world are permeated with meanings that sustain our disempowerment” (1991, p. 59).

Unless autonomy is grounded within a greater coherence, then, it ultimately works against empowerment and results in destructive actions (Kahn 2010). As R.D. Laing explains, “Our behavior is a function of our experience. We act according to the way we see things. If our experience is destroyed, our behavior will be destructive. If our experience is destroyed, we have lost our own selves” (in Jensen 2000, p. 1). Manifestations of such destructive and disconnected forms of “autonomy” can be observed in the unethical actions taken by those on Wall Street that led to widespread economic hardship and the ungrounded “I can change the world” mentality I learned to embody growing up as a successful white female within the western educational system (Lawrence 2012).

Greater empowerment comes as we increase our capacity to see through cultural frames and narratives in order that we can create more congruous relationships among our self/structure and how we relate (agency/autonomy) to the greater spheres of structure expanding outward from ourselves (family, community; political, economic, cultural, and societal system; the planetary system) (Lawrence, Romano, Church and Nolet 2011). Greater empowerment comes as we learn to dance with life in ways that do not erode us, nor disconnect us from the greater spheres of coherence (Rinpoche and Swanson 2012).

Foucault's discussion of the Plan of Panopticon described by Kenneth Gergen (1999) elucidates some of the ways in which post-structural power relations challenge our capacity to experience greater empowerment:

...the tradition of structural power was slowly replaced by programs of education and facilities of correction. One outcome of this trend was the development of the modern prison system. Rather than simply locking away undesirables in dungeons, the modern system attempted to improve the imperfect person. Emblematic of this movement, for Foucault, was Jeremy Bentham’s eighteenth century plan for a Panopticon, that is, a form of prison in which the actions of all prisoners could be observed from a single, elevated watch-tower...The observer could thus see all actions, and very importantly, without being seen. By this arrangement the prisoner could never know when he was being observed; in effect he could do nothing that was not subject to inspection (pp. 206-207, emphasis added).

Several significant ideas about power stem from this work and ground the exploration of health and body issues that follows. First, power does not reside in a structure or in a person, but “in a set of relationships.” Second, because “power relations are manifest in bodily dispositions...it is more important to focus on the actions of we who are caught up in power relations” (emphasis added) than to point fingers at those who are “in power.” One question stemming from this that will be relevant to the conversation on body issues that follows is: How do become aware of how our very actions contribute to and help to reproduce the greater dysfunction we perceive? Foucault suggests that one place we might start is by examining which of our behaviors and habits are for the purpose of escaping being penalized or punished by the external observer so integral to the design of the Panopticon. Finally, Foucault describes power as productive rather than malevolent. “Unlike the structural view of power, which invites suspicion of those at the top of the hierarchy, for Foucault power is more pedestrian. Power relations are constituted by
normal people simply carrying out everyday activities...” Viewing power from a post-structural perspective is about how each of us contributes unconsciously to creating a world we do not desire due to the ways in which “power relations invite us in, give us things to do, and provide a sense of satisfaction” (Gergen 1999, pp. 207-208).

Post-structural views of power and the concept of empowerment described above apply directly to my exploration of issues of body and health integral to Malin and Malmberg’s work. Central to the authors’ discussion is the following idea: “Discourses on normality make certain subject positions available and others unavailable...To sum up, all pedagogical models include and exclude subjects. That is unavoidable” (Malin and Malmberg, pp. 6, 27). Furthermore, they explain that “at the same time as a pedagogical tool like SSI fabricates the ‘problem-solving child’ as something desirable, it is also constructing the ‘not-problem-solving child’ as a failure” (p. 4).

These comments embody a powerful frame: one that inhibits our capacity to engage with challenges of body and health described in Malin and Malmberg in ways that lead to empowerment. By viewing the world as a dualism, we are unable to perceive the nuanced spaces available - the varied contextual texture - in which we can begin to engage in new ways. “To man the world is twofold, in accordance with his twofold attitude” (Buber 1958, p. 3). This “inclusion-leads-to-exclusion” frame embodies a separation between complementary opposites, rather than an integration and working together of these tensions. Empowerment requires that we integrate and work with the tension of complementary opposites.

By focusing less on discerning how we inadvertently reproduce the very power relations that erode us and more on the right and wrong nature of ideas, we trap ourselves into fighting, fixing, or changing the opposite that we perceive as oppressive or undesirable. Embodying these actions erode our wholeness, connection, and humanity (Rinpoche and Swanson 2012). But as Foucault explains, power is not held by people “out there” but is embodied by normal people simply carrying out everyday activities. As such, there is considerable power in working with oneself and others to co-create new relationships with every day activities, rather than creating artificial separations between ourselves and others. The difficulty in this is that “we are inscribed in that which we struggle against” (Lather 1991, p. 20). We have embodied the Panopticon and power relationships of separation. As such, we must become very clear that dualism in language and beyond makes empowerment impossible.

When we learn to see our part in creating things that we don’t like but that are likely to continue, we can begin to develop a different relationship with our ‘problems.’ We’re no longer victims...many visions are doomed from the outset because those who articulate them, whether consciously or not, are coming from a place of powerlessness. If we believe that someone else has created our present reality, what is the basis for believing that we can create a different reality in the future?...If people are...externalizing their problems, they create, in a sense, ‘externalized visions,’ which amount to a kind of change strategy for fixing problems which they have not yet seen their part in creating. Only when people begin to see from within the forces that shape their reality and to see their part in how those forces might evolve does vision become powerful. (Senge, et al. 2004, p. 132).
In what follows, I explore how we can engage in challenges such as those of health and body in ways that move towards empowerment, connection, and transformation and away from dualism and disconnected autonomous actions.

