

PAY08620 or BRO08paper1**Paper 1: The concept of movement and its social ecology.**

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Introduction

There is a need in educational discourse for the development of qualities and characteristics of the body in movement that posits a more intrinsic and subjective value of physical activity. In physical education, sport, outdoor, environmental, health and experiential education such concepts of movement and alternative pedagogical practices require more earnest theoretical/practical deliberation and discussion. Movement is basic to bodily experience but the qualities and characteristics of the 'body moving' in environments are not well appreciated in the current education literature and health promotion discourses. At the root of this lack of understanding is the persistent subordination in the western mindset of the body.

The lack of understanding about the moving body also serves to undermine how 'movers' make meaning of their bodily movements according to the spaces and places of that movement. If so, 'learning' in and through movement, as is demanded in schools and community settings are also undermined. Put differently, and bluntly, any physical education pedagogy that does not engage seriously with the concept of movement, its qualities and characteristics in experience diminishes the educational prospects and pedagogical potential of the field of physical education. But physical education in schools, and coaching/fitness training in the community, are examples only. The challenge for healthy, sustainable living lies partially in the promotion of movement experiences in a wide range of human endeavour and, in schools, in a broad range of curriculum areas.

For the purposes of this paper, the specific challenge for teacher education research is to develop philosophical, theoretical and empirical understandings about the centrality of movement experiences so that future educators and professionals concerned about the sustainability of health and wellbeing promotion can critically examine their current practices and policies. We believe a revitalized notion of movement, and understanding of the various contexts and environments in which movement occurs, will enable deeper consideration of how the discourses of physical education, human movement and outdoor education can be reconceptualized in school-based pedagogies and related community development initiatives in sports and outdoor recreations.

In this paper, we focus on the qualities and intricacies of movement and therefore their potential contribution to the education of the practitioner, be it physical/outdoor education teacher, recreation planner or health promotion professional. Drawing upon the phenomenology of movement in physical education, it is timely that we extract from that literature the ‘other’ qualities, characteristics and different or ‘wild’ dimensions of movements that escape mention in the dominant physical education discourses.

Our purpose is the revitalisation of movement and movement education which may partially contribute in a positive manner to intelligent responses to the otherwise deficit-discourses and negative rhetoric about lifestyle diseases such as the obesity epidemic, and the escalation of diabetes, physical inactivity and sedentary behaviours and disengagement in schools. The task that we are undertaking in the Movement, Environment and Community (MEC) research node is to locate the ‘marginalised’ literature about movement and movement experiences in physical education into a broader, non-reductionist theoretical framework of social ecology and pedagogical

platform of experiential education that informs pedagogical and curriculum inquiry and critical research development. Notwithstanding the literature about movement that is readily available in, for example, philosophy, social theory, geography and cognitive science,¹ our initial but limited aim here is to outline a concept of movement and its ‘lived’ experiential and phenomenological contexts as part of what we believe is a distinctive notions of ‘spatialisation of movement’ and ‘geography of physical activity.’

That is, our interest in MEC is to locate this ‘geography of physical activity’ within the formulation of a ‘social ecology’ of movement education and health and wellbeing promotion. In doing so, MEC researchers aim to make a unique contribution to physical, outdoor, health, environmental and experiential education discourses. While this paper focuses primarily on the concept of movement within MEC it gestures to the E- environmental and C – community concepts that our MEC colleagues will address in more detail in the following papers.

Literature Review

Movement, meaning-making and its concept

There is renewed interest in the discourse of physical education about the concepts of movement, movement experiences, meaning and meaning-making as they relate to the pedagogies of the body (Arnold, 1979; Brown, 2008; Kentel & Dobson, 2007; Kretchmar, 2007). While the literature in physical education has not been abundant, that which has been available for four decades is conceptually rich and has provided untapped intellectual resources for theoretical development of a phenomenology of movement. This revitalised interest in ‘meaning in movement’, ‘physical literacy’, ‘movement literacy’, ‘somatic education’ or ‘movement culture’ is partially in response to the lack of understanding of the rich notions of lived bodily

experiences and meaning-making that are absent in the discourses of sport (Kirk, 2003) or fitness and public health (Troost, 2004).

