

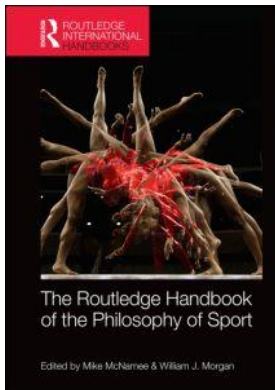
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## EPISTEMOLOGY AND SPORT

*Steffen Borge*

### Introduction

Epistemology has traditionally been understood as the study of knowledge. Among the central questions we find: what do we know, if anything? How do we come to know those things, if at all? Can we provide a satisfactory analysis of knowledge and knowing, or must we settle for less? Are there several distinct modes of knowledge and knowing, or only one? And so on and so forth. An epistemology of sport deals with such questions in the context of sport.

The first question I address is the question of how we can know that a certain activity is a sport and not some other social activity. This question is similar to the well-known problem of the criterion and invites the same sorts of solutions amended to a sport context. I show that to know sports we must first know play and how play opens a social space from which sport can emerge.

The next section is concerned with the question of ways of knowing in sport. Should we distinguish between two types of knowledge in sport – knowing-that and knowing-how – or else be persuaded by an argument in epistemology to the effect that all knowledge is of the knowing-that type? Orthodoxy in the philosophy of sport has it that one can and should distinguish between knowing-how and knowing-that. I show that the orthodox view that knowing-how is constitutively connected to successful performance and thus should be regarded as a distinct type of knowledge, can be defended as long as one acknowledges that the knowledge-how relation is somewhat more complex than previously thought. The question of how to understand the phenomenon of knowing-how or practical knowledge has been much debated in the philosophy of sport. The main battle line is drawn between those who think about knowing-how as involving some sort of information processing and those who do not. The latter camp argues that the knowing-how of the expert performer is an intuitive knowledge of what to do at any given stage of a competition or training session. When the expert performer is in the zone, he or she does not think about what to do or how to do it, but intuitively it. I show that even though knowing-how at an expert level might at times come only with a specific phenomenological in-zone-awareness (as I have dubbed it here) and no consciously felt reflective deliberations, it does not follow that this phenomenological feel necessarily is a reliable guide to what goes on in the performer's mind.

In the last section, I address the topic of various modes of expert know-how in sport. Expert performers can experience a state of automatism with an in-zone awareness – where the sport performance seems to merely flow naturally and intuitively – but this is not the only state of automatism that an expert performer can find him or herself in. There is both conceptual and empirical ground for thinking that there is another category of expert performance that also involves states of automatism, but without the in-zone awareness. The category of zoned-out awareness of expert performance is introduced and defended in the last section. Furthermore, when we look closer at expert performance, we find that expert performance is more complex than being merely a species of automatism, whether that is with in-zone awareness or zoned-out awareness. Expert performers it turns out can also reflectively deliberate on what to do and how to do it, when performing at the highest level.

### Knowing sports

When the Spanish conquistadors invaded what is today known as Mexico, they encountered “a religious ritual ... *danza de los voladores* (dance of the flyers) ... that survived remarkably intact because the Spaniards took it for an acrobatic display of skill” (Harris 2000: 113; see also Leal 1982). If we allow ourselves to distinguish between doing something for sport and something being a sport, where the former is understood as an unnecessary activity undertaken as diversion, entertainment, recreation or pastime, then it seems reasonable to say that the Spaniards mistook that which was a religious ritual for sport. Although the religious meaning of *danza de los voladores* is lost in the mists of time, the example suggests that we can distinguish between what there is for something to be sport or a sport (plural: sports), and judging something as sport or a sport. This observation might also serve as a reminder that any cavalier attitude towards the question of whether some activity is sport or a sport, or not, is misguided. In the same way as the Spaniards mistakenly judged *danza de los voladores* as sport, those who think that, for example, the game of chess is a sport might just be mistaken. Here, for the sake of brevity, I mainly focus on those practices and activities that count as sports, while leaving those practices and activities that are being done for sport, like sport fishing, sport climbing, and so on for another day. Nor do I spend any time distinguishing sports from games, but merely assume that while all sports are games, not all games are sports.

The ontological question of what it is for some practice or activity to be a sport belongs to the realm of metaphysics, whereas the closely related question of how we come to know, recognize, understand, and so forth, that some practice or activity is a sport, is epistemic. Obviously, the Spanish conquistadors in the example above applied some criterion or criteria of sport and got it wrong, but how do we come by a criterion or criteria of being sport or a sport? Though this question is somewhat different than the well-known problem of the criterion, it still raises similar worries and invites parallel solutions.

One can recognize cases of sports, only if one knows the criterion<sup>1</sup> or criteria for something being a sport, while one knows the criterion or criteria of being a sport, only if one can recognize cases of sports. In light of this circle and the threat of scepticism, one might be tempted to appeal to institutions of sport as a way of distinguishing between sports and non-sports.

An institutional theory of sport, however, is unlikely to help with the dilemma. Take, for example, Stephen Mumford’s (2012) attempt to defend an institutional theory of sport. Mumford argues for a parallel between sports and art, and that the defence of an institutional theory of art holds for sports, but since the latter theory is circular, as admitted by its major proponents, this line in the philosophy of sport offers no way out of the dilemma (cf. Dickie 1974, 1984; see also Borge 2012).

