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Habitual reflexivity and skilled action

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Abstract

Theorists have used the concept habitus to explain how skilled agents are capable of responding in an infinite number of ways to the infinite number of possible situations that they encounter in their field of practice. According to some perspectives, habitus is seen to represent a form of regulated improvisation that functions below the threshold of consciousness. However, Bourdieu (1990) argued that rational and conscious computation may be required in situations of 'crises' where habitus proves insufficient as a basis for our actions. In the current paper, I draw on a range of evidence which indicates that conscious intervention (including self-reflective sensory consciousness) is required not only at points of crises but also as skilled performers engage in the mundane actions/practices that characterise their everyday training and performance regimes. The interaction of conscious learning and unconscious schemata leads to the development of a reflexive habitus which allows performers to refine and adapt embodied movement patterns over time.

Keywords: Habitus, Bourdieu, Expertise, Consciousness, Discursive Practice, Bodily Awareness.

Habitual reflexivity and skilled action

The term habit is often used by psychologists and sociologists to explain how we negotiate our world of action without consciously attending to the mechanical details that govern control of our movements. The effortless manner in which we complete quotidian endeavours emphasises the utility of habit. Indeed, one must recognise the value of 'mechanistic' action as bodily engagement with our environment would likely prove halting and dysfluent if every movement required careful consideration. However, traditional psychological conceptualisations of habit tend to portray human behaviour as a conditioned reflex thereby imbuing the term with a peculiar degree of inertia (e.g., Skinner, 1938). According to this perspective, human actors possess a repetitive or mechanical-like tendency to respond to stimuli in a preordained manner (Crossley, 2001a). Such conceptualisations denote the impassivity of human action and while they may possess some value in explaining how we perform simple actions (actions which once mastered require no further attention) they appear ill-suited to an explanation of how skilled agents are capable of refining complex actions or addressing the variety of challenges (e.g., injury) that are a ubiquitous feature of their training and performance regimes.

Theorists such as Mauss (1979) and Bourdieu (1977) sought to cast aside the common conceptualisation of habit as a mechanical assembly or pre-formed programme. According to Bourdieu, the term habit denotes mechanical behaviour whereas 'habitus' implies flexibility and dexterity. Habitus suggests a form of 'practical reason' (i.e., le sense pratique) which constitutes an embodied knowledge of how one may efficiently negotiate one's world of action (Crossley, 2013). The primary habitus represents schemes of action and perception tacitly acquired during childhood while the secondary habitus involves schemata acquired subsequently through 'specialized pedagogical labour that is typically shortened in duration, accelerated in pace, and explicit in organization' (Wacquant, 2014: 7). This process

involves the embodiment of the principles of social organization thereby enabling humans to *spontaneously* generate an infinite array of appropriate actions 'which no rule, however complex, can foresee' (Bourdieu, 1990: 9). This system of dispositions means that individuals are disposed, but not determined, to act in a certain way based on their previous experiences (Glăveanu, 2012).

Habitus offers researchers an important conceptual and analytic tool for exploring the nature of social determination and human agency. Despite the undoubted utility of this concept, and the extensive influence it has had on thinking within the field of body studies, Bourdieu has been criticised for not making full use of the term. For example, although in his later work he emphasised the generative capacity of habitus, he failed to offer a detailed account of how the habitus is formed at either the individual or collective levels. Crossley (2013: 147) argues that Merleau-Ponty's work advances the positions of both Bourdieu and Mauss by offering a 'dynamic account of the process in which habits are formed, reformed and, in some cases, extinguished across time, exploring this process and identifying its mechanisms'. Despite the historical denigration of the concept of habit, thinkers such as Merleau-Ponty (2002) and Dewey (1922) sought to rehabilitate it in an attempt to theorize the dispositional aspect of human agency. For Merleau-Ponty, habits are structures of behaviour which are shaped and reshaped by the dynamic and ongoing interactions between actor and environment. Dewey agrees with this perspective but builds upon it by emphasising how the to and fro of social interaction shapes habit. Indeed, the unpredictability of social situations are such that an element of our habits are always in flux leaving us with little choice but to subject them to conscious revision.

Bourdieu viewed habit as a constraint upon freedom which one may only be liberated from during points of crises (Crossley, 2013). For Grosz (2013), habit promises freedom by providing living beings with the energy and singularity of purpose that allows them to

respond creatively to their environment. Grosz argues (2013: 223) that habit does not mechanize or reduce consciousness to unconsciousness but, instead, brings about a new kind of consciousness, one that is 'not aware of itself but prone to act, that is activated by the possibility of its acting, that knows but cannot know that it knows'. This seems to place habit very close to instinct but Grosz (2013) sees habit as possessing the capacity for invention and transformation. Crossley (2013: 153) suggests that Dewey conceived of habit in a similar manner by proposing that this structure helps 'carry forward impulses to their consummation and which allow us, in deliberation, which is itself a habit, both to plan and to implement a plan'. Although theorists such as Grosz and Merleau-Ponty portray habit as possessing a generative capacity, these embodied dispositions are seen as functioning below the threshold of consciousness. Unfortunately, this perspective does not accord with a wide range of empirical evidence which indicates that skilled performers regularly use conscious reflection to alter habitual routines. Indeed, Merleau-Ponty's emphasis on an unreflective lived body has been criticised for creating 'a polarization of "lived experience" versus "representations" that neglects the fruitful option of "lived corporeal reflection", that is, concrete but representational and reflective body consciousness' (Shusterman, 2005: 165). In the current paper, I argue that one may view habit(us) as representing a form of embodied or practical action and yet acknowledge, as Dewey does, that somatic reflection is required if we are to successfully refine 'attenuated' habits.

