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Merleau-Ponty meets Kretchmar: Sweet tensions of embodied learning

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Abstract

The last decades have seen a rising philosophical interest in the phenomenology of skill acquisition. One central topic in this work is the relation between the athlete's background capacities and foreground attention as an invariant feature of skillful movements. The purpose of this paper is to examine further this gestalt relation from the perspective of Merleau-Ponty's phenomenological account of embodied learning and a classical notion from philosophy of sport, namely 'sweet tension of uncertainty of outcome'. In the first part we will explicate how Merleau-Ponty understands embodied learning as a form of gestalt switch that allows the athlete to perceive the world more meaningfully in relation to an on-going movement project. That is, a skilled athlete perceives more and better opportunities for actions. In the second part, we revisit the classical notion of 'sweet tension of uncertainty of outcome' developed by Kretchmar. This phrase is attributed to the indeterminate back and forth rallies between sport contestants, and to persons facing a sport situation that produces an ambiguity as to whether one will succeed in one's task. In the third part, we then juxtapose Merleau-Ponty's notion of embodied learning and the notion of sweet tension from philosophy of sport in order to draw out the relations between the two notions. In addition, in much of the philosophical work on skill acquisition (for instance in Merleau-Ponty and his much-cited commentator, Hubert Dreyfus) the distinction between everyday skills, like walking and opening doors, and sport skills is collapsed. Our discussion aims to show that by introducing the notion of 'sweet tension' to the literature on phenomenology of skill acquisition, we are able to highlight a phenomenological difference between everyday skills and sport skills.

Merleau-Ponty meets Kretchmar: Sweet tensions of embodied learning

The last decades have seen an upsurge of interest in the phenomenology of skill acquisition within philosophy of sport. For instance, this approach has been taken in order to critique classical cognitivism (Moe, 2005), to understand the fundamental dimensions of bodily movement (Breivik, 2008; Moe 2007a), and the relation between focal and subsidiary awareness (Hopsicker, 2009). For the most part, this work has been non-empirical, but some work, particularly in dance studies, has also investigated the topic empirically (Bailey & Pickard, 2010; Engelsrud, 2010). One of the key topics in the work on phenomenology of skill acquisition is the relations between background capacities and foreground attention, and how such relations are conditions for the possibility of skilful performances in sports (Moe, 2007b). This relation between background capacities and foreground attention can be understood as a gestalt relation. In this paper, we will draw on the phenomenologist Maurice Merleau-Ponty's ideas about embodied learning as a gestalt switches, and relate this to a concept from philosophy of sport, namely *the sweet tension of uncertainty of outcome* (Fraleigh, 1984; Kretchmar, 1975). By doing so, we aim to enhance the understanding of embodied learning in sports. In addition, we aim to elucidate a more nuanced distinction between everyday coping skills (cf. Dreyfus, 2002) and sport skills.

Embodied learning as gestalt switches

Learning is not an explicit theme in Merleau-Ponty's work, but some writers have used Merleau-Ponty's texts to develop accounts of embodied learning (cf. Jespersen, 2003; Standal, 2009). In particular, the work of Dreyfus (Dreyfus, 2002; Dreyfus & Dreyfus,

1986) has been highly influential, also within the philosophy of sport[1]. Dreyfus, as well as others concerned with the phenomenology of skill acquisition, primarily draws on Merleau-Ponty's main text *Phenomenology of Perception* (Merleau-Ponty, 2002. Henceforth: PhP). However, the one place where Merleau-Ponty indeed does engage at length with learning as an explicit topic is in his first dissertation, *The Structure of Behavior* (Merleau-Ponty, 1963. Henceforth: SB).

In SB, Merleau-Ponty draws on findings from Gestalt psychology in order to criticise the behaviouristic theories that dominated the psychology of learning in the 1930's. In behaviourism, learning is a process which "only transfers to certain stimuli the power of releasing certain movements, the motor conditions of which are considered as given in advance. The development of behavior consists only in the different association of pre-existing elements" (SB, 94). On this account, behaviourism provides an atomistic account of learning, where pre-existing elements are associated together to a stimulus-response chain.