Scholars working with phenomenological approaches and critical perspectives of physical education have suggested that this response may also be due to:

- a) research suggesting that students derive little meaning and satisfaction from physical activity during physical education (Carlson, 1995; Tinning & Fitzclarence, 1992);
- b) understanding student motivation to alleviate the so-called childhood obesity and physical inactivity ‘epidemics’ (Kentel & Dobson, 2007; Kretchmar, 2007);
- c) humanistic and philosophical interest in elucidating the richer ‘lived experience’ dimensions of movement (Kleinman, 1979) or to address the importance of movement in self understanding about what it means to be human;
- d) to further elucidate and acknowledge that movement is inextricably linked to the environment through the ‘body spatialisation’ and ‘geographies of movement;’ and
- e) to different layers of communities (school, neighbourhood, town) as the ‘drivers’ of building social and environmental capital which enables healthy sustainable living through upstream approaches (Sallis et al., 2006).

To introduce the complexities of the concepts of meaning, meaning-making and lived experience in ‘movement’ we refer readers to publications that might be described as seminal such as *Connotations of Movement in Sport and Dance* (Metheny, 1965), *Meaning in Movement* (Metheny, 1968), *Philosophy and Human Movement* (Best, 1978), *Sport and the Body: a philosophical symposium* (Gerber & Morgan, 1979), *Meaning in Movement, Sport and Physical Education* (Arnold, 1979) and *Practical Philosophy of Sport and Physical Activity* (Kretchmar, 2005).

In briefly synthesizing these authors, the notion of movement/physical activity/sport as a worthwhile pursuit in and of itself is ever-present. Additionally, from a phenomenological perspective the personal associations of distinctive, pleasing and bodily related contexts enable for an increased understanding of one's embodied consciousness. There has been tacit recognition in these publications of the now popularized notions in educational and pedagogical discourses of different 'ways of knowing' and 'authentic learning'. To highlight more concretely the meaning(s) of movement and meaning-*making* in physical education and sport we draw, for illustrative purposes on three meaning-making concepts: a) the denotations and connotations of movement (Metheny, 1965, 1968); b) the concept of education 'in' movement (Arnold, 1979); and c) Kretchmar's (2000) description of meaning-making, whereby an individual is moved 'away', moved 'toward' and moved 'along'. These scholars' interpretations of movement and meaning-making have been chosen based on (i) the word/time limits on this article; (ii) in response to frequency of these citations within the literature and (iii) as succinct and interpretable approaches in providing descriptions of the importance of the intrinsic qualities of movement.

Historically, it is likely that van den Berg's (1952) article on the *Human body and the significance of human movement* was the first to highlight the importance of phenomenological concepts as they related to human movement. This philosophical work draws on early phenomenologists, Maurice Merleau-Ponty and Jean-Paul Sartre. The concepts of (i) landscape of action, (ii) intention of the moving person, and (iii) the glance of the other are consistently described in various ways by authors such as Metheny (1968), Kleinman (1979), Whitehead (1990, 2001) and more recently Smith (2007). There are others such as Kentel and Dobson (2007), Quennerstedt (2008) and Brown (2008) who have also contributed to the phenomenological work and

importance of meaning-making within the domain of physical education². We wish now to provide a vignette that provides a description of ‘intrinsic qualities’ associated with movement before examining various descriptions of meaning-making as presented by Metheny, Arnold and Kretchmar.

