Understanding undergraduate sports coaching students' development and learning:
The necessity of uncertainty

Abstract:

Despite recent attention, research is yet to adequately focus on sports coaches' intellectual development as a consequence of their formal learning experiences. Drawing on the work of Perry, the aim of this article was to explore how the intellectual development of undergraduate sports coaching students was affected by the social pedagogical setting exposed to. 27 students from two different universities were selected through network and convenience sampling, and 'tracked' over their three year course(s) of study. Data were gathered through focus groups, video diaries and reflective written logs. Findings revealed that over the course of their study students generally progressed from a dualist to a more relativist view of the world. Such a movement, however, was far from unproblematic and uniform. Rather, it was subject to the vagaries of assessment, course structure, the epistemic range of modules experienced, and in particular the relationships established with staff members.

Key words: William Perry; intellectual development; coach learning; coach education; qualitative.

Introduction

Sports coaches' education and learning has been subject to considerable recent investigation (Nelson, Cushion, and Potrac 2013; Piggot 2012). Although acknowledging various influences, it has subsequently been suggested that coaches learn considerably more from informal and non-formal sources as opposed to official coach education programmes (Cushion et al. 2010). No doubt useful in one sense, a problem with this body of research is that it has generally ignored coaches' intellectual, or epistemological, development; that is, how coaches' perception of knowledge construction, learning and sense of self alter over time as a consequence of their learning experiences (Perry 1999).

In this article, we explore how the socio-pedagogical learning setting affected the cognitive evolution of a group of undergraduate sports coaching students. Within it, we discuss how the interplay between self, structure and agency affected the students' intellectual movement between the different positions described in Perry's progressive 'Scheme of Ethical and Intellectual Development'. In doing so, we both highlight the utility and further problematize the Scheme as a structural developmental guide. This is particularly in terms of the roles of context (of *where* learning takes place) and that of the teacher (i.e., *who* stimulates the learning) with regards to student-coaches' intellectual and identity formation.

Studies into coach education have routinely criticized the fare on offer in terms of not affecting practice (e.g., Chesterfield, Potrac, and Jones 2010; Piggott 2012). Much of this critique has focussed on an inability to appreciate the situatedness of coaching, alternatively offering varying forms of de-contextualised, techno-rational 'indoctrination'. Allied to this belief, has been the

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commonly cited position that coaches 'learn from doing' (Mesquita et al. 2014). Although useful in pushing the belief that no 'one size fits all', such work has generally failed to rise above the relativist agenda; that is, to appreciate what can be inferred from coaches' development at an epistemological level. This relates to better understanding the contested relationship between the learner, subject matter, and knowledge (in terms of *what* is understood). The result has been a polarisation of opinions between 'what works' from coach education agencies, and a contingent position from critical scholars who have failed to go beyond an advocacy for situated learning. Both positions then have neglected to appreciate the *transformation* (as opposed to mere understanding) by coaches of knowledge presented to them. According to Entwistle (1994), this knowledge transformation requires the learner to make personal sense and meaning of information exposed to, which, in turn, allows 'an integrated knowledge-in-action' to be constructed (Schön 1987, 25).

Although accused by some as lacking 'real word' relevancy, evidence exists that formal education can play a critical role in students' cognitive development. This is particularly in terms of exposing students to epistemological considerations related to "the 'why' and 'what for' of their own beliefs and decision making" (Stoszkowski and Collins, 2014, 781). It is a process akin to meta learning, where learners become "aware of task demands and of how, or even whether, to meet those demands", in addition to "assessing and exerting control over [personal] cognitive resources" (Biggs, 2011, 185). Not only does such learning involve the development of reflective skills critical to becoming an effective practitioner, but also a change in the way individuals see themselves and the world around them (Erichsen, 2011). Despite such claims, however, we still know little about

how this process is manifest in the development of sports coaches as witnessed through undergraduate provision.

