

# Conceptualizing the Phenomenology of Movement in Physical Education: Implications for Pedagogical Inquiry and Development

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There is increased phenomenological interest, philosophical and empirical, in the meaning and meaning-making dimensions of the experience of movement in physical education (Kentel & Dobson, 2007; Kretchmar, 2000a; Loland, 2006; Smith, 2007; Whitehead, 1990). This scholarly concern about the qualities and characteristics of movement shifts the focus of pedagogical interest to the embodied meanings of such experience and the subjective values associated with it (Johnson, 2008). Too often the meaning of movement has been invisible in the discourse of physical education. Philosophical framing and empirically informed discussion about the phenomenological basis of movement as well as interpretation of its embodied time-space affordances and constraints has the potential to reconceive curriculum, pedagogical, and policy development. In this paper, for the purposes of framing ongoing inquiry we examine phenomenological contributions to the physical education literature that examined or describe the intrinsic qualities of movement and consider implications of renewed interest in meaning and meaning-making for pedagogical theory development and practices.

Moving bodies have an extraordinary ability to make meaning in and of physical activity (Johnson, 2008). Yet the capacity for physical educators to maximize this potential for learning and, therefore, for teaching is constrained because of the lack of a presence in the discourse of physical education about the qualities and characteristics of the movement experience. Pragmatism has been identified by Hawkins (2008) as one source of a physical education discourse that has allegedly 'lost its soul' to functional and instrumental imperatives. Repositioning the phenomenology of movement within the discourse of physical education, as we seek here, and making claims about the meaningful nature of the experience of movement inevitably confronts problems and challenges about how various aspects of the discourse of physical education and its research have historically, culturally and ecologically been conceptualized, contextualized, represented, and legitimized. Here we focus primarily on the conceptualization component provided by the phenomenological frame.

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Moreover, international differences, tensions, and debates have existed for over 150 years about the purposes, aims, objectives, and methods of physical education and physical education pedagogy (Laker, 2000). Invariably, physical education has often been constructed in a practical or utilitarian manner (Kretchmar, 2008a), leaving it wide open to conceptualizations that instrumentally reflect certain predetermined ends or functionally serve government social policy (Gard, 2008), reconstitute the schooling and disciplining of bodies (Fitzclarence, 1990; Kirk, 1994, 2001), provide the impetus for cultural identity formation and national pride (Laker, 2003) or act as a vehicle for the promotion of public health (Hawkins, 2008; Sallis & McKenzie, 1991; Trost, 2004).

These social and historical variations have, undoubtedly, shaped both subtle and overt differences in the purposes, means, and ends of physical education and dutifully led to varying notions of its pedagogy(ies) and pedagogical content knowledge. For example, Tinning (2002, 2008) recently argued for a “linguaging” of the terms *pedagogy* and *sport pedagogy* that encourages more reflexive and critical thinking about the meanings of such terms and how such understandings may be informed by certain paradigms of knowledge production and ways of seeing the world. Three important perspectives he does discuss are: (i) pedagogy as the science of teaching, (ii) pedagogy and knowledge (re)production and finally, and most related to this article, (iii) phenomenological pedagogy. Clearly, Tinning’s aim is to stimulate discussion and consideration of such terms within each particular conceptions via interpretation and explanation he offers about the different theoretical and philosophical sources that historically have shaped these pedagogical perspectives. More broadly as is evidenced in the literature (Johns, 2005; Kirk, 1990) some conceptualizations and representations remain dominant in the discourse of physical education, such as the biophysical sciences (e.g., anatomy, exercise physiology, motor development) and are legitimized as either an exercise and/or health science or human movement study. Some versions and conceptualizations view physical education as a form of social or cultural critique and partial solution to various problems and issues that afflict social inclusion, equity, and access to fulfilling lifestyles, including the promotion of health and wellbeing (Tinning, 2002). Others remain on the margins, such as the phenomenology of movement that quests kinaesthetically or somaesthetically to highlight the intrinsic values of movement and their meanings in the human condition via physical education (Sheets-Johnstone, 1999; Smith, 1997). To be sure, elsewhere there have been commentaries as to which pedagogies and their theoretical sources have dominated and those which that remain on the periphery including, probably, a phenomenological pedagogy (Tinning, 2008).

There is no doubt that the contribution of phenomenology to the physical education discourse is and remains on the margins. As Tinning (2008) observes “. . . we have not seen much of the phenomenological focus on pedagogy in kinesiology” (p. 410). His overview of phenomenological pedagogy in physical education is, understandably, very brief given the word limitations of the journal in which his article appeared. Nonetheless, journal articles are a primary means of the way in which a discourse, its future trends and passed histories are conceptualized and contextualized via that medium’s ability to represent and legitimize knowledge, research and claims. We also note that the topic of phenomenology is limited to three pages only in the 809 pages of the *Handbook of Physical Education* (Kirk, Macdonald, & O’Sullivan,

2006). The brevity of Tinning's and Kirk's explanations might also accurately mirror the absence of theory and paucity of research about the phenomenology of movement within the physical education literature, its claims on the qualities and characteristics, and the sorts of pedagogies it might entail.

Given the lack of representation of a phenomenology of movement in physical education discourse, our task here is to illuminate the rich literature that has sporadically contributed to the field of phenomenological pedagogy in physical education over the past 40 years. Our purpose here is to develop the concept of movement, using the phenomenological framing, through a thematic synthesis of those published articles while highlighting their potential contribution to a broadened notion of physical education pedagogy. Our aim is to highlight the vitality of the qualities and characteristics of movement and movement experiences rather than allow them to remain invisible in physical education pedagogy and its discourse. In developing this conceptualization of movement, based on the physical education literature but within word limits, we cannot elaborate how that conceptualization requires further development of the notion of meaningful movement and its implications for the contextualization of, inevitably, *learning* in terms of strongly representing the sorts of pedagogies we believe are adequate or appropriate to a phenomenology of movement. But, in conceptualizing the phenomenology of movement we will offer some indicators of how the concept might be applied to movement related pedagogies and promoting meaningful movement experiences in physical education.

Our aim is, therefore, positive. We don't explain how such a phenomenology and its pedagogy have been marginalized. Nor, at this stage, can we account for the moving, physically active body's various genetic, biological, chemical, psychological dispositions and its various social and cultural constructions, noting the availability elsewhere of literature in the disciplines of biology, anthropology, cognitive science, psychology, sociology and cultural studies<sup>1</sup>.