This was it then. I straddled the saddle, planted my feet on the pedals, Chris steadying me, then a forward thrust and the bike started rolling down the slight incline of Dudley Road on the hump of the camber, gathering speed, Chris running along behind. I knew the set of the hill from the manic descents on the trike, and feel of the pedals under my toes was familiar, too, but suddenly I realized that an entirely new sensation was coursing through me. I was riding free. Balancing unaided. Chris had let go of the saddle and left me to natural instinct and providence. Brakes? Fat chance, but stopping didn't signify, motion did...the thrill, the exhilaration was unimaginable then, but it has stayed with me ever since...I turned back radiant with glee and rode up to where Chris stood with a big grin on his face, sharing in my triumph. I was a cyclist, a skeddadler (Fife, 2008, p.19).

How likely is it to find these sensibilities mentioned in the official physical education curriculum?

Fife highlighted for us the more pure experience of movements and its spatial and temporal affordances – hence our enthusiasm for a ‘spatiality of movement’ and ‘geography of physical activity’ as more primordial/primitive elements that require revitalization in the physical education/sport discourses, where an instrumental, competitive, performative discourse is unquestionably privileged. For the author, Graeme, riding a bike for the first time unaided was a lived, felt, sentient, purposive act (Shusterman, 2008). For Metheny (1968) meaning derives from the denotations, the literal meaning, and connotations, the personal associations as it has to do with movement, sport and physical activity. Importantly for physical education teachers it is the connotations of movement forms that provide the richness of meanings, hence the meaning-making for the individual. In this example Graeme denotatively cycled from point A to point B, albeit down a road with a hill, but this movement for Graeme at least was connotatively complex. His narrative description is interesting and tells us

something about who he is, what he wishes and hopes for when cycling and what meaning he attaches to cycling. Clearly the feeling of riding a bicycle unaided is a lifelong pleasurable, delightful and memorable experience, it was perhaps Graeme's 'first rush of movement' (Smith, 2007). According to Metheny in Kretchmar (2000) not all connotations are personal or distinctive, in fact they may be common to a particular time and culture, in other words socio-culturally constructed. As Roberts (2008) and Ryan and Rossi (2008) and cautioned:

meaning-making that is regarded as exclusively socially constructed does not account for the varied and often contradictory perspectives that an individual simultaneously takes up and rejects, yet theories that consider meaning-making to be based only on individual psychology neglect to explain the influence of the social milieu on any verbal or non verbal interaction. (p. 40)

Whilst a tension between the individual and social appears to exist, for Metheny this was not a problem for it created opportunity for researchers and practitioners to address the complex meanings of movement between the personal and the cultural. In signalling towards our colleagues presenting 'Environment, place and social ecology in education' (Wattchow, Burke and Cutter-MacKenzie, 2008) and 'The concept of community and its social ecology' (O'Connor, 2008) the cultural connotations of movement, and if we look broader at the environment and community, contribute to this meaning-making primarily through reinforced rituals, values, truths that occur in 'places' (environment) and shared 'spaces' (community) with family/friends or individuals as members of sporting clubs.

Education 'in' movement are those activities of movement/physical activity that are worthwhile in and of themselves from the perspective of the moving agent. They are important educationally as they allow the *moving* agent to actualise themselves in distinctive, pleasing and bodily related contexts as a process of understanding their own embodied consciousness. These perspectives are subjective

and a 'good-in-themselves' as well as being 'good-for-me'. Additionally to further elucidate the meanings in sport, movement and physical education, Arnold (1979) proposed three subjective movement meaning categories: primordial meanings, contextual meanings and existential meanings. Primordial meaning, according to Arnold, relates to how the performer is not only being aware and of experiencing a movement itself, but also to the subjective attaching some value to it. In other words it is related to kinaesthesia, bodily experience and self-identity and the experiences that a performer has that are uniquely his/her own and may, or may not, be able to give voice to, noting the limitations of an overt focus on just the individual at the expense of cultural understanding. Contextual meaning provides the performer with meanings in movement when performed in a specific type of movement situation. The example that Arnold uses here is: (a) sports' skills as particular instances of contextual meanings, for example the 'leg glance' only has meaning in cricket. Contextual meaning as it relates to sport skills means that techniques need to be acquired, but also the skills need to be utilised in the appropriate context of the game or movement; and (b) sports as rule-bound social realities, for example, when playing soccer I learn skills of kicking and trapping. But I also learn the soccer-bound skills of 'offside' and 'to lay off the ball'. As these rules relate to soccer others that play the game also agree to abide by them. Whilst this creates common ground, there is some overlap between what I derive from such contextual meaning as someone else does. Hence contextual meaning is both rule-bound and social. Finally, existential meanings in movement relate to those individual and personal meanings that are part of who I am in the world. For Arnold these themes are: (a) the existent as agent, (b) sport as a quest for authentic experience, and (c) dimensions of existential meaning in sport.