It is also worth noting that the dilemma cuts deeper than the well-known debate in the philosophy of sport between formalists and anti-formalists. Proponents of a formalist position – a position primarily championed by Bernard Suits – attempt to either provide necessary and sufficient conditions for what it is to be a sport or else to define sports in terms of their formal rules (Suits 1967, 2005). To do that, the formalists assume that we already have in place a criterion or criteria of sports by which they can pick out sports that provides a foundation for evaluating the (relative) success of an analysis, or by which they can pick out which rule-governed activities are sports. Anti-formalists, like Graham McFee, Mike McNamee and others, dismiss formalism as futile and, instead, argue that all the phenomenon of sports allows is a family resemblance comparison of activities and practices (McFee 2004; McNamee 2008; cf. Wittgenstein 1953). This also assumes that a criterion or criteria of sports is in hand, since one must already know which objects of comparison are sports.<sup>2</sup>

Barring scepticism (which was what Sextus Empiricus originally opted for), Roderick Chisholm identified two answers to the problem of what and how we know (the problem of the criterion). On the one side, we have the *methodists* who argue that we can first explain how we know something (we have a method for knowing; that is, a criterion or criteria) and, on the other side, we have the *particularists* who argue that we can first explain what we know and from that extract a method for knowing; that is, a criterion or criteria (Chisholm 1982: 61–106). Both approaches, amended to our topic, are needed in an epistemology of sport. I will argue that the key to resolving the problem of the criterion within the epistemology of sport lies in a proper understanding of how the phenomenon of play fits into the world of sports. This is not to deny, as many philosophers of sport have pointed out, that sports need not be play nor need play be sports (see, among others, Suits 1988; Meier 1988; Schneider 2001).

There are many ways to draw a line between play and sports but, here, the most fruitful starting point is the observation that, while many non-human animals and infants and small children engage in social play, they do not engage in sports. Johan Huizinga tells us that ‘animals have not waited for man to teach them their playing’, Scott Kretchmar correctly points out that ‘play is more primitive ... [and] exists and thrives with or without culture’ and numerous field studies leave little doubt that non-human animals play (Huizinga 1950: 1; Kretchmar 2007: 1; Bekoff and Byers 1998; Pellegrini and Smith 2005). Non-human animals, like dogs (and canids in general), are able both to initiate and to maintain social play like competing for objects, play fighting or tug-of-war. Furthermore, other dogs that are presented with, say, the play bow, recognize this as play initiation or play maintenance (Bekoff 1995). This also facilitates other dogs’ recognition of play, enabling them to join in. Similarly, pre-linguistic children can pick up on others’ play behaviour as play (Reddy 1991; Nakano and Kanaya 1993; Legerstee 2005). Exercise play (running around, climbing, jumping, etc.) and rough-and-tumble play (play fighting, play chasing, etc.), are play activities that children at an early age spontaneously initiate, participate in and are able to recognize as play (Tomasello and Call 1997; Pellegrini 2009; Smith 2010). Ontogenetically, play comes before sports and, given the prevalence of play behaviour among non-human animals and assuming standard evolutionary theory, it is reasonable to assume that also phylogenetically play precedes sport in our development as a species (Pellegrini 2009; Smith 2010; Burghardt 2005). As is apparent from the research on play behaviour, both non-human animals and humans (infants and young children) can recognize and understand behaviour as play without having a criterion or criteria of play. We get to know play by recognizing particular instances of play. The particularist line of reasoning is correct for knowing play.

Owing to our natural ability to reliably distinguish play from non-play, we can acquire a criterion or criteria for something being play and this criterion or criteria, I suggest, forms a

basis for sports.<sup>3</sup> Play carves out a social space that stands apart from the everyday world and everyday concerns like getting food, getting shelter, avoiding harm, etc. In this social space of play, actions are not directed towards useful ends (means for survival), nor do they have the same consequences as they do in everyday life (non-play circumstances). Sports spring out of the social space of play. The literature on play is diverse, but most theorists in the various disciplines that are engaged with the topic seem to agree on certain features being crucial for play (see Burghardt 2010). These include:

- Play is autotelic; i.e. it is done for its own sake.
- Play is not needed for survival or any other immediate purpose; i.e. it is unnecessary (although play might both phylogenetically and ontogenetically be very important and beneficiary).
- Play is non-serious; i.e. play actions are not meant to have nor have the same consequences as similar actions outside the play context.

In the philosophy of sport, the closest we come to a commonly accepted view on what are sports is Bernard Suits' understanding of sports as physical skill activities that are 'voluntary attempt[s] to overcome unnecessary obstacles' (Suits 2005: 55). Later, William Morgan refined and shortened up this definition to the basic idea of sports following a 'gratuitous logic' (Morgan 1994: 211). Although many philosophers of sport reject Suits' more elaborated analysis of games and sports, most accept that sports follow a gratuitous logic. A card-carrying anti-formalist like McNamee, for example, subscribes to the view of sports as 'characterised by a gratuitous logic involving, centrally, physical skills' (McNamee 2008: 19). The gratuitous logic of sports overlaps with the logic of play in that both are autotelic and unnecessary activities. The two differ in that in play the participants primarily aim at the continuation of play (this is one important aspect of being a non-serious activity), while sports have 'agonal qualities' where winning/losing or achieving/failing become an important part of the activity (McNamee 2008: 19).