As opposed to the atomism of behaviourism, Gestalt psychology holds that the whole of a system is not equal to the sum of its parts. That is, one cannot decompose a situation into its constitutive parts in order to figure out which parts are associated in a stimulus-response reaction. Not only is the whole of a system greater than the sum of its parts, but Gestalt psychology makes the stronger claim that the individual parts are *determined* by the whole:

[1] Dreyfus describes a 5-step development of skill acquisition from novice to expert. It provides a description of how one's skill learning progresses from an early reflective, rule-following stance towards the higher levels of proficiency where one's skills are described as an embodied situational response to what shows up as important in different situations.

> The form is a visible or sonorous configuration (or even a configuration which is prior to the distinction of the senses) in which the sensory value of each element is determined by its function in the whole and varies with it … This same notion of form will permit us to describe the mode of existence of primitive objects of perception. They are lived as realities, we have said, rather than known as true objects (SB, 168).

'Form' is here synonymous with gestalts[2], which have a figure-background structure in which the foreground figure stands out from an undifferentiated background. Thus, Merleau-Ponty mobilizes the gestalt concept in order to criticise behaviourist theories of learning. With this critique, we can see an indication of the relation between gestalts and embodied learning. This relation will now be brought out more clearly.

The notion of gestalt in Merleau-Ponty

Traditionally, a gestalt figure is conceived as a visible figure on a uniform background. One well known example is Rubin's vase, where one can see either a vase or two faces, depending one how one focuses the eyes. Other examples are the duck/rabbit and old woman/young woman figures. However, the traditional gestalt figures privilege visual perception, and Dillon has argued that a visual gestalt figure like Rubin's vase is equivalent to "an artificial laboratory construct when seen in contrast to the rich

[2] E.g. "Each moment in it [the form] is determined by the grouping of other moments, and their respective value depends on a state of total equilibrium the formula of which is an intrinsic character of 'form' … Thus it would be possible to define it as a process of the 'figure and ground' type" (SB: 91).

heterogeneity of the perceptual world. [It is] also circumscribed within the visual sphere" (1997, 66).

Though visual perception is important in movement, the moving body synthesizes all sensory modalities in its pre-reflective operations. As we have already seen, Merleau-Ponty argues that gestalts can take on both visual and sonorous forms. Importantly, he also implies that the configuration making up a gestalt can be something prior to the distinction of the senses. Synaesthetic perception, that is the intercommunication of all senses, is the rule, according to Merleau-Ponty, but this is something that we have become unaware of

> because scientific knowledge switches the centre of gravity of experience, so that we have unlearned how to see, hear, and generally speaking, feel, in order to deduce, from our bodily organization and the world as the physicist conceives it, what we are to see, hear and feel (PhP, 266).

In the perceptual world of movement the clear-cut figure on uniform a background usually associated with a gestalt figure is an inaccurate picture of perceptual gestalts. That is, the shift from purely visual perception (e.g. Rubin's vase) to synaesthetic perception in movement leads to a blurring of the gestalt figure. Furthermore, Hass points out that the gestalt figures are also transfused with meaning: "the perceptual gestalt is not best understood as the 'figure-ground structure', but rather as a *meaning-laden complex* beyond the form-content distinction altogether" (1999, 94. Italics added).

The way in which a gestalt has meaning as a "lived reality" rather than "a true object of our knowledge" (SB, 168) is exemplified by the football player's relation to the pitch, his team-mates and the opponents. For the player, the football field is not an object, says Merleau-Ponty. This means that the measures the player takes of the field are not those of objective, geometrical space. A player does not locate his opponent to be 5 meters in front himself, 25 degrees to the left and running at a speed of 5 mins/sec, say. Rather, the phenomenal football field is expressed as lines of forces that "initiate and guide the action as if the player were unaware of it. The field itself is not given to him, but present as the immanent term of his practical intentions" (SB, 168).

