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ARTICLES

Becoming Physically Literate for Life: Embracing the Functions, Forms, Feelings and Flows of Alternative and Mainstream Physical Activity

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Purpose: To explore a conceptual shift from mechanism, the dominant 'body-as-machine' (Tinning, 2010) paradigm, to vitalism, the philosophical phenomenological tenets of physical literacy (Whitehead, 2010) upon which the curriculum of physical education in Canada is based, within the context of an alternative physical education program. **Method**: A motion-sensitive phenomenological approach (Lloyd & Smith, 2006b; 2015), conceptually framed by the Function2Flow (F2F) model, was conducted with a sample of $N = 153$ students from seven different schools in Ottawa (Canada) who booked the JungleSport climbing program of their own accord. Sources of information included phenomenological observations, small group interviews, and journal entries. Exemplars of two in depth student experiences are featured in this article. **Results & Discussion**: The phenomenological analysis of the climbing experiences, in addition to the F2F curriculum support tools that were developed, provide practical and philosophical pathways for understanding how we may broaden assessments of learning in physical education.

The over-arching, long held goal of physical education curricula is to have children become active for life (Kilborn, Lorusso & Francis, 2015). Although admirable, this objective has sadly yet to be achieved (Kirk, 2013). Perhaps our failure has to do with the way we have interpreted said expression, with a curricular endpoint in mind, e.g., that children will develop the knowledge, motivation and skills to engage in physical activity. Perhaps if we shift our taken-for-granted interpretation and hone in on the latter portion, becoming active 'for life', e.g., for the sake of feeling alive in the moment-to-moment process of being active, we might experience a different result. Such an orientation has temporal implications as it directs us away from a future outcome and more toward the unfolding nature of the present moment and the qualitative features that physical activity exudes. It also, if fully understood, requires a philosophical shift in the way we view and understand the moving body. Saturated in a culture that prizes workouts which whip, mold, chisel, or if particularly good, kill us, considering what might it be like to feel completely alive, connected to others and the vibrant world in which we are situated as we experience physical activity (what may be described as a phenomenological orientation toward movement) is not the norm (Stolz, 2013). For many, as Shusterman (2008) explains, sensations of our living body only arise in moments of discomfort or pain, when something hurts that impedes our movement, when our well-oiled machine is not working quite right.

The objectification of our bodies to the extent where we think of it as a machine is the dominant perspective in human movement studies (Tinning, 2010), a perspective that aligns with the philosophic orientation known as mechanism (Smith & Lloyd, 2006). As Lakoff and Johnson (2003; 1999) explain, philosophic orientations are noticeable in the language we use in everyday life. Accordingly, we might critically begin to question the language we use to describe our movement experience, e.g., associating movement skills with 'motors'. What then might it be like to shift away from this dominant orientation that deadens the body (Pronger, 1995) as we consider the implications for moving with a sense of vitality, being active *for life*, and approaching a philosophic orientation known as 'vitalism[1]' (Smith & Lloyd, 2006)?

Mechanism in Physical Education

Mechanism, as in Cartesian ways of conceiving the body as separate from the feeling and thinking mind, is surprisingly the dominant philosophic orientation entrenched in the 'discipline' of Physical Education (Stolz, 2013). David Kirk (2010), author of *Physical Education Futures* and leading researcher on the social construction of physical education, as well as other established physical

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education scholars such as Nancy Francis (Francis & Lathrop, 2011; 2014) and Ellen Singleton (2009), provide critical and historic context for the isolated, repetitive, inauthentic, and behavioristic ways we teach movement through an "authoritarian pedagogy of command-response" (Kirk, 2010, p. 95).

A valiant attempt to change the dominant grasp of command-based pedagogy was made in the 1960s by Muska Mosston (1966) with his spectrum of teaching styles, which depicts a continuum that contrasts emphasis placed on the teacher with divergent pedagogical approaches centered on the learner. As one moves across the continuum, the construct of knowledge shifts from something that is fixed and reproducible on the one side to something that is emergent on the other. Yet, this command-to-discovery spectrum (Mosston & Ashworth, 2001; Goldberger, Ashworth, Byra, 2012) as well as other pedagogical models that have been introduced to promote divergent and strategic thinking in Physical Education such as the "Teaching Games for Understanding" model (Bunker & Thorpe, 1986) which promotes the teaching of sport skills within the context of a modified, learner-centered game, have left little more than a dent in disrupting the dominance of a command-based pedagogy as they are met with much resistance on the part of physical education practitioners (Randall & Maeda, 2010; Forrest, Wright & Pearson, 2012).