The particularist position is that humans gain a criterion or criteria of play by being able to recognize actions as play. To see how having a criterion or criteria of play can pave the way for sport and sports it is useful to consider Kretchmar's distinction between tests and contests (Kretchmar 1988; Kretchmar and Elcombe 2007). A test is a voluntary undertaking of a specific task, which is not needed to fulfil everyday needs and it involves some kind of difficulty, where '[a] test simply become[s] unthinkable or unintelligent in the absence of such opposition' (Kretchmar 1988: 225). Doing something for sport is to do it as a test. Contests are shared tests, where that involves recognizing the other(s) as participating in the same test and having a procedure to decide which contestant was better (Kretchmar 1988: 227–8). Sports are contests. Put briefly, '[t]ests are designed to measure simple achievement, whereas contests are structured to assess superiority and inferiority' (Kretchmar and Elcombe 2007: 181). Tests produce achievements and failures, while contests produce winner and losers (although not always superior winner and inferior losers, see Borge 2010). Play, on the other hand, is not aimed at some end-result but rather the continuation of play, which sometimes leads to self-handicapping among nonhuman animals.

In a play fight in non-human animals or children, the stronger or more dominant animal might actually use less advantageous strategies, inhibit his or her behavior, or otherwise act to keep the 'opponent' in the game. This ... can be readily seen when watching a large dog playing with a much smaller one. Here the objective of play may

be to keep the interaction going rather than quickly terminating it by the larger animal 'defeating' the smaller.

*(Burghardt 2005: 90)*

However, social play also appears to be a kind of proto-contest, in that '[m]ost social play involves competition, including pinning in rats, tug-of-war in dogs, and king of the hill in goats', where it emerges which animal is the stronger and the weaker (Burghardt 2010: 742). Having a criterion or criteria of social play gives you three important features of contests, such as sports; seeing the activity as autotelic and unnecessary, while having the ability to recognize other players. When a creature with such a criterion or criteria of social play is able to substitute aiming at the continuation of play with aiming at a specific end state of the activity, like crossing a line, overpowering an opponent, scoring a goal, etc., together with a procedure for deciding who count as best or the winner of the contest, then that creature has a criterion or criteria of sports and can engage in sports and recognize others as engaging in sports. In other words, when a creature is able to do that it creates a constitutive rule or rules, which turns play into sport and that sits well with Kretchmar's line that games and sports 'are the product of their constitutive rules' (Kretchmar 2007: 2; see also Kretchmar 2001). The criterion or criteria of social play forms the basis for a criterion or criteria of sport by which we can get constitutive rules of sport (Searle 1969, 1995).<sup>4</sup> Constitutive rules enable us to become sporting creatures and to know sports. It is a further question to decide which cognitive capacities enable humans to turn play into sports, while non-human animals are, as far as we know, unable to do that (although having a language of a certain level of complexity is one obvious candidate). Suffice to say here, we get to know sports by having a criterion or criteria of sports. The methodist line is correct for knowing sports.

### **Ways of knowing in sports**

To know that someone plays a sport involves having a criterion or criteria for something being a sport, which, as it turns out, is the same criterion or criteria that makes the sport activity possible in the first place. If one holds that view, then one ought to expect that anyone that plays, say, football knows that they are doing that and also knows (to some extent) or has a certain grasp of the sport's constitutive rules (at least the most important ones). Nevertheless, this is not necessarily the case. Many young children have been thrown into the activity of playing football without having much, if any, grasp of the rules of the game. Still, for an activity to be football, someone connected to a particular training session or match must know the rules, even if, say, in the case of young children learning the game, the only one who knows the rules is the coach overseeing the training session or the referee officiating the match. Consider a case where we encountered an activity that looks physically indistinguishable from a football match but where no one knew any constitutive rules (of football as we know it) or saw it as an activity where one aims at certain end-states such as scoring goals or winning the match. Is it football? I suspect that we might be puzzled about what to say about this case, owing to the oddness of an exact football-lookalike but without knowledge or awareness of the constitutive rules of football and no aiming at scoring, winning, etc. If we were persuaded that the aforementioned elements were missing, we would not judge it to be a sport and also thus not football.

Football and other sports demand knowledge of (a certain amount of) the constitutive rules of the sports by players or someone else connected to a particular instance of a sport. Is anything more needed for knowing sports? The question 'Do you know football?' could at least

be answered in three ways, assuming we exclude the possibility of answering this question as ‘Have you ever heard about a phenomenon called football’. We can formulate these three interpretations of the question without using the words ‘knowledge’ or ‘know’:

- Are you acquainted with football?
- Do you understand football?
- Can you play football?