Thus, the phenomenal (football) field is internal to the player's practical intentions. There is a dialectic between the field and the actions of the player, so that "each manoeuvre undertaken by the player modifies the character of the field and establishes in it new lines of forces which in turn unfold and are accomplished, again altering the phenomenal field" (SB, 169). There is thus an interdependence between the player's intentions and actual movements on the one hand and the gestalt of the phenomenal field on the other. We can therefore see that the perceptual gestalt is not imposed solely by the bodily intentions of the player, because the field – by virtue of its set limits – is already partly configured. Neither is the configuration of the field exhausted by the demarcations. Rather, the lines of forces, the possibilities opened for play, are continually changed as moves are made.

Embodied learning

So far, we have seen that in Merleau-Ponty's critique of behaviouristic theories of learning he rejected the atomistic account provided by behaviourism. But Merleau-Ponty also pointed to a positive description of learning, i.e. that to learn consists of "providing an adapted response to the situation with different means" (SB, 96). To learn is not to be able to repeat the same gesture over and over again. Rather there is something additional involved, which makes a learned skill more flexible than a mere automatic response: "There must be a principle in the organism which ensures that the learning experience will have a general relevance" (SB, 99). In *Phenomenology of Perception*, Merleau-Ponty develops his account of embodied learning by examining the acquisition of motor habits[3]. For Merleau-Ponty, habit "is knowledge in the hands, which is forthcoming only when bodily effort is made, and cannot be formulated in detachment from that effort" (PhP, 166). This means that embodied learning is tied to a form of knowledge which primarily expresses itself in acts.

A crucial aspect of embodiment in sporting situations is the intertwining of a moving body-subject and the immediate environment where the movement takes place, illustrated by the example from the football field. The immediate environment is presented to the learner through the intentional arc[4], a feedback loop between body-subject and world

[3] Habit is the word used in the English translation of PhP, but some writers (Dreyfus, 2005; Ryle, 1949) are critical towards the use of this word, because habit is generally taken to imply simple and mechanical behaviours, and thus not what Merleau-Ponty intended with the original French word l'habitude'. Dreyfus favours the word skills, but as we see it, both habit (as understood by Merleau-Ponty, and not the corrupted form of habit often ascribed to it) and skill are useful as long as we know that it denotes a flexible, situational and adjustable ability to act.

[4] "the life of consciousness – cognitive life, the life of desire or perceptual life – is subtended by 'an intentional arc' which projects round about us our past, future, our human setting, our physical, ideological and moral situation, or rather which results in our being situated in all these respects" (PhP, 157).

(PhP, 157; see also Dreyfus 2002). The projection of the present situation – facilitated by the intentional arc – is presented to the body-subject as a gestalt, where certain aspects and features of the situation stand out and call for action. This gestalt figure is harmonious insofar as it solicits a performance that matches the intention of the mover (Dreyfus, 2002).

The notion of intentional arc is in Dreyfus' work paired with another Merleau-Pontian term, maximum grip. This term denotes the body's tendency to find the best way of taking in the lived realities as a whole, so that the gestalt figure presented to the mover tends towards the best possible solution of the current movement project. In the words of Merleau-Ponty:

> The distance from me to the object is not a size which increases or decreases, but *a tension which fluctuates round a norm* … therefore, as I know the relation of appearances to the kinaesthetic situation, this is not in virtue of any law or in terms of any formula, but to the extent that I have a body, and that through that body I am at grips with the world (PhP, 352-3. Italics added).

Again, we see Merleau-Ponty's emphasis on the lived spatiality of movement projects: the distance from the player to the attacking opponent is not to be expressed in geometrical terms, but is rather experienced as a tension. The lived spatiality appears as a possibility for certain actions (and an impossibility for others), and the appearances come in the form of gestalts that – as we have said – fluctuate.

This experience of tension and ambiguity calls for a certain way of considering knowledge and understanding: "to understand a movement is to experience the harmony between what we aim at and what is given, between the intention and the performance" (PhP, 167). For Merleau-Ponty, then, learning movement skills is dependent on the extent to which a relation of meaning is allowed to develop between a situation and an athlete's intention and performance (SB, 103). This relation of meaning is the reversible intertwining of the situation and the body-subject's comportment.