In addition, the value of the paper also lies in responding to Cushion et al's (2010) call for greater longitudinal research into coach development; to better capture the nuance of on-going learning. This is not only in terms of what neophyte coaches say at a particular point in time, but how they evolve their perceptions of development over a period encompassing a variety of learning experiences. Such work relates to paying more attention to the practices, people, regimes of competence and boundaries that serve as the constitutive texture of identity formation and *become part of who we are* (Wenger 2010).

Perry's theoretical framework

From a series of interviews conducted with Harvard and Radcliffe undergraduates during the late 1950s and the 1960s, William Perry created a 'Scheme of Ethical and Intellectual Development'. In raising questions about 'grouping, curriculum design, and teaching method' (Perry 1999, 235), Perry mapped a relatively consistent educational journey—what he characterized as 'an intellectual Pilgrim's Progress' (1974, 3). Such progress was witnessed in a steady evolvement (from dualism to relativism), in terms of how students view the nature of knowledge, truth, the world, and one's responsibilities and values. The Scheme's significance, however, has recently been questioned in terms of a vastly different current socio-historical context, and its influence on learners' sense of self, their relative silence or radicalisation, and response to authority (Moore 2009).

Notwithstanding such reservations, Perry's Scheme is still considered a sophisticated and compelling account of the relationship between intellectual endeavour and development. Hence, it still holds relevance in inviting educators to consider 'where students are' in guiding timing and methods of teaching (Clarkeburn et al., 2003). Similarly, echoing the demands of complex practice (like coaching), the Scheme is able to shed light on how contextual actors manage the multiple frameworks, ambiguity and conflicting perspectives that confront them. Consequently, Perry's work has been used within areas such as biology (e.g., Katung, Johnstone and Downie, 1999), economics (e.g., Thoma 1995) and engineering (e.g., Marra, Palmer, and Litzinger, 2000).

Within the Scheme, Perry identified nine 'positions' describing how undergraduate students saw knowledge and the process of learning. The positions represented an increasing level of cognitive development which were grouped into four main categories: dualism (stages 1-2), multiplicity (stages 3-4), relativism (stages 5-6), and commitments (stages 7-9). Although the categories and steps encapsulated presented a structural approach to ethical and intellectual development, Perry's model was not meant to be read as linear in orientation. Rather, he believed that 'students could be in several different positions at once with respect to different subjects or experiences' (Knefelkamp 1999, xii). Furthermore, Perry argued that students may find ways of delaying or denying the existence of multiple truths that challenged their understandings of the world. In this respect, students could shift their standpoint to both progress and avoid further learning, In relation to the latter, this could occur through what Perry termed 'temporizing'; a period where students, often aware that other steps are approaching, may 'pause' to gather forces or wait for something that could motivate them to engage again in their growth. Similarly, some students go into 'retreat'; a regression to previous positions and the apparent safety of dualism. Finally, a strategy of 'escape'

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was also mentioned by Perry (1999) as students detaching themselves to a middle position as a way to avoid responsibility. The phased structured rationality of the Scheme, therefore, was tempered by considerations of reality. Each of the Scheme's steps is now described in turn.

Perrys' Scheme of Ethical and Intellectual Development

Basic Dualism, Position 1, represents a dichotomous perspective of the world. Students here see knowledge as known facts and absolute; e.g., good-bad, right-wrong. Within it, the belief exists that to receive the right answers, students must listen to authority (e.g., lecturers) as it holds the valuable truth. Position 2, *Multiplicity Pre-legitimate*, is promoted when students are confronted with pluralism. Here, different points of view are acknowledged, even among authorities. Despite this awareness, students largely remain in opposition to the abstractness and diversity of interpretation (Love and Guthrie 1999). Consequently, authority remains the main source of information. Students within this position are inclined to feel fear, stress and sadness when their beliefs are confronted. Hence, they tend to accept the existence of different opinions as temporary.

The progression to Position 3, *Multiplicity Legitimate but Subordinate*, occurs when students realise that even 'good' Authorities don't have all the answers. Although students allow for some uncertainty, they still believe that finding the truth is just a question of time. Hence, where the right answer has not yet been found, it is assumed that no answer is wrong and everyone has the right to an opinion. Furthermore, in order to achieve the standards expected, they still look to authority for guidance and confirmation (Perry, 1981).

