

Snakes and Ladders: A Critical Examination of Blocks in the Talent Pathway

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Declaration

I declare that this thesis has been composed solely by myself and that it has not been submitted, in whole or in part, in any previous application for a degree. Except where stated otherwise by reference or acknowledgment, the work presented is entirely my own.

Date: 10-5-20

Signature:

Jamie Taylor

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Abstract

There has been increasing interest in the nature of challenge variables in talent development (TD). Along with the attendant recognition that individual TD trajectories are typically non-linear in nature, there is also widespread acceptance that challenge plays a critical role in the development of exceptional talent. Accordingly, this thesis aimed to understand what the risk factors in TD are (*the snakes*) and what understand factors support the athlete to progress (*the ladders*). To develop the knowledge base in this area, I first sought to investigate the coach perspective in understanding what factors influenced those with high potential who fell away and the barriers provided by organisations to effective TD practice. Then, from the athlete point of view, I investigated the nature of the challenges faced and what factors helped to navigate these challenges.

Given my role as a coach and coach developer, I felt it critical that the intention for investigation was to generate ‘real world’ and applicable knowledge for the practitioner. Consequently, investigations were conducted under the pragmatic paradigm which seeks to prioritise questions and methods that are practically meaningful, rather than generalisable truth or subjective construction.

Results indicate the following: i) performers without a well-developed set of psychological skills are at risk of failing to realise their potential and dropping out of talent development pathways; ii) the prevailing socio-political features of organisations were identified as barriers to effective practice and increase the risk of athletes having an inappropriate dose of challenge; iii) athletes benefitted from emotionally laden feedback in navigating the challenges that they faced; iv) athletes were influenced by a large number of people offering feedback and their trajectories impacted by incoherence; v) a critical role of Talent Development Environments is shaping a Shared Mental Model of the intended athlete experience amongst various stakeholders.

The findings suggest that challenges causing emotional disruption for the individual performer are not simply events to be *coped with* but rather should be capitalised upon. As such, the results add to the understanding of the skills-based development approach and additionally provide key guidance for the applied practitioner seeking to support performers to facilitate their development. Additionally, given the nature of the TD milieu, with the number of inputs that impact on the athlete, if TD coaches are to offer the athlete a truly ‘athlete centred’ experience, they need to consider the totality of the athlete’s experience, or their wider curriculum. Overall, the thesis provides a unique and in-depth study of the interaction between psychobehavioural factors, challenge variables and external support to the performer in the development of talent. Importantly, it offers critical implications for practitioners seeking to optimise the experience of performers moving through talent pathway and maximise learning from both the highs and lows of the journey.

Lay Summary

The development of talent continues to generate significant interest in both mainstream literature, journalism and within academia. This interest is tied to the increasingly large business of talent development in sport and more broadly across industries. There are multiple difficulties for those seeking to understand, in depth, the nature of talent development. We now understand talent development to be a highly complex process, with multiple individual and environmental factors impacting on an individual's performance trajectory. The wider body of research has now moved beyond simplistic factors (e.g. the number of hours practising) and has led many to consider the role of challenge. There appears broad agreement that those who have '*made it*' at the very highest levels have negotiated significant challenge throughout their development journey. Critically, this has been identified as a consequence of conducting research with those who have made it to the very highest levels and on highly effective talent environments. This leaves a gap in the literature to consider those who haven't made it and the nature of poor support in their development.

Thus, this thesis investigated the 'snakes' - the risk factors in talent development and the 'ladders' - the factors that support progress. Firstly, it considers the perspective of the coach and secondly that of the individual athlete. In doing so, it offers a more granular view of the interaction of challenge and support on the talent pathway. Importantly, it is grounded in a pragmatic approach, offering guidance to real world practice and influencing the conduct of talent development more broadly. The results highlight the role of psychological skills in navigating challenge-full pathways and the importance of pathways in shaping the experience of performers in an integrated and coherent manner.

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List of Abbreviations

Abbreviation	Full Term
TD	Talent Development
TI	Talent Identification
TDE	Talent Development Environment
EC	Epistemological Chain
SMM	Shared Mental Model
RAE	Relative Age Effect
IPA	Interpretative Phenomenological Analysis
RFL	Rugby Football League

Publications emanating from this thesis

Peer-Review Journal Publications

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Chapter 1 – Introduction

1.1 Establishing context

After spending my youth chasing high performance, my entire career has been in the field of talent development as a teacher, coach and coach developer, formerly in schools and latterly in elite sport. Throughout this period, my primary motivating factor has been the desire to support the effective development of others. I began this project with the desire to better understand the mechanisms of development but rapidly moved to feeling thoroughly frustrated with the abundance of overly simplistic, narrow and sometimes plain wrong information sources in the field. I hope the below offers a more nuanced view of the world and moves the field forward, just a little bit.