The gestalt switches involved in learning movement involves coming to perceive the world more meaningfully in relation to an on-going movement project. An important point, then, is that as we learn new skills or refine old ones, we come to perceive the world differently. In movement projects, our skills make the world meaningful for us (Crossley, 2001). By extension, we can say that to acquire and refine skills is to open up the world or perhaps even new worlds. Embodied learning dilates our being in the world, as Merleau-Ponty put it (PhP, 166).

The sweet tension of uncertainty of outcome

In this part, we will further explore the normative tension between the mover and the movement project. In order to do so, we will draw on a classic phrase from sport philosophy, namely "the sweet tension of uncertainty of outcome". "Sweet tension" is a phrase that was introduced by Fraleigh and further applied by Kretchmar (1975) to the uncertainty of outcome in sporting activities[5]. The phrase has been attributed to the

[5] We mainly follow Kretchmar's (1975) interpretation of the "sweet tension". Kretchmar (1975, see note 2) attributes the term "sweet tension" to Warren P. Fraleigh who later discussed the phrase in *Right Actions in*

indeterminate back and forth continuation of rallies between sport contestants and to the person who faces a true test, that is, a situation that produces the ambiguous feeling of "may-I" or "may-I-not succeed" in achieving the desired task. In both of the examples an irrevocable tension of uncertainty tends to emerge in the athlete's engagement with the environment. Because the athlete is attracted to this activity, the tension is interpreted as a pleasurable experience, as "sweet".

The notion of sweet tension of uncertainty of outcome

Kretchmar (1975) argued that sporting activities can be characterized in terms of two kinds of point-counterpoint in sport. By referring to Ogden's linguistic and psychological analysis of opposition, he distinguished between opposition by "cut" and "degree", and related the former counterpoint to tests and the latter to contests. Moreover, Kretchmar argued that a contest's opposition by degree is parasitic on a test's opposition by cut. In other words, a valid test is necessary for the realization of a contest. To characterize a test in terms of an opposition by "cut" means that it places two contrary phenomena on each side of a cut point, a zero point. Logical contradictions such as yes or no, true or false, possible or impossible are examples of contrary phenomena. In the cut point, the answer to a problem is an indeterminate "maybe", neither clearly "yes" nor "no". Thus, balancing in the cut point, the phenomenon stands out as ambiguous.

Kretchmar argued that this cut point is characteristic of the true test. He described a test as vulnerable when the athletes perceive it as a possible project to overcome. On the other hand, a test shows itself as impregnable when it is perceived as an impossible

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Sport (Fraleigh, 1984). Thanks also to Fraleigh for describing the phrase thoroughly in personal communication, 2005.

project to deal with. As Kretchmar and Elcombe (2007, 182) points out, in the cut point the test is neither perceived as achievable ("I can do this!") nor impossible ("Maybe I cannot do this"). Hence, the cut point calls forth an ambiguous feeling of uncertainty to the tester who "lives ambiguously toward his test, acting on the one hand as if his project were destined for success but knowing on the other that his gestures may be ineffectual" (Kretchmar 1975, 25).

It is precisely this sense of uncertainty on the part of the performer that Kretchmar uses the notion "the sweet tension" to describe. On the one hand, the uncertainty creates a tension in the athlete's testing act. On the other hand, when it comes to the objective of one's act, there is no uncertainty.

> Indeed, the very recognition of a test presupposes a specific, unambiguous act in virtue of which something is a test. For example, a mountain may show itself as a test, but only against the implicit background of the act of climbing in a certain way to its summit. *Without the presence of this specific project, there could be no uncertainty about whether or not it can be done*" (Kretchmar 1975, 26. Italics added).

The italicized part of the quote may appear as stating the obvious, but it does point out a central feature, namely that the athlete's motor intentionality[6] is decisive to how her movement project is understood. This understanding is basically implicit, a point that Kretchmar underscores by saying that the athlete "is silently called to engage it" (1975, 26).