**Making Edges Visible - The Method of Creative Potential:**

*I have always felt that the action most worth watching is not at the center of things but where edges meet. I like shorelines, weather fronts, international borders. There are interesting frictions and incongruities in these places, and often, if you stand at the point of tangency, you can see both sides better than if you were in the middle of either one. This is especially true, I think, when the apposition is cultural. When I first came to Merced, I hoped that the culture of American medicine, about which I knew a little, and the culture of the Hmong, about which I knew nothing, would in some way illuminate each other if I could position myself between the two and manage not to get caught in the cross fire. Nine years ago, that was all theory. After I heard about the Lees’ daughter Lia, whose case had occasioned some of the worst strife the Merced hospital had ever seen, and after I got to know her family and her doctors, and after I realized how much I liked both sides and how hard it was to lay the blame at anyone’s door (though God knows I tried), I stopped parsing the situation in such linear terms, which meant that without intending to, I had started to think a little less like an American and a little more like a Hmong. (Fadiman 1997, p. viii)*

In the analysis that follows, I use a postmodern deconstruction. Juxtaposing brief segments of text from Malin and Malmberg and my own words as an author, I intend for us to explore how our use of language embodies dualism and the Panopticon of separation. This juxtaposition is also intended to provide a sense of possibility. By beginning from a different frame, what nuanced spaces might we begin to perceive? And how might these spaces allow us to begin teaching and wrestling with issues of body and health in ways that lead to increased connection, empowerment and transformation?

In order to accomplish an effective postmodern deconstruction, I ground my comments in a participatory paradigm (Guba and Lincoln 2005), which embodies a set of epistemological, ontological and axiological assumptions that diverge from those embodied in the language of Malin and Malmberg, and Melville. I would suggest that the language and framing of these two works embody many of the characteristics of a positivist paradigm. Contrasting these two paradigms, then, will help to elucidate the nature of each. The following table was taken directly from sections of Guba and Lincoln’s more complete table on various paradigms. (2005, pp. 195-198).

<table>
<thead>
<tr>
<th>Issue</th>
<th>Positivism</th>
<th>Participatory</th>
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<tbody>
<tr>
<td>Ontology</td>
<td>Naïve realism – ‘real’ reality but apprehendible</td>
<td>Participative reality – subjective-objective reality, cocreated by mind and given cosmos</td>
</tr>
<tr>
<td>Epistemology</td>
<td>Dualist/objectivist; findings true</td>
<td>Critical subjectivity in participatory</td>
</tr>
</tbody>
</table>
Inquirer Position | ‘Disinterested scientist’ as informer of decision makers, policy makers, and change agents | Primary voice manifest through aware self-reflective action; secondary voices in illuminating theory, narrative, movement, song, dance and other presentational forms

Axiology | Propositional knowing about the world is an end in itself, is intrinsically valuable | Practical knowing about how to flourish with a balance of autonomy, cooperation, and hierarchy in a culture is an end in itself, is intrinsically valuable.

My perspectives in relation to Malin and Malmberg’s words are based on principles and ideals that I find difficult to detach from who I am and what I am doing in the world. As such, juxtaposing these two perspectives for the purpose of deconstructing issues of body and health will, I hope, move us into the space Lather describes as the aim of deconstruction:

Rather than an exposure of error, deconstruction is ‘a way of thinking...about the danger of what is powerful and useful...You deconstructively critique something which is so useful to you that you cannot speak another way’ (Spivak 1989, p. 135, 151). The goal of deconstruction is neither unitary wholeness nor dialectical resolution. The goal is to keep things in process, to disrupt, to keep the system in play, to set up procedures to continuously demystify the realities we create, to fight the tendency for our categories to congeal (Caputo 1987, p. 236)” (Lather 1991, p. 13).

I intentionally attempt to create edges that allow us to experience the tension of creative possibility. Think of this next section as if you were watching the force of the waves pummel the rocky coastline. It is at this intersection that what is new can emerge and what is old can be weathered away. Both the force of the water and the solidity of the rocky coastline are impacted in the process. My analysis also takes on the character of yin/yang—not to symbolize right/wrong and duality, but instead as a juxtaposition of complementary opposites as they exist and relate within the broader, dynamic system—as a means of introducing the possibility of nuanced spaces that might allow for different possibilities in how we engage with youth and ourselves around issues of health and the body in science classrooms. The following depiction of feminine and masculine qualities helps to depict the complementary nature of opposites integral to the deconstructive analysis below. As we learn to more fully embody these complementary opposites and sit with the tension these opposites create, rather than turning them into right/wrong, we move in the direction of empowerment, connection, and transformation.
In the analysis that follows, then, validity must be reframed in order to make space for the fitting and flowing together of complementary opposites. Rather than the traditional notion of triangulation, I move towards an image of validity as the