The development of talent can be characterised as being multidimensional, multiplicative and dynamic (Baker & Horton, 2004; Collins et al., 2012; Simonton, 2001). Yet, there remains a focus in both literature and practice on the search for discrete variables and early correlates of later success (Faber, Nijhuis-Van Der Sanden, Elferink-Gemser, & Oosterveld, 2015; Höner & Feichtinger, 2016; McDermott, Burnett, & Robertson, 2015). This has run parallel to a focus on talent identification within many sports, with many seeking the earliest possible selection of individuals suited for later elite performance (Baker, Schorer, & Wattie, 2018). Approaches of this type continue, despite evidence highlighting their flaws given the hyper dynamic nature of TD (Abbott, Button, Pepping, & Collins, 2005). Indeed, the acknowledgment of complexity in human development is nothing new: “Asking whether individual differences in behaviour are determined by heredity or environment is like asking whether the areas of rectangles are determined by height or width” (Kimble, 1993, p. 13). Yet, many continue to believe that early identification is possible. In contrast, it has been suggested that TID and TD shouldn't be seen as separate entities, instead being highly interrelated processes, importantly, with a greater weighting on development

(Abbott & Collins, 2004). This emphasis appears warranted given evidence highlighting the non-linearity of performance trajectories (Ackerman, 2014; Güllich, 2014; Vaeyens, Güllich, Warr, & Philippaerts, 2009).

With support for the non-linearity of development gaining increased recognition, some sporting organisations have placed an emphasis on the ‘efficiency’ of their pathways, seeing non-linearity as being something to manage away, enabling steady progression by removing barriers to later success (eg. New Zealand's Pathway to Podium programme - Sam, 2016). Yet, following the contention that ‘Talent needs Trauma’ (Collins & MacNamara, 2012), an increasing body of research appears to support the potential *advantages* conferred by the navigation of challenge (Collins, MacNamara, & McCarthy, 2016b; Rees et al., 2016; Sarkar & Fletcher, 2017). This focus on the characteristics of the individual *and* their interaction with developmental experience, rather than the search for discreet correlates of later performance, appears to offer a number of opportunities to understand the process of TD trajectories in more depth.

The previous historic search for discreet variables has perhaps existed as a result of the lack of value placed on truly interdisciplinary, complex research by the academic community (Collins & MacNamara, 2019; Phillips, Davids, Renshaw, & Portus, 2010), and the methodological problem of recruiting and tracking appropriate participants (Côté, Ericsson, & Law, 2005). This has led to the widespread use of retrospective methods with athletes who did ‘*make it*’ to the highest levels of performance (eg. Gould, Dieffenbach, & Moffett, 2002; Orlick & Partington, 1988; Sarkar, Fletcher, & Brown, 2015). Little emphasis has been placed on investigation ‘*via negativa*’ however (eg. Andronikos, Westbury, & Martindale, 2019; Henriksen, Larsen, & Christensen, 2014; Holt & Mitchell, 2006), something that has been stressed in a number of other realms including the academic (eg. Gilovich, Griffin, & Kahneman, 2002) and popular literature (eg. Taleb, 2007). Given the

difficulties of employing long term, longitudinal tracking studies and the challenges of using appropriate methodologies for in depth analysis with large cohorts (eg. IPA - Smith & Shinebourne, 2012), investigations of this nature may offer an opportunity to further the knowledge base in the field. Consequently, at the individual level, there is a clear research gap in understanding the ‘talent graveyard’ (those who didn’t *make it*) and the ‘*snakes*’ (risk factors in TD). In addition, given that effective TDEs have been characterised as supportive in various ways (Henriksen & Stambulova, 2017; Martindale, Collins, & Daubney, 2005; Martindale, Collins, & Abraham, 2007; Stambulova, Ryba, & Henriksen, 2020), only limited research attention has focused on poor TD practice (eg. Henriksen et al., 2014) or *how* effective support can be delivered (*the ladders*) (eg. Webb, Collins, & Cruickshank, 2016).

