Activity theory, complexity and sports coaching: An epistemology for a discipline

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Abstract

The aim of this article is two-fold. Firstly, it is to advance the case for Activity Theory (AT) as a credible and alternative lens to view and research sports coaching. Secondly, it is to position this assertion within the wider debate about the epistemology of coaching. Following a framing introduction, a more comprehensive review of the development and current conceptualisation of AT is given. Here, AT's evolution through three distinct phases and related theorists, namely Vygotsky, Leont'ev and Engeström, is initially traced. This gives way to a more detailed explanation of AT's principal conceptual components, including 'object', 'subject', 'tools' (mediating artefacts), 'rules', a 'community' and a 'division of labour'. An example is then presented from empirical work illustrating how AT can be used as a means to research sports coaching. The penultimate section locates such thinking within coaching's current 'epistemological debate; arguing that the coaching 'self' is not an autonomous individual, but a relative part of social and cultural arrangements. Finally, a conclusion summarises the main points made, particularly in terms in presenting the grounding constructivist epistemology of AT as a potential way forward for sports coaching.

Key words: Activity Theory; sports coaching; Leont'ev; interpretive; epistemology

Introduction

In recent times, Activity Theory (AT) has become an increasingly popular lens through which to research work-place settings (Hardman, 2008). In this respect, it has been used to examine areas such human-computer interaction and ergonomics (Kuutti, 1996), cognitive psychology (Bedny & Meister, 1997), as well as pedagogy (Hardman, 2008). Derived from the work of the Soviet educational psychologists Vygotsky (1978) and Leont'ev (1978), AT is a concept drawn from the idea that all social action is mediated, mainly by language, discourse and other cultural means. With its focus on situating action in context, AT subsequently contends that one cannot study or understand individuals' actions outside the environment in which they take place.

This latter point makes AT particularly relevant to pedagogy. This is because it focuses on practice which, in turn, is taken as being mediated by cultural 'tools' (i.e., aspects of culture) created and transformed during the practice itself (Nardi, 1995). More specifically, the object of AT is to understand the unity of consciousness and activity (Kuutti, 1996), with context being considered to be created by and to act upon individuals, rather than simply the canvas upon which that activity is painted. Context then, is taken as generated through activity, allowing actors to reframe their behaviours as they engage with that activity (Leont'ev, 1978).

Within such a conceptualisation, pedagogy is viewed as a complex social system, whose trajectory or course is inherently influenced by socio-cultural factors (Hardman, 2008). The same could be said of coaching, which has, over the past decade, been increasingly recognised as a social, non-linear process, replete with issues of contextual contestation and negotiation (Jones & Wallace, 2005, 2006). In doing so, portrayals of unproblematic chronology and 'modelling' have been de-emphasised, as has been the

assumption that an identified linkage in one context could ever be directly repeated in another (Puddifoot 2000).

Despite such recognition, with a few exceptions (e.g., Cushion & Jones, 2006; Purdy, Jones & Cassidy, 2009), research in coaching continues to be somewhat starved of contextual considerations, the associated complex-aware rhetoric being somewhat hollow in terms of appreciating how coaching actually plays out as situated action (Jones, Bowes & Kingston, 2010). In this respect, the study of coaching has tended to ignore the social beyond the interactional. This neglect is unwarranted, particularly in light of the consistent and considerable body of evidence indicating that coaches' considerations regarding athlete development surround contextually bound social sensitivities (from Saury & Durand, 1998; Jones, Armour & Potrac, 2004; Jones, Potrac, Cushion & Ronglan, 2011 among others).

The principal purpose of this article is two-fold. Firstly, it is to present the case for Activity Theory (Leont'ev, 1978) as a credible perspective to explore and deconstruct sports coaching. Here, in developing an existing line of reasoning (Jones et al., 2010), an example from empirical work is presented illustrative of the possibilities of AT in this regard. Secondly, the aim stretches to developing this argument into a wider debate about the grounding epistemology of coaching (Abraham & Collins, 2011; Grecic & Collins, 2013; North, 2013; Jones, 2012).