Whereas a test can be a solo project, a contest requires at least one fellow competitor. Thus, one moves from a test to a contest when one finds another person to share a test with. Consequently, testing families emerge. They are specific both in relation to kind and competence level. For example, the soccer player competes with another soccer player and not with opponents from other testing families such as handball or golf. But testing families are even more specific. The skilled player within one testing family meets another skilled player in a commitment to test their skills against each other. These steps are constitutive for contests, because in their absence, Kretchmar argues, "one has at worst no basis for a comparison (two individuals are engaged in taking two different tests) or at best a poor basis for contesting (one side will be 'whitewashed')" (*ibid*, 29).

At first sight this may seem like another opposition by cut, that of winning or losing to an opponent. But when two individuals are engaged in a contest, they share the same project, the same underlying test. They try to do the same thing, only better than one

[6] "Intentionality" is that feature of our consciousness or experience that always is *of* something. Thus, "motor" intentionality marks an embodied and concrete way *of* understanding or being meaningfully *directed at* "things" in the surroundings. Broadly, we can relate it to the more general notion of "operative intentionality", a term that Merleau-Ponty applied from Husserl. Merleau-Ponty described operative intentionality to be "that which produces the natural and antepredicative unity of the world and of our life" (PhP, xx). In short, it can be described as a "bodily readiness" that enables and constrains that which shows up as relevant and interesting in my movement projects.

another. The contest is therefore not characterized in terms of another opposition by cut, but by an opposition by degree. In tight contests, one can be slightly better or worse than one's opponents (Kretchmar 1975, 27-8).

Hence, contests are founded upon tests. Consequently, the contester faces a double uncertainty, that of solving the test as well as one can and that of solving it better than one's opponent:

> Test takers … ask themselves, "Can I do this or not?" or "How well can I do this?" In contrast, contestants experience a more complex set of uncertainties and meanings. They ask themselves, "Even if I *can* do this, can I do it better than my opponent?" or "Even though both of us might be able to do this, what exactly is the difference between us?" (Kretchmar and Elcombe 2007, 187)

Thus, the sweet tension of uncertainty of outcome becomes more complex and an intersubjective relation between opponents is introduced.

Discussion: Sweet tensions of embodied learning

So far, we have introduced the notion of gestalt in the work of Merleau-Ponty and related it to embodied learning of movement skills. In particular we have highlighted that the gestalts of movement are volatile and fuzzy, quite unlike the standard view of gestalt as either/or figures like for instance the duck/rabbit. Gestalts of movement are also inherently intersubjective in the sense that they require the three regions of self, world,

and others (SB, 168-9; Zahavi, 2003). In Merleau-Ponty, this is relevantly exemplified with the football players' relation to the pitch and the other players.

The movement project undertaken by the athlete will have success conditions, that is, the athletes can succeed or fail to meet a certain kind of appropriateness. Merleau-Ponty expresses this as a fluctuation around a norm (PhP, 352). Movement projects are thus characterized by a normative tension. To further understand this normativity, we have introduced the notion of sweet tension of uncertainty of outcome. It was used to illuminate how a true test invokes a genuine sense of uncertainty in the athlete who is compelled to be engaged in it because the test has just the right level of difficulty, that is, the right mix of being achievable or unattainable.

Furthermore, we have seen that the test enables the sport contest where two or more athletes are committed to the same underlying project in a shared effort to do their best. Hence, sport contests invoke a more complex set of uncertainties that may provide a richer source of ambiguities and meanings (Kretchmar and Elcombe, 2007). The notion of "sweet tension" signifies that the intertwined and ambiguous relation between self-world-others is a positive, yet uncertain, one. The lack of clarity brought about by the volatile gestalts is, if we follow Kretchmar, what makes movement tests and contests attractive.

The gestalt relation between foreground and background is clearly present (albeit implicitly) in Kretchmar's development of the sweet tension. Giving the example of a mountain climber, he states: "One's finite skills are one's perspective; they are implicit in meeting the mountain immediately as a test or no test" (Kretchmar, 1975, 26). That is, the perspectives we can take on a given movement project (i.e. how we perceive the

situation) are constrained by our skills. The better our skills are in relation to the specific movement project, the more varied and nuanced are the possible perspectives we can take.