This line of enquiry has been influenced by the argument that habitus requires further development to better accommodate reflexivity (the way the self becomes conscious of itself) as a core component (see Bunn, 2016; Lahire, 2011). In particular, I draw on Crossley (2001a, b) and Sweetman's (2003) proposal that the habitus is characterised by a reflexivity and flexibility which allows the agent to shape secondary dispositions. I start by considering the findings from a number of body studies that have used habitus as an analytical tool to

explain how the embodied agent acquires and performs complex skills. Next, I critically evaluate the proposal that these skills are characterised by a pre-reflective level of bodily awareness. In the following section I argue that habitual reflexivity allows performers to address the 'bodily crises' (e.g., injury, attenuated movement patterns) which will occur at some point during their careers.

The paper subsequently draws on a range of evidence which indicates that conscious intervention is required not only at points of crises but also as skilled performers engage in the mundane actions/practices that characterise their everyday training and performance regimes. In doing so, I consider a body of research which points to the important role that consciousness and discursive practice plays in facilitating 'continuous improvement' amongst skilled performers. This evidence counters the commonly held belief that actors do not become aware of their corporeal schema when everything is running smoothly but only when things go wrong. The paper concludes by considering how future research may better understand the process by which skilled performers advance their bodily capacities over time.

Body work

A number of researchers have used habitus as an analytical tool to examine how athletes advance their bodily capacities by engaging in 'body work'. Wacquant's (2004) ethnographical work exploring how boxers actively cultivate their bodies as a form of capital is one of the most influential treatments of habitus in the body studies literature. Wacquant (2004) extended Bourdieu's work by emphasizing habitus as 'bodily capital' and dedicated greater attention to the nature of skill acquisition (Bourdieu devoted little attention to a discussion of how the accumulation of bodily capital occurs). Central to Wacquant's thesis is the belief that the rules of life the boxer follows pertain not to a reflective evaluation of how they should or should not move but 'rather, from a sort of "concrete science" of their own

bodies' (2004: 128). Wacquant (2013: 24) holds that practical mastery functions beneath the threshold of consciousness and that mental understanding is likely to be a hindrance in the ring 'so long as one has not grasped boxing technique with one's body'.

Although Wacquant (1995: 73) sees a limited role for conscious processes he argues that body work requires the pugilist to 'constantly monitor every part of his body and synchronize a large number of movements'. In fact, Wacquant provides numerous examples of how these boxers monitor their bodily movements but he accords this no status as a form of consciousness (Noble & Watkins, 2003). In referring to his own progress he reveals that 'I feel like I'm getting my punches off better and I concentrate on landing cleanly on my imaginary target with every one of them' (2004: 120). Wacquant also dedicates attention to the discursive element of training. In doing so, he revealed that boxing coaches deliver instructions using an economy of words and gestures. Whilst the coaches in Wacquant's gym appear to avoid bombarding their athletes with a barrage of verbal instruction Wacquant recalls being exhorted by his coach to 'throw a one-two, duck to slip my right an' counter with another one-two from d'other side' (2004: 65) and to ensure that he does not leave his right hand by his side but that he places it against his 'right cheek, to protect himself from the left hook' (2004: 103). Together, these examples emphasize the importance that didactic learning plays in shaping the secondary habitus.

A number of researchers have been inspired by Wacquant's call to engage in what he termed 'carnal ethnography'. For example, Spencer (2009) conducted participant observations and interviews in a mixed martial arts (MMA) club to explore how these athletes engaged in *body callusing* through the use of reflexive body techniques. Spencer (2009) argued that to gain mastery over their movement, body techniques are continually incorporated and combined with the fighter's existing technical corpus and that this means that the fighter's habitus is in a perpetual state of flux or metamorphosis.

Spencer (2009: 127) provides one particularly illuminating passage in discussing how the performers were taught body techniques:

> Everyone gathers in a circle watching intently what George is trying to show and tell everyone. George gets on his back and Philip enters his closed guard. 'So we are going to practice arm bars. First grab the back of his collar on the same side as the arm that you are going to do the arm bar [with], with your palm up as close as you can to his neck, trying to keep your wrist straight [he demonstrates, grabbing the collar of his gi deep and firm]. Then grab on the end of the sleeve of the arm you are going to arm bar with your thumb out [he demonstrates, digging his fingers into the sleeve of the gi, gripping it firmly]. Then you put your foot on his hip, keeping your knee close to his arm and push off. While you are pushing off, slide your other leg across his back [he demonstrates, fluidly gliding his body across the mat and placing himself in position for the arm bar]. Then you just grab with both hands firmly on the inside of his arm and submit him [pulls down on the arm and Philip taps to show that the arm bar has worked effectively]. Any questions?' No one responds and George exclaims, 'pick a partner and do the technique over and over.

Although these instructions seem remarkably prescriptive, Spencer (2009) portrays the learner as a parrot who does not reflect or engage in any conscious thought but who merely seeks to repeat these diktats. That is, through a process of mimesis and repetition these fighters learn new techniques that become ingrained in the body. According to this perspective, the fighter does not need to possess a conceptual understanding of how they should execute these actions. Instead, one develops a sensory or embodied understanding through active and constant engagement in the task. Spencer argues that the refinement and development of new habits is a social act and that MMA fighters learn and unlearn body techniques but that reflection is seen as representing an impediment to this process. He further proposes that 'all the action in battle is pre-reflective, or beyond thought' (2009: 129). Spencer (2009: 132) acknowledges that fighters can develop bad habits but argues that although proprioceptive memory is malleable 'the "conscious" actor cannot by fiat change it; bodily memories change over time and in and through social working and reworking of bodies'.