Tinning's (2008) call for a languaging of the terms *pedagogy* and *sport pedagogy* within certain knowledge paradigms, we believe warrants an elaboration of the phenomenology of movement and, in doing so, conceptually advance the 40 year contribution authors so far have offered. We draw primarily from the extant phenomenological literature of physical education and outline: (a) our philosophical, interpretive and, therefore, scholarly interest in the meaning-making basis of movement, (b) an introduction to phenomenology as an approach to framing inquiry and scholarly development in physical education, (c) our critical interpretation of the key literature (d) a synthesis of concepts of phenomenology of movement, and (d) summary of how the key literature and concepts informs possible pedagogical directions.

## Philosophical, Interpretive, and Scholarly Interest

Scholarly interest in the meaning and meaning-making of movement experiences within the physical education discourse has existed for nearly 40 years (Arnold, 1979; Gerber & Morgan, 1979; Metheny, 1968; Rintala, 1991; Whitehead, 1990). Since that formative period, the number of publications is limited. More recently, several scholars (Brown, 2008; Brown & Payne, 2008; Kentel & Dobson, 2007; Kretchmar, 2000a; Loland, 2006; Smith, 2007; Whitehead, 2001) have revisited this formative interest via studies of "meaning in movement," "physical literacy,"

or “movement literacy” within physical education. This conceptually rich literature has provided additional intellectual nourishment for pursuing how the theoretical development of a phenomenology of movement potentially links with meaning making as a pre-conceptual and aesthetic dimension of more formal learning, the latter of which we tend to focus on in terms of skill acquisition and cognitive development. Notions of the active body in movement that focus on the body’s capacity to produce meaning are being addressed elsewhere in the intersections of phenomenology and cognitive science (Gallagher, 2005; Johnson, 2008; Noe, 2004; Varela, Thompson, & Rosch, 1991) often under the notion of the ‘embodied mind’ but this nondualistic notion remains invisible in the current dominant discourses of sport (Kirk, 2003), fitness and public health (Troost, 2004), active communities (Sallis et al., 2006) and disease reduction within physical education.

Our scholarly and phenomenological interest in moving bodies, movement experiences and their respective meaning-making capacities orients our attention in inquiry to the aesthetic dimensions of human experience, as a hidden precursor of learning and, therefore, pedagogical and curriculum inquiry and development. Our intent is, therefore, a response to

- (a) pedagogical and educational research suggesting that students derive little satisfaction from physical activity during physical education (Carlson, 1995; Tinning & Fitzclarence, 1992),
- (b) the need to make visible how meaning and its making in and from movement is a vital but under theorized contributor to the potential for physical education to make and state the still problematic case for its learning value, pedagogical credibility and educational legitimacy,
- (c) linking the above, perhaps functionally, to formulating a core philosophically robust response to those increasing social and political pressures to further understand the positive and proactive capacity-building attributes of children’s behavior so as, for example to alleviate the so-called childhood obesity and physical inactivity epidemics (Kentel & Dobson, 2007; Kretchmar, 2007). Put simply, if physical education can be made more meaningful and satisfying, then greater physical activity through the lifespan might be anticipated,
- (d) advancing the 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 and a human agent and social actor,
- (e) a generalized desire to provide alternatives to those discourses that see human bodies and their performativity in conventional terms of achievement and status as primarily governed or disciplined consequences of various discourses (Archer, 2000),
- (f) rectify the absence or paucity of empirical studies about the qualities and characteristics of movement and movement experiences in the discourse of physical education and physical education pedagogy.

Although the numerous intentions for pursuing such a line of inquiry are acknowledged, our interest here is to highlight how such an approach to scholarly inquiry can be simplified to probing how these bodily lived movement experiences,

qualities, meanings and characteristics can be understood? According to van Manen (1997) “phenomenological research is the study of lived experience” (p. 9). Whitson (1976) proposed the value of phenomenologically oriented approaches to physical education, sport and sports sciences as a way to understanding in more detail why someone acts in a certain way during sport, “. . . it is necessary to get at what he understands himself to be trying to do, and beyond this, to understand the cultural context and life experiences which have led him to view the world in this particular way” (p. 54). Several other authors (Fahlberg & Fahlberg, 1994; Kerry & Armour, 2000; Loland, 1992; Nilges, 2004) have advocated for the use of phenomenology in these related subdisciplines. But, there is very little empirical phenomenological research or broader understanding of phenomenology in physical education, or its qualitative insights.

Despite this invisibility in research, some time ago Bain (1995) optimistically argued, “. . . because of its philosophic assumptions, phenomenology has particular relevance to the study of movement” (p. 241). While Kerry and Armour (2000) supported Bain’s statement, their caution points to the divergences that exist between the terms qualitative and phenomenological. They state that if the terms qualitative and phenomenology are used interchangeably, then the potential of phenomenology where “. . . meanings as construed by the participants” (Bain, 1995 p. 243) might not be fully realized or appreciated.

We are optimistic about the contribution that phenomenology of movement can make toward theoretical development and enriched pedagogical practice in physical education; not as an alternative vision for the field but as a complement to the biophysical and sociocultural foundation subdisciplines that have offered a richness of practice in the current physical education discourse. But we remain concerned that there has not been a greater theoretical interest and practical uptake of the potential contribution a phenomenology of movement can make to the development of meaning-making, learning and, presumably, satisfaction and joy in physical education.

## **An Introduction to Phenomenology as an Approach to Framing Inquiry**

It is appropriate to locate our understanding of the phenomenological orientation in physical education to broader research about movement, meaning and meaning-making in the philosophy of social sciences and the theory of knowledge (Denzin & Lincoln, 2005). We do so by first outlining what phenomenology is to clarify our position in this article and our languaging of the term, before returning to the conceptualization and contextualization of phenomenology within physical education.