1.2 Research aim and objectives

Consequently, this thesis set out with the desire to shape the professional practice of the coaches and practitioners within TDEs. With the above gaps in the research in mind, the thesis specifically addresses the following aim:

To examine the risk factors in TD (the snakes) and understand what factors support the athlete to progress (the ladders).

This aim was examined through the following objectives. Namely, to:

- 1) Understand the causes of individual talent development failures
- 2) Identify the factors that prevent a TDE offering an optimal set of experiences to the developing athlete
- 3) Understand the nature of the transitional challenge experience for the TD athlete
- 4) Investigate what impacts the athlete to support them through challenge
- 5) Longitudinally track the transitioning athlete
- 6) Understand the experience of feedback in the TD pathway

- 7) Provide applied recommendations for the TD practitioner seeking to optimise the TD journey

1.3 Research philosophy and methodology

This section outlines the philosophical assumptions made in this thesis, given that they influence my choice of literature and methodology used (Holt & Tamminen, 2010). In line with the recommendations of Denzin and Lincoln (2008), robust research design requires researchers to frame their ontological and epistemological assumptions, to make methodological decisions. As a scientist-practitioner, I recognise that my own experiences as a coach and coach developer have shaped my beliefs and that these beliefs have influenced the actions that I have taken, including the way that I approach research. Therefore, given my practical orientation and desire to move the field forward, I have a desire to offer a lens for the generation and refinement of knowledge focused on a return for practice (cf. Cruickshank & Collins, 2017). In addition, the divisions between academics and applied practitioners are well documented across a number of domains, including sport (Bishop, Burnett, Farrow, Gabbett, & Newton, 2006; Brustad, 2002; Glasgow, 2013). The lack of impact made by research in the domain of practice is a significant issue for those seeking to advance the fields of TD and coaching. Thus, after due consideration, I adopted a pragmatic approach with a focus on generating practically meaningful knowledge (Giacobbi, Poczwardowski, & Hager, 2005). Accordingly, presented below is a summary of methodological decisions, consideration of pros and cons, and consequent approaches.

1.3.1 Pragmatic approach

Pragmatic approaches have been characterised by the need to address the specific needs of practice by focusing on application and context; the need for rigorous and relevant research designs; and ultimately be feasible and actionable in the real world (Glasgow, 2013). A key element of a pragmatic approach is the ‘so what’ or difference principle, that requires a focus

on the practical difference that a changing knowledge base makes (Bryant, 2009). Ultimately, pragmatism values knowledge based on its impact on decisions in practice (Cruickshank & Collins, 2017). This leads pragmatic approaches to focus on application and usefulness to practitioners, offering feasible and actionable measures in real-world settings (Glasgow, 2013).

Pragmatists consider themselves co-constructors of knowledge with the aim of providing tangible applied outcomes rather than generalizability or purely context dependent subjectivity (Denzin & Lincoln, 2008) Additionally, pragmatism considers researcher biases and preferences rather than being obstacles to objectivity, can be used to support the generation of novel insights. In this regard, the studies presented in this thesis were aided by my experience as a coach, leader and active practitioner in elite-sport TD pathways (Bryant, 2009; Giacobbi et al., 2005; Morgan, 2007).

1.3.2 Strengths and weaknesses of a pragmatic approach

Given the desire for this thesis to make an impact on real world practice, the strength of the pragmatic approach is the orientation to make a difference in practice. In considering pragmatism's epistemological framing, Cheryl Misak stated: "the best style of pragmatism replaces the old dichotomy between neutral stands and no-standards at all with a substantive, low profile, conception of truth and objectivity, a conception which nonetheless can guide us in inquiry" (Misak, 2000, p. 14). It is this epistemological framing that acknowledges the complexity of various processes of human development, not seeking to reduce the pursuit of knowledge to broad brush positivism or 'anything goes' relativism. Additionally, the use of pragmatism encourages beliefs to be held lightly with a recognition of the inherent ambiguity in complexity (Nicholson, 2013) and encourages the flexible use of knowledge in practice (cf. Grecic & Collins, 2013).

The primary critiques of pragmatism relate to the side-lining of ontological concerns in favour of the primacy of the research question (McCaslin, 2012). Bertrand Russell, in response to the classical pragmatists, characterised pragmatism being a form of “subjectivistic madness” (Russell, 1945, p. 818). Consequently, a weakness of the pragmatic approach, is that research *can* be highly context dependent. Yet, importantly, pragmatic research does not seek generalisable truth and it is important to note that the findings presented in this thesis cannot be seen as *the* truth, but instead considered in terms of transferability (discussed in the section below). These factors have clearly been considered and given the overall orientation of the thesis, a pragmatic approach was deemed highly appropriate given the desire to conduct investigation oriented ‘for’, rather than ‘of’ TD practice (cf. Cushion, Armour, & Jones, 2006).