Crossley (2005: 9) devised the term *reflexive body techniques* to explain how the embodied agent may 'work back upon the body, so as to modify, maintain or thematize it in some way'. Similar to 'body callusing', this technique is seen as operating below the threshold of language and consciousness. Crossley (2001a) argues that it is only through an embodied and pre-reflective know-how that one can execute fast-paced skills – a knowledge which can only be acquired through playing the game and which precludes reflective or intellectual mastery. According to this perspective a fighter should not consciously monitor or control his/her actions as he or she works the bag or spars with a training partner. Such engagement is seen as likely to prove deleterious to embodied coping. Instead, through extensive practice and repetition the fighter's body spontaneously reacts to their opponent based on the sedimentation of body techniques in training. For example, Spencer (2009) argues that it is through proprioceptive memory that the body can sense what is required and responds with contextually-appropriate action. Although these 'reflexive' techniques point to the generative capacity of habits the precise means by which reflexive embodiment might allow performers to alter well-established habits (i.e., those that have been automated for many years) remains open to question.

A common thread that links each of the preceding arguments is the notion that reflection is unhelpful because it is not part of the performance itself (e.g., the fighter does not have time to think or plan their course of action). However, attending to action as one familiarises oneself with a skill does not preclude the possibility that pugilists will eventually utilise these skills pre-reflectively in a fight. Indeed, one can think and reflect as one learns a new skill and having automatised the movement through thousands of repetitions proceed to perform the action without conscious control in the heat of competitive battle. Thinking about the instructions one has received from a coach need not disrupt or hinder skill learning. That is, acquiring a conceptual understanding of why a particular type of movement may be

effective will not inevitably lead to the reinvestment of conscious attention in proceduralised movement. For example, in seeking to explain how Tae Kwon Do practitioners transition from 'thinking' to 'doing' Graham (2014: 67) explains that this process initially requires the mind to dominate. Beginners must 'focus their attention on patterns, kicks and prearranged sparring' and that these techniques are broken down into step-by-step movements and then repeated innumerable times. These transitions will eventually be overseen by a pre-reflective level of bodily awareness. However, I argue that this latter form of corporeal engagement is not unconscious in nature but instead functions in such a way as to allow skilled performers to consciously monitor their movement proficiency and to reflexively act back upon the body. Let me now devote a little more attention to this important issue.

Re-conceptualising pre-reflective awareness

Those theorists who conceive of habitus as a pre-reflective involvement in our environment often draw on Merleau-Ponty's (2002: 166) conceptualisation of habit as a knowledge that is 'in the hands, which is forthcoming only when bodily effort is made, and cannot be formulated in detachment from that effort'. Merleau-Ponty (2002) asserted that spontaneity will always facilitate optimal functioning while bodily awareness or somatic reflection will compromise smooth and efficient performance. He insisted that spontaneous bodily intentionality is a pre-requisite for successful performance as our movement is governed by a spontaneity which will not tolerate any commands, not even those which we like to give to ourselves. Although it might make sense to follow this advice when one is moving efficiently it is difficult to fathom how a reliance on spontaneity will allow a performer to address the wide range of challenges that face the performing body (e.g., injury, aging etc). According to Shusterman (2008: 13) 'we cannot simply trust our habits to correct themselves through unconscious trial and error or through eventual evolutionary adjustments'. In fact, to act spontaneously or to remain focused on the effects of our actions

will merely reinforce these bad habits and compromise our ability to enhance our bodily capacities (Shusterman, 2008).

Unfortunately, skilled action is often characterized in terms of a body that is so transparent as to become invisible or 'absent'. However, when authors such as Merleau-Ponty or Crossley portray habitus as being 'pre-reflective' in nature we should be careful not to take this to mean that our well-learned movements are performed without awareness. Pre-reflective bodily self-awareness occurs when 'one's self is experienced or lived through as the *subject* of awareness, without any process of reflection on itself' (Colombetti, 2011: 303). Here, the performer may experience a bodily awareness that remains marginal or recessive. So, when pre-reflectively aware of our bodies (as performers may be when in a state of absorption or 'flow') we may not explicitly attend to the position or movement of our limbs as we execute the task but that does not mean that we do not have a feeling of how the movement was performed – whether we moved with the desired level of rhythm or fluency, for example. In other words, these feelings are felt in the sense that they contribute to our sensory experience and to the sense of agency over one's movement (Toner, Montero, & Moran, 2016).

Many theorists who espouse the value of pre-reflective engagement with our environment seem to forget that expert action is not just confined to the competitive arena. Indeed, experts spend the vast majority of their time engaged in planning and reflection in between competition. This might involve moments of quiet contemplation where the athlete reflects upon the efficacy of their actions (see Lahire, 2011). Moreover, knowledge is constantly exchanged amongst training partners and the huge array of sports scientists that accompany high performance teams means that performers are always privy to data pertaining to their movement and performance proficiency. Through conscious self-regulation of their action or instructions received from practitioners, performers often decide

that to rectify 'attenuated' movement patterns they have little choice but to switch to *a reflective level of bodily awareness*. This form of bodily awareness requires performers to bring the body into the 'foreground' of their awareness where they reflectively objectify its quality or efficiency.