Phenomenology is, in this context, a philosophical approach to studying the nature and structure of experience as it is ‘lived’ and is understood primarily from the subjective position through which meaning and meaning-making of agents as actors is made sense of. The experience of motility (Merleau-Ponty, 1962), movement (Johnson, 2008), its primacy (Sheets-Johnstone, 1999), and practice (Archer, 2000) are, for example, of keen interest to phenomenologists or theorists drawing from the phenomenological perspective. Phenomenology is the study of the ‘essences’ or primordialities of phenomena like the experience of movement and the way things appear to us in experience or in consciousness. The phenomenologi-

cal approach demands 'deep' interpretation and 'rich' description of situations for which the representation of experience utilizes a variety of evocative literal, poetic and artistic means. According to Thorburn (2008) "the essence of an experience is its intentionality: the meaning of events, the meaning of embodied action including kinaesthetic awareness of one's movements and the importance of sensations as they are experienced by the body" (p. 265). Although terms like essence are now frowned upon, the evocative aspect of rich description recommends we use terms like, for example, 'joy' to describe and connote a certain type of feeling, be it from the researched or researcher, to convey meaning as best as possible, notwithstanding the limitations in the correlation of experience and language (Lakoff & Johnson, 1999).

Phenomenology is also a reaction against naturalist positivism and by implication the scientization of physical education that sees its conceptualization, contextualization, representation, and legitimation primarily as an applied science. At a broader level of the intersection of the social sciences, humanities and cultural studies the main message emerging from the postmodern foundation of knowledge can modestly be simplified to expressions of the need for and importance of (multiple) 'ways of knowing' and, therefore, call for different methodologies and other ways of understanding and representing what we know (for example Alveson, 2002; Flyvbjerg, 2002; Law, 2004; Sayer, 2000).

To assist with our critical discussion of genres of inquiry and how phenomenology is positioned and more particularly that about the lived experience and meaning of movement, we need to briefly outline through example phenomenology's role in establishing truth claims via different forms of knowledge production, representation and legitimation. Some scholars including Loland (1992) and Fahlberg and Fahlberg (1994) ask research methodologists to (i) examine a level of reality (known also as *ontology*), be it matter or meaning; and (ii) where a specific interest of inquiry such as the ways in which we come to know is wanted (known also as *epistemology*), then an appropriate framework (design methodology) can be used. Using running as an example, should one wish to predict, or measure their run as a performance in (or against) time, then the ontological level is matter and the inquiry is empirical, most likely using a postpositivist approach and design and quantitative methods including statistical treatment of data. This 'frame' reflects the applied science approach to explanation that is typical of the exercise sciences logic of physical education.

However should one wish to study the lived experience, meaning, or meaning-making of running to the runner, then the ontological level is the subjective meaning of the quality of bodily movement within the spatio-temporal and, perhaps, socio-ecological dimensions of the act and agency of the runner where the epistemology is hermeneutical or interpretive and methodology will be qualitative, probably along the lines of redeeming a somaesthetic embodied consciousness (for example Shusterman, 2008)

Notwithstanding those historical efforts already mentioned about the significance of a phenomenological orientation, the contemporary postmodern social science work of Andrew Sparkes (1991, 2004, 2008) and Hopper and colleagues (2008) have opened up discussion on the variety of perspectives, approaches and ways to represent their findings to researchers utilizing hermeneutical and interpretive methodologies. For example, Hopper et al.'s (2008) polyvocal review of different

genres of qualitative research provides useful insights into the philosophy of social science and truth claims in physical education and related fields. Indeed “voices” are mediums or genres of inquiry that loan themselves to phenomenology’s interest in the lived experience of, for example, movement, movement experiences and meaning-making. Related genres of interpretation more frequently used in physical education research include: realist tales (Brooker, Kirk, Braiuka, & Bransgrove, 2000), confessional tales (Humberstone, 1997), ethnodramas (Brown, 1998), poetic representations (Sparkes, Nilges, Swan, & Dowling, 2003) and fictional representations (Denison, 1999).

So returning to the runner, Hopper et al.’s (2008) autoethnographic account might be one genre of inquiry that usefully approaches the rich descriptive task of the running experience and is able to express or articulate and, therefore, partially represent many of the embodied and subjective essences and meanings associated with the running experience, such as the bodily feelings, spatial and temporal awareness and response, social interactions and related dimensions of that social ecology of experience.

We are committed to describing to researchers and practitioners in physical education the qualities and characteristics of the movement experiences through the research approach of phenomenology. But in doing so, we also acknowledge the frailties of using such approach. As we have highlighted there is considerable overlap in how both phenomenological research and qualitative research is represented and reported. Yet there continues to be slippage between these two forms of inquiry. We concur with Kerry and Armour’s (2000) review of literature where they expressed concern that much of the available phenomenological research is in fact qualitative and that confusion about understanding the meaning of human experience has arisen in part due to shared purposes of phenomenological and qualitative research. In further elaborating this slippage they write that “. . . phenomenological research seems to suggest that there has been either a lack of attention to the philosophical roots of the phenomenology used or a failure to report the relevant details” (p.10). Researchers, in other words, support the methodological orientations and findings of such approaches, yet do not possess a deep understanding of the epistemological and ontological positions advocated in Husserlian, Heideggerian, or Merleau-Pontian philosophies of phenomenology.

Most significantly for the purposes here this review outlines and describes how authors in physical education have drawn inspiration and ideas from the philosophical phenomenology and what that entails for the (re)framing of a phenomenology of physical education. Given this we continue to advocate the importance of using phenomenological approaches to the scholarly development of research and pedagogical practice in areas such as undergraduate/postgraduate education and teacher professional learning and development (Brown, 2008).

## **Key Literature Toward a Phenomenology of Movement**

Phenomenological work is present in physical education research yet its current status and currency of research activity is not well established, nor self-evident. The breadth of published and unpublished work [mainly doctoral theses, (Inoue, 1984; Kollen, 1981)] or conference presentations (Kleinman, 1964, 1966; Kretchmar, 1970) exists mainly in the form of philosophical, theoretical, or (re)conceptual-

ized work. Empirical work using phenomenology as an approach exists but this is relatively minor (Kentel & Dobson, 2007; Nilges, 2004; Wessinger, 1994). The philosophical, theoretical, or (re)conceptualized literature of a phenomenology of physical education demonstrate several themes, namely: contextualization of historical work, meaning and meaning-making, issues of language and symbolism of movement and intersubjectivity or intercorporeality.

**Contextualization of Historical Work.** Ongoing philosophical/conceptual work drawing on first order historical phenomenologists and social theorists such as Jean-Paul Sartre and Maurice Merleau-Ponty are extant in the physical education research literature, whereas other phenomenologists such as Edmund Husserl (eidetic phenomenology) and Martin Heidegger (existential/hermeneutic phenomenology) have rarely, if at all, been mentioned or cited.