The significance of the article lies in building on previous work where the worth of pedagogical theories to sports coaching has been outlined (Jones, 2006; Kirk, 2010 among others). Here, the case was made that coaches should be considered as educators, and coaching as a complex pedagogical process. The purpose then relates to furthering a relatively fresh, new way to look at coaching, thus building on the current framework of analysis. It is based on the premise that coaching is fundamentally intertwined with coach teaching and athlete learning within given situational constraints; that is, at the heart of

coaching lies the teaching-learning interface complete with its inherent non-routine, problematic and complex characteristics (Jones, 2006). The argument made takes issue with the continuing claims of the sequential 'models' approach to coaching which (despite considerable evidence to the contrary) persists in advocating coaching as logical chains of propositions that can be elaborated into given systems of knowledge (e.g., Abraham & Collins, 2011). Rather, although acknowledgement is given to developmental discourse, primacy is afforded within this paper to the dynamic rings of invisible social contexts which surround the coach-athlete relationship, and their effects of practice (McLaughlin & Talbert 1993).

The importance of the article also stretches to further clarifying the 'complexity of coaching' debate; a discussion highlighted some years ago in a special edition of the International Journal of Sport Science and Coaching (IJSSC). Here, Cushion's (2007) case for the complex nature of coaching was critiqued by Lyle (2007) and others as 'over egging the pudding'. The general admonishment here centred on a (perceived) need for greater appreciation of definitive process and structure within coaching. It is a criticism recently reiterated by Collins and colleagues (Abraham & Collins, 2011; Grecic & Collins, 2013) and North (2013) who, in presenting coaching as a 'logical decision-making' process, argued for more 'practical skills' and 'useful pointers' to be outlined from research. Although previous work has consistently emphasised the complexity position as not being against the conceptualisation of coaching as a process (see Jones & Wallace, 2005, 2006), perhaps the case made has not been explicit enough. Consequently, the current paper, in both drawing attention to and expanding on existing work (e.g., Jones & Wallace, 2005, 2006; Bowes & Jones, 2006; Jones et al., 2010), can be seen as a response to Abraham and Collins' (2011) claim that this step has yet to be taken, and North's (2013) contention that the view given by opponents of the processual modelling perspective has been one of 'unmanageable

complexity'. With this in mind, however, taking that both schools of thought appear to respect the need for structure and agency, the discussion should not be encased in an either/or scenario but within the confines of degrees (a point debated at greater length in the penultimate section).

Accepting this 'shades of grey' position as a point of departure, we nevertheless take a lead from Law (2006) who asked the question that if we consider something to be messy (as most coaching scholars, rhetorically at least, seem to agree on), then "would something less messy make a mess of describing it?" It is a case that simplicity won't help us understand complex things. He even goes so far as to claim that some social scientists' refusal to (sincerely) acknowledge the messy nature of life, "in their attempts to make the world clean and neat", actively repress the very possibility of understanding the reality they purport to study. It is not an approach that has served coaching well from the perspective of practice or as a profession. In terms of the former, the empirical evidence continues to mount that practitioners don't find such simplicity (or rationality) of much value in supporting or informing their work (Chesterfield, Potrac, & Jones, 2010; Nash, Sproule, Hall & English, 2012; Potrac, Jones, Gilbourne & Nelson, 2013). Similarly, with regard to the latter, such functionalist research only makes a negligible contribution at best to the creation of a recognisable domain-specific critical tradition.

The paper's claim to originality, however, must be tempered as not only (and inevitably) does it borrow heavily from the work of Leont'ev for its theoretical grounding, but also on the writings of Theureau (1992) and Hardman (2007, 2008) in terms of related means of inquiry. The purpose then, as opposed to opening totally 'new areas of investigation', relates to clarifying and developing earlier work (e.g., Bowes & Jones, 2005, 2006; Jones et al., 2010) in more firmly rooting complexity-related thought and studies, and in particular AT, within coaching research.

In terms of structure, following this introduction, a more comprehensive review of the development and current conceptualisation of AT is given. This is followed by an outline of how a method using AT as a grounding framework can be used to research sports coaching (through an analysis of critical incidents or 'evaluative episodes') (Hardman, 2007, 2008). Here, an empirical example is given of how such an analysis looks like in practice. The penultimate section locates such thinking within coaching's current 'epistemological debate; that is; how relative and/or absolute should we position the activity. Finally, a conclusion summarises the main points made and provides signposts for possible future research and discussion.

AT: Its development and establishment

Broadly defined, AT is a philosophical and cross-disciplinary framework that can be used to study forms of human practice where both individual and social processes are interlinked (Kuutti, 1996). Its roots are firmly embedded within Marxist philosophy and Soviet educational psychology, from which it explored the active, developmental and constructive roles of human actions (Kutti, 1995). Originally referred to as Cultural-Historical Activity Theory (CHAT), AT is commonly associated with Vygotsky's (1978) concept of mediated action and Leont'ev's (1978) hierarchical structure of human activity. Founded on a number of basic, yet interrelated principles, AT provides an ecological perspective from which to understand the unity connecting the human mind [consciousness] and activity [what people do] (Nardi, 1996).

