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“I’ve had a magical journey”: Understanding how international sports coaches learn through cross-sport boundary encounters

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Abstract

Recent approaches to facilitating coach development place considerable emphasis on social interaction aimed at enhancing participants’ learning through collaboration and discussion. This investigation examined the usefulness of utilising the Landscapes of Practice (LoP) framework to better understand such ‘social’ learning, specifically focussing on boundary interactions experienced by international coaches. Having recently undertaken a cross-sport development programme, 14 coaches from 11 sports were interviewed and a thematic structure was subsequently established featuring four categories: (a) confidence, openness and authenticity, (b) sense making, (c) reflection and mentoring and (d) reconceptualising and reframing. This investigation found strong support for the usefulness of the LoP framework. Furthermore, knowledgeability and boundary interactions were insightful concepts to better understand how coaches learnt through interactions within, and beyond, the programme. For example, cross-sport interactions enabled some coaches to learn more effectively because they felt less encumbered by peers’ judgements when compared to other environments.

Keywords: Landscapes of Practice, Communities of Practice, Wenger-Trayner, Dialogical learning mechanisms

Introduction

Over the last 20 years, organisations across the world with a responsibility for coach development have shifted away from predominantly technically-focussed (i.e., sport-specific techniques) and didactic (i.e., direct instruction from a tutor) approaches to designing coach learning pathways (Trudel et al., 2020). Resultantly, coach learning is currently increasingly focussed on inter-personal (e.g., developing positive coach-athlete relationships) and intrapersonal skills (e.g., reflection; Vinson et al., 2016). Many of the approaches to facilitating such aspects of coach learning place a heavy emphasis on social interaction with the aim of enhancing participants' learning through collaboration and discussion with tutors and peers (Culver et al., 2019; Ollis & Sproule, 2007). Throughout this 20 year time period, a lens which has been frequently used to better understand coach learning, with a particular emphasis on elements such as collaboration and discussion, has been the evolving social learning theory of Etienne Wenger-Trayner. Wenger-Trayner's (previously Wenger) theory has progressed through three 'phases' (Wenger-Trayner & Wenger-Trayner, 2020). The evolution of this work reflects the Wenger-Trayners' ongoing consultancy and scholarship in this field including giving due consideration to criticisms of their work. Therefore, it is first important to briefly outline the nature of each phase and provide an insight into the critique which helped to stimulate the next iteration. The first 'phase' of Wenger-Trayner's work (Lave & Wenger, 1991) introduced situated learning and the concept of legitimate peripheral participation (LPP) to explain learning as a journey from newcomer (e.g., a novice coach) to old-timer (e.g., an expert coach). However, Fenton-O'Creevy et al. (2015) highlighted that not everyone becomes an old-timer and so proposed that a range of participation metaphors (e.g., apprentice, tourist and sojourner), may be helpful in analysing the degree of investment and permanence a

learner may enjoy within any particular context. The second 'phase' focussed on Communities of Practice (CoPs; Wenger, 1998; Wenger et al., 2002) as a lens through which to better understand how groups of people can help each other to solve daily work problems; a framework which became prominent in the field of coach learning spanning a considerable volume of research (e.g., Bertram & Gilbert, 2011; Culver & Trudel, 2006, 2008; Garner & Hill, 2017; Stoszkowski & Collins, 2014). The vast majority of the research relating to CoPs recognised the potential usefulness of the theory to enhance coach learning. Nevertheless, there have also been a number of criticisms relating to the rigour of the underpinning theory and supporting empirical evidence (Mallett, 2010). Principally, these criticisms suggest the role of the individual's learning has received insufficient attention (Mallett, 2010); that the CoP concept fails to adequately deal with the power relations relating to the internal operations of the groups (Fuller et al., 2005); and that research has yet to address how and why social, cultural, material, and institutional resources are developed (Bertram et al., 2017). Similar criticisms have been levelled at the CoP concept across a wide number of disciplines such as policing, education and healthcare (Crawford & L'Hoiry, 2017; Gorodetsky & Barak, 2008; McKellar et al., 2014).

Partially in response to such criticisms, Wenger-Trayner et al. (2015) published *Landscapes of Practice (LoPs): Boundaries, identity and knowledgeability in practice-based learning* as a way of theorising how individualised professional learning occurs across multiple sites and roles. LoPs represents the third 'phase' of Wenger-Trayner's social theory of learning, although the concept has, as yet, received relatively little scrutiny within sports coaching (Duarte et al., 2020). In particular, there has been only limited consideration of the extent to which the framework can address the criticism raised within 'phase 2' and whether it can offer additional insight into the phenomena of

coach learning. One concept that featured strongly within Wenger-Trayner et al. (2015) which offers the potential to help better understand coach learning is that of boundary encounters. Although evident within Wenger-Trayner's earlier work, the potential for consideration at what happens at boundaries is given considerable further attention within phase 3. Boundary encounters involve an individual contending with new information or practices and might, for example, feature a coach working in a new context which is very different from anything they have experienced before or engaging with a new mentor who is challenging some of the coach's fundamental beliefs about their practice (Goos & Bennison, 2018). Wenger-Trayner and Wenger-Trayner (2015) posited that learning occurs through such boundary encounters. To date, no research explicitly focussing on boundaries as learning mechanisms has been conducted in the field of coach learning.

This research aims (a) to examine the usefulness of the concept of LoPs in international coach learning, with a specific focus on how this framework can extend understandings constructed within phases 1 and 2, (b) to specifically explore the nature of the boundaries experienced by international coaches having undertaken a cross-sport development programme and (c), to investigate the perspectives of individual learners in relation to what mechanisms are apparent at boundaries which impact coach learning. To address these aims, we will first turn to a review of the coach learning literature emanating from phases 1 and 2 of the theory, with a particular focus on the effective functioning of CoPs. In the second section of this introduction we will consider the criticisms levelled at CoPs from a theoretical and empirical perspective, and discuss how Wenger-Trayner and Wenger-Trayner (2015) have sought to address the gaps highlighted by scholars from a wide range of disciplines. In the final part of this introduction we will specifically examine the concept of boundaries and how a better

understanding of boundary encounters might be useful in better understanding coach learning.