“...crystalline’, a deliberately transgressive form” of validity. “I propose that the central imaginary for ‘validity’ for postmodernist texts is not the triangle – a rigid, fixed, two-dimensional object. Rather the central imaginary is the crystal, which combines symmetry and substance with an infinite variety of shapes, substances, transmutations, multidimensionalities and angles of approach. Crystals grow, change, alter, but are not amorphous. Crystals are prisms that reflect externalities and refract within themselves, creating different colors, patterns, arrays, casting off in different directions. What we see depends upon our angle of repose. Not triangulation, crystallization. In postmodernist mixed-genre texts, we have moved from plane geometry to light theory, where light can be both waves and particles. Crystallization, without losing structure, deconstructs the traditional idea of ‘validity’ (we feel how there is no single truth, we see how texts validate themselves); and crystallization provides us with a deepened, complex, thoroughly partial understanding of the topic. Paradoxically, we know more and doubt what we know (Richardson 1997, p. 92 in Guba and Lincoln 2005, p. 208).

Thus, I invite you, as a reader, into a role “other than that of being ‘convinced’” of my right as an author to “serve as ‘The Great Interpreter’ (Dreyfus and Rabinow 1983 cited in Lather 1991, p. 10). I invite you into a space of wondering, curiosity and imagining together what might be possible beyond our dualistic, separatist tendencies. After all, as Einstein so humbly reminds us, “no problem can be solved by the same consciousness that created it.”

Juxtaposing Positivist (Father) and Participatory (Mother) Discourses:
Excerpt 1:

*Says the father...* *(Malin and Malmberg)*

In each programme, persons with weight problems – usually over-weight – are advised about how to change lifestyle to increase their fitness (p. 8, emphasis added).

*Says the mother...*

By beginning with “persons with weight problems”, we inherently work against students’ capacity to empower themselves in ways that lead to improved health. We do this by reproducing separation: both by 1) encouraging people to fix themselves rather than perceive their greater coherence, and by 2) separating people from the greater systems of, in, and through which they participate to co-create the world:

First, we begin by identifying a flaw and asking students to use information to fix the weight problem we perceive in them. A leading scholar from the World Health Organization explains that “health professionals have supported the concept of agency through recognizing the importance of working from strengths rather than from deficits to motivate community action” (Wallerstein 2006, p. 19). Youth must be viewed as a resource rather than as an objectified embodiment of individualized weight problems. Public health scholars Abel and Frolich explain this in the following way:

Individuals targeted by health promotion are too often reduced to their behaviours directly relevant to health risks (e.g. smokers, obese, drinkers) and thus are reduced to risk carriers. These individuals are seen to have become so either because they do not know what is good for them or are in conditions in which they become exposed to risk. The health promotion consequences to date of this objectification of the individual is to either teach people to be healthier or to protect them; both approaches lack respect for individual autonomy and agency, and therefore disable people from realizing their true potential, and often, from becoming healthier (Abel and Frolich in press 2012, p. 7).

Increased empowerment is impossible, then, if we start from the assumption that we have a problem, especially if this perceived problem is a surface feature that indicates something deeper needs to become more coherent (Scharmer 2007; Schetchikova 2002).

Taking this one step further, then, let us examine another facet of how beginning with persons with weight problems works against empowerment, connection, and transformation. The medical model’s diagnostic method of treatment, which is integral to the approach of advising people with weight problems of how to increase their fitness, provides a relevant focal point. In the diagnostic medical model a name is given to the patient’s condition, after which, the name of the condition is treated rather than the patient (Schetchikova 2002). Often, the treatment temporarily changes and controls the external symptoms. However, these approaches less consistently alter the underlying functioning of the body in ways that lead to actual transformation (Davidson 2009).

Pema Chodron speaks to the futility of this point of view: “Does not trying to
change mean we have to remain angry and addicted until the day we die? Trying to change ourselves doesn’t work in the long run because we’re resisting our own energy. Self-improvement can have temporary results, but lasting transformation occurs only when we honor ourselves as the source of wisdom... Trying to fix ourselves...implies struggle and self-denigration” (Chodron 2001, p. 33). Rather than honoring our coherence and wisdom and using the feedback from our bodies as a means coming more fully into alignment with our structure, we fight and judge ourselves for eating too much and try to force ourselves to eat less or differently. Our reasoning helps us “know” what we should do to see a different body. Reasoning and evidence, however, are insufficient means of connecting to our deeper wisdom, or our primary knowing “by means of interconnected wholes (rather than isolated contingent parts) and timeless, direct presentation (rather than through stored re-presentations). Such knowing is ‘open,’ rather than determinate” (Rosch in Scharmer 2007, p. 167).

Davis and Sumara (2006) contrast two approaches to change that are significant here. The first is learning as behavior modification: the belief system upon which industrialized education is built. This parallels advising people with weight problems of how to change their lives. Help people know analytically what they should be doing, encouraging them to internalize an external world. On the other hand, learning is "a series of transformations in the learner that are simultaneously physical and behavioral – which is to say, in biological terms, structural. Learning is certainly conditioned by certain experiences, but it is ‘due to’ the learner’s own complex biological-and-experiential structure, not an external stimulus” (2006, pp. 13-14, emphasis added). This is more aligned with the idea of primary knowing described above. If we seek transformation rather than temporary change, we must recognize the coherence and wisdom present in each person and engage in ways that honor this coherence rather than assuming we have the answers to solve their problems (Chodron 2001; Davis and Sumara 2006; Markova 2000). An alternative, more holistic approach to working with persons with weight problems, is one in which healthcare providers “enhance the function of the body by removing the interference to the body’s natural self-healing capabilities expressed through the nervous system” (Schetchikova July 2002, p. 36). Additionally, considerable work is currently being done within the neurosciences emphasizing the importance of training the mind through contemplative practices as a means of improving health and well-being (Davidson 2009). Both of these perspectives recognize an inner wisdom and coherence rather than assuming that information is separate from the persons with weight problems and that taking in this information can lead to transformation rather than short term change (like that which comes from a diet).