The first conceptualisation of AT, as stated, drew heavily on Vygotsky's concept of mediation whereby individuals' interact with objects in the world by means of cultural artefacts; signs, symbols and practical tools (Hardman, 2008). All social action then, was construed as mediated action. The central premise was that humans are not passive

participants but operate within a shared social environment where interactions instigate meaning making processes enabling them to engage in that shared activity. It was argued that the mediation of these cultural and historical tools or considerations influenced the nature of external behaviour, and subsequently the mental functioning of individuals in everyday practice.

Critiquing the idea that only focussing on mediation at the individual level limited the possibility of analysis, Leont'ev (1978) and other second-generation theorists developed a framework to illustrate how cognitive change happens within a collective or mutual context (Blin & Munro, 2008). Consequently, from a Leontovian perspective, individual action became further viewed as socially mediated, where consciousness and meaning are formed in a communal activity (Foot, 2001). As such, Leont'ev proposed human mediated activity to be a social system characterised by a division of labour and rules that arbitrate, facilitate and construct the interaction within it (Engestrőm, 1987). Here, individual activity was considered the result of systems of social artefacts and endeavours, as opposed to the isolated or unrelated cognitive functions of a human agent (Nardi, 1996).

Although the work of Leont'ev developed insight into how personal actions are engaged within the social, it was criticised for failing to situate the motives, emotions and creativity of an individual within context (Hardman, 2008). As such, a third evolutionary stage of AT offered conceptual tools to understand dialogue, multiple perspectives and cultural diversity. Here, in moving still further away from the initial person centred considerations of AT, Engeström (1987) addressed both the individual and the social through the concept of activity systems analysis. The focus lay on interrelated activity systems that explore partially shared understandings, as well as issues of subjectivity, emotion, identity, and moral commitment (Engeström, 2009). To understand the nature of AT from this perspective, Kutti (1996) suggested that we must consider an activity to have both an external

and internal nature, whereby the subject and object of an activity are in a reciprocal relationship. This, according to Cole (1996), extends the idea of AT to allow for socio-political factors and situations. It is a perspective which emphasises AT's social, dynamic nature, giving credence to its object-orientated activity, its multi-voicedness, its historicity, the role of contradictions, and its possibilities for expansive learning (Engeström, 2009).

Exploring the complexity of coaching: How AT (and course-of-action analysis [Theureau, 1992]) can help

Coaching has increasingly been theorised as a complex social system (where the term complex is used principally as a noun) (Bowes & Jones, 2005, 2006; Jones et al., 2010; LeBed & Bar Eli, 2013). Here, the activity has been positioned as a co-operative, socially contested endeavour, containing elements of initiation, reaction and exchange within temporal boundaries. Such a conceptualisation draws heavily upon the early work of Marc Durand and colleagues (Sève, & Durand 1999; Saury & Durand, 1998; Hauw & Durand, 2005, 2007) in coaching, Sonsino and Moore (2001) and others (e.g., Jess, Atencio & Thorburn, 2011) within pedagogy, as well as complex systems writings more generally.

In recent work, however, a conscious effort has been made to link complexity theory, including the view of coaching as a complex adaptive system, with that of AT more definitively (Jones et al., 2010). Here, both situated action (Suchman 1987) and AT (Leont'ev, 1978) were discussed as perspectives informing a course-of-action analysis to more sensitively engage with coaching's non-linear, flexible nature (Thelen & Smith, 1996). In this regard, credence was given to an individual's conscious motivation, thus supporting a proactive as opposed to a reactive view of action (LeBed & Bar Eli, 2013). Such (coaching) behaviours, however, were not considered isolated motivations, but rather influenced by

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dynamically changing environments. Subsequently, according to LeBed and Bar-Eli (2013), the purpose of coaches' acts can be interpreted as the 'regulation of equifinality'; that is, "intervention utilising soft control that directs the self-organization of a human system from the outside" (p.39). Echoing Jones and colleagues' (Jones & Wallace, 2005, 2006: Jones et al., 2011) conceptualisation of coaching as social orchestration, it is a view which positions the coach as trying to converge differing means and ways towards an accepted common goal. Although, again, acknowledgement of a progressive practice is given, such a stance does not locate the coach within the confines of a predictable, self-centred or highly explicative process. Rather, he or she is placed as an actor in an open adaptable system; in a web of relations between individuals who share a common goal that forms, dissolves and re-forms anew as that goal is actually sought. Despite the recognition of coaching as complex, methods to engage with this complexity have only limitedly been engaged with. It is to this issue then, paying particular attention to course-of action analysis and AT, that we now turn.