Such a preference for the de-contextualization of movement has created a particular pedagogical paradigm, one that David Kirk refers to as the "physical education-as-sport-techniques" paradigm (Kirk, 2010, p. 42). Note that his use of the term 'sport technique' as opposed to 'sport skill' is purposeful as he contends that assessing a movement in isolation, i.e., such as assessing 'throwing and catching' outside of the authentic context of a game, removes notions of critical thinking. Skill, on the other hand, infers intelligent action. As such, within the sport technique paradigm, the body is viewed as a Descartian mechanical apparatus, one that can be best understood by the scientization of movement (Corbin & McKenzie, 2008).

Physical Literacy: A New Paradigm

Physical Literacy, a concept put forward by a British physical education and phenomenological scholar Margaret Whitehead (2010; 2007; 2005; 2004; 2001), was introduced with the intention to disrupt pedagogical practices in physical education that treat the body as a mere machine. Inspired and informed by her doctoral readings of existential thinkers such as Merleau-Ponty (1962; 1968) and Sartre (1956), who put forth embodied philosophies, Margaret Whitehead created the concept of physical literacy with the intention of changing the underlying philosophy of physical education, i.e., shifting the underlying 'body-as-machine' philosophy (Tinning, 2010) to understanding movement as a 'body-mind-world' phenomenon. As such, Whitehead first explained physical literacy through the following overarching characteristics:

> …a physically literate individual… moves with poise, economy and confidence in a wide variety of physically challenging situations. Furthermore the individual is perceptive in "reading" all aspects of the physical environment, anticipating movement needs or possibilities and responding appropriately to these, with intelligence and imagination. Physical literacy is akin to notions identified by other writers as intelligent performance or intelligent action. . . it follows that physical literacy is not purely a 'bodily' capacity. Physical Literacy requires a holistic engagement that encompasses physical capacities that are embedded in perception, experience, memory, anticipation and decision making. (Whitehead, 2001, p. 3)

Whitehead thus defined the concept of physical literacy through an embodied perspective that prioritizes the thinking and feeling learner.

Whitehead's conception of physical literacy has been embraced by both Physical and Health Education (PHE) Canada as well as many provincial curricula (PHE Canada, 2010). The physical literacy definition that PHE Canada puts forward, for example, carries much resemblance with Whitehead's concept: "Individuals who are physically literate move with competence and confidence in a wide variety of physical activities in multiple environments that benefit the healthy development of the whole person" (PHE Canada, 2010). While such a definition is helpful for teachers to orient toward the complexity of an existential concept that embraces not only the development of movement competence but also the thoughts, feelings and relationships experienced by the learner, more support is needed to shift out of the 'physical-education-as-sport-technique' paradigm (Kirk, 2010) and embrace the existential and phenomenological philosophy on which physical literacy is based. In Canada, for example, curriculum support materials have aligned the concept of physical literacy with the teaching of a prescribed set of fundamental movement skills such as throwing, catching and kicking (Higgs, 2010; Francis, Johnson, Lloyd, Robinson, & Sheehan, 2011; Ontario Ministry of Education, 2015; PHE Canada, 2010; CS4L, 2011), e.g., what David Kirk describes as 'sport techniques', hence the antithesis of Whitehead's curricular intention has emerged. According to Canada Sport for Life (CS4L, 2011), "Fundamental movement and sport skills are the basic building blocks of physical literacy", a metaphor that is based on the premise that if you can learn the fundamentals of movement you can then be prepared to participate in a wide variety of activities. The process of becoming physically literate has thus been described as the acquisition of foundational skills such as "walking, running, jumping, …[which] provide a sound basis upon which all refined sport skills are based" (Francis, et al., 2011, p.14). The premise is that if you can 'run' you will have the building block required to take part in games

that are based on running such as soccer, baseball, etc. But without further intervention, how does this building block metaphor help teachers shift out of the 'physical-education-as-sport-technique' paradigm? Moreover, in equating physical literacy as a discrete stage of development in a long-term athlete development model (CS4L, 2011), we are shifting away from understanding physical literacy as a cradle to grave phenomenon as espoused by Whitehead (2010). Rather, we are taking an existential concept and mechanizing it so that it may fit within the dominant paradigm we know so well.