Relating this to Merleau-Ponty, we first of all see that in the football example (SB, 168-9) a skilled player will be able to see more and better opportunities for passing, shooting, tackling, dribbling and so forth. Secondly, since the possible perspectives are constrained by our skills, it seems clear that the possibility of broadening one's perspective or being able to take on completely new perspectives are the outcome of learning processes: "A movement is learned when the body has understood it, that is, when it has incorporated it into its 'world', and to move one's body is to aim at things through it; it is to allow oneself to respond to their call" (PhP, 160-1).

In this sense, we have related Merleau-Ponty's ideas of skill acquisition to a classical concept in philosophy of sport. This perspective adds to the literature on the phenomenology of skill acquisition in sports by highlighting the dynamic and volatile characteristics of movement projects. More specifically, these dynamic and volatile situations produce a normative tension, which is sweet and attractive. This reverberates in Merleau-Ponty's notion of gestalt: "The perceptual 'something' is always in the middle of something else, it always forms part of a 'field' … We must recognize the indeterminate as a positive phenomenon" (PhP, 4; 7).

Drawing on work from both analytic philosophy of mind (Searle 1983) and phenomenology (Dreyfus, 1991; 2002), Kelly (2000; 2003; 2005a) attempts to nail down the indeterminate feature in our experience by relating it to our absorbed and unreflective bodily engagement with the world. His basic claim is this: "I believe, the essential feature

of skillful, absorbed coping is that it is a way of engaging normatively with the world instead of a way of describing it" (Kelly, 2005a, 16). To illuminate this normativity, Kelly follows Dreyfus' phenomenology of the skillful engagement of our everyday coping skills. His examples are the kind of skilled behaviours we perform unreflectively in our daily life, such as grasping for the doorknob without paying attention to the fact that that is what we are doing. Kelly's example is of himself, lost in philosophical conversation with a friend while he still is "able skillfully to reach out, grasp the doorknob, and open the door; without even noticing that it is happening, my hand forms itself naturally to the shape of the knob" (*ibid*, 17). The outcome of this, Kelly continues, "is that engaged activity is normative in a special sense: it involves a kind of solicitation in which the world is intrinsically motivating for the agent, an agent who is unreflectively engaged with it" (*ibid,* 21).

There is a parallel here in Kretchmar's development of the sweet tension. Giving the example of a mountain climber, he said that it is against the implicit background of the act of climbing that the mountain appears as a test. Thus, the mountain is, to paraphrase Kelly, intrinsically motivating for the agent, an agent who is, as we recall, "silently called to engage it" (Kretchmar 1975, 26). There seems, in other words, to be a close relationship between Kelly's interpretation of the normative, but indeterminate, feature of our unreflective bodily engagement with the world and Kretchmar's sweet, but ambiguous, tension of skilled behavior in athletic tests and contests.

However, we also think that there is an important phenomenological difference between the two descriptions. By mainly focusing on the phenomenology of our everyday coping skills, Kelly (and Dreyfus) tends to collapse an important distinction

between differences in our bodily comportment[7]. In Kelly's example of grasping for the doorknob while he is lost in philosophical conversation, his solicitations to reach out to grasp the doorknob takes place at the margins of his awareness. That is, the activity of grasping the knob is in the background of his experience while a different kind of activity, his conversation with a friend, is at the centre of awareness (see Kelly 2005a, 20). But this seems to be quite the opposite in sporting activities called forth by the logic of sweet tensions. They have, in accordance with the conversation story, background conditions that are enabling the movement project of the test to occur. However, what makes up the center of the activity in the testing and contesting acts is precisely what is called forth by the situation, that is, the experience of the sweet tension of uncertainty of outcome[8].