The first question connects with having a criterion or criteria for sports; that is, recognizing something as a sport. One could answer the question by saying ‘Yes, but I don’t know the rules’ without any air of contradiction or oddness. On the other hand, someone who knows of football (who has heard of it or even seen it) but mistakenly believes that it is some sort of art performance, or, say, an elaborated, but mostly unsuccessful rainmaking ritual; that is, does not recognize it as a sport, does not know football.

Interpretation 1 seems to be minimally connected with having a criterion or criteria for recognizing football as a sport. The other two interpretations of the question presuppose that, and instead hone in on whether, the addressee has (a certain amount of) propositional knowledge about football, aka ‘knowing-that’ or has the ability or the skill to play football, aka ‘knowing-how’. Another and somewhat different way to slice the conceptual cake, would be to say that interpretation 2 concerns theoretical knowledge, while interpretation 3 is about practical knowledge, and yet another way is to talk of declarative knowledge and procedural knowledge. Ever since Gilbert Ryle’s (1949) *The Concept of Mind*, it has been standard in philosophy to think of knowing-that and knowing-how as two distinct ways of knowing (Ryle 1949: ch. 2). Pre-theoretically, one could envisage someone who knew every true proposition about football, so that it would be natural to say that he or she understood football while having no ability to play football and thus not knowing-how to play football. Ryle tells us that ‘a fool might have all that knowledge without knowing how to perform’ (Ryle 1946: 8). Conversely, many great footballers struggle to explicate their football abilities verbally; that is, their football skills (the latter would be lack of declarative knowledge). Anyone who argues that there is a distinct way of knowing-how that is not explainable, translatable or reducible to knowing-that (propositional knowledge) occupies the position known as anti-intellectualism.<sup>5</sup>

One way of understanding what knowing-how to play football amounts to, is to argue that it entails the ability to play football, and ‘[t]his “ability account” of know-how is often attributed to Ryle’ (Fantl 2012: 6; see Hornsby 2012 for a diverging interpretation of Ryle’s position). Philosophers of sport have not engaged much in Ryle’s ability account of knowing-how (but see Aspin 1976; Carr 1979, 1981; Loland 1992: 61–2) but it is more or less taken for granted in the literature that sports are connected with skills. Given that having skills is to have certain abilities, it would not be far-fetched to say that most philosophers of sport (tacitly) accept or rely on a skill account of knowing-how in sports. Also, given our interest in sport, we need not worry about whether all knowing-how should be understood as the performance of abilities or skills. Rather, we can concentrate on the question of whether sporting skills (being a species of abilities) outruns propositional knowledge (as the anti-intellectualist position would have it) or else should be understood as a type of propositional knowledge (as the intellectualism position would have it).

Although Ryle’s most explicit argument against intellectualism is his so-called regress argument, perhaps even more influential is his claim that ‘[p]hilosophers have not done justice to the distinction which is quite familiar to all of us between knowing that something is the case and knowing how to do things’ (Ryle 1946: 4; Bengson and Moffett 2011: 11–12). This both

challenges and shifts the burden of proof to the defenders of the intellectualism position. Pre-theoretically, the distinction not only makes sense but also seems obvious, and it would take some persuading to convince us otherwise. Nevertheless, Jason Stanley and Timothy Williamson have argued that all knowing-how is knowing-that. At the heart of their attempt to provide cases of knowing-how that amount to knowing-that lies an example from the world of sport.

[A] ski instructor may know how to perform a certain complex stunt, without being able to perform it herself. Similarly, a master pianist who loses both of her arms in a tragic car accident still knows how to play the piano. But she has lost her ability to do so. It follows that Ryle's own positive account of knowledge-how is demonstrably false.

*(Stanley and Williamson 2001: 416; see also Stanley 2011: 127–30)*

According to Stanley and Williamson, you can know how to perform a Beillman spin on the ice but not be able to do it; that is, knowing-how without ability. Conversely, David Carr has argued that you could have an ability to do something without knowing-how to do it: that is, ability without knowing-how. He writes that '[a] novice trampolinist ... might at his first attempt succeed in performing a difficult somersault, which, although for an expert would be an exercise of knowing how, is in this case, merely the result of luck or chance' (Carr 1981: 53; see also Carr 1979: 397).

While Fantl (2012) and Weatherson (2006) have argued that Ryle does not hold the ability view often ascribed to him, the above challenges remain, since it is common ground in the philosophy of sport that knowing-how to do a sport is connected to skills.

The first thing to notice is that whereas the philosophical debate on Ryle and knowing-how is centred on abilities and its connection to knowing-how, philosophers of sport focus on skills. This makes an important difference. Mimicking Carr's novice trampolinist, let us envisage that I, being a mediocre amateur footballer, in a moment of luck and some basic footballing skills, manage to bend it like Beckham. Obviously, I am able to bend it like Beckham, I actually did, and, *pace* Noë, it is not unreasonable to say that if I am actually able to it, then I have the ability to bend it like Beckham (Noë 2005: 280). On the other hand, there would be no temptation to say that I have the skill to bend it like Beckham and, thus, according to the standard way of thinking about this in the philosophy of sport, I do not know how to bend it like Beckham. The fact that luck was centrally involved prevents my bending it like Beckham from counting as knowing-how to bend it like Beckham (see Hawley 2003: 27–8).