Habitual Reflexivity

Our very capacity for reflection or reflexivity appears to be rooted in the habitus. Crossley (2001b) argues that Bourdieu underestimated the extent to which reflexivity enters into everyday life. While Bourdieu proposed that radical reflection and reflexivity may only occur at periods of crisis, Crossley (2001b) contends that we are capable of reflexive action whatever the circumstances. Socialisation equips the agent with 'a durable capacity for talking to and reflecting upon their self, and indeed for viewing problems and situations from different points of view' (Crossley, 2001b: 145). Similarly, Sweetman (2003) posits that contemporary conditions may actively contribute to the development of a particular type of habitus which is inherently reflexive in nature. The complexity and speed of change which characterises 'late modern societies' calls for a heightened degree of reflexivity. This orientation towards the contemporary environment may 'itself be regarded as a form of habitus, itself the outcome of an adaptation to – rather than a distanciation from – the changing nature of the social terrain' (Sweetman, 2003: 543).

There is a considerable volume of evidence to indicate that skilled performers must adopt such a reflexive stance in order to address 'attenuated' habits. The cultivation of reflexive body techniques (i.e., that enable the foregrounding of the body) allows the performer to act back upon the body in an attempt to acquire new schemes of perception and action. Importantly, this form of reflexivity is a component of the habitus and we can continue to draw upon our primary habitus as part of the solution to a problem. Ultimately,

habitual reflexivity enables the performer to consciously engage with the various options for change that is at his or her disposal. Let us now turn our attention to a consideration of a specific event (i.e., the emergence of 'crises') that presents the skilled performer with little choice but to subject their habitual responses to conscious computation/reflective awareness.

'Crises'

A large volume of empirical evidence suggests that skilled athletes and performing artists are confronted by a variety of 'bodily crises' over the course of their careers (Wainwright, Williams, & Turner, 2005). Elite training regimes place extraordinary pressures on the performing body and no matter how closely performers might attend to training and rehabilitation protocols their bodies inevitably face decay. According to Shilling (2008: 16) crisis occurs when 'there develops a significant mismatch or conflict between the social and physical surroundings in which individuals live and their biological and bodily potentialities'. These crises are likely to represent a serious threat to the embodied subject as one's habitual way of moving is severely compromised. Although crises present a formidable challenge to the performer they might also offer the possibility to explore and extend one's capabilities or bodily capacities.

As noted above, Bourdieu (1977) recognised that crises occur and that there may be occasions where habitus proves insufficient as a basis for action. However, Bourdieu considered these crises to be rare occurrences while other theorists, such as Dewey, see them as being part of the natural fabric of our worldly existence. Dewey (1922) believed that the demands and unpredictability of social situations are such that an element of our habits are always in flux thereby requiring reflective intervention and reworking. As a leading proponent of pragmatism, Dewey (1922: 41) viewed human activity as 'projective, dynamic in quality and ready for "overt manifestation"'. Although he acknowledged the value of

mechanism, he dismissed the notion that a reliance on spontaneity (or end-gaining) will facilitate optimal functioning. Instead, the embodied agent is required to find a line of action which will inhibit the undesired behaviour and which 'by instituting another course of action will bring him to his desired end' (Dewey, 1922: 35). There are a number of forms of pragmatic action that might be required to address these crises. I start by considering the role that consciousness and affect plays in skilled performers' training regimes.

Altering habits: the role of consciousness and affect

Highly-skilled performers engage in practice activities which require their 'full attention and concentration' (Ericsson, 2006: 700). Indeed, research has revealed that athletes identify weaknesses by engaging in conscious regulation of their actions or through conversations with one's coach or training partner. 'Somaesthetic awareness' (see Shusterman, 2008; 2012), or heightened body consciousness, may serve as one regulatory process which is particularly influential in helping performers to avoid 'prematurely arrested development' (Ericsson, 2013: 893). Athletes may use somaesthetic awareness during deliberate practice (where they strive purposefully and single-mindedly to achieve specific and challenging goals in a deliberate attempt to improve their skills) to identify and subsequently alter 'attenuated' movement patterns. In fact, researchers have demonstrated the importance of utilising a reflexive level of bodily awareness if athletes are to successfully refine well established movements (e.g., Carson, Collins, & Jones, 2014; Collins, Morriss, & Trower, 1999). This form of representational body consciousness operates through the recruitment of sensory-motor processes and is characterised by certain affective qualities. This argument aligns with the 'enactive approach' which considers cognition as not just embodied but also intrinsically affective (Thompson & Stapleton, 2009). That is, our movements come with distinctive affective qualities such as graceful, clumsy, or beautiful. Sheets-Johnstone (1999) referred to these bodily feelings as 'kinetic portrayals' and argued

that they evoke affective nuances that may not be easily articulated but whose quality is nevertheless directly grasped by the observer.[1]

As previously argued, when moving and performing efficiently, the skilled agent is likely to experience their body pre-reflectively. In this case, although the body may remain in the background of one's awareness it remains clearly present in experience. According to Damasio (1994: 150) we are only subtly aware of these feelings but 'aware enough to be able to report instantly on its quality'. However, to alter a deeply embedded habit, one that has been shaped by powerful forces of socialisation, performers appear to have little choice but to take the body as an intentional object and to place it at the centre of their attention. Although Bourdieusian scholars tend to reject the idea of mental representations as explanations for our embodied habits, such change is only possible when we become explicitly aware of the somatic sensations that accompany our movement and when we 'focus on our awareness of the object of our awareness through its representation in our minds' (Shusterman, 2005: 158). To enact change, the agent must subject their action to a 'second-order act of consciousness' (Colombetti, 2014: 121) but this experiential state will nevertheless evoke affective feelings, such as frustration as one struggles with the challenges presented by this process, or pleasure as one experiences the body moving with more grace or power.

To initiate this process, pedagogists may use approaches such as 'contrast' drills to initially increase the athlete's physical and mental awareness of the desired versus undesired movement positioning. Importantly, practitioners will help their performers cultivate both a conceptual and an embodied understanding or 'feel' for the new movement. The instructor will explicate why the new movement is necessary but will also use a variety of other techniques – including simulation and gesture (discussed in the next section) – to help the performer develop a sensory understanding of the desired movement. Throughout this

process, affective qualities of movement play an important role by revealing our level of progress.

