Physical Literacy and Intentionality: Embodied Beckoning

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Abstract

The purpose of this paper is to explore the interconnectedness between physical literacy, intentionality and the notion of embodied beckoning. We coin the term 'embodied beckoning' to explain our innate transactional relationship and desire as human beings to explore the world through movement, and how the environment also calls us to move. We draw upon a range of perspectives including post-humanism, social-materialism and Deleuzian theory and explore how these paradigms may enable us to continue to blur the lines between mind and body, self and environment, and view human embodiment, interaction and intentionality more holistically. Our ultimate goal is to try to better understand engagement in physical activity, for holistic health, wellbeing and flourishment.

Physical literacy could have a significant contribution to make in understanding, exploring and nurturing embodied experiences. Physical literacy may be able to provide a much-needed philosophical framework from which the promotion of engagement in physical activity, physical education and wider sport, leisure and recreational activities are undertaken with an holistic appreciation of human embodiment.

Key Words: Embodiment, physical activity, physical education, health, wellbeing, creative movement, creative praxis, intentionality, environment, self, motility, enactivism, affordances physical literacy, flourishment.

Introduction

Uncovering the 'nature of human beings' and the phenomena of 'being human' is a complex endeavour. This paper seeks to explore one such complexity, namely the interconnectedness between physical literacy, intentionality and the notion of embodied beckoning, from an existential and phenomenological viewpoint. This exploration aims to better understand the interplay between self and environment with respect to movement experiences. In doing so we hope to frame a more holistic appreciation of embodied experiences as interconnected encounters between self and environment through time.

We begin by defining and describing our collective understandings of the terms physical literacy, intentionality and embodied beckoning.

Physical literacy. Physical literacy is defined by the International Physical Literacy Association (IPLA) as the:

> motivation, confidence, physical competence, knowledge and understanding to value and take responsibility for engagement in physical activities for life (IPLA, 2017 Online)

However, this definition does not fully capture the extent and/or essence of what physical literacy 'is' in relation to a multiplicity of contexts. As such, the definition is just the tip of a metaphorical iceberg that emerges from a philosophical and scientific base. Below the surface are a range of philosophical and scientific concepts including human embodiment, physicality, motility, embodied cognition, enactivism, personhood, monism, phenomenology, existentialism, intentionality, as well as many others. Whitehead (2010, p.5) also argues that physical literacy can, inter alia:

- identify the intrinsic value of physical activity
- overcome the need to justify physical activity as a means to other ends
- provide a clear goal to be worked towards in all forms of physical activity
- underwrite the importance and value of physical activity in the school curriculum
- refute the notion that physical activity is an optional extra of only recreational value
- justify the importance of physical activity for all, not just the most able in this field
- spell out a case for lifelong participation in physical activity
- identify the range of significant others who have a part to play in promoting physical activity.

The above is not a definitive list but instead outlines just some of the proposed positive outcomes of physical literacy. Not surprisingly with a list such as this, there has been a considerable amount of growing interest in physical literacy (Edwards, et al., 2016 and Lundvall, 2015). Essentially, physical literacy is concerned with the understanding, development and nurturing of embodied experiences, through physical activity, to enrich and enhance quality of life (Durden-Myers et al., 2020, Durden-Myers et. al., 2018, and Whitehead, 2010).

Intentionality. Intentionality is a term used to describe the innate human transactional relationship and urge to relate to, be connected with and be stimulated by the environment. This is an inherent part of our consciousness as human beings (Bartlett et al., 2012; Durden-Myers, 2020) with transactions between self and environment continually experienced. Verela, Thompson and Rosch (2016) describe how intentionality has two sides: first, intentionality

includes how the system (person) construes the world to be (specified in terms of the semantic content of intentional states); second, intentionality includes how the world (environment) satisfies or fails to satisfy this construal (specified in terms of the conditions of satisfaction of intentional states). Intentionality, therefore, describes the constant interplay or (perceptual) interaction between person(s) and environment(s).

The inherent human intentionality described here, provides the ground and substance for establishing and enriching interaction with the world. Physical literacy can be understood as one mode of human interaction. Embodied interaction develops from embodied intentionality and is evident in everyday life as we relate to the environment, and therefore is also evident in different forms of physical activity such as competitive games and dance (Purser, 2018). In their different ways these two activities demonstrate intentionality in action. In games embodied interaction is reactive and responsive while in dance it develops as the performers together create a presentation.