A social theory of learning: CoPs - antecedents, enablers and barriers

Wenger-Trayner and Wenger-Trayner (2015) posited that learning is much more than the storing and retrieval of information. For Wenger (1998), learning fundamentally involves the becoming of a certain person and the development of new or stronger identities (Culver & Bertram, 2017). For Wenger (1998), such learning frequently occurs in professional settings in which individual's 'becoming' is inextricably dependent on other people. Lave and Wenger (1991) coined the phrase CoP to help better understand such phenomena. Wenger et al. (2002, p. 4) defined a CoP as "A group of people who share a concern, a set of problems, or a passion about a topic, and who deepen their knowledge and expertise in this area by interacting on an ongoing basis". Wenger (1998) posited that the concepts of shared repertoire (i.e., common language/terminology), joint enterprise (i.e., a sense of 'we're in this together') and mutual engagement (i.e., genuine investment and commitment to the group) were useful indicators of whether certain groups of people constituted a functioning CoP. However, these elements were never considered to be a binary 'checklist' and were not to be used to qualify whether a group was actually a CoP or not. Research into professional learning through the lens of CoPs in a wide range of disciplines has yielded a number of potentially important factors which might impact the usefulness of such structures. In the field of mathematics teacher education Goos and Bennison (2018) highlighted several antecedents relating to the disposition of CoP members which effect the potential value and sustainability of interdisciplinary collaboration. They argued that practitioners who demonstrated open-mindedness, trust, mutual respect and shared beliefs were more likely to derive value from participation. Relatedly, Goos and Bennison (2018) highlighted that entrenched

differences had been apparent in their investigation with the majority of participants voicing frustration with the culture of their own discipline. Similarly, in considering the safeguarding of children, Crawford and L'Hoiry (2017) found that tacit assumptions about ways of working between police and social services sometimes yielded challenging differences which required considerable work to resolve. Wenger-Trayner and Wenger-Trayner (2015) did not contend that 'phase 3' made the concepts of Situated Learning, LPP or CoPs redundant. All these concepts remain useful theoretical constructs and are required to understand the LoP framework (Culver et al., 2020). For the purposes of this investigation, whilst we draw on the concepts of Situated Learning and LPP, we are principally concerned with how boundary encounters between, for example, CoPs, are negotiated. Therefore, consideration of the evidence emanating from sport-related settings in relation to CoPs is foundational to this investigation.

Several studies relating to coach learning have advocated the appointment of an internal facilitator to be fundamental to the successful functioning of a CoP (e.g., Bertram et al., 2017; Culver & Trudel, 2006, 2008; Gilbert et al., 2009). Indeed, a considerable portion of Wenger-Trayner's work has discussed the importance of social learning 'leaders' such as facilitators or brokers – which may well be different people (see Wenger-Trayner et al., 2015; Wenger et al., 2002; Wenger et al., 2009). Wenger et al. (2009) suggested that leadership in social learning settings is often crucial to learning and requires highly skilful mediation. Relatedly, Werner and Dickson (2018) affirmed the importance of social learning leadership through brokering but argued that research should turn towards investigating such roles across multiple sites and contexts. A second common concern related to sports coach learning in CoPs has focussed on the potential barrier of rivalry and competition amongst group members (e.g. Callary, 2013; Culver et al., 2009; Garner & Hill, 2017). Fearing handing a rival a competitive

advantage, some coaches within CoPs have been reported to be unwilling to share anything more than mundane insights into their practice (Lemyre et al., 2007). However, the overwhelming majority of research into CoPs has concerned coaches operating within the same sport, and potentially even the same league. A very limited volume of research has examined cross-sport coach learning and so feature coaches who are not immediate rivals (see, for example, Jones, Morgan, et al., 2012). Nevertheless, Bertram et al. (2017) did report that recruiting participants who were not immediate rivals may have aided the openness with which they shared information. However, Bertram et al.'s (2017) study predominantly featured assistant coaches and Jones, Morgan, et al. (2012) investigated student coaches. Therefore, these studies can only provide a limited insight into the context of this investigation. Nevertheless, such cross-sport interactions represent a clear illustration of a boundary encounter – for example, when a swimming coach meets to discuss their practice with a peer from the world of basketball. It is to the concept of better understanding boundary encounters that we now turn.

Knowledgeability, boundary crossing and dialogical learning mechanisms

Whereas a CoP refers to a discrete group of people, an LoP represents the entirety of a profession's body of knowledge (Culver et al., 2020). As such, LoPs are constituted by a great number of bodies associated with the practice, regulation, teaching and research of a particular discipline (Wenger-Trayner & Wenger-Trayner, 2015). For example, the LoP relevant to a professional rugby union coach in the UK will be constituted (in part) by the Rugby Football Union, UK Sport, UK Coaching, UK Anti-Doping and influenced by many other factors such as the workings of their club, the International Council for Coaching Excellence (ICCE) policy documentation and research conducted in Higher Education Institutions. From a 'phase 2' perspective,

‘becoming’ involves claims to competence within a CoP. Wenger-Trayner and Wenger-Trayner (2015) posited the term knowledgeability be used to describe how claims to competence might be evaluated against the disparate, and often competing, conceptions of expertise within a LoP. Here, learning is considered to be a broad term which may encompass changes in practice, identity or new understandings – amongst many other possibilities (Akkerman & Bakker, 2011). Learning is reflexive engagement, in which dialogue is pivotal, through which claims to competence are negotiated, renegotiated, and meaning is created across multiple contexts. Ultimately then, learning concerns the negotiation of meaning across multiple social contexts as people wrestle with what kind of human being they want to be (Farnsworth et al., 2016). Such negotiations, influenced by the many different bodies shaping the LoP, represent one example of how power relations are evident at all levels of individuals’ claims to competence and which represent an example of the kind of factors which Fuller et al. (2005) considered had been insufficiently explained within ‘phase 2’ research. Directly responding to the criticism concerning power relations, Wenger-Trayner argued that the concept of LoP adequately accounts for these considerations and used the notion of competence as an illustration:

> Central to the theory is the idea that learning from a social perspective entails the power to define competence. And so when you have a claim to competence in a community, that claim to competence may or may not be accepted. Or it may take work to convince the community to accept it. When the definition of competence is a social process taking place in a CoP, learning always implies power relations. Inherently. … [but] that’s not what the theory is about. It is a learning theory, not a theory of power in general … I would not say that my theory does not recognise

> structural power relations; it recognises them but it is not what to tries to theorise. (Farnsworth et al., 2016, pp. 151-152)

Indeed, Crawford and L'Hoiry (2017) found that differential power relations were exposed by such a theoretical lens. A number of other studies have considered power relations to be most apparent when considering the relationship between learners and their instructors. For example, Cowan and Menchaca (2014) found that inappropriate use of power wielded by instructors threatened the very legitimacy of the CoP itself. Nonetheless, from the LoP perspective, the concept of power relations within coach learning, particularly when exploring cross-sport boundary encounters, has not yet been investigated. To this end, and consistent with Wenger-Trayner's position (Farnsworth et al., 2016), this paper is concerned with recognising and illuminating where power relations are apparent and how they have influenced participants, but will not attempt to theorise them explicitly.

Moving between multiple contexts requires consideration of the encounters and interactions a coach may negotiate when crossing a boundary from one site to another. Under the framework of LoPs, all learning is inextricably connected to boundaries - which are considered to be sociocultural differences which lead to some kind of discontinuity in action or identity (Akkerman & Bakker, 2011). For example, a coach entering a new workplace may find colleagues who do things differently than they have previously experienced and this may lead to the coach questioning the veracity of their own practice. Boundaries are dynamic constructs that may help coaches evolve their practice by highlighting and legitimating different approaches and epistemological perspectives. Such differences may require practitioners to confront problems and reconcile differences thus highlighting how boundaries have considerable learning potential (Goos & Bennison, 2018). Indeed, Goos and Bennison (2018) argued that

boundary crossing can enrich practitioner learning through reflection and resolving discontinuities.

Through a review of the educational literature Akkerman and Bakker (2011, p. 138) identified four potential "dialogical learning mechanisms" which can occur at boundaries: identification, coordination, reflection, and transformation – each of which comprises a number of characteristic processes. (a) Identification relates to how practices, which might have been previously conceived as distinct, being called into question and subsequently renegotiated. For example, the club coach of a junior international athlete might be promoted so that she is now also that athlete's national coach. The coach may now decide she needs to adjust how she interacts with the athlete so that others in the national programme do not perceive any degree of favouritism. Resultantly, her 'identity' as the coach of that athlete has been re-negotiated. (b) Coordination involves the practices within two or more sites remaining distinct but where attempts are made to harmonise efforts for mutual benefit. For example, a Head Coach might negotiate the role of the performance analysts within a coaching team to make their work more efficient and beneficial for the athletes. (c) Reflection relates to the generation of something new by considering alternative perspectives. For example, a coach developer might realise that whilst they consider themselves to be an educator, the coach they are observing on an *in-situ* visit might see them principally as an assessor, requiring the coach developer to re-evaluate how they negotiate the relationship. (d) Finally, transformation leads to meaningful changes in practice through proactive work, usually between multiple practitioners. For example, a coach might be asked to integrate a new video-sharing platform into their coaching practice and have to work hard, and in collaboration with assistant coaches and performance analysts, to make it an effective tool. Additionally, Akkerman and Bakker (2011)

identified between two and six characteristic processes of these four dialogical learning mechanisms (see Table 1). It is beyond the scope of this paper to describe all of the characteristic processes here, although we will draw upon those which are particularly pertinent to the data we present later.

[Table 1 about here]

Akkerman and Bakker (2011) also identified a number of limitations and gaps in the literature related to boundary crossing which are of relevance here. They assert that we have limited understanding of the specific nature of the learning which is occurring at boundary interactions, highlighting the rather general nature of the data reported. Oswick and Robertson (2009) criticised the almost wholly positive accounts of learning at boundary interactions and warned that analysis should recognise the highly politicised negotiation of meaning. Additionally, Akkerman and Bakker (2011) criticised research which they perceived had reported only anticipated boundaries, as opposed to having provided evidence of the existence of specific discontinuities. Finally, Duarte et al. (2020) 'mapped' the landscape of wheelchair curling coaches including, for example, the 'hills', 'bridges', and 'travel guides', concluding the concept provided a potentially useful framework from which to better understand their learning. However, Duarte et al.'s (2020) research was only a pre-intervention scoping exercise and so is unable to provide further empirical evidence of the usefulness of the LoP framework at this stage.

Therefore, the research questions which drive this study are (a) to what extent does the LoP framework provide a useful perspective from which to better understand international coach learning? (b) What is the nature of the boundaries experienced by

international coaches undertaking a cross-sport development programme? and (c) to what extent can an exploration of the nature of boundary interactions help to explain coach learning at an individual level?

Methodology and method

Adopting a constructionist epistemological viewpoint and an interpretivist theoretical perspective in alignment with Wenger-Trayner's social theory of learning (Lave & Wenger, 1991; Wenger-Trayner & Wenger-Trayner, 2015; Wenger, 1998), this investigation sought to explore the meaning sports coaches created as a result of cross-sport boundary interactions. Fourteen in-depth, semi-structured interviews (Range = 35-75, M = 51.29 ± 12.64 minutes) were conducted with international sports coaches (seven female and seven male) who were purposively sampled having recently completed a selective development programme administered by a non-governmental organisation (NGO). The coaches were all UK-based and worked within 11 sports namely gymnastics, swimming, hockey, snow sports, archery, table tennis, golf, taekwondo, badminton, rugby union and sailing. All of the coaches held, or were working towards, the highest level of coaching qualification offered by their respective National Governing Body (NGB) and were currently coaching junior international athletes (e.g., an under-21 national team). The programme comprised seven two-day workshop-based events spread over the period of 18 months which were delivered by external experts such as leading coaches, consultants and academics. The programme content was determined by the NGO prior to the coaches' enrolment. The coaches had all been nominated by their NGB on the criteria that they had the potential to develop into Olympic and World-level medal-winning coaches. Whilst there was no designated learning facilitator within the programme, each coach was allocated a cross-sport mentor who largely operated outside the confines of the course. Commensurate with