Historically within the nascent discourses of physical education, it is likely that Van den Berg's (1952) work on the *Human body and the significance of human movement* was the first to highlight the importance of deeper meaning through movement experiences. Drawing on the work of Jean-Paul Sartre, van den Berg highlighted a series of concepts; namely: (i) landscape of action, (ii) intention of the moving person, and (iii) the glance of the other, to examine the subjective movement experiences. The scholarly core of this work has been used by more recent sympathetic proponents of it in contextualizing a phenomenology of movement for physical education (Kleinman, 1979; Smith, 2007).

Kleinman draws on Sartre's philosophical work of the three dimensions of the human body to conceptualize the practice of physical education not in kinesiological terms but in awareness of these dimensions and where human movement can derive its significance through an example of a mountaineer. In examining and describing the mountaineer and her/his performance, Kleinman describes the mountaineer's subjective moving experiences, where: (i) the body becomes realized as a living body where the body is transcended into silence as an activity is conducted, (ii) the body coming into the eyes of his fellow man, (iii) the body becomes aware she/he is being watched by another body. In a similar vein to Kleinman, Smith (2007) foregrounds his descriptions of the significance of children's movements, via Sartre's three dimensions of the human body (landscape, intention and glance) signaling its importance to our understanding, through recent developments in eco-pedagogy and eco-phenomenology (Brown & Toadvine, 2003) via a social ecology ". . . as the originating source of meaning for movement" (p.50). In other words, movement cannot be divorced from environment, or as Smith, Van den Berg or Kleinman, have written drawing on Sartre, excluded from its landscape of action.

**Meaning and Meaning-Making.** According to Kleinman (1979, p.179) one of the key objectives of physical education was to "discover the heretofore hidden perspectives of acts and uncover the *deeper meaning* [our italics] of one's being as it explores movement experiences" (p. 179) in response to developing an awareness, openness and understanding of self. While such statements are twenty years old, they provide reference to the approach to philosophical thinking that gestures more firmly toward the embodied sources and role of meaning-making in physical education. Such statements are consistent with the work of Arnold in physical education (1979) and more recently by Pring (2004) in education. However such purposes of physical education have historically been marginalized in the current



debates and discourses. Any physical education that does not engage seriously with the concept of movement and its qualities and characteristics, via a social ecology of the physical<sup>2</sup>, diminishes the educational prospects and pedagogical potential of the field of physical education. But what are these concepts of meaning-making and how does they relate to moving?

By way of introduction there are a wide variety of ways in which the term ‘meaning’ has been constituted and applied to field of research. In physical education we refer to publications that might be described as seminal such as *Meaning in Movement* (Metheny, 1968), *Philosophy of 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). Underlying these publications has been tacit recognition of alternate ways of knowing, doing, and becoming. Those influential publications mainly from the United States of America draw on the work of Michael Polanyi (1958, 1975), whose understandings of meaning are derived from his work of the theoretical understandings of personal knowledge, as ‘tacit.’ Whereas publications from the United Kingdom (see Arnold and Best), have explored those meaning-making concepts espoused by Phenix (1964). We will attend to each of these briefly, before returning to the literature relating to the phenomenology of physical education.

Polanyi’s theory of meaning is drawn out of his extensive personal work on the theory of personal knowing (Polanyi, 1958). Essentially knowledge or meaning is ‘personal’ and requires the knower to develop a framework (known as *subsidiaries*, which are unknown to the knower). In addition there is the concept of indwelling<sup>3</sup> and the notion of the *focal* attention. As Hawkins (2008) eloquently describes from Polanyi,

“All knowers rely on a framework that is a subsidiary essentially unknown to the knower. The knower uses this subsidiary to attend focally to the object of attention. Thus, there is a *tacit* (his italics) dimension of knowing, an aspect which remains implicit and unexpressed, known only through engagement with that to which we are focally aware.” (p. 349)

Phenix’s (1964) *Realms of Meaning* are contextualized to education where he argued that “. . . general education is the process of engendering meanings” (p. 5). Phenix articulated meaning via: the experience of reflective self-consciousness, the logical principles by which the experience is patterned, the elaboration of these patterns into traditions and finally the expression of these patterns by means of appropriate symbolic forms. As he has described, “. . . if the essence of human nature is in the life of meaning, then the proper aim of education is to promote the growth of meaning” (p. 25). To achieve these aims of education, Phenix described six fundamental patterns or modes of human understanding, which actually correspond to traditional subjects that comprise the school curricula. These realms include symbolics, empirics, esthetics, synnoetics, ethics, and synoptics<sup>4</sup>.

Within the discipline of physical education over the last 40 years there has been an attempt by a very limited number of authors to get at “. . . the meanings and delights of physical activity” (Kretchmar, 2008b, p. 9) via an understanding of the meaning and meaning-making of movement (Brown, 2008; Kretchmar, 2000a, 2007; Loland, 1992, 2006; McCaughtry & Rovegno, 2001; Metheny, 1968; Quenne-

rstedt, 2008; Ryan & Rossi, 2008). A serious philosophical attempt to describe the importance of meaning and meaning-making was undertaken by Eleanor Metheny (1965, 1968). Language like “denotation,” the literal meaning, and “connotation,” the personal associations related with movement provided physical educators with initial ‘practical’ visions of where and what a phenomenology of physical education might look like. Highlighted some years later by Kretchmar (2000a), the work of Metheny was important in providing insights into the meanings associated with lived experience in that connotations of movement that tell us complex and interesting stories about the performer of the movement, physical activity or exercise. In his own analysis drawing on the meaning-making work of Polanyi, Kretchmar (2000a, 2000b) critiqued the traditional ways that physical educators seek to demonstrate meaning via prudential, intellectual and affective approaches. Using “meaning as transport” metaphors Kretchmar elaborated through practical examples of how meaningful experiences can occur in movement synthesizing meaning when one can be moved *away* from the literal, where one can be carried *toward* or where one can be moved *along*.