Here, we find an important parallel between knowing-how and knowing-that, which, if these two are distinct ways of knowing, is expected. In the same way as luck prevents something from being knowing-how, Gettier cases taught epistemologists that luck prevents true justified belief from being knowing-that (Gettier 1963). Having a true justified belief that *p* does not ensure that the agent in question knows that *p* and, similarly, successful performance of *p* does not ensure that the agent in question knows how to *p*. The latter fact is reflected in philosophers of sports' emphasis on skills, which demands that the successful performance in some sport discipline is not accidental, not centrally based on luck, for someone to know how to do that sport.

Stanley and Williamson's (2001) ski instructor example, on the other hand, challenges the idea that knowing-how to do something entails being able to perform it. The example succeeds in showing that in cases of knowing-how, the agent in question who knows how to *p*, need not be able to perform *p*. Stanley and Williamson's take home lesson from the ski instructor example is



that knowing-how to perform a complex ski stunt is knowing a fact about a way of performing the complex ski stunt (Stanley and Williamson 2001; Stanley 2011). I will show, however, that that does not follow from their example. In contrast, Ryle believed that knowing-how entails knowing a way of performing the complex ski stunt, and that is true as long as we remember that it need not be the agent in question; that is, the person knowing-how to *p*, who is able or has the skills to perform *p*. Let us consider what it would take for knowing-how in this case to be nothing but knowing-that. Put bluntly, one should be willing to credit the ski instructor with knowing-how to *p* (how to perform a complex ski stunt), where the knowing-that *p* (a fact about a way of performing the complex ski stunt) is not in any way connected to the performance of *p* (performing the complex ski stunt). In the ski instructor case, this means that we should exclude the case where the instructor (like the pianist who has lost her arms) used to be able or had the skills to *p*, since in that case it is the fact that the ski instructor used to be able to perform *p*, which justifies us in crediting her with knowing-how to *p*. In the case where there is a physical disability, which has always prevented the ski instructor from performing the stunt, one would justify the claim that she knows how to *p* by arguing that if she did not have this-and-this physical disability, then she would have been able or have the skill to perform the stunt (Hawley 2003: 20–2). This justification, however, is also connected to skilful (neither accidental, nor based on luck) performance of the complex ski stunt.

Finally, in the case where Stanley and Williamson's ski instructor has never been able or could be able to perform the stunt in question, one could argue that one would still be justified in crediting her with knowing-how to *p*, as long as she is successful in using her knowledge of a way of performing the complex ski stunt to enable others to perform the stunt in a skilful manner.<sup>6</sup> Unfortunately, once again it is not the knowing-that *p* per se, which justifies us in thinking of the ski instructor as knowing-how to *p* but the fact that we can tie that propositional knowledge to the skilful performance of *p*. What Stanley and Williamson need to say is that someone who is not able to skilfully *p*, has not been able to skilfully *p*, nor could be able to skilfully *p* and, furthermore, has never been able to enable anyone else to skilfully *p*, still, on the basis of entertaining a thought that *p*, knows how to *p*. Substitute *p* with 'to ski' and you get the claim that a ski instructor who is not able to skilfully ski, has never been able to skilfully ski, could not skilfully ski and, furthermore, has never been able to enable anyone else to skilfully ski, knows how to ski, because she knows the relevant descriptions of or facts about skilful skiing.<sup>7</sup> This ski instructor looks a lot like Ryle's fool who has all the knowledge without knowing-how to perform (factually or counterfactually) or make others perform, and we do well in denying that such a ski instructor knows how to ski. We can conclude that knowing-how is constitutively connected to performance, although the performance connection is more complex than Ryle seemed to think.<sup>8</sup>

### **Cognitivism, phenomenology and the varieties of sport performance**

The question of skilful execution of sports and knowledge is not uncharted territory in the philosophy of sport (Ziff 1974; Steel 1977; Wertz 1978; Hyland 1990; Loland 1992). In later years, Hubert Dreyfus's theory of expert performance has been influential when philosophers of sport have thought about knowing in skilful sports movements. Dreyfus's Heidegger- and Merleau-Ponty-influenced line of reasoning is that top athletes' bodies know what to do at any given point in a sport, because '[a]n expert's skill has become so much a part of him that he need be no more aware of it than he is of his own body' (Dreyfus and Dreyfus 1986: 30; see also Heidegger 1963; Merleau-Ponty 1945). The Dreyfus line builds on the Heideggerian insight that humans do not first figure out the world and then decide to act in it but, rather, as

infants and cognizers, we are thrown into a world we must cope with, making this world our own. Only later do we reach the cognitive sophistication of being able to think about the world more abstractly, to plan actions and so on and so forth. In Heidegger's own words, '[w]e are always already in a world' by coping with the world, and this coping always precedes reflective thinking (Heidegger 1988: 165). Whereas Heidegger was concerned with a phenomenological description of our everyday dealings with the world, Dreyfus turns his attention to expert performance, often by way of examples from the world of sport. It is in the latter respect that philosophers of sport have found him relevant (Breivik 2007, 2008, 2011; Eriksen 2010; Loland 1992; Moe 2005, 2007; Hopsicker 2009; Standal and Moe 2011).