Course-of-action analysis

Within the recent work of Jones et al. (2010), course-of-action analysis was posited as a means to better explore the given complexity of coaching. In borrowing from Sonsino and Moore (2001), coaching was conceptualised as taking place "at or near the 'edge of chaos'; a state which lies neither in a zone of complete stability nor total flux" (Jones et al., 2010: 15). Studying such a non-linear dynamic process then, which still acknowledged a (target) goal and where the distinction between cognition and behaviour was recognised as blurred, necessitated an exploration and understanding of situated action.

In meeting such conditions, course-of-action (Theureau, 1992) seeks to describe and analyse the action of agents in relation to the characteristics of the situation. It is a perspective which locates the focus or the unit of analysis as being more than just the

individual actor or the environment, to the interaction that occurs between these two over time. In this respect, it argues for the importance of participation in structuring thought, as opposed to any pre-defined 'effective' best practice. Consequently, in considering that cognition is inseparable from the activity where it is produced, with no distinction drawn between action and interpretation, course-of-action analysis holds the potential to examine the seemingly intuitive, unplanned actions of coaches; those which accommodate unforeseeable contextual contingencies whilst respecting the boundaries of a plotted course.

Activity theory (AT)

As previously stated, central to AT is the understanding that pedagogy (inclusive of learning) is a culturally based social endeavour; the mind being considered as situated in context. The unit of analysis within AT is the object-orientated, collective and culturally mediated activity. The activity, or the activity system, is, in turn, conceived as comprising an 'object', 'subject', 'tools' (mediating artefacts), 'rules', a 'community' and a 'division of labour'. AT then, allows us to look at coaching along these dimensions. For instance, the subject of the coaching system is the coach. The epistemic assumptions held by each coach will influence how he or she sees the role, and impact what tools will be used, when and where. The subject is consequently considered to act on the object.

The object equates to the problem that both coach and athlete(s) are working towards (e.g., correcting or developing a tennis player's backhand stroke), and can be considered as the primary focus of the activity system (Hardman, 2007). Activities then, are considered both collective and motivated by the need to transform an object into a desired outcome (e.g., greater consistency or more velocity on the given backhand) (Blin & Munro, 2007). Indeed, it is the object that imbues an activity with meaning, allowing for its 'structured understanding' (Kaptelenin, 2005). Although fundamental to AT, the object remains an area for debate

within it. Here, even though Leont'ev originally tied it to motive, Engeström (1987) defined the object as the 'raw material' or 'problem space' at which the activity is directed. This, in turn, is transformed into outcomes with the assistance of a variety of mediating instruments; a view which necessitates the "need to focus on the object construction in the context of activity" (Hardman, 2007: 55).

Mediating artefacts can be considered the 'tools' used by a coach. These tools mediate thought during the interaction between subject and context. Such tools can be physical or material (e.g., cones, bibs, an electronic white board) or, perhaps more obviously in relation to coaching, to do with language and discourse. Indeed, one of the most prevalent tools used can be that of coaches' talk (including questioning and instruction).

The rules refer to the norms, interactions and social conventions of the gym or sports field, which drive, enable and constrain the subject's (i.e., the coach's) actions. Such rules are to do with the social conventions that guide coaching, how the coach treats the athletes and how athletes treat each other. These could also include a coach's normative working strategies; for example, allowing a degree of latitude and lack of formal structure within practices. Rules can thus be divided into those that concern the instructional context, and those that involve the social order. The first can include evaluative rules towards the goal at hand, while the latter refers to the social rules that govern interaction and organisation between coach and athletes. Finally, in this respect, the coach and athletes are members of an active community who work towards a shared object. Within the community, there is also a given division of labour, with responsibilities, tasks and power being constantly negotiated (Cole & Engström, 1993; Hardman, 2008)