The question then becomes, how can we help learners perceive, sense, and trust their own coherence and access those resources within themselves that allow them to become healthier, rather than bombarding them with an onslaught of newest steps they should take to free themselves of problems? If we choose the more traditional problem-solving approach (using primarily cognitive reasoning to analyze evidence), we might observe changed external symptoms over the short term (energy drinks appear in the school cafeteria; the body is less obese), but they
often fail to lead to the internal transformation that increases power and health permanently.

Secondly, we work against empowerment and connection by starting from the perspective that persons with weight problems are “isolated, insulated individuals” (Davis and Sumara 2006, p. 14) responsible for changing their own behaviors, assuming unlimited autonomy/agency and failing to recognize how “persons with weight problems” are situated within a greater structure (planetary sphere and political, cultural, social, and economic systems). This approach also isolates “persons with weight problems” from those in the classroom who do not have weight problems.

Margaret Wheatley describes how a quantum physics look at this language can move us towards a capacity to situate work on health and body within a greater system:

Mostly we don’t take time to notice the dynamics that are moving in the whole system, creating effects everywhere. As good engineers, we’ve been trained to identify the problem part and replace it. But a systems sensibility quickly explains why this repair approach most often fails. The great scientist, philosopher, and poet of the early nineteenth century, Johann von Goethe, applied his genius to the problem of seeing the wholeness of nature. He was intrigued to understand any phenomenon not as an isolated event, but as a consequence of its relationship to other phenomena. Individual behaviors co-evolve as individuals interact with system dynamics. If we want to change individual or local behaviors, we have to tune into these system-wide influences...as people engage together to learn more about their collective identity, it affects them as individuals in a surprising way. They are able to see how their personal patterns and behaviors contribute to the whole. The surprise is that they then take responsibility for changing themselves (2006, pp. 140-142, 144).

Evidence suggests that “empowerment strategies (as distinct from positive youth development approaches)” are effective when they "emphasize awareness of feelings of powerlessness and power,..., and whether young people believe they are able to influence public health issues and policies...engaging young people in structured organized activities that link them to each other and to institutions enhances their self-awareness and social achievement, improves mental health and academic performance and reduces rates of dropping out of school, delinquency and substance abuse” (Wallerstein 2006, p. 19, emphasis added). Furthermore, we must set the conditions for learning in ways that allow for people to see their place and power (individual and community agency) within a greater whole (institutions and structures) and create opportunities for them to create new relationships with their own contexts (Lather 1991). This increased empowerment of individuals and communities has been found to improve health and educational outcomes (Thomas, Quinn, Butler, Fryer, & Garza, 2011).

This same phenomenon was observed in a recent service-learning project with middle grades students and teacher candidates. In this study, youth described
the ways in which they began to discern their part in the larger whole through the use of math concepts to explore local waste production and resource consumption. As they began seeing themselves as part of a greater whole, many students began making changes in their own consumption habits and encouraged others to do the same. The classroom teacher noticed and was impressed by students’ commitment to completing work outside of class because others were depending on them and because they saw the work as something that “really, really” mattered (Lawrence, et al. 2011). Furthermore, the middle grades students could immediately change their own collective consumption and production of waste and worked to do so without an external authority teaching them (using information to convince) them of the need to consume less. Students experienced an increased sense of their own power (Lawrence, et al. 2011). By focusing at the level of the individual, we are unable to create the space necessary for empowerment on the part of students because empowerment requires connection with a greater whole or structure.

Excerpt 2:

Says the father... (Malin and Malmberg)
The importance of healthy body is something everyone can agree on, and besides that something that belongs to a scientific discourse. The notion of a “beautiful body” or a “normal body” is on the other hand belonging to a cultural discourse. But one way in which cultural norms was transformed into scientific facts was to let the students measure their own BMI (Body Mass Index) without relating it to a critical discussion on “what is a normal body”. And through wrapping the body-discussions in terms of health, the school avoids handling difficult issues about the abnormal body, e.g., in terms of anorexia and fatness – at the same time as the students urge for discussing just these issues.

Says the mother... (Lawrence)
In the statement above, we inadvertently reproduce separation and work against students’ capacity to empower themselves in ways that lead to improved health in two ways: 1. First, we focus primarily on the discrete categories of healthy body, normal body, and the abnormal body, rather than recognizing the place of these objects within the greater subjective system of health and well-being. 2. Second, the authors situate this conversation within the somewhat rigid, discrete frames of particular discourses (scientific, cultural) which inherently creates a dualism (inclusion and exclusion) rather than creating opportunities for connection and empowerment. Both of these concepts are explored more completely below.