Dreyfus's philosophy of skilled coping is a reaction to what is sometimes called classical cognitivism. The central tenet of cognitivism is the idea that the mind is computational; that is, the mind processes information. In its classic form, spanning from the cognitive revolution of the 1950s throughout the 1970s, the slogan was that the mind is a computer or a syntactic engine (Dennett 1981; Haugeland 1981). The sportsman is an information processor and 'the elite performer might excel because she/he (a) recognizes the stimulus sooner (perceptual processing), (b) has a variety of appropriate responses ready for execution (decision processing), and/or (c) issues movement commands more rapidly (effector processing)' (Wrisberg 2001: 7; as quoted in Moe 2005: 161–2). Thus, at least one important difference between Roger Federer and an lesser-skilled tennis player is a difference of degree, where the former is just a lot better at processing information relevant to performing in a tennis match. The cognitivist picture allows that the information processing in expert performance, perhaps, takes place at a subconscious and/or automated level.<sup>9</sup>

In contrast, Dreyfus takes the same difference between Federer and a lesser-skilled tennis player to be a difference in kind. Dreyfus presents a picture of skilful performance that is acquired in a stepwise fashion – from novice, advanced beginner, through competence and proficiency and finally expertise – and where the expert level of knowing-how is phenomenologically different in kind from the others (Dreyfus and Dreyfus 1986: 21–36; Dreyfus 2002: 368–72). Both the competence and proficiency level of, say, playing tennis, qualify as knowing-how to play tennis (and a case can also be made for the advanced beginner) but, whereas these know-how levels involve reflective deliberations on what to do, the expert's performance 'is ongoing and nonreflective', so that '[c]ompetent performance is rational; proficiency is transitional; experts act irrationally' (Dreyfus and Dreyfus 1986: 31, 36). According to this picture, the expert performer, who is an elite athlete, does not calculate what to do; he or she just does it without thinking about it. Regarding the expert performance of a tennis swing, Dreyfus writes:

[I]f one is expert at the game, things are going well, and one is absorbed in the game, what one experiences is more like one's arm going up and its being drawn to the appropriate position, the racket forming the optimal angle with the court – an angle one need not even be aware of – all this so as to complete the gestalt made up of the court, one's running opponent, and the on-coming ball. One feels that one's comportment was caused by the perceived conditions in such a way as to reduce a sense of deviation from some satisfactory gestalt. But that final gestalt need not be represented in one's mind. Indeed, it is not something one could represent. One only senses when one is getting closer or further away from the optimum.

*(Dreyfus 2002: 379)*

Elsewhere Dreyfus tells us that '[w]hen one is bodily absorbed in responding to solicitations there is no thinking subject and there are no features to be thought' and, in more general terms,

he states that ‘the enemy of expertise is thought’ (Dreyfus 2007: 358, 354; see also Graybiel 1998: 130; Ennen 2003: 314). Obviously, as the quotes above show, the expert performer is aware of his or her environment, while responding to changes in that environment in a non-reflective fashion. Let us call such awareness *in-zone awareness of knowing-how*.

According to Dreyfus, the phenomenology of the expert level offers a guide to understanding how someone is able to play, say, tennis, at an expert level. If, from the inside, it does not feel like you need to think about what to do, then you don’t think about what to do. This line of argument, however, relies on the implausible view that all thinking takes the form of explicit formulations and considerations of propositions, concepts or ways to do things (Ginet 1975: 6–7; McDowell 2007: 367–8; Stanley 2011: 23–4). Rejecting this part of the Dreyfus line, however, does not invalidate the idea that the expert level of knowing-how comes with a specific phenomenological feel. One can accept an in-zone awareness and its phenomenology, while remaining neutral as to how the minds of experts work or even allowing that experts think, but that the experts’ thinking does not take the form of reflective deliberations.

Regarding the phenomenon of knowing-how to do sports, the expert level is, of course, marginal. Most, say, tennis players in the world that know how to play tennis are not Dreyfusian experts. Indeed, the phenomenology of the lesser-skilled sportspersons (as contrasted with experts of a field), who nevertheless know how to play some particular sport, remains a neglected area of the philosophy of sport.<sup>10</sup> Clearly, there is a ‘what is it like to be’ question to be asked about, say, mediocre tennis players with a not-so-good backhand, which might be as philosophically interesting as questions about the expert level. If Dreyfus is correct in thinking that expert performers do not reflectively deliberate on what to do during a game, while lesser-skilled sportspersons do, then the knowing-how of lesser-skilled sportspersons is distinctly different and deserves attention on its own merits. By reflective deliberation I mean that the agent in question not only thinks about what to do but also is aware that such deliberations take place. Also, if expert performers sometimes reflectively deliberate on what to do during a sports event, as it will be apparent that they do, then one would like to know whether there is a quantitative or qualitative difference between experts and lesser-skilled performers’ reflective deliberations.

### Modes of expert performances

At the level of expert performance that does not involve reflective deliberations, the in-zone awareness of Dreyfusian experts is not the only mode of expert performance. David Armstrong’s classic example of the absent-minded long-distance driver qualifies as a case of expert performance that exemplifies another mode.