Position 4, *Late Multiplicity*, symbolizes an important turning point for students, where two

distinctive pathways are identified; *Multiplicity Correlate* (4a) and *Relativism Subordinate* (4b). Within *Multiplicity Correlate,* uncertainty is no longer seen as avoidable. Rather, primacy is given to the belief that everyone has the right to their own opinion which, in turn, carry equal weight. Here then, students assume multiplicity as possessing equally legitimacy (Perry 1999). The transition to *Relativism Subordinate* commences when, in discussions with Authorities, students sense the weakness of their arguments as not being underpinned by robust reasons or evidence (Perry 1999). They begin to differentiate an opinion from a 'supported' opinion.

During position 5 (*Contextual Relativism),* students move from seeing relativistic thought as an exception (Position 4) to identifying it as the norm. Here, notions of right and wrong are viewed as context specific, while also evaluated in terms of consistency and coherence. Dualism is now resigned to the category of 'special cases', while authorities are considered diverse and divergent. In Position 6 (*Commitment Foreseen)*, a truly relativistic world is accepted, where infinite context requiring constant decisions exist. At this point, students start to feel that commitments need to be made 'in order to establish their bearings in a relativistic world' (Love and Guthrie 1999, 12).

Positions 7, 8 and 9 represent different degrees of commitment within the relativism accepted. This makes them not as clearly defined as other positions. Nevertheless, students further conceptualise values and knowledge as temporal and contextual. Although a somewhat contentious issue, it has been argued that an element of transformation (Belenky et al. 1986), as opposed to mere cognitive development, takes place during these phases. This is because, within them, individuals integrate personal or 'inner' knowledge (based on past experience and introspection) with that gained from others. For many, such a development is initially deemed

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risky and will, therefore, only be attempted in areas considered 'safe'. With increased confidence, greater responsibility for decision making is assumed. According to Perry (1981, 97), this is the time when 'one finds at last the elusive sense of "identity"'. *Commitment* then, gives a place to stand in uncertainty, creating apparent structure in the ambiguity of the relative. When they reach position 9, Perry (1999, 171) considered students to be mature in relation to being in a partly settled condition about what they can determine and what is left 'in the hands of fate'.

Methods, participants and procedures

Taking account of its social nature, the current project was located within the interpretive paradigm. Such a paradigm is predominantly utilised to address questions related to individuals' understandings of actions, often through the meanings found in symbols and language (Crotty, 1998). It is also well suited for gaining insights into issues about which very little is known, such as the topic under study. More specifically, the objectives of the work were addressed through the use of three research methods within a broad ethnographic framework. These included individual reflective logs, video diaries, and focus group interviews.

Reflective logs (RL)

Each participant was requested to keep a reflective log. The emphasis here was on reflection upon personal experiences and questions. The purpose was related to getting participants to consider their own development over time; a process taken as mediating experience and knowledge (Schön 1987). It was anticipated that the logs would provide insight into the student-coaches' views of their own learning and evolving identities.

Video diaries (VD)

Each participant was also requested to keep a video diary. Video diaries are often considered a way for individuals to frame their own lives (Noyes 2004); enabling them to tell their *own* stories from their *own* situations. It also marked an effort to engage with the student-coaches' mundane, everyday experiences over time. While recognizing no actual escape from the observer's gaze and the project's hierarchy could be possible, what was nevertheless hoped for from the use of such a method was less 'mediated' representations of participants' selves (Pini 2001).

Focus group interviews (FG)

Semi-structured group interviews were also conducted with the participants. The central purpose of the interviews was to elicit the student-coaches' perceptions of themselves and their development. Hence, the interviews focussed on concrete events which the students felt important in their intellectual progression, in addition to feelings about their evolving selves. It was anticipated that the data generated would produce insights less accessible without the interaction found in a group (Morgan 1988). Being semi-structured in nature, such interviews allowed questioning within a particular framework, whilst maintaining agency to probe beyond the immediate answers given. This offered the flexibility for gaining further information on issues deemed important, enabling both clarification and elaboration to take place.