The final interpretation that we wish to draw upon from the physical education literature is the concepts of being moved ‘away’, ‘toward’ and ‘along’ (Kretchmar, 2000). According to Kretchmar “meaning can transport individuals away from the literal features of an event – the movements themselves, their biomechanical requirements, perhaps even the score of a game” (p. 22). This definition highlights how movement/sport/physical activity becomes meaningful. It does so by moving you *away* from the mundane tasks of everyday life, to a place that is uplifting and where positive, joyful, delightful memories come to the fore. Meaning can also be derived when individuals are drawn toward particulars of movement. The activity/movement becomes so important to performers, that it grabs them. They tend to zero in on it. For some they become part of the environment, or piece of equipment they are using. Examples to highlight being moved *toward* include rock climbers become part of the rock they are climbing (Csikszentmihalyi, 1977), or rowers toward the water, boat or fellow rowers (Lambert, 1998). We offer caution, especially to physical educators that may have used or comprehend this concept of meaning-making in movement. Exercise can at times be detrimental, and some performers that become exercise dependent plausibly do more harm than good when their meaning-making ‘takes’ over their lives. Finally the third kind of meaning-making experience is one which Kretchmar described as being moved *along*. Physical activity/movement can become very meaningful when it is described as a storyline or narrative in one’s life. From the performer’s perspective it is viewed as a spiritual and philosophical approach to life which is clearly at odds with thoughts within the current discourses of physical education about fun, exercise and skill development as meaningful content. As an example, Kretchmar drew on Henry David Thoreau (1966/1982) book chapter on thoughts on walking (sauntering as described by Thoreau). Describing it as a

fundamental part of who he was, sharing his hopes, plans and actions. His action of walking, being moved *along* was an important part of the meaning-making movement experience of who he was and how it was part of his life's narrative.

In summarizing this brief introduction into meaning-making concepts of movement within the discourses of physical education as presented by Metheny, Arnold and Kretchmar are the personal associations of distinctive, pleasing and bodily related contexts enabling an increased understanding of one's embodied consciousness. Whilst some suggest that this personal phenomenological approach is limited (Roberts, 2008), it never the less opens up opportunities for physical education teachers and researchers to understand the important subjective and 'intrinsic' qualities of movement of the individuals, that are both personal and cultural, that are missing from the dominant biophysical sciences model of current physical education curriculum.

These publications have also tacitly recognised the importance of various educational and pedagogical discourses of different 'ways of knowing' and 'authentic learning'. However, we wish to go one step further and highlight that to date there is a limited scholarly insight within the physical education and movement discourses about what we will refer to as:

- The spatialization of the moving body in time
- The geographies of physical activity

That is, the distinctive contribution we seek to forge in MEC relates to the 'yet-to-be-probed' notions of how movement and physical activity, and meaning-making and learning, must also account for the perceptual and intentional affordances, enablement's and constraints of the various environments that spatially and geographically influence the human and social experience of movement.³ As such,

our notions of the spatialised body and geography of movement for physical education provides an opportunity for researchers/scholars to consider both the independent and inter-dependent characteristics of movement, environment and community when explaining physical education, health education or outdoor and environmental studies in teacher education or continuing professional development.

We will attempt to explicate such concepts by drawing on the available literature of a phenomenology of movement primarily through the discourses of physical education pedagogy.