In a recent article, Hardman (2008) demonstrated how an AT approach, using the concepts listed above, could be used to analyse pedagogy. More specifically, the analysis centred on critical incidents, or what she termed evaluative episodes within the contextual

interaction. An evaluative episode or event was defined as a coherent activity where a teacher disrupts the "pedagogical script [to] make visible the evaluative criteria required for students to produce a legitimate text" (Hardman, 2007: 57). Here, the teacher (or coach) is called upon to restate and make clear the evaluative criteria in response to on-going learner progress. Hardman's (2007) discourse related to 'disruptions' and 'restatement' draw heavily on Flanagan's (1954) definition of critical incidents and Goodwin's (2001: 7) understanding of turning points, where a teacher or coach's "utterances shape the tone of the subsequent interaction". Such an evaluation can provide insight into a pedagogue's epistemic assumptions about the nature of his or her work and how they go about it. In this case, it can provide a window through which we can view pedagogic behaviour in relation to a generally accepted aim (i.e., an object). A principal way through which these episodes can be developed is through the checking of learner understanding. For instance, take the following example (drawn from on-going PhD work) of a football (soccer) coach trying to generate learning among players about the principle of denying the opposition space and thus good quality possession[1,2].

Coach: Ok, you've had a look at the field ....it's a small pitch, with Fred not playing, we're losing a bit of height at the back.......so what I really want you to think about is to push up from the back (i.e., moving the defensive line further up the field), squeeze a touch higher (to make the area of engagement smaller). A touch higher than we normally do (the coach uses his hand in a pushing manner to emphasise the squeeze action). Do you understand?

Players: [almost in unison] yes, ok!

Coach: We want to squeeze up the field so we inhibit any service they want to provide to their forward players…(Long pause)…is that ok?

Player 1: So you're saying you want us to play a high (defensive) line?

Coach: Yes...but not without consideration....play in relation to where the ball is... so play higher than usual without being rigid about it.....because we outnumber them in midfield, we ought to be able to squeeze and hold quite high....(the coach again pushes an imaginary line forward with his hand as he speaks)…….What we don't want is for their midfield players to have possession, be able to look up and make passes behind our defence because their attackers look quite quick. Remember that the point here is to deny the opponents time and space when in possession, so we can win the ball back earlier and higher up the field.

Player 2: So you're asking Kyle [and the defence] to push the back line and play high up the field? Sorry, but I don't quite understand [a murmur of agreement rises from some of the other players]

Coach: ok, no problem [the coach bends down to place 11 white cones on the dressing room floor illustrative of the players' starting positions]. We've agreed that we need to play the game more in the opponents' half of the field, right?

Players: yes.

Coach: Why?

Player 2: So we can be closer to their goal when we win the ball back.

Coach: (nods) In order to do that, we need to compress the field as a team [the coach then draws a line with chalk indicating that almost all the outfield players are positioned in the opposition's half]. So, what will this enable us to do when they have the ball?

Player 1: We can close the opposing player(s) in possession easier….

Coach: Why can we do this?

Player 3: Because we have compressed the total area of the playing field. We are basically starting closer to them.

Player 4: …because the distance between us and them is smaller

Coach: Good, OK. So, what happens if the back line, our defensive line, sags back; is not as high up the field? (As he speaks, the coach moves the back three cones [illustrative of the team's three defenders] well back behind the chalk line creating considerable space between them and the rest of the team)

Player 3: It becomes harder to close down the opposition when they have the ball, because the spaces on the field are bigger.

Coach: So now can you see the value in our defensive line playing high?

Players: yes, ok.

Coach: Good, now….

Player 4: (puts his hand up)

Coach: Yes, Nicolas?

Player 4: I understand that, but where does this idea of 'showing them [the opponent in possession] the inside' fit with that?

Coach: Can someone explain that to Nicolas?

Player 1: Isn't it to do with directing their possession to make it predictable?

Coach: Well, yes in a way. But it's more than that. (Bending down again, the coach lays out 11 red cones in the general shape used by opposing teams, in relation to and within the white cones). Now, as you can see, the white cones are us and the red cones are them. This is where their players will generally stand in relation to you. Can you see that?

Players: Yes, yes.

Coach: Now (pointing to a peripheral red cone), assuming that this wide player has got the ball, how do we need to react?

Player 2: We need to shuffle across the field, making him pass in-field….so as to make the play predictable.

Coach: yes, that's right…but as I said, there is more to the strategy than that…any ideas?... No? OK, well if we force the opposition to play the ball in-field (and pointing to the set up cones), do we have players in that area already or not?

Players: Yes, we do; a lot.