Participants

Although the initial participant cohort comprised a group of 32 sports coaching students, seven failed to complete the course for a variety of reasons. Project data were subsequently drawn from 27 participants, as two of the students that withdrew made significant contributions during the first

two years of the study. More specifically, 12 came from Cardiff Metropolitan University (UK), and 15 from the University of Porto (Portugal). The participants were chosen through network and purposive techniques (Patton 2002), which involves sampling with a particular purpose in mind. The principal objective here was not representation of all possible variations, but a deeper understanding of analyzed cases. Hence, although availability was undoubtedly a consideration, of greater importance within this selection process was securing participants most likely to contribute appropriate data, both in terms of relevance and depth. Furthermore, recognising inevitable differences between and within the differing cohorts, taking into account the courses on offer and the requirements for entry, the overall sample was perceived as being located within a similar developmental domain.

Procedure

The students were encouraged to submit log and video diary entries as and when they wished throughout their three years of study. Additonally, they participated in at least four periodically spread focus group discussions per year. Consequently, 32 group interviews (comprising between 3-5 participants) on both sites were held during each year, making a total of 96 throughout the 3 year duration of the project. The full data set further included 153 video diary and 99 written log entries. The scheduled frequency of the focus groups ensured a certain regularity of data flow; a situation which contrasted with the less dependable reflective logs and video diaries; methods considered somewhat onerous by the students. Most of the data cited in this paper then, are derived from the interviews. However, in addition to the study's stated aims, the focus group interviews were loosely structured on issues raised from the students' logs and video diaries, thus providing opportunities for the latter's further examination, elaboration and deconstruction. Such a

procedural strategy proved effective in provoking students' interest and engagement within the focus groups, with the issues discussed being directly related to concrete experiences of what and how the students were learning (Wibeck, Abrandt Dahlgren and Öberg, 2007).

Data analysis

The collected data were transcribed and analysed as soon as they were collected, so that the next stage of the research could benefit. This involved line-by-line scrutiny of the submitted reflective logs and focus group interview transcripts, deconstruction of the video diaries, and the production of analytical memos to integrate theory into the analysis. In this way, analysis was not viewed as separate from but intrinsic to the data collection process. Hence, making sense of the data was seen as both a recursive and iterative process; one that involved working back and forth between data and theory (Wolcott 2001).

In relation to ethical considerations, the scope of the research and their role within it in addition to guarantees of confidentiality and anonymity were explained to the student-coaches before they agreed to participate. Subsequently, all the students who partook in the study signed informed consent forms. Hence, all the names used within this paper are pseudonyms. The students were also informed that they could leave the project at any time without fear of penalty.

Results

Results from the data were subsequently organised under three principal themes; 'Uncertainty and frustration'; 'A progression to relativism'; and 'The continued progression to more complex cognitions'. Each is now presented in turn.

Uncertainty and frustration

A finding during the student-coaches' first few months of study was their desire for ontological certainty. In their own words:

Steve: *He (the lecturer) never gives you a straight answer. You ask him questions, he just argues the answer.*

Gav: *He's like, "um, yeah, ah, well, there's this and there's that. And..."*

Gav: *You just need certainty about some things with coaching. He doesn't sound stable at all. I don't know... scared!*

Steve: *You're more confused leaving than going in.*

(FG, December 2011).