In seeking to alter my running technique, for example, my movement will likely become halting and disjointed as I try to adjust my stride length. Initially, I must consciously attend to my action to ensure that I execute it in the desired manner. This is an attentionally demanding process and results in me neglecting to attend to certain strategic elements of performance such as my pace or rate of breathing. Affective qualities of my movement serve a motivational function by informing me that I am moving with greater efficiency and that my action is more powerful or streamlined. By retaining representational awareness I can appreciate the increasing ease, grace and fluency with which I am beginning to execute the new movement pattern. Visualisation plays a crucial process here by helping me to establish a clear and vivid mental image of the technique I wish to adopt. I may conjure up this image as I run and use it as a guide to my action. Alternatively, when running in an urban environment, I might glance in a shop front window to quickly check my stride length, posture, or general running form. This process involves comparing the relationship between an internal image (forged after thousands of training miles), bodily sensations and the reflected image (Hockey, 2013). All my senses are engaged in monitoring my progress. Not alone does my foot-strike feel lighter but it produces a distinctly different sound of which I am acutely aware.

None of the above involves a spontaneous reaction to my environment but, instead, requires the use of representational awareness to address problems of misperception and misuse of my body (Shusterman, 2005). Of course, although this evaluation may represent a subjective analysis of what one considers to represent good or bad running technique, it would be remiss to ignore the role that logics of practice (e.g., bio-scientific knowledge that informs coaching behaviour) play in shaping the latter belief. These doxic values are never

open to question through our practical engagement in sport. Aside from this point, my intention in this section was not to suggest that we can disconnect from our embodied manner of being. In fact, the representations discussed are grounded in our physical and perceptual interactions with our environment.

Discursive practice

Discursive practice, or recurring episodes of face-to-face interaction, would also appear to play a crucial role in helping skilled performers to refine movement patterns. Habits arise from our interactions with the world and these interactions invariably involve other human actors. Given that coaching is essentially a dynamic and negotiated practice, it is surprising that scholars such as Bourdieu have downplayed the discursive dimension to sports training (Noble & Watkins, 2003). He argued that the body is not taught via 'theoretical discourse' but that sports trainers speak directly to the body as athletes possess a practical knowledge – that is, they have an intellectual understanding of the 'movement to make or not to make, without being able actually to do what one has understood, for lack of comprehension through the body' (Bourdieu, 2000: 144). In Pascalian meditations, Bourdieu refers to stage directors who employ pedagogic practices that seek to suspend intellectual and discursive understanding by using exercises that encourage actors to rediscover bodily postures that are capable of evoking certain emotions and cognitions.

There are a number of other ways for instructors to 'talk directly to the body' thereby minimising the use of explicit instruction. For example, by using mirrors or video, sports coaches can help athletes become aware of how they appear when assuming certain positions or performing certain movements (Toner & Moran, 2015). Of course, the performer's habitus may establish a propensity to engage in such behaviour in the first place. The instructor may draw the athlete's attention to the affective qualities associated with different movement positions which will help them to associate 'visual forms' with different somatic sensations.

Through *associative training*, practitioners can help athletes to infer from their affective experiences whether they are moving efficiently or in the desired manner. But this process still requires the practitioner to explain *why* the new position may be beneficial and to explain various means by which the athlete may attain it. This latter process also involves developing in the performer a sensory understanding of what the new movement will feel like. Researchers have recently outlined the perils of explicit instruction (i.e., it leads to the build-up of verbalizable knowledge which can be reinvested in automated skills) and have recommended that sport coaches use analogies or metaphors instead. For example, when performing a basketball free-throw participants have been advised to 'shoot as if you are trying to put cookies into a cookie jar on a high shelf' (Lam, Maxwell, & Masters, 2009: 181). Under normal conditions, the use of this metaphorical visualisation may benefit learning by acting as a constraint that encourages performers to discover their own action co-ordination solution. Unfortunately, however, these approaches have been found to be less effective when used with skilled performers who are attempting to alter a well-established movement pattern (see Rendell, Farrow, Masters & Plummer, 2011). As alluded to earlier, theoretical discourse (involving the explication of the desired versus undesired movement) is required when the performer must analyze their technique for purposes of refinement.

The use of gesture may be another pedagogical practice which enables performers to embody a new movement whilst avoiding the transmission of an excessive number of explicit instructions. For example, researchers have shown that teachers use gestures alongside speech as a matter of routine when teaching mathematical concepts (e.g., Alibali & Nathan, 2007). This points to the embodiment of mathematical knowledge and how cognition is grounded in perception and action and in the physical environment (Wilson, 2002). The use of *representational gestures* (i.e., gestures that depict semantic content, either literally or metaphorically, via handshape or motion trajectory; Alibali & Nathan, 2012) are particularly

commonplace in pedagogical encounters in sport. For example, gestures will accompany any attempts by the coach/instructor to verbalize how a movement might be performed or how it might feel. A golf coach wishing to improve their student's movement through impact might articulate how the clubhead needs to be released but will also gesture this movement (i.e., rotating their hands from right-to-left). These representational gestures manifest simulations of action and perception by activating sensory, premotor, and motor areas of the brain in action-appropriate ways. These simulations play an important role in both language comprehension and the manipulation of mental images. Ultimately, they arise because thinking is based in perception and action.