Towards a concept of the spatialisation of the body in movement over time and its geographies of physical activity

The literature in the phenomenology of movement highlights a qualification and rejection of a series of dualisms in the physical education literature. Clearly, physical education is one of those curriculum fields where the human ‘body’ is central to the primacy of practice and, by necessity, theorization about it. However, Whitehead (1990) has cautioned that physical education teachers have a philosophical inability to articulate the subject’s importance and place in the curriculum;

What they are really so concerned to cite are incapable of articulating, namely the achievement of successful liaison with the world via their embodied dimension; or to be exact, between their motile embodiment and the concrete features of the world (p. 6)

Despite this ongoing philosophical theorising of the body and the more pragmatic pedagogic encounters in physical education appear to slip back into recreating the mind-body and I-world separations despite the best efforts of many writers cited above (Connolly, 1995). Some scholars such as Smith (1997) attempt to address these constant limitations. Drawing on van Manen’s (1986) ‘pedagogical thoughtfulness and tact’, Smith presents the notion of ‘educating physically’, which refers to the

teaching of games, sport and movements in physical education that is embodied and respects the movement experiences of the child.

Those with an interest in the phenomenology of movement will need to remain vigilant to this slippage because of the ongoing risk of placing the moving body and movement experiences, and their study, on the periphery of a reoriented physical education discourse. The ongoing challenge we discern is that a ‘social ecology of movement’ and its pedagogies beckons. To do this, we must be very attentive to the notions of the spatialisation of the body and geographies of physical activity.

There are numerous theoretical sources to develop the spatialisation and geographies of movement (for example Maitland, 1995; Noe, 2004; Weiss & Haber, 1999) and physical activity that lie outside the nascent but revitalized notion in physical education of a phenomenology of movement (see footnote 1). And, although, the remit of this paper is to focus only on the discourse of physical education, brief mention must be made in conclusion of two important notions that highlight the spatialisation of the body in movement in time. Those notions are ‘body schema’ and ‘intentionality’ and, here, we are indebted to Merleau-Ponty’s (1962) phenomenology of perception.

The notions of ‘body schema’ and ‘intentionality’ (and consequently ‘flesh’), effectively point to the inseparability and connectedness of the body, in movement, in space and time, with the numerous environments in which movement occurs, is enabled and constrained (built, structured, urban, open, natural, treed, footpathed, river, wilderness – for example, we move in particular ways in water, in a pool, on a river, through a wave and so on). For flesh is more than just the sensorimotor surface of the body. It pertains not only to a depth, whereby ongoing transactions/interactions with the environment occurs simultaneously, continuously and in reciprocity (e.g. as

in visceral exchanges such as breathing), but as an element of Being. For children their relationship to movement/sport/physical activity, their embodied connection or ‘flesh in the world’ is primordial and occurs prior to any self-identification (Smith, 2007). Critically, this ‘inseparable’ connection of the moving body and *its* environments, effectively deconstructs the basic logics that persist in western thought about the separations of mind and body, and I and world. Merleau-Ponty’s ‘flesh’ metaphorically elaborates the ‘porous like’ transactional relationship between bodies, environments and natures. They are mutually constitutive in relation to the meaning-making that occurs for the individual body in sensing and ‘learning’ of the opportunities, affordances and constraints of the environment but also there are effects on that environment/nature as a recursive consequence of that movement experience. Smith’s (2007) account of the ‘rush’ of movement is a very useful description of an environmental affordance and how the flesh acts as a mediator of that rush;

The child is situated gesturally amidst the flesh of the world through movements that reciprocate the appeals of the landscapes, the seascapes, the airscapes and firescapes. The child’s movements flesh out the mimetic impulse to become the Other. In fact, the power of this impulse is the depth of the flesh that is discerned in the motions of child-like connection to the world (p. 59)

It is in environments of landscape, airscape and seascape where ‘lived’ movement/sporting/physical activity experiences occur in childhood, often through ‘rushes’ of habituated movement such as swimming, running, walking and dancing. Beyond reducing children’s movement experiences to our own (Smith, 1992), parents/educators/coaches rarely cultivate or understand the importance and meaning-making of such landscapes, airscapes, seascapes and connection to ‘rushes’ of movement.