First, we reproduce separation by focusing predominantly on discrete objects (healthy body, etc.), rather than recognizing the place of the object within the subjective (greater system of health and well-being). Without situating a look at the body (healthy, abnormal, or normal) within the greater coherence of the individual and within the greater coherence of the external systems in which the body and person are situated, greater empowerment and bodily transformation are an impossibility. Instead we work towards “behavior modification” of the abnormal body (Davis & Sumara, 2006) which is unsustainable, violent, and energetically
expensive. Whereas the authors emphasize that “wrapping the body-discussions in terms of health” results in the school’s inability to address “difficult issues about the abnormal body,” I wonder how we can work towards the longer-term aim of greater health by focusing predominantly on the normal body or even the healthy body? Does not this objectified focus trap us within siloed dimensions that make it difficult to accomplish anything more than learning as behavior modification within the science classroom? “We are coming to understand health not as the absence of disease [or obesity], but rather as the process by which individuals maintain their sense of coherence (i.e. sense that life is comprehensible, manageable, and meaningful) and ability to function in the face of changes in themselves and their relationships with their environment” (Antonovsky, 1987). As such, a focus on the body as an object is an insufficient starting premise from which to create greater health.

Looking at the second feature of this quotation, the emphasis on the healthy body as part of a scientific discourse alongside beautiful and normal body as part of a cultural discourse works to create a dualism. If we hope to provide spaces where students can become increasingly empowered in science classrooms, it is imperative that we begin embodying a less rigid sense of what should be included and excluded within a scientific discourse. Lab Director of the Lab for Affective Neuroscience Richie Davidson (2009), who is doing cutting edge work in neuroscience and transformation, predicts that by 2050 a series of fundamental transitions will occur in the ways science is used to support better health and well being. These transitions include:

- “Work on the mind and consciousness will be integral to medical practices and we will better understand how the brain can help to modulate biological functions in ways that affect health. As a result, people will begin taking more responsibility for their health
- Science will be a field informed by virtuous qualities
- Mental exercise will be accepted and practiced in the same way physical exercise is practiced today.
- Secular approaches to contemplative and awareness practices (e.g. meditation) will be developed that help teachers and children better regulate emotions and attention and cultivate qualities like kindness and compassion.”

These predictions clearly blur the already fuzzy lines between scientific discourses and cultural discourses by acknowledging that scientific discourses are never separate from cultural discourses. These predictions also suggest that we can and should actively work within science classrooms to help create a culture that supports health and well-being of people as a coherent system within a greater system rather than talking about and measuring discrete indicators of the abnormal body (like BMI) as a means of knowing where one’s BMI fits within what’s defined as normal: a traditionally diagnostic, medical model approach. “A systems world cannot be understood by looking only at discrete events or individuals” (Wheatley 2006, p. 140).

Quantum physics challenges us to move beyond the limitations of staying
within our fixed frames (such as the scientific discourse). It suggests that by starting with this fixed frame, we inadvertently alter what transpires in interaction by limiting the possibility of what might be manifested and observed in any given moment. More specifically:

...an electron is both a wave and a particle until our observation causes it to collapse as either a particle or a wave...It is the act of observation that determines the collapse of the...wave function. I realized I had been living in a Schroedinger’s cat world in every organization I had ever been in. Each of these organizations had myriad boxes, drawn in endless renderings of organizational charts. Within each of these boxes lay a ‘cat,’ a human being, rich in potential whose fate was determined, always and irrevocably, by the act of observation. In human organizations, we play with Schroedinger’s cat daily, determining the fate of all of us – our quality of aliveness or deadness – by what we decide to observe in one another. As non-physicists, we may think we have an easier time with the mysteries of such things as observation and the role of the observer, but it seems to me we would do well to linger longer with these quandaries, to explore how our perceptions of people and events shape the reality that we then end up struggling with so much... ‘knowing is disrupting.’ Every time we go to measure something, we interfere. A quantum wave function builds and builds in possibilities until the moment of measurement, when its future collapses into only one aspect. Which aspect of that wave function comes forth is largely determined by what we decide to measure. Every act of measurement loses more information than it gains. So how can we ensure that we obtain sound information to make intelligent decisions? How can we remain open to the information we lost when we went looking for the information we got?” (2006, pp. 62-65).

This work suggests that an important question in working with youth in science classrooms to increase health and well-being is, How do we remain open to information and ideas outside of what we are trained to expect and accept within science? And how can our openness lead to increased health and well-being within or outside of science classrooms? Approaching our work in this way, opens the door to working with learners to create a new set of power relations around the relevance of science in increasing health and well-being. Rather than internalizing (consuming) the external world of scientific information and best practices in order to keep the body (discrete object) within the “normal” parameters of BMI, students can begin using scientific information and ideas to begin getting to know their wholeness in a deeper way. Scientific information, then, could be conceptualized as a way to become more conscious of oneself as a greater system and of oneself within a greater system. In order to accomplish this, we integrate systemic ways of knowing alongside analytical ways; subjectivity in conjunction with what we perceive to be objective. This requires new and different ways of knowing and making sense than the cognitive dimension and training we have mastered.
...learning to observe the whole of a system is difficult. Our traditional analytic skills can’t help us. Analysis narrows our field of awareness and actually prevents us from seeing the total system. ‘There is no analytic language to describe what we are seeing at the quantum level. I can only say that it does not help to analyze things in more detail. The more specific information, the less relevant it is.’ If we can’t analyze wholeness, how then do we learn to know it? I frequently get frustrated by the realization that to perceive the world differently requires new perceptual techniques. We can’t move past analysis by being analytic. But if I can’t use my traditional ways of knowing, how can I even know enough about a new phenomenon to acknowledge that I need new ways of knowing? (So if you feel frustrated by the following descriptions, I believe this indicates you’re making progress.) As I have struggled to understand a system as a system, I have been drawn to move past cognition into the realm of sensation. The German philosopher Martin Heidegger describes this as a ‘dwelling consciousness.’ When we dwell with a group or a problem, we move quietly into our senses, away from our sharpened analytic skills. Now I allow myself to pick up impressions, to notice how something feels, to sit with a group or with a report and call upon my intuition (2006, pp. 140-141).