Earlier Arnold (1979) proposed three subjective movement meaning categories as a way of understanding movement. Primordial meaning, according to Arnold related to how the experiencer is aware the movement itself as well as attaching subjective value to it. In other words it is related deeply to kinaesthetic flow patterns, pleasurable bodily experience and the formation of 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. In this article, our focus and concern is on the discourses of physical education, so while we acknowledge that beyond the physical education literature there exists a growing number of contemporary scholars that gesture toward the importance of such primordial, aesthetic, subjective, and intrinsic way of knowing movement (Archer, 2000; Sheets-Johnstone, 1999; Shusterman, 2008), we do not discuss this work but consistently reference it. Arnold’s second subjective movement category is that of contextual meaning. This provides the agent or subject with meanings in movement when performed in a specific type of movement situation<sup>5</sup>. 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. According to Arnold (1979) such existential meanings “. . . ‘stand out in,’ relate to and are part of a person’s individual existence as a result of his involvement in movement situations within the world” (p. 38). As an agent his participation in movement involves the whole of him in total unity. He cannot or should not be controlled by another (e.g., coach/trainer). In other words “. . . he is what he does” (p. 38). In looking for sport and its existential qualities, “. . . sport is authentic to the extent that it is a medium in and through which man can find both himself and make himself” (p. 38). Arnold’s final categorization of existential meaning relates to both the ontological and metaphysical questions related to man’s being. As Arnold questions, “How is it that an individual existent derives meanings which ‘stand out’ for him as a result of engaging in particular sporting activities?” (p. 38).

**Intersubjectivity.** For Smith (2007) the philosophical thinking about the body “fails to address the embodied consciousness of the child and the intercorporeal

consciousness of adults interacting with the children” (p. 47). As a result, Smith’s own research has highlighted the importance of pedagogical encounter between teacher/parent/coach and the child/student, yet poignantly reminds and cautions us that often teachers/coaches/parents may reduce children’s movement experiences to our own (see also Hawkins, 2008). Smith (1992) wrote,

We need to suspend belief in how children’s physical education can be explained and be prepared to describe how it is possible for an adult to stand in an educative relation to a children within particular, somewhat unique, situations that carry significant connotations of physical maturation. (Smith, 1992, p. 62)

Intersubjectivity therefore, as with the spatiality of movement we have looked at as central aspects of embodied meaning making is a crucial phenomenological dimension of the social ecology we are formulating for physical education pedagogy. In physical education Smith calls this *educating physically* (Smith, 1997). In conceptualizing these encounters within a phenomenology of movement for physical education, Smith draws philosophically and theoretically on van Manen’s (1986) tone of teaching, where observing children, reminiscence, good memories, gestural connectedness and gestural reciprocity/mimesis are consistent within a broader phenomenological frame. Such encounters are laden with personally meaningful, rich conceptions, not only of movements ‘in’ physical education but also of the relationships between these bodies. In this way there exists much overlap with Connolly’s (1995) work and in particular her description of the intersubjective experiences between teacher and child. Connolly has suggested that the current contexts of physical education class often render the ‘I’ plus ‘other’ or the ‘us’ relationships into linear/hierarchical ones. Connolly wrote,

We live in a world, a lifeworld, inhabited by many I’s and others, so we are constantly living the experience of intersubjectivity—an interplay between subjects, a shared discourse, a conflict. Human science is *in* the lifeworld, a pedagogical intersubjective act. (p. 28)

It is this embodied act, the intersubjective and intercorporeal encounter, in teaching physical education through wonderfully diverse contexts of the gymnasium, the oval, or tennis court where bodies, movers, and doers, be it child or teacher, interact to define the importance of the pedagogical relationship. It should not be defined by power or hierarchies. It should be one of acceptance and acknowledgment, because “. . . my body is me, but it is also a body among others.” (p. 28)

In summarizing the available literature in physical education it is clear that a phenomenology of movement within the discourse of physical education exists but remains invisible, hidden, or marginalized. Most work to date is informed via ongoing philosophical and conceptual development, via contextualization in physical education of historical phenomenological work informed by Sartre and Merleau-Ponty. There exists an ongoing research stream examining the importance of movement to an individual’s meaning-making which begun with Metheny as early as the 1960s and has continued through the early 2000s by Kretchmar. The final theme of this philosophical and theoretical work relates to the concept of intersubjectivity. Here the work of Stephen Smith and Maureen Connolly provided useful guidance to physical education teachers and researchers about the importance of the pedagogical encounters between teacher/coach/parent and child/player.

Clearly as can be evidenced to date most of the literature that we have examined is primarily of a philosophical/theoretical dimension. However this current synthesis is incomplete without insight from those few empirical studies that do exist.

**Empirical Studies.** One factor limiting the phenomenology of movement presence and legitimacy in physical education discourse is the small number of empirical studies. An early example is Kollen's (1981) doctoral dissertation which examined the experience of movement in physical education and the requisite meaning(s) of these experiences in a sample of 20 high school students. The findings suggested that the

dualism, meaninglessness and self-consciousness of the experience of *movement* in physical education for the students was described against the backdrop of an experience valued and sought by each of the students: being-into-*movement*. A phenomenological account shares student reports of natural highs experienced outside of physical education and highlights the near impossibility of being-into-*movement* inside physical education boundaries. (p. i)

Wessinger's (1994) study of the lived experience of scoring goals during games in physical education is another example of the empirical use of the phenomenological research approach. Wessinger used a three stage approach: (i) isolation of key descriptors, (ii) collapsing this information into themes, and (iii) derivation of meanings from these themes. Of Wessinger's study, Kerry & Armour (2000) observed that "... much of the rich data from this study, including vignettes and quotations from the children's stories, remains unpublished in the form of a doctoral thesis. Inevitably, perhaps, the journal paper lacks the rich narrative that would characterize the best examples of phenomenology" (p. 14). This example supports the earlier comment we made about the slippage of phenomenology in qualitative research. Kerry & Armour's observation underscores the invisibility of the phenomenology of movement in the physical education discourse and the difficulties of it obtaining status and, hence, credibility. One of the few published examples of Wessinger's findings is a "word picture" of feeling good and scoring which is an interpretation reproduced here about the children's stories. Although there are strong undertones of performativity and (self)identity production processes the following extract partially represents how meaning can be made:

Doing it feels good

Doing it well feels good

Doing it spectacularly feels even better

Doing it well and besting others feels best of all

Scoring feels good

Scoring and being noticed feels really good

Scoring a home run and being noticed feels terrific

Scoring the most, the best, the most unusual is best of all. (p. 436)