Embodied beckoning. To explain what we mean by embodied beckoning we first look to describe what we mean by being embodied. With the term embodied we draw upon two key points: first that cognition depends upon the kinds of experiences that come from having a body with various sensorimotor capacities, and second, that these individual sensorimotor capacities are themselves embedded in a more encompassing biological, psychological, spiritual and cultural context (Dreyfus, 1979). In other words, sensorimotor experiences, including those gained through physical activity contribute towards the sense of embodied self and of embodied self in relation to the environment. In using the notion of embodied, coupled with the term beckoning, we mean to describe the intentional nature of (perceptual and motile) interaction among the person(s) and environment(s), through exploration of embodied experiences. Specifically, we explore how embodied experiences pertaining to movement and physical activity can foster a range of embodied interactions and so too nurture physical literacy.

Embodied Beckoning: Ecological Enaction of Movement Callings

When discussing the notion of embodied beckoning we draw upon the following key theories: enactivism, affordances and ecological dynamics. It is hoped that the exploration of these terms below, aids understanding of the transactional phenomena that occur between person(s) and environment(s) (Figure 1). In short, both the person(s) and the environment(s) calls for, and calls forth, opportunities for the exploration of movement potential and thus the development of physical literacy. The collection of movement experiences informs the intentional nature to respond to, or avoid, movement callings in the present and future.

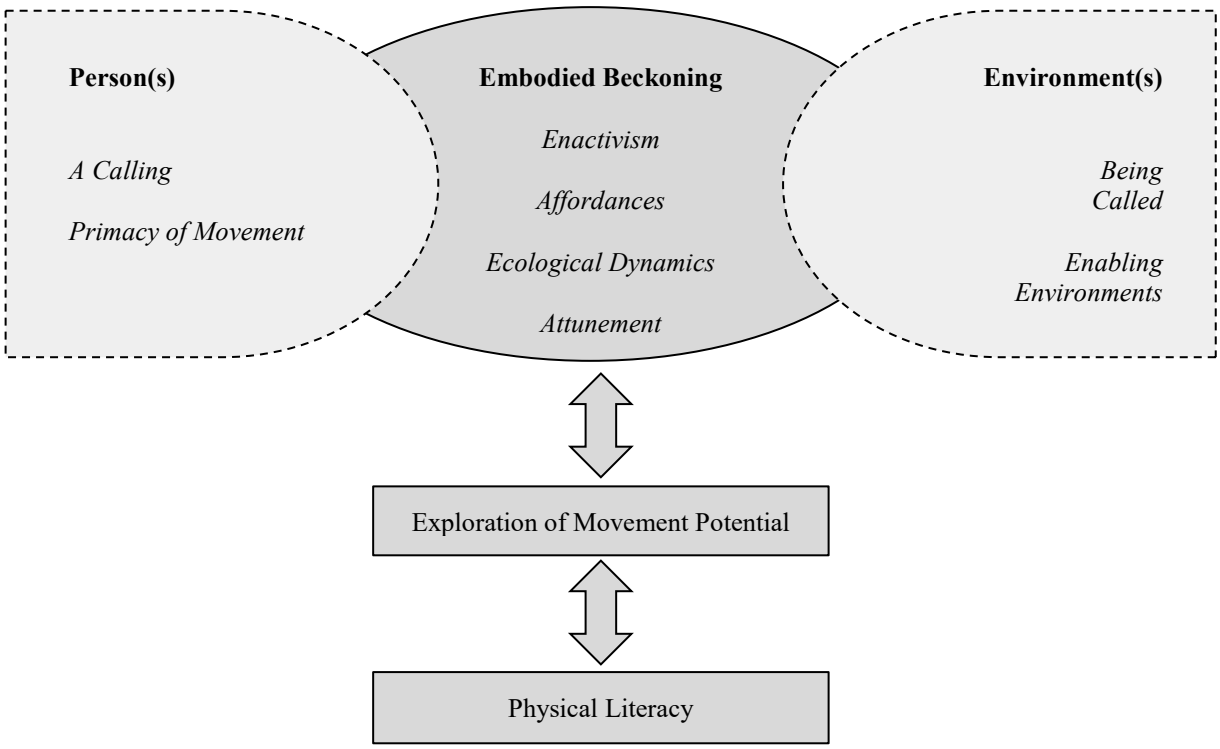

Figure 1: Embodied Beckoning

The figure above aims to pictorially illustrate the coming together of person(s) and environment(s) through embodied beckoning in the exploration of movement potential and the nurturing of physical literacy. For example, a pupil experiencing early primary school physical

education (age 5-7) may enjoy the feeling of tumbling sideways down a slope (like a pencil). The slope called the pupil to move, the pupil being simultaneously called and the environment enabling and affording the dialogue. The child's physical literacy journey now includes confidence, physical competence and knowledge and understanding of how to balance and move safely down this slope. Hopefully, s/he is also motivated to try this again in multiple contexts, with another, or on a higher incline. Each of the theories identified above are explored in more detail below.