Coach: So, by doing that we are forcing them to play in confined spaces which is difficult to do right?

Player 3: Right…so, it's the same principle as holding a high defensive line.

Coach: That's right. And remember that our more concrete strategies like holding a high line and forcing the opposition to play inside are not based on absolute rules but on principles. So, now you can see how the principle of denying opponents space to play can be realised in action.

Players: Yup…got it…ok…let's play.

Without pointedly 'telling' how this interchange fits neatly into an AT framework, no doubt the interaction cited can be understood through such a lens. Indeed, the purpose here was to 'freeze' (as best as possible) an example of pedagogic activity in time, thus providing something of a window into a dynamic coaching system (Hardman, 2007). The episode was 'sparked' by the coach checking athletes' understanding. When this was not clear, the evaluative episode was created, with the evaluative criteria being re-stated early in the piece (Coach: 'Remember, the point is here…'). This is the understanding the coach wishes to generate or refine, and can be interpreted as the 'object'; something which the athletes also recognise. The material 'tools' relate to the coloured cones and chalk line (and even to the coach's imaginary pushing action), which are used to illustrate the principle of denying space to opposition players. These tools are supplemented and supported by the coach's talk, which involves both instruction and questioning in moving between abstract principles and concrete strategies (Hardman, 2007). Such coach-initiated talk, by connecting the abstract to the concrete, gives personal meaning to conceptualisation and serves to mediate or guide the players' understanding and engagement with the task. However, it would be erroneous to suppose that each evaluative episode focuses exclusively on a single object. This is because 'evaluative rules' (Bernstein, 1996) exist which transmit the criteria or frame(s) of references for legitimate actions and answers. For example, when a coach gives reasons why an answer, response or behaviour is considered good or bad, the evaluative rules become evident. In this respect, they can be considered the "invisible rules of engagement" (Hardman, 2007: 57), which are flexibly treated and manipulated by the coach in response to the object and players' interventions. The evaluative episode ends when the coach shifts to focus onto the next topic to be covered. A crucial point to remember here, however, is that the coach's moment of

action or power would not exist if the activity system of coaching had not been collectively constructed and understood as such. It is this apparent constructed nature of coaching which we now consider.

Developing an epistemological consensus for coaching

Taking into account the case made for AT as a position from which to view sports coaching, and of both the 'objective' and 'subjective' discourse associated with it, a discussion surrounding the development of a consensual epistemology of coaching would seem pertinent. This was recently called for by Jones (2012), following the claim by Abraham and Collins (2011) that a cull of differing perspectives should take place, with prominence being given to coaching's conceptualisation as a 'nested' (defined as 'embedded') decision making process. As opposed to a selective cull (Abraham & Collins, 2011), we view such a consensus as involving an agreement into what kind of knowing do competent coaches engage in, how does it compare with that presented in theory (Schön, 1991), and how knowledge construction, use and representation are interactionally communicated in coaching situations. That way, researchers in the field can really begin to talk to, as opposed to past, each other.

Where we also differ from the perspective put forward by Abraham and Collins (2011), and more recently North (2013), is the degree to which the non-linear, contested nature of coaching should be recognised and engaged with, and, therefore, how coaching should be perceived. As mentioned earlier, many have argued against a modelling approach for coaching (see for example, Cushion, Armour & Jones, 2006; Cushion, 2007; Cassidy, Jones & Potrac, 2009; Bush, Silk, Lauder & Andrews, 2013 among others). Without wishing to revisit old ground, the criticism of the approach (which still remains valid in relation to recent attempts) revolves around the contention that such implied functionality associated

with given levels, ages, reduced forms of 'decision making', time-lines and directions hides a much more complex and multifarious process. Indeed, such an approach in seeking linear clarity within a composite social system appears akin to what Flyberg, Landman and Schram (2012: 2) termed the futile "questing after the ghost of law-like processes".