It is only as we come to know in ways that allow us to perceive the system rather than becoming lost in the irrelevancy of the increasingly specific and discrete that empowerment, connection, and transformative learning will begin taking place on a more regular basis within classrooms.

**Excerpt 3:**

*Says the father...*(Malin and Malmberg)

Discourses on how to be and how to act are embedded by the body. It is through the body that the subject is disciplined to act in society within the order of discourses. Donna Haraway (2004) writes —*bodies are maps of power and identity* (p. 38, emphasis added). The focus on body and health influences the way people perceive and handle their bodies culturally. The body has become an arena for identity construction, which is expressed in the way one constructs one’s body, and also in how one talks about how one constructs and controls it (Giddens 1991). This is apparent in diet advice and information on contact lenses, plastic surgery, doping and gene technology. Technologies are creating new possibilities to control and change the body, which might also imply a technological imperative for change: If you can – you should! The body and health have become individual projects through which you can show your identity and your social status... Several researchers have claimed that cultivated people in modern society are synonymous with people who discipline their bodies (e.g. Douglas 1966) (p. 13).

These girls are inside a health discourse, and they associate the responsibility with themselves and to some degree their parents. And if they – on
some rare occasions – don’t act in order with the body and health discourse, they discuss their guilty conscience (p. 21).

Says the mother...(Lawrence)
Disrupting the Panopticon of separation requires us to actively reframe and envision the ways in which we can embody more empowered and connected relationships with our bodies and structure (culture, society, planet, economy, political arena, etc.). Malin and Malmberg present a compelling description of the danger of the ways in which we have embodied separation from our own coherence: 1) by controlling the body, altering the body, and changing the body in ways that lead people to perceive of us in particular ways, and 2) by internalizing the external (discourses), acting in alignment with predominantly the external, and then feeling guilty when we act in ways that diverge from the authority of the external, stifling our creative potential and capacity. As David Hawkins explains, recent work in the field of kinesiology reveals the intimate connection between the mind and body and has shown that “the mind ‘thinks’ with the body itself” (2012, p. 42). Because we have embodied layers upon layers of external authority (Gergen 1999), it is essential that we find ways to free ourselves from these layers of authorized knowledge in order that we might practically, creatively, and experiment on behalf of a “new science” of social being predicated upon absolute nonreductive commonality of existential differences” (Kahn 2010, p. 114).

Unfortunately, schools are often complicit in “the exercise of...ecological repression, generally carried out through the immobilization of the body and the subordination of our emotional nature, our sexual energies, and spiritual capacities” (Darder in Kahn 2010, pp. xiv-xv). In this section, then, I briefly explore ways that educators might work with students to begin moving beyond the embodiment of separation into more empowered and connected ways of engaging in the world.

If we want schools and science classrooms to be places where students become healthier, more empowered and have the capacity to engage in learning that is transformative (Davis and Sumara 2006), then there must be places and spaces for students to begin embodying practices that help them learn to connect with themselves in deep and meaningful ways (below the layers of internalized authority and beyond the cognitive dimension), to experience and become comfortable with nonlinearity, and to engage in ways that embody quantum principles of constant movement through available space rather than a more causal, mechanistic Newtonian perspective.

The following excerpt from a piece I wrote for a local publication, Whatcom Watch, demonstrates one way in which movement practices can help us begin moving beyond the ways in which we have embodied oppression and the Panopticon of separation. I share my own story of using movement practices to come into a greater sense of wholeness, connection, and capacity to engage in a quantum, relational world. This excerpt is intended to help us explore an answer to the question: How do we live, learn, and dance connection and dynamic aliveness rather than separation and a static existence?
...Shawn Wilson (2008) speaks to the power of changing how we relate: “Rather than viewing ourselves as being in relationship with other people or things [separation], we are the relationships that we hold and are part of [connection and wholeness]” (p. 80, emphasis added). We must be the relationship we want to see, because we are the relationship we are seeing. If we are seeing planetary destruction, what are the ways in which we embody this destructive relationship?

How has dance helped me relate to myself and others differently? To engage from a place of connection rather than creating further separation and violence?

1. It has helped me to get out of my head and into my body. And it is helping me learn to engage from a place of connection and wholeness rather than from fear or the disconnected analytical mind.