If we truly understand Whitehead's concept of physical literacy, however, it is nowhere near that of a stage in a linear model, it is a construct of continual becoming across the life course. Teachers have a tall order then, as their goal is to teach in such a way that their students have the motivation, competence and confidence to be active long after they leave school. We need to shift our attention away from reproducing fixed sport skills in ways where we evoke instructor dependence. In addition, we need to provide opportunities for students to awaken their imagination, to become curious about their bodies and movement and most importantly to experience a sense of joy and meaning so that movement is not perceived as a burden, a punishment or drudgery, but rather something quite profound.

What might it mean to embrace the philosophy upon which physical literacy is based in practical terms? A walk down a street, for example, could be so much more than a means-end utilitarian activity. Walking with a sense of curiosity provides an opportunity to deepen our perceptual connection with the world (Lloyd, 2015), especially if we remove our socks and our shoes as we experience what movement philosopher Maxine Sheets-Johnstone (1999) suggests, to make the familiar strange. And in becoming more open and vulnerable to the chiasmatic sensations available in this foot-world exchange, a surface that we assumed to be flat and predictable, undulates beneath us, and in the existential sense, comes to life as it presses up into us. Thus in leaving the predictability of the sidewalk or the treadmill, which one may note gives no opportunity to leave a tread (as explored more fully in Lloyd, 2011a), we might form a new trail with our feet, a motile act that puts us in touch with how trails and sidewalks were created in the first place—through a lived relational dynamic between the ground and our feet.

Author of *Being Alive: Essays of Movement, Knowledge and Description*, Tim Ingold (2011), a Merleau-Pontian anthropologist, explains that "a more literally grounded approach to perception should help to restore touch to its proper place in the balance of the senses. For it is surely through our feet, in contact with the ground (albeit mediated through footwear), that we are most fundamentally and continually 'in touch' with our surroundings" (p. 45). To put this into context, imagine walking in a forest and venturing off the well-traveled trail to the extent where our steps form a path. In this instance we are likely to not distract ourselves by looking at our handheld mobile device, a common feature of present day pedestrian walking. Rather, there is a tendency to experience a sense of interactivity, a feeling of perceptual connection that puts us in touch with our thoughts, feelings and the earth beneath our feet. Such a perceptual experience of interactivity is at the heart of the existential philosophy on which physical literacy is based.

The Function-to-Flow Model

To experience a perceptual connection between movement, thoughts, feelings and our relationships with others and the world is a simple enough concept to digest, yet much curricular and pedagogical support is needed if we are to fully step out of the body-as-machine, mechanistic paradigm. In fact, measuring the degree to which one is physically literate as one experiences various moments in time over the duration of one's lifecourse is a question that the International Physical Literacy Association (IPLA, 2015) discussed in their biannual 2014 meeting. Turning a desired existential state into a measurable construct is no easy feat as the philosophical integrity of the concept could easily be lost. In Canada, for example, the *Canadian Assessment of Physical Literacy* carries much resemblance to the fitness testing many of us experienced in school (Tremblay & Lloyd, 2010; Tremblay, 2012) with a caveat worth mentioning. Forward folding exercises which promote a particular postural affect, such as repetitive sit ups, have been replaced by the plank, a positive change in terms of its long-term postural effects/affects. While such tests have their place in enabling researchers to collect normative data on children's body size, cardiovascular capacity, strength and flexibility and in so doing make evident the need to prioritize children's health, we as educators need to recognize that such an assessment of physical literacy resides within the mechanistic paradigm. Therefore, more assistance is required to align physical literacy assessment with its underlying philosophy.