While such instances of discursive practice might facilitate the embodiment of a new movement pattern, one must be sufficiently motivated to start, and persist with, what is undoubtedly a challenging process. Pedagogical encounters involve a series of affective transactions and it is possible for pedagogists to imbue in their performers a sense of excitement or enthrallment about the prospect of extending their current movement capacities (e.g., by altering well-established habits). In considering the role affect plays in pedagogical relationships, Watkins (2010) drew on Spinoza's distinction between affectus (the force of an affecting body) and affectio (the impact it leaves on the one affected). Watkins (2010) explored how engagement with the world and others generates affects which become sedimented during the process of learning. The success of pedagogical relationships is dependent on both parties recognizing each other's worth 'with this intersubjective acknowledgement being integral to their sense of self' (Watkins: 2010: 273). Moments of recognition, which are characterized by bodily sensations and which accumulate over time, function as affectus. This accumulation of affect may promote in performers both the desire and the capacity to learn. Pedagogists may choose to elicit such affective responses by 'performing' (e.g., delivering content in an animated manner) in an effort to generate an

excitement and interest which students subsequently embody. At the elite level, this sense of excitement will motivate performers to embrace the challenge that technical change entails and to help them to remain committed to the chosen method of refinement.

Structural constraints

While the examples outlined in the preceding section would suggest that performers are free to make certain choices about how they might alter embodied habits, one must recognise that the performer's primary habitus will predispose them to unintentionally reproduce the structural arrangements of which they form a part. Moreover, the doxic components of sport limit the possibilities open to the performer. To explain, high-performance environments represent 'structuring structures' to which performers must adapt. In fact, performance in these fields is structured in ways that exert powerful forces on individuals and mechanisms are often in place to ensure the perseverance of these structures. For example, these environments are characterised by the use of a host of disciplinary techniques - such as surveillance - that have the capacity to render athletes docile (Markula & Pringle, 2006). Furthermore, if we acquire our own reflexivity via an 'appropriation of the view of the generalised other, then the limits of our own reflexivity are, in effect, the limits of the collective representations of our society' (Crossley, 2001b: 150). However, this predisposition to act in particular ways should not entirely inhibit the agent's strategic capabilities (Crossley, 2001a, b).

Take, for example, Hilgers (2009: 747) argument that agents can 'emancipate themselves from their determinisms'. To do so may require them to develop a sociological consciousness (including knowledge of various structural constraints) which Hilgers has argued is indispensable in assisting the agent's efforts to modify habitus - though it is insufficient to bring about a permanent transformation of dispositions. The freedom to exert volitional control may arise if the actor is aware of their determinisms and thereby positioned

to choose or transform them. While we can never be entirely free of our dispositions, maintaining a reflexive distance allows us to expose structures and thereby provide us with the power to exert self-control. Such an approach sheds light on the mechanisms which 'make it possible for agents to identify the best situations for attaining their goals, and for the collectivity or politics to effect transformations of objective structures' (Hilgers, 2009: 746).

Enhancing agency

Although the agent's capacity to enact change is constrained by the structural arrangements of which they form a part there is a wide range of evidence which points to the role that consciousness and discursive practice plays in the revision of habitual movement patterns. One can recognise the value of consciousness without necessarily believing that dynamic action is governed by the application of explicit rules. Instead, a more moderate version of intellectualism would involve the belief that certain reflective processes allow performers to strategically allocate attentional resources. This top-down modulation of attention (i.e., executive control) helps the performer to identify sensory, affective and motor affordances that invite the possibility for new and improved ways of performing a skill (Bermudez, 2016). It seems that through deliberate and discursive practice performers develop an increasingly sophisticated understanding of how to use executive control (Toner et al. 2016). For example, as one becomes more sensitive to the parametric structures that govern performance one learns how to use this information for top-down adjustment of proximal and strategic control (Christensen, Bicknell, McIlwain, & Sutton, 2015).

Of course, the practical mastery that characterises skilled action can only be acquired through active engagement – that is, by developing a sensory appreciation of how different movements produce different effects on the environment. And yet, through such embodied practice experts accumulate a vast amount of experience (much of which will have been

conceptualised and which will be available to conscious recall) that they can reflect upon and use to influence *what* they do and *how* they do it. Acknowledging the role played by both sensory appreciation and reflective processes should help us avoid severing the tie between mind and body. Indeed, the concept of habitual reflexivity may allow us to account for the skilled agent's ability to slide back-and-forth between reflective and pre-reflective states. Ultimately, the capacity to be reflexive about one's bodily engagement in the world becomes deeply rooted in the habitus itself.

Given the generative nature of habitus, it is important to consider the types of inter-disciplinary work that will allow researchers to identify how performers are capable of enhancing their bodily capacities over time. To describe and better understand embodied action, researchers may wish to employ methods that are "truly grounded in the carnal realities of the lived sporting bodies" (Hockey & Allen-Collinson, 2007, p. 116). One possible method is Allen-Collinson and Hockey's phenomenological-based mode of enquiry which has proven particularly illuminating in helping researchers to better understand the 'fleshy' realities of moving and sensuous sporting bodies (e.g., Hockey & Allen-Collinson, 2009). Phenomenological approaches can provide researchers with the rich descriptions necessary to generate testable hypotheses in this field. The use of digital technology might allow researchers to conduct more fine-grained observations of how gestures are coproduced with verbalizations and bodily movements (Núñez, 2012). In a sporting context, researchers could follow this approach by exploring speech-gesture coproduction or analyse bodily movement in didactic learning. Neuroscientific approaches might also shed further light on the malleability of habitus. Recent findings regarding the 'plasticity' of the human brain mitigate against biological determinism by showing that we have the ability to initiate self-change (see Pitts-Taylor, 2010). Further exploration of these approaches are, unfortunately,

beyond the scope of the current article but it is worthwhile to flag this body of work as a potential resource for those interested in embodiment and skilled action.