Hence, in athletic tests and contests, which require a challenging goal, a set of means, and a way of measuring success (Kretchmar and Elcombe 2007, 187), the athlete's solicitations to act do not take place at the margins of awareness. Instead they make up the very centre of athletic engagement, what the athlete aims at and what her motor intentionality is basically directed at. This is not to read back a thinking "I" into the movement project, nor is it to invoke a thought out intention in the athlete's understanding of the test. Instead it is a way of being deeply interwoven with the

[7] See Breivik (2007) and Eriksen (2010) for a related critique.

[8] Dreyfus' (cf. 2002) preferred example is that of car driving. But, surely there is a phenomenological difference in the experience of driving a car in the mundane sense that we all do, and the experience of driving a race car in a competition. See also Hyland (1990, 116-117) who distinguishes skilled behavior in sport from the skills of our daily life by the phrase "responsive openness", which constitutes the stance of play.

surroundings which are intrinsically motivating the athlete to respond in a highly context sensitive way.

One central issue to understand is that there is a whole different epistemology at work when we deal with the phenomenology of skill acquisition, as opposed to the classical cognitive approach to skill acquisition. Brinkman and Tanggaard (2010) claim that Western philosophy to a large degree is dominated by visual metaphors, to the extent that knowing is a way of seeing and "learning happens through visual confrontation with something" (p. 244). They call this idea the "epistemology of the eye", and make a case for a complementary form of epistemology, namely an epistemology of the hand[9]. The change from an epistemology of the eye to one of the hand was also a central part of the argument about the gestalt switches in embodied learning: Gestalts are traditionally circumscribed within the visual sphere; we perceive them with our eyes. But as we broaden the perceptual range to include synaesthetic perception, the visual gestalts are no longer entirely suitable. In dynamic movement situations, the perceptual gestalts are continually fluctuating due to the embodied involvement of the agent, and a purely visual gestalt will not aptly capture the perceptual terrain of skilled sport performers.

One central element of the epistemology of the hand is that knowledge is something *taken* by embodied agents, rather than something *given* to them, transferred by sight. It is through active manipulation[10] of situations that we come to learn about things and their possibilities for use. As opposed to the cognitive approach to skill acquisition, there is no

[9] It is an important point that these different epistemologies are not competing, so that one is false and the other correct. It is not feasible to set up a dichotomy between doing and thinking, as if embodied learning is a way of unthinkingly acquiring skills. Seeing is a part of understanding the world, but the point here is that there is a prejudice towards seeing.

[10] Note the etymology at work here: *manus* = hand

problem of representation (Moe, 2005) within the epistemology of the hand, because "the hands cannot represent (or misrepresent) the world. They can only handle or mishandle it" (p. 247). Indeed, this is precisely the point with situations characterized by a sweet tension of uncertainty of outcome: the possibilities of handling or mishandling are simultaneously present in sporting tests and contests.

Closing

In this article, we hope to have added to the literature on the phenomenology of skill acquisition by elaborating on Merleau-Ponty's understanding of embodied learning as gestalt switches. More specifically, we have traced Merleau-Ponty's development on the topic from his first dissertation, *The structure of behavior* – where he critiqued the behaviourists' conception of learning – to his seminal text *Phenomenology of perception*. In the latter book, he sees the acquisition of motor skills (or habits, which is his preferred term) as a way of dilating our being in the world. That is, embodied learning enables us to perceive the world differently, and in a sporting context this means to perceive more and better opportunities for action.

The work of Merleau-Ponty has been juxtaposed with a classical notion from philosophy of sport, namely *the sweet tension of uncertainty of outcome*, which is a characterization of the uncertain, yet attractive, outcome of engagement with sporting tests and contests. More specifically, we have looked into the double ambiguities provided by tests and contests, how the latter depends on the former, and how they both depend on the athlete's concrete and embodied movement project/capacity.

The main outcome of this is that we have been able to highlight a phenomenological difference between everyday coping skills (like walking and opening doors) and sport skills. In everyday coping skills, bodily movement are performed in the margins of awareness, allowing other activities, like discussing with a friend, to take centre stage and attention is mainly directed elsewhere. In sport skills bodily movements are at the centre of awareness. They are characterized by a sweet tension of uncertainty of outcome that arises from an agent's deep involvement with the surroundings.

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