The intention behind my research is to help practitioners connect what they know, i.e., mechanistic tendencies to assess fitness and teach fundamental movements within the sport technique paradigm, with what is less familiar to them. In this case, the unfamiliar terrain is the existential philosophy on which the concept of physical literacy is based, namely, an orientation to experiencing interactivity in a way that perceptually intertwines body, space, time, and relational awareness—existential concepts (van Manen, 1997) that are actually central to health and physical education (HPE) curricula (e.g., Ontario Ministry of Education, 2015). Hence, much of my academic research has been dedicated to providing practical and philosophical pathways that encourage a shift from mechanism to vitalism within the context of fitness, physical education, as well as curriculum theorizing that pertains to embodied learning across various school subjects (for further detail, please see the following articles: Smith & Lloyd, 2006; Lloyd & Smith, 2006a; Lloyd & Smith, 2009; Lloyd, 2011a; Lloyd, 2011b; Lloyd, 2012b; Lloyd, 2014). As an interdisciplinarian, I do not wish to position one way

of conceptualizing movement in opposition to another, rather, as the leading interdisciplinary researcher Repko (2008) recommends, I, in partnership with my colleague Stephen Smith, aim to advance and transform knowledge by providing a pathway that integrates and connects various schools of thought. The Function-to-Flow (F2F) model thus integrates four perspectives of movement function, form, feeling and flow, rooted in principles of exercise physiology, physical education pedagogy, somatics, motivational psychology, and existential phenomenology (Lloyd, 2014; Lloyd & Smith, 2014).

More specifically, *function* draws upon the 'ABCs—agility, balance, coordination and speed' of physical literacy (CS4L, 2011), hence the 'capacity' for movement in health-related fitness, e.g., 'cardiovascular capacity' (Lloyd & Smith 2009; Plowman, Sterling, Corbin, Meredith, Welk, & Morrow, 2006; Smith & Lloyd, 2007). *Form* connotes the outer shape, hence bodily form visible in movement expression as well as the process involved in movement maturation (Laban & Lawrence 1974; Laban, 1948) for which much of the pedagogy in physical education is based. *Feeling* draws attention to the inner sensations of movement such as musculoskeletal sensations of tension or elongation, the quality and sensation of breath, perceptions of balance, and the "self-sensing, internalized perception of oneself" (Hanna, 1988, p. 20; Johnson 2000; Lloyd, 2011b; Shusterman, 2008). *Flow* draws attention to the existential dimension of movement, i.e., the possibility for sensing pleasurable connections and flow experiences (Csikszentmihalyi, 2000) that are energetically experienced between the person, the motion, others, and the world at large (Merleau-Ponty [1968] 1964; Sheets-Johnstone 1999; Lloyd, 2011a; Lloyd & Smith, 2006a).

And in creating such a model, my desire is to help teachers find comfort in stepping out of the 'physical-education-as-sport-technique' (Kirk, 2010) paradigm and also teach toward revised curricula aligned with the existential concept of physical literacy (Ministry of Education, 2010; Whitehead, 2010). Note that curricula supports aimed toward cultivating flow experiences in physical education are particularly relevant, as flow is the ultimate positive movement experience as it is premised on intrinsically experiencing an activity to the extent where one's action perceptually and existentially merges with one's awareness (Csikszentmihalyi, 2000, 2008/1990).

Methodology

With the goal of stepping beyond the paradigm of reproducing isolated sport techniques and helping teachers assess and conceptualize what it means to become physically literate in activities that are not indicative of the dominant sport model, a phenomenological study was conducted in an alternative physical activity setting. The JungleSport program (see www.junglesport.ca), which might be best described as adventure-based learning, where students interact with obstacle courses, vertical challenges such as fixed lines, climbing walls, bouldering walls, and cargo nets, thus formed the context of this Social Sciences and Humanities Research Council of Canada (SSHRC)-funded study which was situated within schools in Ottawa, Canada.

Participants included a sample of $N = 153$ students from grades one, five, seven, eight and nine located within seven different schools who booked the JungleSport program of their own accord. Within each school, a particular class was selected under the guidance of the school principal, and in consultation with the HPE teacher. The Head Instructor of the JungleSport program also agreed to participate in the study. During the second year of this study, three classes from three different intermediate schools, including two grade 7 classes ($n = 19$ and $n = 26$) and a grade 8 class ($n = 23$), piloted curriculum support tools as well as cross-curricular lessons and activities.

The main sources of information upon which this article is based comes from close phenomenological observations of children climbing (as inspired by Abram [2010]; Smith [1997]; van Manen [1997]) with motion-sensitivity (Lloyd & Smith 2006b; 2015) as well as student written responses to daily journal prompts and optional creative writing assignments (Nilges, 2004; van Manen, 1997). Other sources of information gathered over the two year data collection period include: small group interviews with student participants that were conducted at the conclusion of the 3–5 day JungleSport program with video recall (Ryba, 2007), teacher and head instructor interviews, as well as observed interdisciplinary activities developed in the second year of this research project that connected climbing to the school subjects of Language Arts, Drama, and Science and Technology. To orient the researcher (me) and the research assistants to the JungleSport program as well as the lived experiences of children climbing, the phenomenon of climbing was experienced first-hand, an approach recommended by van Manen (1997). Thus an opportunity to attune to the phenomenon from various perspectives was provided.