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Diana: *It's like when you are heading somewhere. You have two ways: the straight one and one which goes around the block. She (the teacher) always takes the longer way round to say things when she could be more direct and less confusing (FG, April 2011)*

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Mary: *My first [coaching science] assignment was a bit scary cos I'm not sure I did it right, and I want to get everything right (VD, November 2011).*

Such frustration was caused by the ambiguity encountered as the student-coaches' established dualistic way of thinking was increasingly questioned. This early phase of their higher education experience then, was characterised by the students' perceptions of themselves as mere receptors of information. Having their notion of knowledge as an accumulation of given facts challenged by

relativist positions created resistance among the students, who saw staff as the principal sources of authority. This search, and respect, for 'knowledge-authority', however, stretched beyond the staff to other student-coaches' themselves. Thus, despite being placed in discussion groups, the students appeared to defer to one who 'knew more'. In the words of three;

> Steve: *We sometimes discuss matters together, the how and what of coaching, in order to dissipate any doubts*
>
> Rui: *It's good because in a group of four or five there is always one that understands the things very well, so he (sic.) really becomes the 'lecturer'. (FG, February 2012).*
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> Tracey: *the night before we revised as a group. This helped a lot because others had learnt it, and able to explain it properly…and it made sense to me (RL, December 2011).*

Such a tendency was more than a simple 'recourse to authority'. Rather, it resembled a search for a collective security; an affirmation of the students' developing perceptions. Although initially evident prior to exams, this 'checking of understanding' also became prevalent in relation to general issues and content as the course progressed.

Instead of accepting insecurity as a challenge to personal progress, most of the students found alternative means to make them more secure in their learning. These included borrowing students' notes from previous years, and sticking rigidly to only revising information given out in the lecture-based sessions. Despite such tendencies, the students were nevertheless evolving their epistemological perceptions of knowledge, particularly when encountered by what they considered to be more than one 'sound argument' (Dai: *'Different lecturers have different opinions whilst*

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having good arguments for that… Still, I can't make my mind up') (VD, October 2012). Similarly, as the students progressed through their second year of study, evidence emerged of them better accepting their role in the construction of personal coaching knowledge (Tom*: 'I dunno if I want… like, this year, I don't know if I'd want definitive answers'*) *(FG, December 2012).*

A progression to relativism: Course structure and staff relationships

A principal factor in the development of students' into more 'relative' learners was the structure of the courses experienced, which encouraged engagement with the content and related objectives. One component seen as particularly useful was when three staff members gave differing opinions on coaching; from rationalistic, pragmatic and relative viewpoints. The students then were broken into discussion groups to debate, not only the merits of each case but also personal stance(s) in relation to them. In the words of Steve;

> Steve: *I've had one opinion [about coaching] which was fine, and then someone else came in to give a neutral perspective. And today we're getting someone that actually disagrees with the first opinion. It's good, I actually started reading about coaching to understand it better. Me, reading – that's astonishin' (laughs)!! (FG, October 2012).*

Additionally, seminar sessions were viewed as very beneficial in and for the students' cognitive development. Here, they were actively encouraged to discuss perceptions and answers;

> Tom: *I realise now there isn't one answer. I also want to be aware of all the possibilities so I can make the most informed choice.*
>
> Q: *And where do you get those possibilities from? How would you become aware of them?*
>
> Heather: *From discussion I guess, during the seminars…because the lecturer always asks*

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us what we think, so we can give our own opinions about it, and from there we can gather

other options (FG, December 2013).

Such a structure which included interaction opportunities within traditional lecture-based sessions, not only allowed but ensured a level of engagement and preparatory interpretive work: (Steve: *'It gets you to read them [articles on coaching], doesn't it. You have to, because you know you're going to have to discuss them' (FG, December 2012).* A challenging issue here, however, concerned the different areas of knowledge and their respective epistemic foundations, which the students were subjected to. For example, the degree courses undertaken consisted of modules related to physiology and biomechanics in addition to pedagogy and sports coaching itself. Within some modules then, students were exposed to absolute, dualistic information, while in others they were expected to behave as relative learners. A consequence of such a situation was to make the transition from dualistic to relative thought additionally problematic. In the words of one;

> Steve: *... each lecturer in different subjects has their own beliefs and views. So*
>
> *you get some who just give you closed answers and you get some who are open-answered*
>
> *about everything. Which makes it really hard for us (FG, May 2013).*