However, (as has been stated many times in previous work) this is not a refutation of structure (see for example, Jones & Wallace, 2005, 2006) or a collapse into total relativism as some would have us believe. Similarly, it is not a call for coaching to take up an uncritical post-modern cudgel interpreted as an 'anything goes' individualistic attitude, where coaches construct reality within 'closed self-centred' circles' (Engström, 2000). Those of us who continue to both empirically research and practice coaching itself know the activity can never be so contingent. Rather, the case places coaching as a complex social system which, whilst not being devoid of structure (no system can exist without one), recognises elements of contestation and disorder inherently within it. In this respect, it draws from Puddifoot's (2000) critique of what counts as a 'social process', arguing that an increasingly intricate appreciation is required if a more insightful conceptualisation of a process is to be developed. Puddifoot's (2000) reason here is dually-founded. Firstly, it is based on the need to better engage with the question of "whether evidence that one social condition is followed by another would always demonstrate the existence of a given social process" (p.81), and, if so, whether any identified linkage could even be repeated (that would provide evidence for a process). The second major critique centres on the generally accepted unproblematic 'linear' view of such processes, one that is quite uncritically assumed in relation to other possibilities (e.g., of "processes having alternating phases or cycles") (Puddifoot, 2000: 82). Alternatively, a process here is considered subject to and shaped by the practice vagaries of everyday life comprising such actions as 'drift', tinkering' and 'improvisation' (Smith, 2005); something altogether more complex (and realistic) than a direct conjunction of chronological events.

Such a process is also considered a social construction, in that a coach's role and actions would not exist without the tacit agreement of other social actors (i.e., athletes, administrators, policy makers, and referees or umpires). A coach's possibility to act (or make decisions) then, is dependent on his or her place within the given social activity system (Engström, 2000).

This of course, is not a particularly new terrain for discussion, as the contention for epistemic uncertainty in many areas, and particularly pedagogy, has been a constant philosophic thread from Socrates onwards (Hoyle & Wallace, 2008). Perhaps the problem for many coaching scholars is to truly embrace this interpretive epistemology of contingency while being somewhat rooted in an external/realist ontology of a progressive process. That is, recognising the need for a forward momentum of athlete development and improvement, whilst appreciating that how this may be done is dependent on many contextual factors. For some, however, it seems easier to stay pre-set in one perceived tradition; and, in particular, on the conceptually untroubling ground of modelled rationality which, although easy to think with, bears little resemblance to actual phenomena (Flyvbjerg, 2001). However, if we accept that coaching is relational (that is, it occurs between people and not only in the mind of the individual), the positivist paradigm as a founding ontology for it, where behaviours occur from a sequential chain of cause and effect, can only be rejected (Garratt, 2013). This is because, due to the unpredictability of human relations and reactions, no 'unimpeachable' foundations related to a universalising set of practices can ever be so deduced. A principal reason for this refutation is that such a perspective tends to factor out context, assuming relational behaviours take place in a social vacuum (Scott, 2009).

Despite differing perspectives (e.g., Garratt, in press; Bush et al, 2013; Abraham & Collins, 2011; North, 2013), no doubt a degree of agreement exists in and about coaching, in that its primary purpose is about athlete learning and performance improvement. This, we

would contend (as argued earlier [Jones, 2006]) cuts across any artificial simplistic dichotomies related to 'performance', 'development' or 'participation' domains. Although such a position suggests the existence of 'good practice' guidelines somewhat immune from the contingencies of context, the consensus here can be incorporated and addressed (without losing situational importance) by the interpretive paradigm. Here then, we take issue with North's (2013) erroneous claim that interpretivism exists without "reference to any mediated reality [thus] neglecting any commonalities and consistencies evident in the social world" (p.283). For example, the social anthropologist Claude Lévi-Strauss (1963) described common cultural themes (or social understandings) as 'structural universals', while the phenomenologist Alfred Schütz (1972) termed them 'intersubjective agreements'. Similarly, the sociologist Harold Garfinkel (1967) saw social life as governed by rule-following behaviour which gave a semblance of social order and accord. The principal difference, of course, between these interpretations and those from the more objective and external-orientated paradigm is that such systems or rules are not considered independent structures imposed on individuals, but rather as created by people in the 'course of their everyday lives' (Scott, 2009). Garfinkel's (1967) response to the question of why such rules are seemingly unquestioningly complied with was that we all have vested interests in upholding them because of the social order and ontological security they provide. In coaching then, we can interpret an exchange going on, where both coach and athletes sacrifice some power and control in return for the benefits gained from respecting social rules and norms.