Research Questions

The main question that guided this study was: What is it like to become physically literate in a way that invites an expanded movement consciousness, from the rudiments of movement function to the somatics of flow? To explore this question, several subquestions were developed. Function: What fitness attributes and fundamental motions provide a foundation for becoming physically literate? Form: What is the outer awareness of form and what does it mean to become aesthetically aware of the shapes, gestures, patterns and pathways of movement generation? Feeling: What are the inner senses of becoming physically literate? Within a variety of activities, what is it like to sense the breath, muscular contraction/ elongation and alignment? Flow: What is the presence of vitality and the 'flow' of energy within movements of self-creation and of connection with others, the environment, and the more-than-human world?

Based on these questions, prompts that guided participants' journal entries and their small group interviews were developed to ensure understanding and accessibility*: Function:* Tell us about a movement that you remember from today. Could you get fit doing this activity? *Form:* What did your movement look like? (Describe shape, body parts, face, etc.) *Feeling:* What did your movement feel like? (In your muscles, mood, level of energy, etc.) *Flow*: What animal, bird or other creature best describes how you moved in this moment and explain why.

To orient to the experience of the children's climb from a perspective beyond that of phenomenological observation, a creative writing activity was completed in a Language Arts class on the third day of experiencing the JungleSport program. A prompt was created to awaken their imagination. It read: "Write a jungle story where you are the creature. To help you get started, think of stories like "The Jungle Book" or "Avatar". Example: I wake up in the jungle one morning. I notice that my body is different. What am I? How am I moving? Am I strong? Am I flexible? Am I fit? What is going to happen next? . . . "

Results

Two Exemplars that Feature the Function2Flow Model and the Process of Becoming Physically Literate in an Alternative Activity

Phenomenological descriptions of two climbers are featured in this paper. Note that these experiences are but brief snapshots of what was gathered within the two year data collection period, yet they serve as exemplars for revealing the limitations of the dominant paradigm of physical education, i.e., tendencies to direct attention to outer bodily form and reason to adopt a phenomenological worldview, i.e., the expressive capacities that movement affords. They also serve as an exemplar for cross-disciplinary activities that address the whole child in terms of awakening imagination and evoking a sensing of connection to others and the world.

Amy's Steady, Smooth, and Serene Climb

Amy (pseudonym), a lean, agile grade-seven girl is ready to climb. Nestled between two good friends, she absorbs their shrieks, ear-to-ear grins, and vies for her attention with a gentle, warm smile. After attaching the carabiners dangling from each of the two arm's-length, red ropes that connect her harness to her fixed line, a vertical rope attached to a steel frame 20 feet above her head, she puts up her hand and waits for a safety check. "Perfect", says her instructor Michael (pseudonym) with a playful tug. She responds with a soft giggle. Her eyes then turn toward the Prusik knot on upper red rope. Her nimble fingers quickly twist it back-and-forth so that the vertical loop or the 'door' within the knot can slide across and open to permit slack. Her knot is loose enough to glide up as far as she can reach. She sits back in her harness and curls her knee toward her torso to unload her weight from the lower loop. Within moments she opens the door of the lower knot and raises it a proportional amount. Her foot effortlessly settles back into the loop and she steps up in one fluid motion. The steadiness of her ascent resembles that of a person climbing a staircase only her vertical stride is more than three times the height of a stair, rather that of a chair. A merged vertical shape between her body and the fixed line emerges. After a brief moment she repeats the sequence of loosening the upper knot, sliding it up as far as she can reach and siting back, letting her harness support her entire weight.