Nilges (2004) studied movement meaning in a fifth-grade creative dance unit. The methodological perspective included: (i) reviewing formal data from extant research on why students find movement meaningful, (ii) a circular process to collect data and refine coding of sensitizing concepts, (iii) reducing primary codes to underlying dimensions of movement meaning, and (iv) developing a metaphor to reduce data to one overarching meaning structure. The primary codes of possible meanings included: expression of feeling and ideas, disruption of feelings, being good at it, being seen/performance, gender, and social relations. These primary codes were then reduced to underlying dimensions of: the expressive, the sensory, the experiential, competency, and the intersubjective. The final process led to the metaphor of *Ice Can Look Like Glass* (Nilges, 2004). While the lack of empirical literature may be seen as problematic reiterating that phenomenology is often seen as an approach or perspective warranting philosophical elaboration, there are several points worth noting from these three studies. The most notable similarities between the studies were the importance of student's meaning of movement, their voice and their meaning-making. Primarily this is heard through the researcher, where philosophical concepts, for example Arnold's (1979) description of subjective meanings are used to interpret and represent students embodied intentionalities, through interview or word to understand their meanings of movement. This was present in the findings of all three studies. Importantly this highlights the appropriateness of using phenomenology as an approach when questions related to meaning are posed by researchers. Two other points should be noted: subtle differences exist between studies in their approaches and methodologies; and secondly, two of the studies focused on primary school aged children, while the other was on high/secondary school aged children. Clearly we encourage using phenomenological approaches, but suggest researchers clarify and develop the epistemological and ontological presuppositions and positions that inform appropriate phenomenological methodologies. This would ensure consistency among researchers interested in phenomenological approaches and decrease the likelihood of slippage to qualitative findings not in keeping with particular phenomenological approaches.

## Synthesis of Concepts of Phenomenology of Movement

The literature in physical education about a phenomenology of movement identifies important insights that require elaboration in extending the field's pedagogical, curriculum, and research efforts into expressing the meaningful basis of experiencing physical activity in physical education. The insights and concepts can be framed into five broad themes of which the first three are interrelated and the latter two suggest implications for research and pedagogy. The themes we derived from summarizing the phenomenological orientation include: (i) challenging assumptions about knowledge production and truth claims in the field, (ii) the need to grapple more earnestly with the nature of the experiencer in physical education, (iii) the importance of accommodating shifts in the focus and locus of inquiry, research, and pedagogical development, (iv) examining the congruence and coherence between research approaches, aims, problems, design, and methodology and the representation and legitimation of certain pedagogical outcomes of such research.

Our thematic synthesis is relatively broad because we have confined this paper to the presence of the phenomenological orientation in the physical educa-

tion literature. At this stage, we see our task as one of reporting on the status of a phenomenology of movement within physical education and, therefore, indicate a number of sensitizing concepts and themes that serve as intellectual resources in furthering the case for including a phenomenology of movement in physical education. We reiterate that much more detail can be gleaned from the sources cited in this synthesis of the literature and that a related task for development of this line of inquiry can be found outside the physical education discourse in, for example, the intersections of phenomenological philosophy, cognitive science and even eco-phenomenology if, indeed, the meaning of movement is to be further articulated in ways that address pedagogical development (Brown & Toadvine, 2003; Gallagher, 2005; Johnson, 2008; Noe, 2004; Varela et al., 1991).

**Challenging Assumptions.** The literature in the phenomenology of movement highlights an ontological qualification and, at times, rejection of a series of dualisms chronically present in the physical education literature. Clearly, physical education is one of those curriculum fields where the human “body” is central to the primacy of movement and practice and, by necessity, theorization about it. But what the writers within a phenomenology of physical education state or imply is that theorization of the moving body and its experience, meaningful, or hidden and otherwise, in physical education, appears to reconstitute the mind-body separation, despite the best efforts of many writers cited above. There are indications in the literature that the body in movement is, in itself, a rich somatic source and site of meaning and meaning-making that is ‘prerational’ and, therefore, often lies below the discursive (and textual) consciousnesses that tend to dominate in our conceptions of the value, utility, or efficacy of physical education and an education of and for the physical.

There can be no doubt that rationally we use language to communicate meaning, understanding but, invariably, the ‘mind’ knowledge and truth claims that might inordinately be privileged in physical education, and for which teachers and researchers are often held accountable, do not always attend assertively to the felt bodily meanings that the phenomenology of movement aims to reveal via its particular methodology of representing lived experience. Put differently, in alerting us to the ‘below’ the discursive/textual body consciousness, some of the ideas of the phenomenologists of physical education reviewed above encourage us to be attentive to the value of meaning-making that, probably, defies or can’t be reduced to knowledge, facts, and, even, autoethnographic voices, narratives, and stories. Yet feelings, emotions, joys, and sadness, frustration, awkwardness should not be eliminated from the embodied meaning-making and somatic “understandings” that the somaesthetic and kinaesthetic dimensions of a phenomenology of physical education and movement experiences must accommodate, in the represented reality of the lived experience that phenomenologists emphasize.

Hence, those with an interest in the phenomenology of movement and the aesthetics of physicality and human self-understanding within movement experiences will need to remain vigilant to this slippage into the sovereignty of the mind and authority of reason in physical education. There is ongoing risk of placing the moving body and movement experiences, and their study, on the periphery of a reoriented physical education discourse that still inordinately privileges the mind, knowledge, and reason as the only or primary medium of knowledge production and claims on truth. For those, who seek to retrieve or promote the centrality of

the meaning-making human body in physical education, we suggest also that it is appropriate to grapple with notions like the “embodied mind” as a possible way, metaphorically speaking for purposes of brevity, of extending the most recent developments within the phenomenology of movement.

If slippage to either the sovereignty or authority of the mind does occur, other dualisms are likely to be reconstituted, namely the rational self/I over and against the aestheticized body as intimately linked via movement experiences to its environments and lifeworld. Again, from the literature we have reviewed here, the inextricable intersubjective and intercorporeal connections of the moving self/person and sensed and afforded environments/nature are usually only implied and, we conclude, need to be more explicitly developed—conceptually, theoretically, and empirically. For example, we feel that while there are useful signs in the physical education literature of reconnecting the body and its social, urban, and natural environments of movement, noting Merleau-Ponty’s inspiration for the phenomenology of physical education, there needs to be greater attention to what, for example, we will refer to again metaphorically as the *spatiality and temporality of moving* and *geographies of physical activity* as those concepts might then be located within what we can refer to as the theoretical need for a social ecology of movement, movement experiences, and, inevitably, a reconceived approach to physical education.