Undoubtedly, there is a risk here of simplifying the important concepts of ‘body schema’ and ‘intentionality.’ But that risk is worth taking so the reader can

imagine the directions we are taking in our theorizations of the spatialisation of the body and geographies of physical activity within the broader theoretical driver of social ecology and pedagogical platform of experiential education in an education of/for/with movement/physical activity.

‘Body schema’ is an indicator of the primordially and, often, primacy of certain bodily dispositions and capacities, characteristics and qualities that ‘permit’ the pre-conscious, perceptual, intuitive, sensory and habitual orientations, positionings, interactions and relations with various proximal and, sometimes, distant environments, spaces and places, either momentarily or for extended durations. For example, we move (walk) up a long, steep hill in windy weather in a particular way that differs to moving on sand at the beach. Or, we turn our head when we hear a noise. Or we gesture with our eyes and hands to a colleague when verbal communication is insufficient. Or children play in secret spots in particular personal, social and ecological ways that we have forgotten about. The concept of body schema should not be confused with a term very popular in physical education and health discourses of ‘body image,’ noting the serious debate in other literatures about the inappropriateness of the misleading confusion surrounding their interchangeable use, even in philosophy and cognitive science (Carman, 2008; Gallagher, 2005). Body image relates more to the idea of the attitudes and beliefs we hold about our own bodies, and those of others. Image connotes a ‘set picture’ of the appearance of the body objectified. And, as such, body image and related concerns about self-esteem have preoccupied many physical and health educators, amongst numerous others, in regard to, for example, the culture of thinness/fatness, body types and measures and eating disorders, and so on. Body schema, therefore, is a conception of the dynamic orientation of the body to and in response to the experienced lifeworld, or ‘lived

experience' while body image is a more reified objectification of the self and socially conceived body in that socially constructed lifeworld. Both point to vary different orientations to the 'environment' which, in many instances, overlap. For example, we do walk and dress in particular ways on the beach according to the combination of the affordances/restraints of the sand/water/waves and a sense of 'display,' appearance and performance. We feel the heat of the sand on our feet; many feel the gaze of the audience. Of course, there are major implications of the differences and overlap between body schema and body image for movement experience education, meaning-making that, undoubtedly, differ from conventional views of physical/health and outdoor/wellbeing educations.

(Body) intentionality, therefore, is closely linked to the notion of body schema in that it highlights the dynamic nature of the spatiality of the body in movement and, more generally, underpins the notion of the geographies of physical activity as each pertains to an alternative conceptions and constructions of physical education and embodied/experiential pedagogies. Simply, intentionality highlights the 'directedness' of the orientation to move in a particular way in a particular setting in particular conditions. Intentionality is 'automatic' or 'pre' conscious but can be 'learned' over time. For example, we 'learn' how to walk and choose a route up that steep hill on a windy day that might differ from the route we select on a calm or wet day. We intuitively know how, when and where to dive through, or over a wave and, in doing so, reorient that dive according to a sense of its size and power. There are some parallels here with the idea and practice of game sense, now frequently taught in physical education classes and in pre-service teacher education. But, again we refer the reader to footnote 2, and how the physical education teacher operates within the range of pedagogies listed there that are dominant or marginalized.

So, despite the limitations here, the notions of flesh, of schema and intentionality are indicators of how a phenomenology of movement addresses the a) spatialisation of the body in movement in different environments and b) geographies of physical activity. They are partially implied, even sometimes directly addressed in conceptualizations of what it is to be physically educated, or educated physically, and what is included in the physical education discourse. Our reading of the physical education discourse suggests that, by and large, the mention of spatiality and geography of activity is located in the instrumental and performative logics/outcomes of that discourse. The phenomenological discourse, and MEC's distinctive contribution, aims to 'open up' that discourse via a considered view of what is currently excluded and might need to be re-included, such as the notions of embodied knowing, somatic understanding, ecological subjectivity, intercorporeality (between bodies), kinaesthetics, somaesthetics and so on.