Despite such obstacles, the students were journeying from a more dualistic position to one increasingly aligned with contextual relativism. In addition to the course structure, another principal reason for this was the staff member(s) exposed to. Hence, the students' readiness to discuss answers and considerations appeared to be heavily influenced by the relationship with the lecturer in question. This, in turn, was linked to the aforementioned structure of course, which better (or not) allowed such relationships to flourish:

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Mary: *This is about feeling comfortable with the lecturer. So, if he [lecturer] knows my name, we know each other a little bit...or if he takes my seminar, I have more contact. Some lecturers, I don't even know who they are.*

Tracey: *He talks to you, not at you. And asks your opinion, not giving his all the time (FG, October 2012).*

What seemed to develop this perception was a belief that the staff in question cared about the students' learning. This was more than simply viewing staff as approachable people (Steve: *'I like the fact, just before seminars, he sits down with us, and just talks about everything'*) (*FG, February, 2013*). Rather, it appeared as a justification for the students' changing cognitive engagement. For example,

Tracey: *In the first year, we thought 'They're not giving us any support, they don't care'. But they were [caring], coz it might just have been that they were trying to make us to think for ourselves.*

Fran: *It is just seen as not caring, because they don't want to spend all their time on you and then you don't put in any effort. So, you can understand it a lot more; it's a kind of caring, bit like tough love.*

Tom: *I find with certain lecturers, in that awkward silence and no one answers, and I think 'I could say something here', but with her (lecturer) I want to say something because it's her (FG, March 2014).*

Despite the importance attached to staff empathy, which created the context for more relative engagement, staff were still viewed as authority figures (Steve: *'He's [lecturer] willing to chat to us…so we're all ready to listen to him'*) *(FG, February 2013).* Consequently, even though the students were becoming aware of a multiplicity of views, compliance with authority, in this instance the wishes of staff, still loomed large in their intellectual development and learning.

The continued progression to more complex cognitions and the strategic nature of students' learning

As the student-coaches progressed into the final year of their course, evidence emerged of their development, not only as 'relative' but also what Perry termed 'committed' learners; i.e., where responsibility for personal judgments were increasingly made. Similarly, there was a perception of their roles as creators of personal knowledge (even if compliantly told to do so by staff);

> Steve: *I told my supervisor I find it hard agreeing or disagreeing with someone...and he said 'you've just got fight it and think through it.' And I thought OK, but I still don't know if I agree. It's hard to find if you're right or wrong, to find your own perception of everything; but obviously in academic and I suppose in coaching terms you've got to critique everything and fight it.*

> Gavin: *If they gave you just one answer which fits all, it wouldn't work; coaching isn't like that. At the start I was like, 'just tell us the fricking answer!'…and he said you have to pick your own encounter, and now that makes perfect sense.*

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Tom: *Coaching has to be what you make of it… trying to understand what has the most value to you and why (FG, May 2014).*

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Steve: *If you are moulded into a 'robot' coach, how is that going to help? How did the 'big' managers/coaches get to where they are? By being told what to do and how to do it? No, they were individualistic, having their own methods and approaches, being creative (RL, November 2013).*

Although, as suggested, the curriculum structure and developing staff relationships impacted on the students' movement to a more relativist way of thinking, of arguably more importance was their position as 'strategic learners'. In this respect, the students appeared, almost without exception to be primarily concerned with 'passing the test' and 'finding an answer' as the following excerpts illustrate;

Steve: *Because every lecture, every seminar, every little task counts now, everyone's taking it seriously. Now, in a seminar, you can sense that people want to speak, because it counts (FG, October 2012).*

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Tracey: *It's good because it opens your mind, but eventually you want a right answer, who's saying the right thing on this topic. Who's right? (FG, May 2013).*

The movement towards relativism in the students' thinking, therefore, was more problematic than

first appeared. This was principally related to the fact that they still considered staff (and the institution) as authority sources. Allied to their dominating tendency to be strategic learners, such compliance somewhat ironically ensured their engagement on a general trajectory towards relativism; a form of 'relativism' that could be viewed as infused with subordination.