the aims of this investigation, whilst we may refer to the programme cohort as a CoP, neither the extent of its functioning, whether the title 'Social Learning Space' might be more appropriate (see Culver et al., 2020; Wenger-Trayner & Wenger-Trayner, 2020), or the effectiveness of the programme are our principal concern. Our principal aim is delimited to understanding the nature of the cross-sport boundary encounters experienced by the participants. For 13 of the 14 coaches, this programme represented their first longitudinal coach education experience in a cross-sport environment. All names cited throughout this study are pseudonyms. Ethical approval for the study was granted by our institutional Research Ethics and Research Governance Committee.

Protocol

An interview guide was created following the five steps outlined by Robson and McCartan (2016), namely introduction, warm-up, main body, cool-off and closure. The substantial components of the interview comprised (a) participants' coaching journey to date (including motivations and key milestones), (b) beliefs about learning generally, (c) the value of the course, (d) developments in coaching practice over the previous 18 months, (e) future learning and development plans. Probes were used to prompt or extend responses specifically relating to cross-sport interactions (Bryman, 2015). The interview guide was piloted with a senior international assistant field hockey coach and a University Director of Netball; both had experience of cross-sport formal coach education. Only minor modifications to the interview guide were made as a result of the pilot interviews including changing one item from a question to a probe and changes to terminology used in two further items. Following each interview, the participant was emailed the verbatim transcript to check it was an accurate representation of what was said. Only minor corrections, such as the spelling of club names, were made as a result of this process.

Data analysis

Data analysis adhered to the five stage thematic coding analysis model outlined by Robson and McCartan (2016) commensurate with our constructionist epistemological position and examines the ways in which incidents, meanings, and practises are shaped by the wide range of discourses perceived and experienced by key stakeholders within the various coaching environments. This approach has evolved from the general principles established by Braun and Clarke (2006) and was conducted with the aid of NVivo version 12 pro (QSR International, 2020). Following familiarisation with the data, initial codes were generated based on the text units from the verbatim transcripts and were then inductively grouped to represent prominent first order themes (Steps 1-3). Following principles commensurate with a reflexive thematic analysis (Braun & Clarke, 2020), steps four and five retained elements of inductive reasoning but also overtly considered the four classifications of dialogical learning mechanisms (see Table 1; Akkerman & Bakker, 2011). Based on the nature of the relationships between them, first, second and then third order themes were constructed into a broader network which was subsequently integrated and interpreted so that the final thematic structure could form the basis of discussion (Steps 4-5). To illustrate steps 4 and 5, for example, the third order themes of confidence, openness, and authenticity were ultimately grouped together to form one final category as we considered that the boundaries illustrated by these themes were strongly connected to the dialogical learning mechanism of 'identification'. The first author completed the five steps independently at first and then engaged the second and third authors in reflective discussion concerning the analysis process. Thus, the final thematic structure represents a construction based on inductive and deductive analysis of the data,

consideration of the informing theoretical perspectives, and the reflexive interpretations of the research team (Braun & Clarke, 2020).

Rigour

Smith and Sparkes (2014) argued that analysis of the rigour of any study should be founded on an informed, principled and strategic decision-making process. Naming this practise 'connoisseurship', they suggested the resulting criteria should emanate from consideration of the research context and aims. Commensurately, we invite the reader to critique our work using the criteria of resonance (Tracy, 2010), meaningful coherence (Tracy, 2010), and understandability (Ghaye et al., 2008). Firstly, resonance will have been achieved if our analysis of the data 'rings true' for the reader on a more than superficial level. If the reader is able to see similarities and differences between the experiences of the participants and of themselves, then we may have achieved resonance, but also contributed towards a degree of naturalistic generalisation (Smith, 2018). Secondly, we will have achieved meaningful coherence if the reader considers that our principal aims of utilising the concept of boundary encounters to better understand the learning of our participants have been met. For example, the reader might ask 'do the different categories of dialogical learning mechanisms help to differentiate between, and illuminate, the various boundary encounters the participants describe?' Thirdly, we have adapted the criterion of understandability from that proposed by Ghaye et al. (2008). In this sense, we have considered how to apply Wenger-Trayner's ideas in a meaningful manner in order to develop an appreciative and developing comprehension of the value of the concept of boundary encounters in better understanding coach learning. For example, we give explicit examples of how knowledgeability might be constructed for some of our participants and how different levels of participation with the programme manifested for some coaches. We hope that

sports coaches and scholars will resonate with the applied nature of our analysis and extract functional understandings of the meaning created by the coaches featured within this study. Additionally, we have used each other as critical friends throughout this investigation in order that we present a truth which is not overly constrained by our individual biases (Smith & Sparkes, 2014). However, it is important to note that what we present here is our agreed understanding - a plausible analysis of how boundary encounters have shaped the learning of our participants, not *the* truth in a generalisable sense (Smith & McGannon, 2018).

Results and Discussion

Four major categories were established comprising (a) confidence, openness and authenticity, (b) sense making, (c) reflection and mentoring, and (d) reconceptualising and reframing. These categories will now be discussed in turn, analysing quotations drawn from the participants to illustrate how they negotiated meaning with respect to their cross-sport boundary interactions.

Confidence, openness and authenticity

In considering their initial engagement with other practitioners on the programme, some of the participants described cross-sport boundary encounters as a negotiation in their confidence in relation to their identity as a competent coach. For example, Gabriel (swimming) said:

> Prior to the programme I would have felt confident in certain environments. I would have felt confident working with my athletes. I would have felt reasonably confident working with my athlete in conjunction with a service provider. I struggled being confident working with my peers directly and several other coaches delivering workshops together. Then that confidence began to be questioned somewhat, and

> even more so when I went to [the programme] and engaged with some of these other coaches working at Olympic level. Yeah, I was quite in awe of that initially. That led to me questioning my purpose.