Growing up in a western culture, I was constantly up in my head. My analytical mind ruled and I used it to do many things. This came at a cost for me and the planet, though. How so? “We are now at a point in time when the ability to receive, utilize, store, transform, and transmit data – the lowest cognitive form – has expanded literally beyond comprehension. Understanding and wisdom are largely forgotten as we struggle under an avalanche of data and information. In the ever accelerating assault of data and information on cognitive capacity, understanding and wisdom may be declining in absolute as well as relative terms” (Hock 1999, p. 224). In other words, we are culturally stuck in the analytic mind (head) and out of touch with understanding and wisdom, which are dimensions of the heart (Markova 2000). As a result, we are consistently reproducing separation and violence in our world.

Here is how this separation and violence played out in my own experience. I made many decisions based only on what my analytical mind told me I was supposed to do. Often these decisions were based primarily on the external: others’ ideas of what might work, what research told me, or what I feared would happen in the world if I did not do what my analytical mind told me. I regularly felt my analytical mind (head) and intuitive wisdom (heart) in opposition of one another, resulting in considerable stress. Working primarily from the analytical mind, I found myself trying, pushing, or unconsciously doing things. Because I was disconnected from intuitive wisdom and my heart, fear shaped my actions and decision-making. I feared the planet would fall apart. I feared deep down that I was not enough and needed to do something to contribute in order to be enough. And I feared that other people would ruin the planet. All of these fears are a form of separation and acting from a place of fear led me to 1) reproduce the very violence and destruction I was trying to eliminate in the world and 2) stay separated from the deeper intuitive wisdom that flows through me and becomes increasingly accessible as I come into my body more fully.

Dance is an embodied form of movement. And it allows anyone to begin embodying more whole and connected movements. In my case, I had to learn to be within the tension of intuitive wisdom (heart) and analytical mind (head) and the seemingly conflicting messages I received from them. This led to considerable uncertainty. However, as I have come back into my body and learned to be within this tension, I am beginning to experience the tremendous creative possibility as we
refuse to create more separation by acting from either the place of the head or the heart, rather than from a place of connected head and heart.

2. I began learning to trust and love the creative motion and flow of the universe (a quantum universe) rather than being attached to certainty and expected outcomes (a Newtonian universe).

When dancing in community everyone in the room is moving through the empty spaces. As the collective begins moving faster and faster through the available spaces, an incredible creative force can be felt in the room. Just like the order I experience when in nature but am not able to fully explain or recreate through planning, the room is a living, breathing, self-organizing system. This feels much different than how I tend to engage with others in my work at the university: in planned interactions where roles are defined and expectations are more likely to shape my interpretation of what is going on. In the flowing, creative energy of the dancing community, I experience my connection with myself and with others in the room in a completely unexpected, unattached, and grounded way. Through others’ movement, I am presented with new spaces that spark my own creativity and potential. The space that exists is lived, breathed, and moved through by those in the room. We all dance freely and fully.

Contrast this with an experience I had dancing at a local club when I was just learning the visceral feeling of a moving and connected community of dancers. Packed to the gills on a Saturday evening, the room was filled with people dancing in their somewhat fixed spaces. I found myself dancing in my spot, moving in place. As more people entered, my space began to feel like it was shrinking. I found myself immediately wanting to stick out my elbows and preserve my tiny space.

As we learn to see and experience the universe as constantly in motion, as filled with available space, and as embodying an order that can be felt and sensed but not planned or detected fully by the analytical mind, we learn to be the relationship that contributes connection, wholeness, aliveness in all contexts. We transform ourselves in ways that create connection rather than separation even when we dance at the local club where less movement through the available space is obviously visible.

But getting back into my body and beginning to experience connection between head and heart, analytical and intuitive ways of knowing is quite a terrifying endeavor. In her book *I Will Not Die an Unlived Life* (2000) Donna Markova explains that our work in transforming ourselves into connection is to find our way beyond the “islands of fear” inside of us into the “continents of wisdom and truth” (p. 25). And we do this as we educate ourselves “in the interior dimension”. Dance allowed me to begin learning from the inside out.

Dance helps us viscerally experience the creative motion and flow of the universe (a quantum universe). Embodying this understanding can help us to rapidly and radically transform ourselves and our world. By coming more fully into our body and the wisdom pulsing through it, which is not defined by a role, nor limited by an expectation. This necessarily leads to transformation outside of ourselves as we become conscious of, embody, and live connection more completely.
Through it, we learn to “act in the world and not on the world” (Senge, et al. 2004, p. 92). Transforming the world starts with transforming the way we relate, which starts with how we relate to ourselves” (Lawrence 2012).

This excerpt provides one example of how movement practices can help us reconnect with our bodies in ways that unearth the Panopticon of Separation and allow us to connect more completely with our deeper nature and coherence (Kim 2012)—our power—in turn helping us become healthier (Antonovsky 1987). Furthermore, it depicts the ways in which movement practices can help us come into more empowered ways of relating to the external world by connecting with and bringing the inner dimension to all that we do. It is imperative within the educational system and science classrooms, that we find ways to move beyond reproducing the Panopticon of separation in our work with students. The girls’ discussion of their engagement with the authoritative health discourse above, in which they describe that they feel guilty when they do not eat what they are supposed to eat, is a disempowered relationship based on separation. It is possible and necessary that we find ways within science classrooms to create spaces where students learn to relate to the body and health in ways that are empowered—that connect us more deeply with our wholeness and power. If we do not, we continue to waste energy forcing ourselves to follow best practices without the power of intention and our inner dimension integrated with the external. Ultimately, this fails to lead to deeper fulfillment and meaning, decreasing health and well-being (Markova 2000).