Martin: *So I just find it all a little bit too woolly, really…I'd prefer somebody to say "This is the way to do it." And crack on…I think.*

Tracey: *…but, I suppose, they want us to…see how we interpret things, probably. Because that's what coaching's about, right?*

Steve: *Now I just think, yes OK, I'm on the right track, I can do it (FG, May 2013).*

The students' increased relativist way of thinking also had an impact on how they saw staff; not as *the* authority sources, but rather *an* authority source always in contestation with others. This questioning shift was facilitated (perhaps rather paradoxically) through students' closer personal relationships with staff. These were, in turn, attributed to the increased number of seminars during the second and third years of study (*Daniel: 'He's [the lecturer] someone I can have a conversation with now'; 'I've got to know her more as a person'*) *(FG, May 2013).* Allied to this acceptance of multiple realities and perspectives, the students increasingly questioned the 'correctness' of *staff (Steve: 'It doesn't mean they are actually right') (FG, October 2013).* Such disagreement, however, can also be seen as somewhat reinforcing the staff's standing, with the students sometimes taking a diametrically opposed position. Hence, the students often came to

define themselves in relation (i.e., in opposition) to that of their teachers. Taken as such, the power and influence of the staff over the students' intellectual development was still very much in evidence.

A final catalyst in the students' general progression towards relativism was the influence of peers. As each grappled with the move from dualism, despite content-based disagreements, the students found security in each other's frustrations. Here, perspectives were shared, and perceptions influenced; the result being a general convergence towards increasing relativism (in line with the overall course objectives). In words of two;

> Rod: *I think what influenced me more were others, who see things the same way (FG, June 2013).*

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> Rui: *I frequently have discussions about things with the others…it gives me new ideas about coaching, a new opinion on it…..it makes me re-evaluate my conceptions. It also allowed me to find arguments to support my beliefs (FG, June 2013).*

Discussion and Conclusion

Our findings both agree and challenge existing work which has used Perry's scheme as a 'sense making' lens. In terms of the former, no doubt a progression in terms of the students-coaches' intellectual maturity took place over the duration of the courses; a development in line with Perry's thinking. This was witnessed through a broad advancement from dualistic to relativist cognitive perspectives. More significantly, however, our findings diverge from Perry's scheme in a number of ways. For example, and perhaps most crucially, they highlight how power continues to be

manifest in students' intellectual development. Although others have reported on Perry's under-appreciation of power, the precise nuance of its workings continue to lack clarity. Indeed, although Perry was aware of the need to 'get to know students' to affect their intellectual and ethical development (Geisler-Brenstein et al. 1996), the power dimension within this unavoidable hierarchical relationship was given inadequate attention.

In contrast, our study stressed the importance of 'who' is the teacher in student-coaches' intellectual development. This was evidenced in two principal ways. Firstly, as a result of more meaningful staff relationships and accompanying perceptions of care; discernments arrived at through increased opportunities to interact with and discuss content-relevant concepts. Secondly, staff proved catalysts for students' cognitive maturity through their espoused positions, against which students defined their growing 'independence'. Such 'opposition' is different from Perry's recognition of 'rebellion' (a stage also conceptualised as 4a). This is because it acknowledges more than just accepting that where authorities don't know, safe ground exists for individuals to decide upon their own answers. Rather, acknowledging that no such unfettered choice from unlimited options exist, our conceptualisation posits students' rebellious thinking as being more-than-often in relation to what their teachers had already taught them. Consequently, it could be argued that stage 5 in Perry's scheme, '*Contextual relativism*', is somewhat misnamed. Alternatively, much greater primacy could be given to 'teacher considerations' in terms of when and how this relativist state is arrived at.