Gabriel's journey affirms the value of examining his role across multiple contexts (i.e., his entire professional LoP; Wenger-Trayner & Wenger-Trayner, 2015), as his confidence in his coaching identity was markedly different across the various sites in which he operated. Gabriel's testimony also resonates with Wenger-Trayner's depiction of knowledgeability and the negotiated claims to competence a practitioner might make within his LoP which can be accepted or rejected – a judgement of which Gabriel appears acutely aware (Farnsworth et al., 2016). According to Akkerman and Bakker (2011), such negotiations represent a dialogical learning mechanism; specifically as a form of legitimating coexistence under the broader umbrella of identification (see Table 1). In giving considerable power to his perception of what the 'Olympic level' coaches might think of him and in recognising that he needed to consider his degree of engagement, Gabriel demonstrated a conscious negotiation of his coaching identity and an awareness of the invitation to align himself across multiple group memberships (Bogenrieder & van Baalen, 2007; Duarte et al., 2020). For Heidi (badminton), the impact on her confidence of crossing the boundary into the programme CoP was magnified by the isolation of her 'home' coaching environment:

> From a coaching journey point-of-view, you go through phases of having lots of confidence and then phases where you haven't got much confidence. Actually, having something like [the programme] is great because … it massively helps with your confidence and [through] chatting to other people with very similar challenges you feel less isolated. In coaching, you're very isolated.

The inherently collaborative nature of CoPs is understandably appealing to sports coaches. Heidi's testimony affirms the considerable proportion of research which has highlighted the importance of collaborative processes to realising value in CoPs (Gilbert et al., 2009; Kuklick et al., 2016). Indeed, Culver and Trudel (2006) reported participating in CoPs to be important in tackling professional isolation – a problem commonly reported by coaches who often feel they work in a vacuum and have very limited opportunities to share their ideas or concerns. Furthermore, both Crawford and L'Hoiry (2017) and Bertram et al. (2017) found that a key to successful collaboration was the degree of, and commitment to, open and honest discussions. Karen (archery) considered the degree of openness to be strongly related to coaches' professional efficacy:

> You've got to be open to it. I know some coaches who would like to go on [the programme], but they're not ready for it. At that point, they don't yet have their own coaching personality, and you're still trying to be like everyone else. If you've only been coaching two or three years, then you're possibly not ready for it. You've got to be ready to be really deeply challenged, and to be able to articulate things. If you're working from the appearance from being a very good and proficient coach, but all the time underneath your stomach is churning because you've seen other coaches do it or read about it, don't go ahead yet because you'll get found out. You can hide nothing on that programme, you get stripped down and you get rebuilt.

Karen's beliefs resonate strongly with Wenger's (1998) assertion that learning in a CoP concerns the becoming of a particular person and further affirms the notion of negotiated, and re-negotiated, claims to competence. For Karen, the negotiation of

identity was also important, considering that openness was most evident in those who had moved beyond the replication of a perceived 'gold standard' practice. A considerable volume of research has focused on the development of coaching expertise and has recognised the importance of experience (e.g. Côté & Gilbert, 2009; Stoszkowski & Collins, 2016), whist other studies have highlighted the complex balance of negotiating a range of powerful factors apparent in formal coach education such as NGB expectations, coaching practice, and identity formation (e.g. Jones, Bailey, et al., 2012; Roberts, 2011). Wenger-Trayner and Wenger-Trayner's (2015) framework effectively encapsulates these perspectives, highlighting the dynamic construction of identity across an individual's LoP. In the present case, Karen described that her identity was destabilised ('stripped down') and then 'rebuilt' as she made sense of the different boundary interactions demanded through interaction with the programme – a dialogical learning mechanism which Akkerman and Bakker (2011) named 'othering'. Karen's statement also resonates strongly with one of Bruner's (1966) major features comprising his theory of instruction – that of readiness to learn. Bruner (1966) proposed that better understanding the predispositions of the potential learners should shape all future pedagogic intent. Appreciation of the concept of othering and of Karen's predispositions to learning are helpful in understanding this particular boundary encounter.

Effective facilitation of such boundary encounters requires a considerable degree of collaborative openness, a collective phenomenon which Silas (taekwondo) considered to have emerged through a particular workshop task:

> I don't think we started doing that [opening-up] until about the third session in. The ice breaker for everyone was that life script, because that was the trust builder and it digged [sic.] deep. I had to think that if I was

> going to get the best out then I need to be honest and say everything honestly, even if it's embarrassing moments. It created trust and it created an environment to share. After that, every session I'd been in seemed like magic because it felt like coming into a family of coaches. The conversations we were having when you would meet up were so much more relaxed and authentic. It got to a point where the coaches were showing their life happenings, and there were some of the coaches going through some difficult times in life during that period. Being able to do that is powerful.

Silas' perspective affirms a number of CoP-related studies which have reported trust as an important mediator of effectiveness (Callary, 2013; Crawford & L'Hoiry, 2017; Goos & Bennison, 2018). Silas' belief resonates with Cowan and Menchaca (2014) who posited that trust was unlikely to be apparent where dramatic power imbalances exist. The 'life script' exercise appears to have enabled participants to 'bare their soul' and this contributed to ensuring a degree of equality and stability in the interpersonal relationships between the participants based on greater mutual understanding and reciprocity (Crawford & L'Hoiry, 2017; Gilbert et al., 2009). These findings are also commensurate with Culver and Trudel (2006) in suggesting that environments in which the potential barrier of ego has been stripped away are particularly conducive to learning. Bernd (snow sports) also considered the collaborative openness of the group to be important, but felt that the most value from the programme was derived more locally than the broader programme group:

> [The most valuable part of the programme was] the ability to work with other coaches on a personal level ... It's the first opportunity I've had in ten years to work so closely with people on such a deep level, and just

> understanding each other without having any judgemental input because we weren't involved in each other's sports. It's probably the only forum that I would be able to completely relax and talk through issues that were going on and know that no one had an insight or knew any of the backstory.