Enactivism. The enactive approach draws upon two areas, first, that perception consists in perceptually guided action and second, that cognitive structures emerge from the recurrent sensorimotor patterns that enable action to be perpetually guided (Verela, Thompson and Rosch, 2016). Enactivism highlights the interplay between perception, action and then the reinforcement, both positive and negative, of this relationship through changes in cognitive structures. Ryan and Gallagher (2020) eloquently highlight the interplay between perception and action at the ecological level drawing attention to the resonance between brain-body and world. Enactivism has strong similarities with embodiment in that both notions recognise the sensorimotor and perceptual modalities of human life and how these modalities are embedded in a more encompassing ecological system of biological, psychological, spiritual, cultural reinforcement and attunement. Physical literacy encourages the development of movement potential through the exploration of movement in a wide array of contexts and environments. This encourages a rich exploration of the lifeworld through movement and thus, exposure to and experience of, a wide variety of sensorimotor and perceptual modalities. The nature of experience as perceived by the individual, be it positive or negative, will either reinforce a desire to seek out further opportunities and experiences or potentially reinforce the avoidance of similar experiences in the future. In other words, those who have had prior positive experiences in physical activity are more likely to seek out more opportunities to be active, whereas those who have had prior negative experiences are more likely to avoid these types of activities and experiences (Durden-Myers, 2020 and Whitehead, 2010). This notion shares very strong similarities with the concept of affordances.

Affordances. The term 'affordance(s)' was coined by Gibson in 1966 (Kyttä, 2003). Gibson later developed the concept and defined it in the following way:

> The affordances of the environment are what it offers the animal, what it provides or furnishes, either for good or ill. The verb to afford is found in the dictionary, but the noun affordance is not. I have made it up. I mean by it something that refers to both the

> environment and the animal in a way that no existing term does. It implies the complementarity of the animal and the environment (Gibson, 1979/1986, p.127).

Gibson states that he developed the concept of affordance after being inspired by Gestalt psychology and more specifically by Koffka's concept of 'demand character' and ~~to~~ Lewin's 'valences' (Gibson, 1979/1986, p.138).

Gestalt psychologists share Gibson's view that the perception of meaning is as immediate as, for example, the perception of colour. In Koffka's view, objects tell us what we should do with them, i.e., they "demand" to be used. Lewin's valences have also been given the name "invitation character". Valences can be described as vectors that pull or push the perceiver towards or away from objects. However, Gestalt psychologists interpret the demand or invitation character of objects as a phenomenal phenomenon; in other words, the character changes according to the perceiver's individual perceptual habits. Gestalt psychologists thus adhere to a dualistic person-environment view. The Gibsonian view, and his concept of affordances, differ in this respect from those in Gestalt psychology.

According to Gibson (1979/1986), the purpose of perception is to perceive affordances. Objects and other things are not perceived as such, but rather as functionally meaningful units, which makes the perception of functional meaning primary. Objects offer themselves up to be grabbed at, twisted, lifted, and so on. Surfaces are to be run on, climbed on, slid on, and so on. With that being said enaction of this perception is dependent on maturation and motor development, for example, a surface may be perceived as desirable to run on but without the pre-requisites of standing (balance) and walking (bilateral limb coordination) it will not be possible to be enacted. In Costall's (1995) view, Gibson's theory of affordances can be seen as one of the most significant theoretical contentions in modern psychology. Affordances reveal the reality of meaning that is independent of language or customs, thereby strengthening the potentially universal relevance of physical literacy for understanding physical activity throughout life. Physical literacy therefore, when viewed through the lens of affordances, highlights the centrality of movement to human life and embodied interaction as an ecological transaction. Affordances call the material world, objects and environments, back to life (Kyttä, 2003). Affordances therefore follow on from enactivism in that the interpretation of sensorimotor capacities have perceptual meaning, unique to each individual. Perceptual meaning may manifest consciously or subconsciously, encouraging or discouraging (or neither) the exploration of environment(s) through movement. That said, the environment is enacted by things (material / matter) both independent from the person yet, simultaneously, is

interdependent. Perceptual meaning will therefore, either fall silent, avoid or call forth the exploration of the lifeworld. It will result in whether an object is seen or unseen, explored or unexplored and to what extent. This again draws us back to the transactional nature of person(s) and environment(s) and their dynamic, fluid and ecological nature. As such, enactivism and affordances can also be positioned in relation to another complimentary concept, ecological dynamics.