If you have driven for a very long distance without a break, you may have had experience of a curious state of automatism, which can occur in these conditions. One can suddenly ‘come to’ and realize that one has driven for long distances without being aware of what one was doing, or, indeed, without being aware of anything. One has kept the car on the road, used the brake and the clutch perhaps, yet all without any awareness of what one was doing.

(Armstrong 1970: 76)

The driver in a state of automatism perceives, or is aware of, the road. If he did not, the car would be in a ditch. But he is not currently aware of his awareness of the road. He perceives the road, but he does not perceive his perceiving, or anything else that

is going on in his mind. He is not, as we normally are, conscious of what is going on in his mind ... The driver in the automatic state is one whose 'inner eye' is shut: who is not currently aware of what is going on in his own mind.

(Armstrong 1970: 78; see also Armstrong 1968, 1981)

The phenomenon described by Armstrong seemingly involves a similar sort of automaticity of action as that which is associated with Dreyfusian experts but the phenomena obviously differ. Presumably, in-zone awareness of knowing-how is rich in phenomenological feel, whereas the phenomenon exemplified by the absent-minded long-distance driver is devoid of it. Still, as Armstrong points out, there is awareness of driving the car, since it does not end up in the ditch. Let us call such awareness *zoned-out awareness of knowing-how*.<sup>11</sup>

First, zoned-out awareness shows that it is not the case, as philosopher of sport Jens Birch has argued, that 'all knowing how involves phenomenal consciousness' (Birch 2009: 43). Although the phenomenon of zoned-out awareness has so far eluded philosophers of sport, there are at least some possible candidates where we might find sport instantiations of the phenomenon. For example, consider a marathon runner who has broken away from the field by a considerable distance and who is concentrating on keeping a steady pace and rhythm, while running his or her own race. One can easily envisage such a marathon runner zoning out for stretches of the race. Similar considerations hold for other long-distance endurance sports such as cross-country skiing, race-walking or rowing. Obviously, further attention to and research on the phenomenon of zoned-out awareness with regard to knowing-how to do various sports, is needed before one draws any conclusion as to how often, if it all, athletes zone out when doing a particular sport. Still, the phenomenon seems worthy our attention. This gives us three distinct modes of knowing-how to do a sport:

- reflective awareness of knowing-how
- in-zone awareness of knowing-how
- zoned-out awareness of knowing-how.

Do all expert performances exclusively belong to the latter two categories? Concerning bodily awareness, it seems clear that in everyday life 'when I am engaged in the world, I tend not to notice my posture or specific movements of my limbs' (Gallagher 2003: 55). Also, regarding various types of engagement in sport much of 'the body [is] a background, a dark zone' (Breivik 2008: 349). Yet, that does not mean that it all resides in the dark zone when top athletes perform at their best. A case reported by Breivik suggests that the Dreyfus position is too strong (see also Hopsicker 2009; Eriksen 2010; and Breivik 2011, for other recent critiques of the Dreyfusian line):

After winning a gold medal in the World Championship in downhill skiing in Åre, Sweden, 2007, Aksel Lund Svindal thought he had made an almost perfect race, just with one small fault. After the race he was interviewed on Norwegian TV by the reporter Espen Graff.

Reporter: We talk about choosing the right line and the perfect run. Are you so well prepared that you go on autopilot or do you also think during the run?

Aksel Lund Svindal: I think during the run and – I think it is important to think during the run – so you do not doze off in a way.

Interviewer: Then what do you think?

Aksel Lund Svindal: I think about ... work tasks ... that is exactly how it is ... I think about racing well and – there are a lot of small details and you need some pegs that make the details go as planned.

*(Breivik 2007: 130)*

Even in a high-speed race like downhill, Lund Svindal reports having reflective deliberations of this sort. This does not mean there are not also automatic subdoxastic motor skill states involved in Lund Svindal's performance, only that it is not all in the dark zone. Similarly, Diego Maradona reports that when he scored his famous solo goal against England in the World Championship in football, 1986, Mexico, he was keenly aware of the position of his fellow striker Jorge Valdano. In fact, Maradona was looking for an opening to pass to Valdano as he took on the entire English defence – 'I was waiting to pass the ball – the logical thing to do' (Maradona 2000: 129; for further considerations, see Aggerholm, Jespersen and Ronglan 2011). This is not surprising, since research suggests that expert performers have heightened reflective awareness of the unfolding of events in which they participate as the event unfolds (Chaffin, Imreh and Crawford 2002; Ericsson and Kintsch 1995; Sutton 2007; Sutton, McIlwain, Christensen and Geeves 2011).

The net effect of these considerations is that the phenomenon of knowing-how in general and knowing-how at an expert level, in particular, is more complex and many-faceted than the Dreyfus picture suggest. There are at least three distinct modes of knowing-how and it is furthermore clear that expert performance is not confined to just one of these modes. Philosophers of sport should opt for sport-specific considerations when theorizing about knowing-how in sports, while entertaining the possibility that expert sport performance can render 'the mind wandering in and out between conscious effort and control and automatic subconscious state' (Breivik 2007:130). This, I believe, is good news for philosophers of sport, since there is still much exciting work to be done in this corner of epistemology, which, hopefully, will broaden and deepen our understanding of sport.