Such theorising, it can be argued, encompasses many paradigms (including the post-modernist, post-positivist, critical realist and post-structuralist), and locates coaching largely within the interpretive realm. Although an argument could be made for coaching to somewhat sit within or close to the critical paradigm, the case for it as a functional, positivist, behaviourist activity no longer rings true. In developing this line of reasoning further, we

postulate that coaching can best be located within post-structuralist thinking. Despite being suspicious of objective conceptualisations, post- structuralists have no intention of abandoning general theorising altogether (Seidman & Alexander, 2001). Rather, credence is paid to a cultural structuralism; what Bourdieu, in allowing for the creative interplay of cultural rules, famously called 'a feel for the game'. The important point to be made here is that an acceptance of structure exists, albeit it a sceptical one with recognition given to relational social power (Seidman & Alexander, 2001). Such a stance echoes that of Flyvbjerg's (2001) phronetic 'virtuoso social actor'. Although agreeing with the subjective premise that there is 'no view from nowhere', with an emphasis given to practical situational knowledge, phronesis or the phronetic position also proposes that decisions are taken within a framework of value-rationality. Such rationality, however, doesn't equate to the confined, codified and tidy structures advocated by neo-positivists, but to situated judgement about what is good (within a culture) to do. Again, the related criteria for such judgments come from the moral collective climate or common view among the group or culture under study (Hemmestad, Jones, & Standal, 2010). For Flyvbjerg (2006, p. 375) then, "sociality and history is the only solid foundation we have, the only solid ground under our feet". In this respect, he concluded that "there are rules and there is the particular", thus avoiding total relativism as much as rule-based objectivity (2001: 49).

Finally, in this context, Leone (2010) both critiqued and examined notions of improvisation in management cultures. As opposed to merely springing from agential flourishes, in borrowing from Vera and Rodriguez-Lopez (2007), she considered the notion of improvisation as emanating from structures of 'designed chaos'. Improvisation then, was deemed a creative, spontaneous process, whilst also being characterized by real time and deliberate action. The general point being made through recourse to these various writings is not some 'soggy eclecticism' that uncritically laps up any theoretical approach, a cherry

picking of convenience (Foucault, 2001). Rather, the intention is to cite such thinking as a convergent, consensual case to demonstrate a credible epistemic way forward for coaching. Similar to AT's grounding considerations which allows room for both 'objects' and 'subjects', it is a position which takes account of structure and agency. Importantly, however, it does more than merely advocate an abjected place for artificial accord; a middle ground for the sake of it. Rather, the proposed epistemological stance is reflective of a considered position, of which AT (as outlined in the first half of this paper) provides a concrete example.

Concluding thoughts

As coaching scholars continue to struggle to better understand coaching per se, AT can provide an additional frame of reference towards this end. It can do so by recognising that coaching knowledge grows primarily from an intimate familiarity with contextualised settings which cannot be taught *a priori* (Flvybjerg et al., 2012), whilst still operating within shared understandings of practice. Doubtless, however, such a perspective will not strike a chord with all, as many, while rhetorically conceding that coaching is complex, still clamour for the linear functionality of a given 'toolkit' and an 'effective' practice model.

Accepting that there may be several ways to position coaching, taking account of its non-linearity and (yes!) complex nature, we believe it should be positioned within the interpretivist paradigm, guided by a relativist ontology (incorporating concepts related to social consensus), and a subjective, interactive epistemology. In line with AT, the coaching self is thus positioned as an aspect of social and cultural arrangements, as opposed an autonomous self-contained individual. Unlike the claims and contestation of others, it is a view predominantly developed from empirical work (e.g., Jones Armour and Potrac, 2004; Purdy et al., 2009; Cushion & Jones, 2006; Santos, Jones & Mesquita, in press, among others). Far from being a contingency exclusive straight-jacket, such a framework can easily

house seemingly separate notions as 'object', 'subject' and 'division of labour' (as contained within AT) across coaching contexts. In this respect, it allows for the pursuit of an interpretive agenda whilst not denying the existence of an agreed target goal. Finally, we present such a view of coaching and subsequent theorising as pedagogical, in the sense of assisting readers for what is required of them, "to learn what can only be implied, and never as direct advice" (Flyvbjerg et al, 2012: 4). In this respect, we have tried to move beyond critiques of modelling and rationality as related to coaching, to a more practical and accurate version of its grounding epistemic reality. In doing so through presenting the case for AT as a sense making lens for sports coaching, we hope to have gone some way to addressing the theory-practice inconsistency often evident within the field, enabling a step forward for the discipline of sports coaching as a whole.

Notes:

[1]We present this empirical passage not as an example or illustration of broader findings,but as an instance of how AT can be used to make sense of such data.

[2]The study from which this extract is drawn involved a broad ethnographic inquiry into the pedagogy of coaching. The focus then, was predominantly on the coach, and how his interactions (particularly in terms of humour) impacted on the context and the athletes' general learning.

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