Of equal importance in stimulating the movement from dualist to relativist thinking, was the structure of the course. Not only did the influence of small discussion groups and seminars come

to the fore here, but also the assessment demands. The students repeatedly showed themselves to be strategic learners, much more attuned and concerned to 'pass the test' than any engagement with the wider notion of 'learning' as related to coaching. To this end, they consistently complied with course and staff demands which, rather ironically, included a call for greater independence of thought. Again, then, Perry's latter stages of '*Contextual relativism*' (Position 5) and '*Commitment foreseen*' (Position 6) can be critiqued for neglecting the influence of content. Rather, it appeared as if the students in this study remained somewhat anchored in looking for and responding to what authorities wanted of them, a characteristic of Perry's Position 3 ('*Multiplicity legitimate but subordinate*').

Although this inherently powerful link between learning and assessment may appear disheartening to pedagogues who champion the merits of wider learning for its own sake, on deeper reflection, it brings a liberation of its own. This is because, if students are driven by the instrumentality of 'passing the test', then as long as the assessment is adequately conceptualised and considered, what and how they learn can be controlled to a significant degree. Hence, if the aim is to get student-coaches to behave as relative, reflective and insightful thinkers, the task for coach educators is to devise and structure appraisals that stimulate and engender such objectives. This would appear of particular relevance to an activity such as coaching which is both personal and social, and one which demands engagement with insecurity, ambiguity and considered creativity.

A further point of contention evident in our findings lay in where the seeds of identity development are sown. According to Perry, this process only begins in earnest during the '*Commitment within relativism*' (Positions 7, 8 and 9). However, for our students, it appeared to start much sooner. For

example, early in their development, the students emulated the beliefs of authority figures (and each other), which generated aspects of their (social) identity construction. What seemed to accelerate this commitment were the work-based experiences embarked upon; and, more specifically, the quality of these experiences. The more stimulating the interaction, be it with a given authority or the context, the stronger the commitment to both relativist positions and personal coaching identities. Indeed, as discussed, the influence of authority figures continued through their intellectual progression in many and varied ways, perhaps most significantly through their aped frames of cognitive reference. What also proved problematic for the students in this regard, was the epistemic range of modules experienced. Here, some units were taught from an interpretive standpoint, while others were rooted in a positivistic paradigm. Again, although Perry recognised the problematic influence of students' epistemic assumptions and their effects on learning (Clouder 1998), the precise workings of in-built course contradictions (as witnessed) have remained largely unexplored. The results from this study pointed to a degree of student confusion from this inconsistency, which proved something of an obstacle to the student-coaches' general intellectual development. Similarly, our findings suggest that greater attention could be paid to how and why a person transitions from one phase to another. Although Perry concedes that an individual can be at different stages at the same time with respect to different subjects, little attention has been given to how this impacts on identity development or the commitment to a given subject (e.g., sports science or sports coaching) that teaches from differing epistemological positions. In countering the argument that student-coaches should be exposed to multiple free-standing alternatives, perhaps coaching degrees and related professional preparation programmes should locate their courses within a given epistemology (e.g., interpretivism as opposed to positivism). This would allow both a depth of cognitive engagement, and a security of identity within developing coaches.

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The move towards a greater acceptance of relativity is particularly appropriate for the field of sports coaching. This is because it gives credence to those who argue for the inclusion of complex concepts and a constructivist perspective, as opposed to rationalistic discourse, within coach education courses (e.g., Jones, Morgan and Harris, 2012). This was a point recently argued by Jones et al (in press), who made the case that decontextalised simplicity won't help us understand complex things, like coaching. Borrowing from Law (2006), they went on to claim that some coaching scholars' refusal to (sincerely) acknowledge (and therefore pedagogically engage with) the messy nature of coaching, "actively repress the very possibility of understanding the reality they purport to study" (Jones et al., in press). Taking account of coaching's complex nature then, like students in general, developing coaches should be challenged to leave the safe ground of dualistic certainty as early as possible. Although this often results in a degree of resentment and defensiveness against the new learning, it is the price to be paid as they move towards a degree of relativism: a pre-requisite to understand the inherent complexity of the activity. Not to engage student-coaches' in such non-linear ways of learning, by holding to a view of coaching that can be unproblematically elaborated into given systems of knowledge, does developing practitioners a continuing disservice.

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