Before long, Amy's two phases of the fixed rope climb, the vertical 'step up' and 'sit back' into a ball, blend into one motion. From a distance she resembles a caterpillar inching her way up the rope and I am fully drawn into her steady climb. It seems as if only seconds have passed since her toes left the floor, then a moment of apprehension grips and pulls me away from her present-moment consciousness. She is nearing the top and only has one safety knot, two short of the instructor's recommendations. As a researcher-observer I am unsure if I should intervene. Just as I am about to say something, the instructor approaches, looks at her, smiles with a mixture of care and concern and says, "*What is wrong with your rope?"* She is oblivious so he continues, "*You only have one safety knot and I want you to tie two more right now"*. She smiles and complies. A look of elation soon stretches from ear to ear as she fully soaks in the moment of simply hanging in the air, twenty feet off the ground.

A Journey, Not a Destination

Julie (pseudonym) is a heavy-set grade eight girl with a calm demeanor. Her teacher says that he was quick to judge her at the beginning of the term as she appeared to be out of shape but she proved him wrong. She is keen to participate in most activities and does well in her physical education class overall.

Julie gets up from her cross-legged position on the floor from where she observed the safety demonstration and approaches a fixed line in the far back corner of the steel climbing structure. After her safety check is completed she places her hands on the rope and places her foot in the loop.

Julie struggles. She is not climbing like the girl and boy on either side of her. She places her foot in the loop, transfers her weight up toward the fixed line and then returns to the ground, back from where she started. The more I closely watch Julie, I realize that she isn't stuck. What I am observing is a well-rehearsed routine. When she steps up and brings her torso close to the fixed line, a position from which she may raise the Prusik knot, she doesn't move it up or down. Moments later she repeats the step up action, wiggles the knot without raising it and returns to the ground. She perseveres and continues to step onto the lower loop set at the same height for the remainder of the lesson.

Assessing Function

If a teacher were to assess Amy and Julie's climb from a muscular function perspective, they were both performing actions of a step-up, a multijoint, closed kinetic chain motion that recruits gluteal, hamstring, quadriceps and calf muscles. Amy's climb had an additional contractile action of the torso and legs that requires enhanced activation of the core musculature and hip flexors. Amy was able to perform this additional action because she left the ground completely affording her harness the opportunity to support her entire weight as she drew her knee toward her chest. Such a motion required dynamic strength and flexibility as she was able hold her knee up as she moved the unloaded lower rope up the fixed line. Because Amy had two identifiable phases in her fixed line climb, a step up and a torso curl, from a muscular function perspective, Amy's climb recruited more muscles and thus was more advanced from a health-related fitness promoting capacity compared with Julie's.

Assessing Form

Both Amy and Julie were similarly active for the entire class yet from an aesthetic, outer body frame of reference their form was remarkably different. Amy effortlessly assumed the two phases of the fixed line climb: the extension phase or stork-like balance and the contraction phase where the spine rounded, affording the head and knee to increase in proximity. If a teacher were to assess the girls' climbing experience in terms of outer form, preference would be given to Amy's climb since Julie was not able to effectively hold the stork-like balance for more than a fleeting moment. In addition, the rounded, ball shape phase of Julie's fixed line climb was notably absent.

Assessing Feeling

From a kinaesthetic register of consciousness, however, one might begin to assess Julie's experience with more sensitivity. Amy whose climb was observably effortless, for example, did not indicate that she became kinaesthetically aware of her motion. She noted in her journal:

> At the beginning, I was really nervous, but I was also excited at the same time. Then we put our harness' on and I thought that it would be really hard to put on, but the instructors explained it so that it was really easy to put on. After that we attempted the rope which was really fun and the instructors made sure we were safe. Overall I really liked it. (Amy's journal entry)

Julie on the other hand was more aware of how she felt. Her journal reflection reveals, "*My foot that was in the rope hurt because all my weight was going onto it*." Such a discomfort did not change her attitude toward climbing though as she also wrote, "*I was super excited to get climbing"*. She knew her climb didn't measure up to her peers as she acknowledged, "*I didn't go very high. It was a little scary*." Regardless of her comparative height however, something tremendous was experienced in the act of leaving the ground, even if just for a moment. She wrote: "*The feeling of being above the ground in the air was an amazing experience. It felt so neat hanging in the air, I felt like I was flying*."

What the two contrasting journal reflections indicate is that you can't solely judge a book by its cover, or in this case, outer form. From an external perspective, it would appear that Amy would have experienced more elation as she was smiling from ear-to-ear as she rested in her 20-feet-off the ground accomplishment. This sensation was not part of Amy's journal reflection however as her text was more procedural in nature, not indicative of the emotions she experienced. Julie on the other hand, felt like she was flying. Even though her foot barely left the ground, she was filled with feelings of elation. Not motivated by a comparative height, she was intrinsically satisfied with her progress and thus soaked in all the sensations a brief step up could afford.