For Bernd, the cross-sport nature of this smaller group ensured that the power relations were not detrimental because the coaches' technical expertise could not be challenged. It was also important to him that the group did not hold preconceptions of any of the key learning episodes he described. These findings are entirely consistent with Crawford and L'Hoiry's (2017) research highlighting the importance of balanced exchanges and mutual respect for difference. Furthermore, Bernd's perception of the group's commitment and continuous interaction with one another endorses Bertram et al.'s (2017) comparable finding. Duarte et al. (2020) concluded that such principles were important and were especially apparent in the world of parasport. However, the group were not universally positive about the group dynamic. Sabina (field hockey) said:

> At a key point, I had a really key question about myself; I was very busy, and I was not in a good place. I would have really loved that environment to be an environment where I could have shared that. I didn't feel that I could have got supported … I remember sharing some of myself in one session, and the group dynamic had switched off a little bit, so that people weren't listening to each other anymore. I remember not feeling listened to, and when you're going to share something meaningful about where you are, you want to feel listened to. I

remember feeling that the group wasn't really listening, and I shut down and just kept those feelings inside.

Sabina's experience is a reminder that engagement within a CoP is dynamic and that whilst trust can be built through continuous interaction with one another (Bertram et al., 2017; Goos & Bennison, 2018), undermining such prosocial concepts can cause an erosion of the group dynamic and a re-alignment away from that CoP. Sabina's perspective is further confirmation of the usefulness of the concepts of sojourner and tourist as metaphors to represent her degree of engagement with the programme CoP (Fenton-O'Creevy et al., 2015); her reticence to fully open-up to the group suggests she never became, deliberately, an old-timer. The learning mechanisms described in this section have related to negotiation and realignment in various contexts but have not concerned overcoming a boundary to enhance practice. Overcoming a boundary requires practitioners to make sense of ways of working and resources which exist in one context and understand how they might translate to other areas of their LoP; Akkerman and Bakker (2011) called such learning mechanisms 'coordination' and it is to such aspects we now turn.

Sense making

This section describes how the participants attempted to translate the programme content to their 'home' coaching environment. It is beyond the scope of this investigation to evaluate the programme itself; here we are solely concerned with how the participants made sense of the content to which they were exposed and so explore this form of boundary crossing. Pre-prescribed and de-contextualised formal coach education curricula have been criticised extensively over the last 10 years (Mallett et al., 2009; Piggott, 2012). Whilst the coaches on the programme were not involved in the design of the curriculum, a number of them discussed how their preconceptions affected

the translation and contextualisation of the material to their 'home' coaching environment. For example, Bernd said:

> I thought it was pretty broad topics, and they're going to be topics of interest with our sport ... At first it felt a little bit too broad, but then I learnt to apply that to what I do … They [the NGO] probably understood that I was slightly sceptical too about what could be perceived as a mainstream sport CPD programme applied to our sport, but they've seen me go from that healthy scepticism to embracing the opportunity.

Bernd's initial scepticism, which eventually gave way to proactive engagement, represents a communicative connection (Akkerman & Bakker, 2011) – a form of dialogical learning mechanism which facilitates the effective sense making of certain boundary objects[1] by multiple stakeholders within a CoP. In this case, the boundary objects are the 'broad topics' comprising the programme. Whilst Bernd reported perceiving the potential value of these objects from the outset of the programme, it took time for him to willingly accept their usefulness and applicability. Nevertheless, Bernd's statement provides very little detail about the processes underpinning this shift in his perspective. Karen offers a little more insight in this regard:

> The PCDEs [Psychological Characteristics for Developing Excellence], looking at that, it took me a long time to get that. I could understand it, but I couldn't get what I was going to do with it … The first time he [academic] talked to us about it I had no idea what he was talking about

[1] A boundary object is an artefact which provides a bridging function to aid boundary crossing Akkerman, S. F., & Bakker, A. (2011). Boundary crossing and boundary objects. *Review of Educational Research, 81*(2), 132-169. https://doi.org/10.3102/0034654311404435 .

> ... When we came back six months later - yeah, I got that, I know what I'm doing with that and I understand it - that you have to work with both domains and you can't do one domain without the other. I get it, and I have a diagram in my head. I'm okay once I have a diagram in my head. It's sometimes you just need the time to bring it into your sport.

Karen's description of creating a mental figure to aid her translation of an academic concept to her practical coaching domain represents another form of dialogical learning mechanism known as an effort of translation (Akkerman & Bakker, 2011). Through this process, Karen managed to find a way to interpret academic research in a way she deemed meaningful for her professional practice. Karen's assertion that it took six months for her to complete this process affirms the importance of Gilbert et al.'s (2009) suggestion to continue to work on designated topics until there has been meaningful improvement. Sabina demonstrated a particularly refined 'effort of translation':

> One of the things that I find with knowledge, is how you take pieces of knowledge and integrate and make it your own. Through this process I was able to take knowledge and think about how to implement it. In the end I created a pyramid of my philosophy with lots of pieces of the knowledge but integrated in a way that made sense for me. It's something that underpinned what I did with my players and my team, not that they've seen the underpinning, but I wouldn't have been able to have that foundation a year previous. I think [the programme] allowed me to bring a lot of stuff together and put it in a shape and a foundational basis to show that I knew the direction I was going, and that's actually been huge.