### Concluding remarks

I have approached the question of an epistemology of sport by first addressing the question of how we can know sports: that is, being able to recognize something as a sport, and have shown that we first need to address the phenomenon of play. The particularist line, I have argued, is correct for knowing play. While we gain a criterion or criteria of play by already being able to know play, we acquire a criterion or criteria of sport when adding agonal qualities to the criterion of play, thus transforming play into sport and enabling us to engage in and know sports. The methodist line is correct for knowing sport. Furthermore, there are various ways by which one can know a sport and one of them is knowing-how to play a sport. Orthodoxy in the philosophy of sport has it that knowing-how to play a sport is constitutively connected to skilled performance and I have defended that orthodoxy against recent attacks. The fallout of that defence is that it turns out that the performance-connection is more complex than previously assumed or argued. Finally, I have shown that there are several modes of knowing-how and that top athletes' sport performances (that is, expert performances) are not confined to only one mode, which suggests that further sport-specific investigations and research into knowing-how in sports are warranted.

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## Notes

- 1 The problem of the criterion was first championed by Sextus Empiricus (2000: 72–3) and brought into new prominence in the twentieth century by Roderick Chisholm (1957: 30–9; 1982: 61–75).
- 2 Notice that the problem, which Suits (2005: 161–74) discusses in the appendix ‘The Fool on the Hill’ in the Broadview reissue of *The Grasshopper*, is different from the problem of the criterion as I have presented it here. Suits addresses what is known as the inquiry paradox as it is formulated by Plato in *Meno* (1997: 79–86) and which in the twentieth century was dubbed the paradox of analysis by G. E. Moore (1903). Chisholm’s problem of the criterion and my adaption of the problem within the epistemology of sport concerns the source of knowledge – in our case the source of knowledge of sports and the question of how we can recognize something as a sport as opposed to another type of activity. The inquiry paradox or the paradox of analysis, on the other hand, is about the seeming impossibility of a conceptual analysis being both correct and informative. In his appendix, Suits worries that:

[I]n constructing my definition, I permitted myself to use as data things that were games ... [b]ut how could I possibly know these things in the absence of the very definition[?] ... Had I really had one tucked up my sleeve all along[?]’.

(Suits 1978: 163)

This lands him, according to himself, ‘in Plato’s fire’ (ibid.). In other words, either one cannot start constructing an analysis of the subject matter and thus there cannot be a correct analysis of games, or else the analysis will not be informative, since Suits already had an assumed definition of games, when he started his enquiry and thus no conceptual analysis of games can be informative. Suits acknowledges that his ‘trouble appeared to be the same kind of trouble that Meno tried to make for Socrates’ (ibid.). There is no room here to go into Suits’ own arguments about how to deal with the paradox of analysis. Suffice to say, Suits is worried about ‘Meno’s dilemma’ as ‘an entirely sensible one to raise against the search for definitions’ (Suits 1978: 164), while the problem of the criterion for sports, as I have painted it here, concerns how we could even be able to recognize something as a sport – *pace* the question of whether we could come up with a valid and informative analysis of sports.

- 3 This is not to suggest that there cannot be borderline cases between play and non-play, where we are uncertain about the status of the activities as play or non-play.
- 4 Searle’s account of constitutive rules as contrasted with regulative rules and how constitutive rules make certain social practices or institutions possible, is the most well-known and widely discussed theory in the literature, although Searle himself claims that the distinction was ‘foreshadowed by Kant’s distinction between regulative and constitutive principles’, while acknowledging Rawls’s (1955) ‘discussion of a related distinction’ (Searle 1964: 55; Midgley 1959 also precedes Searle).
- 5 Another, although somewhat different, anti-intellectualism position in the philosophy of sport is found in Peter Hopsicker’s (2009, 2011, 2013) work, which builds on Michael Polanyi’s seminal work on tacit knowledge (Polanyi 1974).
- 6 Notice that several philosophers of sport deny this possibility, arguing that ‘sports and games are acquired by demonstration, and not by teaching in the sense of being told’ (Steel 1977: 101); see Breivik (2014), fourth section, ‘Practical Knowledge: Sport Philosophy and Knowledge: the Beginnings’ for an overview of this line of reasoning.
- 7 Stanley tells us that the main thesis of the Stanley–Williamson view is that ‘knowing how to do something is the same as knowing a fact ... when you learned how to swim, what happened is that you learned some facts about swimming’ (Stanley 2011: vii).
- 8 Christopher Winch (2013) has also argued – although not in the context of thinking about sport – for a more complex picture of knowing-how.
- 9 Stanley’s intellectualist position also allows for this (Stanley 2011: 24, 173, 183–4).

- 10 For a take on such issues with regard to playing music, see Sudnow (2001).
- 11 I take it to be uncontroversial that the phenomenology of in-zone awareness is consciously felt. That, however, need not mean that zoned-out awareness is devoid of phenomenology. Clearly, the phenomenon of zoned-out awareness has no explicit, available for the mind's eye phenomenology but perhaps there could be a more subtle and implicit, more evasive in its characteristics, phenomenology associated with zoned-out awareness (for an attempt to elucidate such a phenomenology in connection to the phenomenon know as self-deception, see Borge 2003: 19–21).

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