Ecological Dynamics. Both enactivism and affordances can be positioned within the theoretical framework of ecological dynamics. Ecological perceptual psychology (Gibson, 1979/1986), ecological systems theory (Bronfenbrenner, 1989) or more recently, ecological dynamics, are collective terms / theories that champion the transactional nature of person(s) and environment(s) and how these relationships are dynamic and interactive, whereby all components play an active role. We draw upon these frameworks, as well as the concepts of affordances and enactivism to explore and position the nature of embodied beckoning to more holistically embrace the transactional relationship between person(s) and environment(s) with respect to maximising movement potential and nurturing physical literacy. Exploring and nurturing physical literacy with an appreciation of person(s) and environment(s) can capture lifeworld experience through means of a creative praxis (Dhillon, 2018). Creative praxis locates self within an evolving environment which is either structured (school, coaching) or unstructured (free play, recreational, walk stories). At the juncture of praxis, the act of creating, attunes individuals to their experiences of the environment. This accumulating experience is the lifeworld and a window into the assimilation of tacit and explicit knowledge, knowing and being (Bartlett et al., 2012). In particular we are interested in how physical activity and motile experiences encourage the development of physical literacy and thus engender an embodied sense of self, in relationship with and connected to, one's environment. This continues to our understanding of attunement between perception, meaning, action and encoding of the lifeworld and the interplay between, with and among, person(s) and environment(s).

Attunement. With attunement, attention is drawn to the balance between person(s) and environment(s) and how this transactional relationship may be heightened, hindered or mediated by perception, or lack thereof, previous positive and negative experiences, environmental factors and the assimilation, presentation or coming together of information both symbolic and actual. Walk stories (Dhillon, 2018) are a record of physical literacy existence (Dhillon and Biso, 2020). Physical literacy and motility create a space for praxis and allow the individual to actively reflect through interaction. Motility as a process of attunement is constantly evolving, alluding, shaping and fleeing. This multiplicity (Hughes, 2008), is

attuning self through a framed perspective, framing experience (embodied) through motility as a canvas for creativity.

We now look to explore embodied beckoning and being called to move, within and beyond some complimentary concepts that draw attention to and highlight aspects of embodiment from varying perspectives, namely 'A Calling' (person(s) perspective) and 'Being Called' (environment(s) perspective) to move.

A Calling

This section explores the notion of an intrinsic call to move, and to engage in movement from a predominantly humanistic perspective. It does so by exploring the notion of the primacy of movement as a complementary concept that helps to explore how this movement calling is innate to all human beings but also individualistic and shaped by the environment.

The Primacy of Movement. The moving body is essentially how we experience, explore and interact with the world. Movement and more specifically the human embodied dimension can be considered as fundamental to life and its meaning (Nussbaum, 2000). The human embodied dimension is integral to life, and meaning-making throughout all stages of life. However, it is especially highlighted and observable in the early months and years of life, where movement and development are inextricably linked. Perhaps this is the first example from which we can discuss how from infancy we are all involved in self-organised and self-regulated movements. In turn, this affords learning, by developing our movement capabilities and in exploring the interrelationship between movement and meaning.

Humans experience movement in the earliest stages of life, with even the fetus exploring movement inside the womb. When born, babies have a curiosity and desire to move, to not only make sense of the world but also to be able to interact and engage within it. The infant's urge to move provides the very source of the capacity for optimal development and the enhancement of holistic health and wellbeing. Further, the infant's exploration of the world through movement and efforts at making sense of this world provide the ideal platform from which to learn how the infant might enrich his/her life. Sheets-Johnstone (2000, p.344) explains that in the early months of life "we were all apprentices of our own bodies: we learned our bodies and learned to move ourselves" but also alongside and consequent to this we learned an understanding of our body and ourselves with others and with the environment. This early development in relation to a child exploring the world through movement and enriching its life by moving is the very first step in developing a disposition whereby an individual may develop his/her physical literacy. As Whitehead states (2010, p.13) "individuals will have a well-

established sense of self as embodied in the world. This together with an articulate interaction with the environment will engender positive self-esteem and self–confidence". Therefore, to be embodied is to have the capacity to interact effectively with the environment, exploring movement and its meaning (Durden-Myers et al., 2020). This exploration adds to an existing collection of embodied experiences that inform views of the lifeworld and immediate and future interactions therein.