We reiterate that notions like the spatialisation of the body in movement and geographies of physical activity are important ingredients of the theory of social ecology and pedagogy of experiential education. They are important because of the way in which the embodied making of meaning through movement and physical activity in various environments over times are, indeed, major sources of an expanded notion of learning which, if so, is part of the legitimation process that physical education has struggled with, for far too long. Often seen as mere 'doing' curriculum areas like physical education and outdoor education that privilege the moving, active, experiencing body do offer a rich and extensive qualities and characteristics of meaning and learning that are unable to be offered in the classroom.

The challenge for us and physical education is for physical educators to recognize how the nascent but revitalizing phenomenology and social ecology of

physical education can enhance its endeavours conceptually and practically in ways that have not been previously envisaged, or only partially so.

Summary

It is clear that those writing in the genre of a phenomenology of movement are committed to how the moving body (in time/space) is a source, or origin, and reflection of meaning and meaning-making. The phenomenological discourse shifts our ecological attention to some of the more intrinsic qualities and characteristics of the body(ies) in movement in time and space. In so doing, at least, a renewed sense of agency is therefore implied in regard to developing the theory and practice of physical education. We feel this positive sense of agency fostered by the meaning-making dimensions of movement is probably a 'primitive' or 'primacy' of practice and, therefore, prerequisite to more earnest accounts of conception and learning undertaken rationally by the various critical, post-structural and applied-science discourses.

To be sure, movement, both situationally and contextually, is inextricably linked to the affordances, enablements and constraints of the various environments that spatially and geographically influence the human and social experience of movement. In addition to the spatialities of movement, their geographies also shape how communities act as the 'driver' of social and environmental capital and their sustainability. The phenomenological, or 'micro' study of, for example, the body schema and image in movement provides a 'critical' window through which the social, cultural and ecological 'world' might also be examined.

This social ecology of movement therefore addresses at different levels the relationships between human, social, built and natural environments – a prerequisite for the promotion of health, wellbeing and sustainability. This 'socio-historical-cultural' and 'ecological' theory of moving in time and space, even place, will

positively deconstruct the disconnects of mind-body, organism-environment, I-we-world and, inevitably, ontology-epistemology-methodology that, currently, continue to fuel the theory-practice gap in physical education.

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¹ Meaning and meaning-making in movement draws mainly on concepts from diverse academic fields including phenomenological philosophy, cognitive science, psychology, social theory and environmental ethics. Concepts used include somatic understanding (Egan, 1997), practical consciousness (Giddens, 1984), the primacy of practice (Archer, 2000), ecological subjectivity (O'Loughlin, 1997), the mind-embodied (Weiss & Haber, 1999), the embodied mind (Lakoff & Johnson, 1999), kinaesthetic intelligence (Gardner, 1983), body/corporeal schemata (Merleau-Ponty, 1962), subjective knowledge (Bain, 1995), somaeasthetics (Shusterman, 1997) and lived experience (van Manen, 1997). It is evident that there exists a richness about the qualities and characteristics of movement from outside the domain of physical education. Scholars tend to draw inspiration from the phenomenological and interpretive branches of philosophical inquiry and the human and social sciences.

² Due to space restrictions, we would ask that interested readers refer to these relevant publications.

³ We note here that, indeed, the spatialization of the body is well understood in physical education (for example, dance, kicking the ball into the wind, leaning into the bend) but its theoretical underpinnings, qualities and characteristics – both philosophical and primal, have been eroded by the chronic (perceived/ideological/standardized) need in physical education and human movement studies for instrumental, technical, competency, measurable, training, efficiency, safety, rules, calculative and performative 'outcomes.' Spontaneity, for example, becomes 'invisible.'