**Learning to Embody the Ecology We Are:**
The separation embodied in language use becomes apparent in reflecting on the words and perspectives juxtaposed in the previous section. Furthermore, our predominant focus on categories and the discrete continues to reproduce the Panopticon of separation. If we are to continue down the road of focusing almost solely on cognitive reasoning and evidence-based analysis we will foster further separation in our work with students. This is insufficient to foster greater health and well-being. Putting more intuitive, participatory, and connected forms of knowing into tension with analysis and reasoning will move us more fully in the direction of health, - not as the absence of disease but as the process by which people maintain their sense of coherence (Antonovsky 1987). Postmodern theory urges us to push beyond our Descartes tendancies to swing between these two complementary opposites, assuming one is right and the other is wrong. The challenge, then, for us at this juncture is to begin holding creative tension between complementary opposites (Parker 2009), between the masculine and feminine. The invitation, then, is to transform ourselves and the world by more consistently embodying connection (both/and) rather than continuing to prioritize separation (Either/Or). Engaging in the world and working with information in this way, we have the capacity to become more fully empowered. Lappe (2009) describes this shift as moving from assuming that we must make trade-offs to searching for synergies.

The following words by Donna Markova elucidate the power of holding and allowing for a creative tension between analysis and intuition (complementary opposites).
The brain has both analytic and intuitive ways of processing information. They are meant to work hand in hand, but usually end up in an arm wrestle. If we analyze only as we have been taught to do in most schools, snapping at the first answer that comes along, then judging it good or bad, right or wrong, the shy intuitive mind, not unlike a prairie dog, runs for cover. Analysis, when improperly done, causes paralysis. It creates a world ‘out there,’ of which we are only spectators and in which we do not live. This is commonly called objectivity. If, on the other hand, the analytic mind asks open questions of discernment – ‘I wonder how this could work…What would it look like if this were really possible?’ the intuitive mind begins to explore many possibilities, weaving its way through the trees until it has a sense of the whole forest and its meaning in nature’s scheme of things. Pop! Personal truth cannot be found in either analytic thinking or intuitive thinking alone. It can only be uncovered in an open inquiry between them (2000, p. 30).

As educators, we must focus less on fixed categories and the discrete [positivist] (science discourse, cultural discourse, abnormal, normal, and healthy body, etc.) and become more present with and open to what can be learned within the lived [participatory] experiences of the wholeness of each moment. This is the creative possibility of the positivist paradigm juxtaposed with the participatory paradigm. This juxtaposition allows us to create new ways of relating to what is going on in each of our lived interactions that are healthier, more empowered, and more connected. By focusing on relationships, in tandem with categories and the discrete, we situate ourselves in ways that allow us to perceive the nuances of how individuals and communities are working to transcend and negotiate boundaries (Lawrence 2007) and how they use information and experience to step more fully into their power: learning as transformation rather than behavior modification (Davis and Sumara 2006).

Becoming clearly able to see how we have internalized aspects of culture that work against our coherence and that of the planetary system is also critical. Rather than trying to force ourselves to live in ways that lead to a sense of normalcy, we can find ways to engage with information that contribute to a deeper connection with our own integrity. This requires us to creatively dance through the tension of complementary opposites and difference, into new ways of relating that increase our power. It also requires that we find ways to free our bodies from the internalized oppression of the Panopticon of separation. By getting back into our own bodies and using movement practices as a means of liberation, we can begin learning without starting from the premise of “there’s something wrong.” We become able to access our deeper wisdom and to liberate ourselves one dance at a time. Access to this wisdom allows us to love our way through transformation and learning rather than control our way through a diet.

In accepting and honoring ourselves more fully, we begin to experience our power (agency) as well as to perceive our place within a larger whole (structure). And, we begin to recognize that our participation in each of these coherent systems always helps to create what we are observing within that system (Boggs and Kurashige 2011). As we come to see ourselves as part of a greater whole we are able and willing to transform ourselves because we’re not just doing it for ourselves anymore (Lawrence 2011).

The words of Antonia Darder paint a compelling picture of of the power of moving beyond dualism and separation towards connection, transformation, and empowerment as
we seek health and well-being:

...to contend effectively with issues of racism, sexism, homophobia, disablism, and other forms of inequalities, a life-affirming ecological praxis is paramount. That is, one that encompasses a refusal to adhere to political, economic, and philosophical disconnections, which falsely separate humankind from those ecological dynamics that shape local, global, regional, rural, and urban landscapes. Instead, static views of humanity and the planet, which inadvertently serve the commodifying interests of capital and its penchant to divide and conquer, are challenged and dismantled through an integral political solidarity of heart, mind, body, and spirit. Accordingly, a critical ecopedagogy must then encompass those philosophical principles that are at home with ambiguity, dissonance, difference, and heterogeneity, as an ever-present phenomenon. Such an ethos supports a world where cross-species concerns are both commonplace and valued for their creative potential in the making of a truly democratic, just, and peaceful world (Darder cited in Kahn 2010, p. xvi).

It is only through empowerment and connection that systemic health and well-being can become more integral to our experience, education, and our planetary system.
Abel, T., & Frolich, K. L. (in press 2012). Capitals and capabilities: Linking structure and agency to reduce health inequalities. Social Science and Medicine, 74(2), 236-244.