Moreover, Whitehead (2010) argues, movement competency can be facilitated by encouraging fluent interaction with a wide range of environments. Therefore, it is important that a wide range of environments are made accessible to all to encourage and facilitate fluent interaction with the potential variety of environments. This notion is discussed in the following section whereby creating enabling environments is explored further.

Being Called

This section explores the notion of being called to move and to engage in movement. From a predominantly post-humanistic, social-materialist perspective, how the environment calls and invites human beings to move is discussed.

Embodiment could be considered fundamental to the communication among things and people and can be initiated and nurtured by motility (Merleau Ponty, 1945/2014; Whitehead, 2010), hence the importance of physical literacy in the lives of humans and in promoting the value of engagement in physical activity throughout life. What could be made more explicit is the multiplicity of these relations and the importance of things nonhuman. Further, in line with an ecological sensitivity, the conjoining of nonhuman-human merits more explicit attendance, as this is arguably inherent within the concept of physical literacy. So rather than disjointing into binary ontologies, following Barad (2003, p. 812), we call for a "relational ontology".

In situating humans as having intent, Merleau-Ponty's phenomenology reduces the centrality of 'things' (Bennett, 2004). A concert of things-with-humans, conjoined in composing, recomposing and decomposing (Barad, 2003), yet always becoming, concurs with Merleau-Ponty's perpetuality. Thus, enlivening the material things, and decentring humans, secures an even plane from and on which the dialogic is performing (Hein, 2016). With reference to earlier discussion above on enactivism and affordances, we extend Kyttä's (2003) claims that humans bring things 'back to life' - things are already vital, perpetually becoming. Further, for Bennett (2004, p.348), "things and their powers can have a laudable effect on humans" and compose connections as humans-nonhumans journey through life.

Enabling environments. Fluent interaction with things in the environments in which humans find themselves includes encountering things, such as books, balls, digital devices, a cat, a mat. Things also include the affective and intangible (Mulcahy, 2012). Such relational 'unseen' things are sometimes referred to as 'flow' (Bennett, 2004). Following actor network theorists (such as Latour, 1999), that which is fluid, circulating, flowing in, through and around things human and nonhuman, relates well to the way in which embodiment is being discussed in this paper. Enacting meaning-making through embodied interactions in the world becomes an onto-epistemological project (Barad, 2003). Mulcahy (2012, p.11) further highlights the dynamic nature of Latour's circulations, which rely on other bodies acting on, with, through other things. Here, experiences throughout the physical literacy journey of individuals resonate with the point being reinforced throughout this paper, that multiple environments facilitate multiple enactments among things human/nonhuman. Experiencing a variety of physical activities is thus important for exploration of what might become valued, or not, at different times and spaces in the lives of individuals.

The residual a/effects of experiences remain with bodies and so connections persist, just as they might be severed, 'decompose' or 'recompose' (Lutpon, 2018). As connections persist then embodiment seems to be more extended, or distributed and for Lupton (2018, p.5) this invites the "more than human" perspective of the world. Composition and decomposition of a/effects of bodies acting on and being acted upon, might be 'felt' even when an encounter has ended. This is what Ingold (2016) terms 'traces', which remain even when moving away from the encounter. A/effects can accumulate, as experiences from multiple previous encounters with things have informed, for example, the child's progress towards climbing stairs unaided. Once a concept-object has been experienced, traces of that experience remain (Bennett, 2004, p.362). Children come into the education environment embodying previous learning. This highlights the uniqueness of individuals in ways not always evident in, for example, education. Again, this highlights the existential and phenomenological nature of existence, in the accumulation and understanding of embodied knowledge (Whitehead, 2010, Dhillon, 2018).

In democratic curricula or difference curriculum (Vagle, 2015), marginalized narratives counteract eurocentric curricula. Counteracting requires self to harmonize and attune to a given environment both hostile and hospitable, in doing so, recording and revealing physical literacy (Dhillon, 2018). This all-encompassing celestial or optimal existence records the attunement of self as an authentic experience (oneness). Oneness (person and environment) (Bartlett et al., 2012), seeks engagement and attunement as a process of nourishment and

alignment. Creative movement is an example of physical literacy whereby music, props and motility are in harmony with one; a narrative (embodied beckoning). Embodied beckoning weaves narratives by aligning self to living knowledge (Bartlett et al., 2012). Stimuli (time) become the constant within space and the discourse revealed is the variable. Physical literacy over time is therefore a discourse of the body. The Body is an evolving incubator of knowledge, revealing itself through dialogic exchange (Freire, 2000, Dhillon and Biso, 2020).