Many of the authors we have reviewed who are working within the phenomenology of movement are keen to bridge various dualisms they see as hampering the field of physical education. Because there are so few efforts to position the field of physical education in such a way, the promising effort so far is partial, sporadic, and needs to be made more explicit. The ongoing challenge we discern from the literature is that a social ecology of movement and its pedagogies for movement experiences beckons physical educators to respond seriously to the question of the basis and focus of meaning in physical education and its research efforts.

A way forward is to connect sociohistorical-cultural and ecological theories of moving bodies in time and space, as place. We feel such an ontological move intersecting with epistemological variations can 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.

**The Nature of the Experiencer.** The embodied, ecological, meaning-making nature of the experiencer of moving is directly implied above and leads into the second key concept we explicate from the literature on phenomenology of movement. Such a ‘nature’ of the experiencer is, for example, manifested as a form of intentionality, a key concept of phenomenology, reflected in vitality and expressions of movement. Simply, our bodies are perceptual organs that do things within the environment that the body understands its enablements, opportunities, and constraints. There exists several important components of intentionality; (i) there are conscious intentions, (ii) there are preconscious demands on the way we move (i.e., attributes of the environment ‘shape’ enable and constrain the way we move, our body positions itself in response to moving uphill or downhill, or against the wind so intention is shaped by environmental opportunity and limit, hence the spatiality of movement and geographies of physical activity that we discern as new

conceptual formations of a social ecology of physical education). For example, movement in water requires a different form and style of movement than walking.

Of course, intentions, agency, and action can be understood in a different way. There are numerous other factors and sociocultural forces that permit, deny, license, discipline, and inscribe the experiences of physical activity and, for example, govern performance, measurement, and sport. These social constructions of physical education have been addressed more systematically in each of the critical, poststructural, and exercise science discourses. What is less apparent in the way these discourses construct notions about the experience of forms of activity is the more subtle and elusive notions of preconscious a more organic or 'natural' versions of intentionality and affordance, bodily response, and aesthetics of human understanding that celebrate the perceptual, sensory, kinaesthetic, and relational dimensions of those experiences and how meaning is made, or reflected, in the pedagogies of physical education. Thus, if enjoyment, satisfaction, and meanings of movement is an existential and experiential precondition of a more inclusive viewpoint about the value and virtues of physical education then the preconscious version of intentionality (for example, responding positively and constructively to spatial cues and clues and geographical opportunities of a wide range of movement experiences and their pedagogical construction, including for example spontaneous exploration and discovery in various environments and spaces) is an important addition. Thus, inquiry into the primordial and socially constructed nature(s) of experience is pressing if we are to promote and adjudicate different meaning levels and making processes in a manner more phenomenologically critical than what the physical education discourse has done in the past.

**The Locus/Focus of Inquiry.** It is clear that those writing in the genre of a phenomenology of movement are committed to how the moving body (in time/space with feelings and understandings embedded in the nature of the movement experience) provides a source, or origin, of meaning and meaning-making. This consensus in the literature about the primacy and primordially of the intentionally moving body in time-space underscores our preference in a reinvigorated debate in physical education for a focus (non exclusively) for the 'mind embodied' and embodied meaning making metaphors within a *geography of physical activity* including its social and ecological dimensions and characteristics. The emphasis on embodied meaning, meaning-making, and pedagogies of movement experiences in numerous environments opens up for inquiry the "hidden" dimensions of sentience, sensation, perception, somaesthetics/kinaesthetics, and emotions that are of a more primordial nature within that organism-environment interaction and relation.

We note that the body has not been lost from the critical and poststructural discourses of physical education and pedagogy but we do observe that the body is primarily constructed in those positionings as a problematic source of social problems that need to be contested praxically or a (passive) site inscribed by various texts/discourses which often, renders the disciplined body as a mere consequence or effect of discourse (Archer, 2000; O'Loughlin, 1998).

The phenomenological discourse clearly shifts our socioecological attention to the more intrinsic and aesthetic qualities and characteristics of the body(ies) in movement in time and space. In so doing, at least, an intentional sense of agency is, therefore, implied positively and meaningfully. We feel this positive sense of



agency fostered somatically by the meaning-making dimensions of movement is probably a 'primitive' of practice and, therefore, an ontological, embodied and moral 'prerequisite' to more earnest ethical and political accounts of physical education and, therefore, presupposed conceptions of pedagogy and learning 'outcomes' undertaken rationally by the various critical, poststructural, and applied-science discourses.

Again, based on the above review we feel that it is important for physical educators to 'raise the stakes' about the importance of meaning, meaning-making through movement experiences, and their ecologies and what it entails for *being and becoming educated physically*. Pedagogies that propositionally stress formal and rational learning may, indeed, lose sight of many of the basic qualities, characteristics, and dimensions of the ontological 'nature of the experienter' and the meaningful experience of movement in time-space. We suspect the denial of this more intrinsic, subjective factor is one of a range of reasons why many students find physical activity unappealing and physical education less than satisfying (Carlson, 1995; Tinning & Fitzclarence, 1992).

***Congruence and Coherence in Research Approaches.*** We have indicated above how authors contributing to the phenomenology of movement in physical education are overtly or complicitly signaling the need for greater attention to be given to the ontological presuppositions of their inquiries and approaches to pedagogical and curriculum development. To be sure, while phenomenologists of movement do make relatively clear their ontological commitments, our reading of the discourse of the exercise sciences, critical theories, and poststructural accounts suggest that the ontological basis of those approaches is not always clear. Where do they stand, for example, on the question of the mind-body split and commitment, or relation of the self or I to the environment, or the argument that bodies are only docile and a consequence of texts? How do they theoretically, pedagogically, and methodologically promote the reconciliation of these dualisms, splits, and gaps—ontologically and epistemologically?