Conclusion

In emphasizing the unconscious nature of habitus many theorists appear to have ignored, or largely downplayed, the hugely important role that consciousness plays in allowing elite performers to refine and improve their embodied habits. However, it is also important to recognise that in his later work Bourdieu acknowledged that conscious computation may be required when habitus proves insufficient as a basis for our actions. In seeking to address this possibility, my goal was not to privilege consciousness by arguing that performers execute complex skills by drawing on rules or internal representations to guide their action. Embodied theorists have rightly rejected a mind/body dualism by arguing that cognitive processes are causally related to bodily affects. Instead, I argued that it is our very capacity for reflexivity – itself deeply rooted in the habitus – which allows us to act back upon ourselves and to enact change. Such change is possible because skilled performers are highly attuned to the kinaesthetic and proprioceptive sensations that accompany their movement.

As Noble and Watkins (2003) argue we should be careful not to sever the tie between practical and discursive thought. As we work our way through our world of action we inevitably accumulate bodily affects that eventually sediment into a series of dispositions and yet we must also recognise that actors may use reflexivity/conscious computation to shape these dispositions. There is little doubt that the body possesses its own intelligence but a reliance on unthinking spontaneity is unlikely to help skilled performers address the complex challenges that are a ubiquitous feature of their everyday regimes. Unfortunately, a continued reliance on spontaneity or pre-reflective bodily awareness cannot foster intelligent habit or prevent the acquisition of inflexible modes of bodily functioning. The reflexive nature of the

habitus allows the skilled performer to advance his/her bodily capacities and equips the habitus with a greater agentic function without necessarily creating an imbalance in favour of agency as opposed to structure (Noble & Watkins, 2003).

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Notes

1. Sheets-Johnstone (1999; 2012) challenged dualistic notions of the body by emphasizing the primacy of movement through an exploration of the ways in which kinetic dynamics inform our lives. She was critical of enactive approaches which tended to 'dissolve the subject of action into neurology and the subject's action into motorology' (2012: 198). These perspectives lack what she terms 'experiential moorings' by failing to account for the 'kinaesthetic awareness of a qualitative kinetic dynamic that is created in the flow of the living present' (Sheets-Johnstone, 2012: 198). Blackman and Venn (2010) suggest that the latter idea may help replace notions of bodies as 'dumb matter' with what might be termed a 'somatically felt' body. The question of how such embodied data may be collected is one that continues to stimulate discussion amongst body-studies scholars. One potentially useful approach is Walkerdine's (2001) interview method which invites the interviewer to explore their visceral and affective responses to an interview. See Body & Society, special issue on 'Affect', for a discussion of how bodies should be defined by their capacities to affect and be affected and some of the methodological innovations that may help researchers address this process.

595 **References**

596 Alibali M and Mitchell N (2007) Teachers' gestures as a means of scaffolding
597 students' understanding: Evidence from an early algebra lesson. *Video Research in*
598 *the Learning Sciences* 349-365.

599 Alibali M and Mitchell N (2012) Embodiment in mathematics teaching and
600 learning: Evidence from learners' and teachers' gestures. *Journal of the Learning*
601 *Sciences 21*(2): 247-286.

602 Bermudez JP (2016) Do we reflect while performing skillful actions? Automaticity,
603 control, and the perils of distraction. Available at
604 http://mindsonline.philosophyofbrains.com/2016/2016-1/do-we-reflect-while-
605 performing-skillful-actions-automaticity-control-and-the-perils-of-distraction/
606 (accessed November 10 2015).

607 Blackman L and Venn C (2010) Affect. *Body & Society 16*(1): 7-28.

608 Bourdieu P (1990) *In other words: Essays towards a reflexive sociology*. Stanford, CA:
609 Stanford University Press.

610 Bourdieu P (1977) *Outline of a Theory of Practice* (Vol. 16). New York: Cambridge
611 University Press.

612 Bourdieu P (2000) *Pascalian meditations*. Stanford, CA: Stanford University Press.

613 Bunn M (2016) Habitus and Disposition in High-risk Mountain-climbing. *Body &*
614 *Society* 22(1): 92-114.

615 Carson HJ, Collins D and Jones B (2014) A case study of technical change and rehabilitation:
616 Intervention design and interdisciplinary team interaction. *International Journal of*
617 *Sport Psychology* 45(1): 57–78.
618 Christensen W, Bicknell K McIlwain D and Sutton J (2015) The sense of agency and its
619 role in strategic control for expert mountain bikers. *Psychology of Consciousness:*
620 *Theory, Research, and Practice* 2(3): 340-353.
621 Colombetti G (2011) Varieties of pre-reflective self-awareness: Foreground and
622 background bodily feelings in emotion experience. *Inquiry* 54(3): 293-313.
623 Colombetti G (2014) *The feeling body: Affective science meets the enactive mind*.
624 Cambridge, MA: MIT Press.
625 Collins D, Morriss C and Trower J (1999) Getting it back: A case study of skill
626 recovery in an elite athlete. *The Sport Psychologist* 13: 288-298.
627 Crossley, N (2001a) The phenomenological habitus and its construction. *Theory and*
628 *Society*, *30*(1), pp.81-120.
629 Crossley, N (2001b) *The social body: Habit, identity, and desire*. London: Sage.
630 Crossley N (2005) *Mapping Reflexive Body Techniques*. *Body and Society 11*(1): 1-35.
631 Crossley N (2013) Habit and habitus. *Body & Society* 19(2-3): 136-161.
632 Damasio, A (1994) *Descartes' Error: Emotion, Reason, and the Human Brain*. New
633 York: Putnam.
634 Dewey J (1922) *Human nature and conduct*. New York: Henry Holt and Company.
635 Ericsson KA (2006) The influence of experience and deliberate practice on the

development of superior expert performance. In: Ericsson KA Charness N Feltovich P and Hoffman RR (eds) *Cambridge handbook of expertise and expert performance*. Cambridge, UK: Cambridge University Press, pp.685-706.