Assessing Flow

When asked to compare their climbs to how an animal might climb, to prompt reflections that would situate their movements in relation to the natural world, both made references to monkeys. Amy wrote: "*It kind of felt like a monkeyish kind of thing"*. Her climb was coordinated, agile and smooth approaching that of an animate expert. In fact, one might wonder if she experienced a monkey-like, animate consciousness as she got into the rhythm of her ascent, so much so that she forgot to stop and tie the required number of safety knots. Julie's reference to feeling like a monkey in her creative writing journal, by contrast, gives more indication of what it was like for her to imaginatively experience flow.

> I wake up late in the afternoon and realize that I am in the air, gripping a vine tightly. I feel a sudden adrenaline rush and I just start climbing. The feeling comes to me naturally even though I don't remember doing this before. Then I jump off the vine and onto the side of a mountain. I climb up the side almost as if my hands and feet were sticky. The feeling is so amazing. I'm scared because I'm so high up but it's so fun. Being in nature and seeing it from this perspective is so enjoyable. Then I wake up lying in my bed with my alarm clock buzzing in my ears. I just wish that I could live my life like that. It would be so relaxing. I would love to have those powers, that body, that life…

Conclusion and Implications for Assessing Physical Literacy Through the Function2Flow Model

Exploring the lived experiences of students' movements within the physical education context through various interdisciplinary lenses inspired by the F2F model attunes

both teachers and students alike to the movement *function, form, feelings* and sense of *flow* possible within the process of becoming physically literate. Julie's experience provides motivation for delving beyond the constraints of the dominant 'body-as-machine' approach to teaching movement in physical education. By considering how students feel and the degree to which they experientially connect their movements to the animate world (Abram, 2010), we are more likely to cultivate a "literacy of the motile aspects of the human embodied dimension" as Whitehead (2004, p. 4) intended, and help students connect to the positive sensations that live within the simplest of movements—reaching, stepping, extending, contracting, etc..

Recall that Whitehead's original definition of physical literacy included notions of "intelligence and imagination" (Whitehead, 2001, p. 3). By encouraging Julie to access her imagination in response to her climbing experience, she transformed what some teachers might view as a comparative failure to an experience that connected her to bodily feelings that she describes as 'amazing'. Without attending to Julie's feelings and thoughts, the step up that barely left the ground would be likely be judged as unsuccessful, as it was nowhere near the top. And if a teacher resorted to command-based pedagogy in this instance, cues would be directed at placing her hands, hips and the rest of her body so she would be more like the climbers on either side of her, cues that would not take into account all that she was experiencing.

If we want to encourage children to become active *for life*, we need to attune to such moments and the potential they have to motivate young movers. In this study, Julie was encouraged to express herself through creative writing. Thus, she was afforded an opportunity to imagine feelings of strength and power. Her journal entry closed with the wish that she could, "*live my life like that. It would be so relaxing. I would love to have those powers, that body, that life…"*

I wonder, how might students like Julie experience '*a life like that*' in Health & Physical Education (HPE) more often? Physical and Health Education teachers might not have the luxury of planning cross-curricular activities with Language Arts teachers to tap into students thoughts and feelings; therefore, it is essential that we teach in ways that are attuned to our students' inner sensations, from discomfort to pleasure, and encourage them to modify their movement accordingly. It is also important, as advocated in other divergent pedagogical styles (i.e., TGfU), that we have questions and prompts that help orient us to the ways our movements may existentially connect with others and the environment in which we are situated. With this in mind, the function2flow.ca website was created with various prompts, lesson plans and rubrics, to help teachers orient toward their students' movement experiences through various lenses, namely, movement function, form, feeling and flow.