Encoding Motility

The body as a knowledge incubator (Dhillon and Biso, 2020) can be defined as a perpetual encoding of motility. Physical literacy informs and is informed in multiplicity. The literacy of the body is fluid, tangible, intangible, and structureless, allowing beings to roam. At the juncture of motility absorption, an assemblage of beckoning, a physical literate-experience is prevalent. Prevalence may indicate meaning-ful/less encounters in the milieu of life (past-present, temporal dimension). The synthesis of time (Patton, 1994) records embodied beckoning by intersecting at the point of differential. These minute interactions can proliferate on/off in any given trajectory. Differential multiplicities (Hughes, 2008) evolve as the body becomes the experience and is experienced. Experience in this context is defined through aleatory events (random or unpredictable) connected by the self-being-becoming-being incubation (Dhillon and Biso, 2020). As illustrated in the musing below, trajectories are recorded at points of virtual (assumption) and actual (discourse). Musings are defined through the beginning structure, a physical literate structure, developed through consistency. Consistency is developed and connected through fluidity, the absolute elements that transform the amorphous.

> As I look out at the free-flowing waves, my thoughts resemble a lived journey. Being with water and becoming (with) water. The present state of experience? I can feel the sun on my shoulders as I enter the lake. This feeling is not what I remember. The water is not salty, and I can't ride any waves. As I immerse myself into the water, I realize that my body, the knowledge incubator, is integrated. I am not adapting or changing (resemblance), but allowing interactions to live side by side as another experience (synthesis of time)? As I begin to move my arms and legs, the feeling of becoming in/with/through water is jarring (assemblage) (Physical Literacy Musing).

In this musing it is evident that language plays a key role in describing narratives. On the edges and margins of these words are revealed expressions (tensions). Descriptive narratives (physical literacy) are a place of sensory revelation (multiplicity). Creative praxis is a minute expression of multiplicity, a sensory revelation. The Body as a Knowledge Incubator™ is a discourse of living, taking flight in the form of a body whilst attuning itself to the revealing canvas. Its appearance is through the body (celestial) but its meaning is fleeting. It is all-encompassing moving phenomena, weaving in and out/through the body. These interactions are constantly evolving in/with/through bodily movement. The Body as a Knowledge Incubator™ is therefore amorphous awaiting stratum. It is inherently person and environment, and everything in between as discovered, discovering and yet to be discovered.

Conclusion

Physical literacy goes beyond the structured world of physical education, health or sport and is a concept that is found in the daily occurrences of life (Whitehead, 2010). Physical literacy documents the milieu of life through knowledge incubation, through the accumulation of embodied experiences (Dhillon and Biso, 2020). The Lexicon dilemma eloquently illustrated by Lloyd (2011) describes the stratification of the physical and its literacy. The latter, the stories, the art created by beings is an assemblage. Assemblage in the making may dissipate by process if we fail to move conversations from perception to the condition of creativity (Deleuze, 1990). Physical literacy has an opportunity to destabilise the current structure of how inter alia; physical activity, physical education, sport, recreation, leisure and health are approached (Vagle, 2015) and encourage a more holistic appreciation of human life, through (re)conceiving and highlighting intentional connections (Vagle, 2015).

In summary, within this paper we have aimed to draw attention to a range of concepts that help to highlight the holistic nature of physical literacy, intentionality and embodiment. We have sought to blur the lines between person(s) and environment(s) by adopting an holistic approach to human embodiment; we recognise the significance of sensorimotor and perceptual meaning attributed to, and acquired through lifeworld experiences (existentialism) and finally, we draw attention to how this is meaning is unique to each individual (phenomenology), each of whom, have unique embodied assemblages and trajectories. In doing so we collectively use the term ‘embodied beckoning’ to capture our innate transactional relationship and desire as human beings to explore the lifeworld through movement, and how the environment also calls us forth to move. As such we call for and are called forth to experience movement in the toing and froing of embodied intentionality. Physical literacy has a role to play in nurturing

opportunities for individuals to explore their movement potentials and develop their attunement to embodied beckoning through the transactions between person(s) and environment(s). We hope that this paper has fostered a renewed appreciation and provided an alternate framework to consider the intricate interconnectedness of person(s) and environment(s) which is highlighted in movement and embodied experiences.

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