Ericsson KA (2013) Experts and their superior performance. In: Reisberg D (ed) *The Oxford handbook of cognitive psychology.* Oxford: Oxford University Press, pp. 886-901.

Glăveanu VP (2012) Habitual creativity: revising habit, reconceptualizing creativity. *Review of General Psychology* 16(1): 78.

Graham (2014) 'There is no try in Tae Kwon Do': Reflexive body techniques in action. In: Garcia R and Spencer D (eds) *Fighting scholars: Habitus and ethnographies of martial arts and combat sports.* London: Anthem Press, pp.19-31.

Grosz E (2013) Habit today: Ravaisson, Bergson, Deleuze and us. *Body & Society 19*(2-3): 217-239.

Hockey J (2013) Knowing the 'Going': the sensory evaluation of distance running. *Qualitative Research in Sport, Exercise and Health 5*(1): 127-141.

Hockey J and Allen-Collinson J (2007) Grasping the phenomenology of sportingbodies. *International Review for the Sociology of Sport 42*(2):115-131.

Hockey J and Allen-Collinson J (2009) The sensorium at work: The sensory phenomenology of the working body. *The Sociological Review 57*(2): 217-239.

Hilgers M (2009) Habitus, freedom, and reflexivity. *Theory & psychology 19*(6): 728-755.

Lahire B (2011) *The plural actor*. Polity press: Cambridge.

Lam WK, Maxwell JP and Masters R (2009) Analogy learning and the performance of motor skills under pressure. *Journal of Sport & Exercise Psychology* 31(3): 337.

Markula P and Pringle R (2006) Foucault, sport and exercise. *Power, knowledge and transforming the self*. Routledge: London.

Mauss M (1979) *Sociology and psychology: Essays*. Routledge: London.

Merleau-Ponty M (2002) *The phenomenology of perception*. New York: Routledge.

Noble G and Watkins M (2003) So, how did Bourdieu learn to play tennis? Habitus, consciousness and habituation. *Cultural studies* 17(3-4): 520-539.

Núñez R (2012) On the science of embodied cognition in the 2010s: Research questions, appropriate reductionism, and testable explanations. *The Journal of the Learning Sciences* (21): 324–336.

Pitts-Taylor V (2010) The plastic brain: Neoliberalism and the neuronal self. *Health 14*(6): 635-652.

Rendell MA, Farrow D Masters R and Plummer N (2011) Implicit practice for technique adaptation in expert performers. *International Journal of Sports Science & Coaching* 6(4): 553-566.

Sheets-Johnstone M (1999) Emotion and movement. A beginning empirical-phenomenological analysis of their relationship. *Journal of Consciousness Studies 6*(11-12): 259-277.

Sheets-Johnstone M (2012) Steps entailed in foregrounding the background: Taking the

challenge of languaging experience seriously. In: Radman Z (ed) *Knowing without thinking: Mind, action, cognition and the phenomenon of the background*, New York: Palgrave Macmillan, 187-205.

Shilling C (2008) *Changing bodies: Habit, crisis and creativity*. London: Sage.

Shusterman R (2005) The silent, limping body of philosophy. In: Carman T and Hansen M (eds) *The Cambridge Companion to Merleau-Ponty*, Cambridge: Cambridge University Press, pp.151-180.

Shusterman R (2008) *Body consciousness: A philosophy of mindfulness and somaesthetics*. Cambridge University Press: Cambridge.

Skinner BF (1938) *The Behavior of Organisms*. New York: Appleton-Century-Crofts.

Spencer D C (2009) Habit (us), body techniques and body callusing: An ethnography of mixed martial arts. *Body & Society* 15(4): 119-143.

Sweetman P (2003) Twenty-first century dis-ease? Habitual reflexivity or the reflexive habitus. *The Sociological Review 51*(4): 528-549.

Thompson E and Stapleton M (2009) Making sense of sense-making: Reflections on enactive and extended mind theories. *Topoi 28*(1): 23-30.

Toner J & Moran A (2015) Toward an explanation of continuous improvement in expert athletes: The role of consciousness in deliberate practice. *International Journal of Sport Psychology 46(6)*: 666-675.

Toner J, Montero B & Moran A (2016) Reflective and pre-reflective bodily awareness in skilled action. *Psychology of Consciousness: Theory, Research and Practice* 3: 303-315.

Wacquant L (1995) Pugs at Work. *Body & Society* 1(1): 65–94.

Wacquant L (2004) *Body and Soul*. Oxford: Oxford University Press.

Wacquant L (2013) Habitus as topic and tool: Reflections on becoming a prizefighter. In: Garcia R. and Spencer D (eds) *Fighting scholars: Habitus and ethnographies of martial arts and combat sports*. London: Anthem Press, pp.19-31.

Wacquant L (2014) Homines in extremis: What fighting scholars teach us about habitus. *Body & Society* 20(2): 3-17.

Wainwright SP, Williams C and Turner BS (2005) Fractured identities: injury and the balletic body. *Health* 9(1): 49-66.

Watkins M (2010) Desiring recognition, accumulating affect. In Gregg M & Seigworth G (eds), *The affect theory reader*, Durham, NC: Duke University Press, 269-285.

Wilson M (2002) Six views of embodied cognition. *Psychonomic Bulletin & Review 9*(4): 625-636.

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