Encouraging teachers and students to think about any movement, not just climbing, through various lenses as detailed in the F2F model as well as various cross-curricular modalities thus has the potential to help teachers break from the dominant 'physical-education-as-sport-technique' paradigm (Kirk, 2010). Hence, we might approach a 'function-form-feeling-flow' paradigm that provides a viable pathway toward 'radical reformation' in health and physical education, one of the three possibilities David Kirk (2010) associates with the future of physical education, what I consider to be the most positive when the two other predictions are considered, extinction or 'more of the same'. Thus, in closely observing students climbing and analyzing their experiences in relation to the F2F model (Lloyd, 2012a; Lloyd, 2014), assessment and interdisciplinary understanding in PE has the potential to climb to new heights. Hence, the F2F model and curricular support tools that have emerged from this study may serve as an example for those who are looking for creative and educative ways to nurture the development of physical literacy.

Looking to the future, it is hoped that this article as well as the interactive components of the function-2flow website will help teachers assess movement from various perspectives through interactive, as opposed to command-based, guidance. Accordingly, several inquiry-based prompts are offered (see http://function2flow.ca/?page_id=17198) such as,

- Function: How would you describe the fundamental movement pattern that is at the heart of your desired activity (i.e., are you sitting, standing, reaching, twisting, etc.?)?
- Form: What body shapes/positions make it easier/harder to perform your activity?
- Feeling: Describe the rhythm of your breath during your activity. Is there a time when you typically breathe in, breathe out, and/or hold your breath? Pay attention to the phases of your activity and take time to sense and refine your ideal respiration cadence.
- Flow: Did the perception of time in performing the activity shift from 'clock time' to experiential time (i.e., did time speed up or slow down?)? Did it feel effortless? Did you feel a sense of connection to your environment?

Such inquiry-based prompts may be applied to any movement experience since the journey of becoming physically literate is not limited to the school context or any movement discipline. The F2F model and its curriculum support tools may thus help us conceptualize how we might approach movement in a multitude of ways and attend to the qualitative features of our moving experiences. In closing, as we see how climbers may take on different forms, experience different feelings and experience flow in imaginative ways, I hope that we, as physical educators, may also open ourselves up to the divergent possibilities each step, reach or stretch has to offer. Practically speaking, it means that we take seriously Sheets-Johnstone's (1999) challenge, to make the familiar strange, and adopt a phenomenological attitude that is premised on "re-achieving a direct and primitive contact with the world" (Merleau-Ponty, 1962, p. vii) as

was illustrated with the exemplar of seeing Julie's solitary step up in a fixed line climb beyond that of a comparative failure. Just as one step afforded her the experience of sensing freedom in flight, we too might open ourselves up to the experience of movement with curiosity and deepened sensitivity. Perhaps then we might take a brief moment while we experience something we would otherwise consider to be mundane, such as a repetitive task from walking up a flight of stairs, to peeling carrots or even chewing gum, and attend fully to our thoughts, sensations and feelings of perceptual connection as the movement unfolds. To assist with such awareness it might be helpful to make something that is familiar in this taken-for-granted act subtly strange, such as altering the tempo, the direction, force or projection of the action in some small way. And in engaging in such an act of creative experimentation and inquiry, we open ourselves up to the possibility of feeling more invigorated and alive than dead. For if we fully experience movement from its basic functions, various forms, feelings and flows, we might begin to sense that movement is not something we do, as an objective entity in need of being commanded, molded or manipulated, rather, movement is who we are, as so eloquently explained by Tim Ingold (2011).

> "We say 'the wind blows', because the subject-verb structure of the English language makes it difficult to express it otherwise. But in truth, we know that the wind is its blowing. Similarly, the stream is the running of water. And so, too, I am what I am doing. I am not an agent but a hive of activity." (Ingold, 2011, p. 17).

Note

1. "The concept of vitality has connections to the doctrine of vitalism, which goes back to Aristotle and the "philosophers of life," such as de Chardin and Bergson, who wrote of creative evolution and an élan vital, vis essentialis, vis viva, or life force animating bodily functions right down to the level of chemical processes and the vital order of nature. This life force imbues organic processes with intentions and purposes that distinguish them from the chemical mechanisms governing inorganic matter. The human body is such an organism that is thought to be subject to vitalistic humors, orgone or bioenergy, chi or qi, ki, and reiki, prana, and kundalini shakti . In alchemical terms, the human body is composed of the elements of earth, air, fire, and water, which reflect and are animated by a fifth element, ether, which is the quintessentia, or essential, vitalizing force. The doctrine of vitalism suggests, furthermore, that the human body is a prototype of other living organisms and that it reflects the organization of nature as a whole" (Smith & Lloyd, 2006, p.252).

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