Sabina's creation of a personalised boundary object (the pyramid) to aid the translation of a multitude of ideas to her own coaching practice represents specific evidence of a coordination-based dialogical learning mechanism. Her approach resonates with that described by Florian within Culver and Trudel's (2006) investigation in which he described the process of coach learning as being like a scientist in a laboratory – constantly testing ideas, putting pieces of evidence together and then going back to the start to re-test the whole process. Sabina went on to illustrate how this thinking had enabled her to overcome a boundary encounter which threatened her coaching identity:

> Somebody described it [my coaching practice] as 'fluffy'. It's interesting how some of this stuff is called fluffy because if you go back and look at the charter, you talk about happy people and happy players[2]. So how do you do it then? What does it look like? It looks likes people enjoying themselves, expressing themselves and having fun as a group. I've been there and done that, and I know the power of working with a group of people and you connect and grow. It's magical, and that's probably been the journey these [my] players have had this year, magic is a word that'll come across. I've had a magical journey, they've had a magical journey and why shouldn't we look for magic in the sport we're doing?

Piecing together her philosophical pyramid, and devoting the time to ensuring she translated a wide range of potentially important knowledge, has enabled Sabina to

[2] Sabina is referring to Great Britain Hockey's strapline vision 'more, better, happier players' Great Britain Hockey. (2019). *Great Britain Hockey Coaching Offer*. https://tinyurl.com/ybe8dbrd

utilise the programme to coordinate her coaching practice. Akkerman and Bakker (2011) describe such processes as routinisation – the boundary has been overcome and Sabina's 'fluffy' practice has become part of her normal operating procedure. Sabina's description of the translation of knowledge relates predominantly to information she held previously but learnt to piece together and personalise in a novel way through engagement with the programme. However, it is also important to consider how new information, perspectives, and practices may emerge from cross-sport boundary encounters. New information, perspectives, and practices were most evident when viewed through the lenses of reflection and mentoring.

Reflection and mentoring

With specific reference to dialogical learning mechanisms, Akkerman and Bakker (2011) described reflection as comprising two distinct processes – perspective making and perspective taking. Perspective making concerns the process of developing an enhanced, and explicit, understanding of practice within the context. Perspective taking involves gaining insight by seeing the world from a different viewpoint (Boland & Tenkasi, 1995). A key distinction between the identification-related processes described previously in this investigation and reflective mechanisms lies not merely in the reconstruction of identity but is based on some fundamentally new consideration or perspective which informs future practice (Akkerman & Bakker, 2011). Whilst there are some connections between this and the final 'reconceptualising and reframing' category, they remained distinct through the data analysis process because they ultimately yielded different types of boundary encounters and thus relate to different forms of dialogical learning mechanisms. Our data revealed both perspective making and perspective taking to be in evidence directly concerning participants' cross-sport

boundary encounters. For example, Spencer (golf) described the process of reflecting on the programme's content and how he gained new insight to inform his practice:

> It [reflection] became the life source for the programme and provided meaning for everything. I documented everything. I created three different reflective ledgers, effectively. One where I did brainstorming, reflected on that for days and weeks then took the secondary book and refined that down to personal learning points. The third was an expensive book, and I did that deliberately because if I wanted something to go into it then I wanted it to be extremely poignant for me to act upon. That process of being able to dump the information on pages and not having to worry about it being documented, in time I began to realise what was important to me in terms of my development.

Spencer's use of the ledgers represents a mechanism to mobilise the meaning he has derived through the boundary interactions he has experienced both as a result of engagement with the programme, and beyond. Spencer's use of staged ledger entries to systematically refine and make sense of his experiences illustrates an example of perspective making and also affirms Hoyles, Bakker, Kent and Noss' (2007) findings which detailed the effectiveness of boundary objects to aid reflection. Such evidence also supports the findings of Crawford and L'Hoiry (2017) who found that engagement with collaborative CoP processes enhanced practitioners' reflexivity. When considered alongside Spencer's following quotation, it is evident how powerful such an approach can be when it is supported through effective brokering:

> What Jane [mentor] did for me was show the qualities you have as an individual are exactly what you need to have as a coach; you can't separate those ... Don't shelve them, don't ignore them, bring them to

> the floor and use them. That's just impactful from the perspective that someone wanted to understand you and understands that you as a person is probably better than you as a coach so start embracing who you are as a person through your styles and approaches. She identified some of the things I was fearful of, and that's why I brought up so much around the vulnerability aspect in the presentation [last day of the programme]. They were the things that were holding me back, that I was aware of and I knew there were things I was hiding from people that I didn't want to share about my coaching and my approach, and Jane just smashed that wall down. Reluctantly, initially.

Spencer demonstrates that for him, learning is inextricably part of the process of forming his professional identity and that this process extends far beyond the confines of his 'home' coaching environment. Spencer's testimony affirms the importance of embracing a holistic perspective to learning as a negotiation of meaning and sense making across his entire LoP (Farnsworth et al., 2016; Wenger-Trayner & Wenger-Trayner, 2015) and is evidence of a profound illustration of perspective taking as he learnt to appreciate what Jane could see from her perspective. Furthermore, Spencer's statement illustrates that his journey has been enriched by his cross-sport mentor being able to identify his strongest personal characteristics. It is possible that these characteristics were clearer to identify because Jane wasn't concerned with his knowledge of the sport. Indeed, Jane's capability to help Spencer deal with his vulnerabilities and to re-negotiate his professional identify was founded on her position as a cross-sport broker. Spencer's perspective supports Piggott's (2015) assertion that the cultural and symbolic power of same-sport old-timers or mentors may, in some cases, detrimentally influence the apprentice's capacity to learn because the new-comer

might not be able to challenge certain ideas and practices. Spencer perceived the questioning approach adopted by his mentor to have been particularly helpful. Brokering through questioning resonates strongly with a wide range of research which has advocated the emergence of solutions through collaboration, a balanced exchange of ideas and open dialogue (Kuklick et al., 2016). Not all of the coaches reported a wholly positive experience of mentoring on the programme. Karen said:

> I really liked Robert [mentor] and we had a lot of shared experiences, but I don't think we were clear about the purpose and frequency. I would have loved the mentors to be there at the end. So, I've actually been planning to go and see Robert, so he actually gets to see it. It felt a little bit tense and artificial at first because the mentors hadn't been at any of the sessions with us. We just had to arrange to go and see them, and it was a little bit odd. I would have liked to have had a bit more of an informal start with them being at the session and getting to know us a bit socially, and then setting them up. That would have given us a chance to get to know us and see what the group dynamics were.