Indeed, various writers are indirectly touching upon the mutual fit (or mismatch) of approaches to, framings of, and understandings of how and why preferred curriculum theories and their pedagogies need to be conceptually and empirically consistent (Laker, 2003; Tinning, 2008). They are pointing, again indirectly, to the politics of physical education pedagogy where the aims, objectives, methods, and outcomes need to 'hang together' in commensurable ways that avoid confusion and contradiction. The rebridging in scholarly inquiry of assumptions and declared understandings of ontology, epistemology, and methodology remains a chronic challenge, noting that there are only a few available empirical studies in the phenomenology of movement, as well as physical education pedagogy. Perhaps this is because phenomenology is so concerned with, for example, embodied meaning within the felt nature of experience and aesthetics of human understanding that current methods are inadequate, or inappropriate, leading into a more speculative description of lived experience, in movement and physical education.

As noted, earlier much of the work we have reviewed is scholarly, conceptual, and theoretical. There is some descriptive work of lived experience, as is the demand of the approach to phenomenological inquiry but it cannot be strongly claimed that such descriptions (or evidence/best practice) are sufficient or extensive enough to

mount and argue the case for a physical education pedagogy and policy, unlike other approaches whose representation and legitimation of findings in the discourse has been (differentially) accepted.

Any move to a phenomenology of movement in physical education needs to extend the promising theoretical starting point already available, noting our above recommendations, but also extend into developing an empirical basis in the study of movement that is credible, plausible, and persuasive. We cannot uncritically adopt qualitative means in the conventional sense of that paradigm. The framing of a phenomenological ontology of an ecology of movement, with insights into the meaning-making and related epistemologies of learning of those engaged in moving and the movement experience, will require different approaches to research design, methodology, procedures, interpretation, and representation of findings in ways that advance the field conceptually and extend it empirically (Payne, 2003; Payne, 2005a; Payne, 2005b). At a practical level, this needed move provided by the framing we have undertaken above will ask the physical education pedagogue and researcher to develop keener somaesthetic insights into the sensory and perceptual involvement of the 'mover' within the ecology of the setting. For example, when teaching swimming the astute educator will allow or encourage the swimmers to explore different movements and their forms while discovering alternative ways of working with and through the water. Over time, and in different spaces, such a movement experience might be reinvented in ways that nurture such freedoms provided by a potentially deeper bodily engagement in and with the water. A pedagogical aim here will include a heightening of sight, sound, touch, smell, and taste or 'scapes' (Sparkes, 2009) to the phenomena of swimming while incorporating dimensions of buoyancy, wetness, maneuverability, depth, and warmth. We are reminded here, importantly, of Abram's (1996) notion of 'symnaesthetics' that addresses the phenomenological fusion of the senses that the western mindset analytically disaggregates.

Suffice to say, this pedagogical and research demand is complex. But it calls for a greater congruence between the ontological presuppositions and epistemological interests made in inquiry into pedagogical development, phenomenological understandings, ways of understanding epistemologies of meaning-making and learning, and revision of methodological understandings. Without a more comprehensive and internally coherent research program, in various situations, settings, contexts, geographies, and cultures, the phenomenological movement will struggle to move beyond the sporadic contributions that so far have elevated and highlighted its promise and potential.

## **Summary and Concepts Informing Pedagogical Directions**

We have aimed to fill in some of the conceptual apparatus of a phenomenology of movement, identify some of the intellectual resources that emerge from a review of the literature and outline some directions for scholarly inquiry that highlight the meaning and value of movement and its experience in physical education. The synthesis, proposal and development of what we conclude is the theoretical and empirical need for a social ecology of movement and physical education has

been undertaken because of the important inclusions by Tinning and Kirk of a phenomenology of physical education, notwithstanding the limited explanations they provide in their respective openings of discussion and debate about the field in general.

Despite 40 years of important but sporadic contributions to the literature, with little empirically supported evidence about the characteristics and qualities of movement and different movement experiences and their connections to meaning-making and learning, the phenomenology of movement remains in a nascent stage of development. It would be a shame if it stagnated. This nascent stage of development is unfortunate given the ongoing challenges facing the field of education, noting the heightened social and political expectations of physical education curricula, and teachers, coaches, and parents, due to various social and health problems that, unfortunately, appear to be shaping the field. Notwithstanding these contextual and functionalist imperatives, a phenomenology of physical education and its pedagogies, indeed, begs a 'corporeal return' to the embodied basis of meaning making and human understanding that promotes the intrinsic satisfactions, qualities, and characteristics of movement that motivate many of us but constantly are under attack by the forces touched on above, but partially because of the lack of visibility of the phenomenology of movement in the texts shaping the field's future (Hawkins, 2008). The phenomenology of movement in physical education is, we believe, very promising with significant potential to add richness, depth, and value to physical education

We have deliberately confined this paper to the physical education literature. It is, again, appropriate to acknowledge that literature external to these discourses has the potential to add to the depth of critical understanding about such issues and concepts. Renewed interest in phenomenological philosophy partners recent developments in social theory, cognitive science, place/environmental geographies, and urban planning, to name a few fields undergoing a revisioning of basic assumptions, (trans)disciplinary efforts, and methodological reappraisals.

We reiterate that a phenomenology of movement in physical education highlights a 'different take' on curricula and pedagogical development for 'movement experiences' but that this take has currency, potency, and legitimacy to sit alongside and, at times, challenge and reconstruct aspects of those more established discourses contributing to physical education and its pedagogical development.

## Notes

1. The concepts and language used in these subdisciplines have included: 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), somaesthetics (Shusterman, 1997), and lived experience (van Manen, 1997).

2. Wattoo and O'Connor (2003) writes that a socioecological perspective of health cannot separate the personal and social from the health of sustaining natural systems.

3. Indwelling, according to Hawkins (2008) "... comprises the commitment of the knower to that which is known and is what makes knowledge personal. For Polanyi (1958, p. 61) "... it is a personal commitment which is involved in all acts of intelligence by which we integrate some

things subsidiarily to the centre of our focal attention.”

4. For a fuller description of these six categories, readers are encouraged to critically examine *Realms of Meaning* (Phenix, 1964). Briefly *symbolics* is ordinary language, mathematics, and types of nondiscursive symbolic forms, *empirics* includes the sciences of the physical world, *aesthetics* contains various arts, music, visual arts, the art of movement (henceforth physical education), *synnoetics* comprises personal knowledge, *ethics* includes moral meanings, and *synoptics* refers to meanings that are integrative: history, religion, philosophy.

5. An 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 used 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.”

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