Karen's view reaffirms the importance of high quality interpersonal mentor-mentee relationships to facilitate effective brokering. In addition, her statement concerning the clarity of purpose and frequency supports Gilbert et al.'s (2009) proposition that learning communities require published protocols which guide but do not prescribe. Such protocols should retain the capacity for all contributors to problem solve and to actively maintain creativity, whilst providing a framework all key stakeholders understand and provide a platform from which they can operate. Spencer and Karen have helped us to understand the extent to which their cross-sport mentor was able to broker perspective making and perspective taking – based on the quality of their

interpersonal relationship. It is evident that reflecting on cross-sport boundary encounters has enriched these practitioners' perspectives (Goos & Bennison, 2018). Yet these illustrations have not, as yet, demonstrated the nature of the meaningful, and applied, changes in practice which the coaches deployed as a result of such cross-sport boundary interactions. Akkerman and Bakker (2011) consider such profound renegotiations to be transformational dialogical learning mechanisms and it is to this topic we now turn.

Reconceptualising and reframing

Akkerman and Bakker (2011) consider transformational dialogical learning mechanisms to comprise a number of characteristic processes. Our findings reveal processes commensurate with recognising shared problem spaces, hybridisation and crystallisation. Transformational mechanisms represent a profound reconceptualisation and reframing of practice and it is evident that a number of the participants in this investigation perceived that cross-sport boundary interactions had elicited substantial enhancements in their coaching practice. For example, Karen detailed how collaborating with a cross-sport participant brought substantive enhancement to her home coaching context:

> We [with Silas] both went off and completely changed our academies round on the basis of it. We talked about it and peer-learning, we were both into peer learning. So, we set everything up and we got really excited about. It was the first time I've ever worked with someone from another sport; brilliant! I really would like to do more of that. I need to find a way to make that happen for myself.

Karen's statement is an example of practitioners recognising a shared problem space through a cross-sport boundary encounter. Such transformational encounters comprise

a targeted and directed solution which is shared by both parties and thus the problem space is bound together by the participants' intersecting practices (Akkerman & Bakker, 2011). Rather than transferring and adapting ideas from different environments, Sabina described how her journey through the programme, and the ensuing cross-sport encounters, had helped crystallise elements of her practice:

> I had confidence to deliver a holistic learning programme from where performance has reached good heights, but the journey we've taken has been more holistic. So, I've used story-telling and used perceptions of pressure and used so many of the models and I've shared much of that with my players … We've done lots around reflection with players … Lots of work around dreams and setting their goals, but in a meaningful way. I had my presentation of my journey yesterday and someone asked, 'what about the hockey?' Well hockey's in there too, but you can't do one without the other … So, it's [the programme] really helped me consolidate and have confidence to put in place some of the rigour of knowledge behind it.

Sabina's story represents crystallisation because she has been able to bring together a number of concepts and find a way to bring them to reality through her applied practice. This process is similar to that of reification discussed extensively by Wenger (1998); the concept of crystallisation may provide the 'phase 3' equivalent. The way in which Sabina has pieced-together various concepts from a range of contexts provides further evidence of the importance of exploring learning across the multiple contexts of her LoP although, as with several other studies which have reported crystallisation (e.g. Akkerman & Bakker, 2011; Gorodetsky & Barak, 2008), our data are unable to provide evidence of the impact of these changes in practice.

Conclusions and recommendations

This investigation has demonstrated strong support for the appropriateness of the LoP framework (Wenger-Trayner & Wenger-Trayner, 2015) as a lens through which to better understand cross-sport coach learning. The concepts of knowledgeability and boundary interactions have been shown to be useful tools to better understand how the coaches developed through their interactions within, and beyond, the programme. The individual perspectives in evidence here, alongside the negotiations and renegotiations of meaning, have commonly been shown to be influenced by the highly politicised environments in which our participants worked. In several cases, the coaches demonstrated sophisticated understandings of the sociocultural power various stakeholders, such as senior coaches and the NGB, held within their LoP. Correspondingly, and with respect to the nature of the boundaries coaches experienced, cross-sport interactions enabled some of the coaches to learn more effectively because they did not perceive the same degree of judgement or preconception they might have felt if they had been interacting with colleagues from their own sport. Resultantly, the coaches in this investigation have demonstrated individualised degrees of investment in terms of the engagement, imagination and alignment with the programme CoP. Nevertheless, whilst we have been able to demonstrate some insight into the individuals' perspectives of their cross-sport boundary interactions predominantly related to the programme, future research should consider practitioners' broader LoP more fully.

This investigation has revealed a broad range of dialogical learning mechanisms (Akkerman & Bakker, 2011) were evident as the coaches' negotiated their individual journeys through the programme CoP. Within this investigation we have only been able to scratch the surface of a wide range of such learning mechanisms which occurred

through a range of boundary encounters. Future research should seek to delve deeper to more fully understand the social, cultural, material, and institutional resources which are developed through such interactions. It is evident that the individual predispositions to engagement with CoPs, and the frequently reported enablers of effective learning communities, remain in evidence when viewed through the lens of LoPs (Duarte et al., 2020). Strong interpersonal relationships, openness, and trust remain important and resonated strongly with our participants. This investigation has also shown the potentially important role of mediation through consideration of the participants' mentor. Future research should consider how such interactions sit alongside the various other mentors and confidants which participants such as ours undoubtedly have but were beyond the scope of this investigation to consider.

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Table 1: Overview of different mechanisms and according characteristic processes of boundary crossing (Akkerman & Bakker, 2011, p. 151)

Dialogical learning mechanisms	Characteristic processes
Identification	Othering
	Legitimating coexistence
Coordination	Communicative connection
	Efforts of translation
	Increasing boundary permeability
	Routinisation
Reflection	Perspective making
	Perspective taking
Transformation	Confrontation
	Recognising shared problem space
	Hybridisation
	Crystallisation
	Maintaining uniqueness of intersecting practices
	Continuous joint work at the boundary