1.3.3 Research strategies

Purists may point to the sharp divide between qualitative and quantitative methodology in terms of ontology, epistemology, axiology and causal linkage. Yet, pragmatists see value in multiple approaches, not seeing the conduct of science being that of objective verification through narrow positivism, or of ‘anything goes’ relativism (Onwuegbuzie & Leech, 2005). Ultimately, the pragmatic approach “places the research problem as central and applies all the approaches to understanding the problem” (Creswell, 2003, p. 11). Thus, the pragmatic orientation of this thesis, supports the use of multiple methods to provide appropriate insight into the research questions (Giacobbi et al., 2005). This offers an advantage in that it allows the researcher to be flexible in investigative techniques, fully addressing the scope of research questions (Onwuegbuzie & Leech, 2005). Thus, multiple methods were used to answer the objectives of the thesis, though, given the nature of the objectives, requiring a focus on the lived experience of participants, the methodologies were predominantly qualitative in nature.

Qualitative methodologies. The term qualitative methodology is an umbrella term referring to a variety of approaches such as ethnography, phenomenology and action research that primarily use textual data rather than numerical, to explore meaning and phenomenological perspectives (Williams, Boylan, & Nunan, 2020). If the strength of quantitative research is perceived to be its reliability, offering measurements that are repeatable over time, then the strength of qualitative research is the validity, that is the closeness to ‘truth’ or is practical utility (Greenhalgh & Taylor, 1997). Qualitative research is characterized by the use of an explorative approach and the collection of rich descriptive data (Silverman, 2006) with the aim of producing a useful map of the world, rather than a correct one (Stearn, 1998). The use of qualitative methodologies have thus been characterised as seeking depth to make sense of phenomena (Black, 1994). Consequently, the adoption of primarily qualitative methods throughout the thesis allowed for the rich exploration of the issues faced during the TD process (Denzin & Lincoln, 2008).

The two primary qualitative approaches used in this thesis are IPA and thematic analysis. Relative strengths and weaknesses are discussed below. IPA is a qualitative methodology used to explore the lived experience of participants in specific contexts (Smith, Flowers, & Larkin, 2009). It aims to generate insight as to how a given person makes sense of a phenomenon, the focus being the personal sense making of the individual (Smith & Shinebourne, 2012). This strong emphasis on the sensemaking of the individual, was deemed highly appropriate given the research objectives, in order to support participants to make sense of and reflect on their experience (Smith et al., 2009). The ideographic nature of IPA also allows for the in-depth analysis on a case by case basis and enables analysis on both the individual and group level. Given the depth of analysis and the desire to understand the perceptions of a small group, sample sizes have been recommended to reflect this (Smith & Osborn, 2007). Additionally, and in line with the pragmatic orientation of the thesis, the

experience and personal biography of the researcher is pivotal in IPA methodology (Roberts, 2013). Thus, IPA was deemed highly appropriate for the studies presented in Chapters 5 and 6 which required a deep exploration of the lived experience of a small homogenous population. Although some have questioned the extent to which IPA and thematic analysis differ, a distinctive difference is the depth of exploration of data and as such, thematic reports tend to be less detailed. Consequently IPA is not recommended for larger participants groups such as those in the studies presented in Chapters 3 and 4 (Smith & Shinebourne, 2012) .

1.3.4 Trustworthiness

Given that the number of concepts pertaining to quality in qualitative research is representative of the complexity inherent in the landscape of qualitative methodology (Tracy, 2010). There is significant debate about the most appropriate terminology to consider quality in qualitative research and given the number of approaches to qualitative research, there has been ongoing debate as to how to approach quality of research for decades (Koch & Harrington, 1998). Lincoln and Guba (1985) suggested that the aim of trustworthiness in qualitative research is to support the need to pay attention to a study's findings. A list of benchmarks was created to consider whether qualitative research could be deemed trustworthy: credibility, dependability, confirmability and transferability. Credibility was proposed to be a match between the reality of the participant and those reported by the researcher. Dependability relates to the constancy of the data over time and in different conditions. Confirmability suggests that data accurately represents the information provided by participants (Lincoln & Guba, 1985). Finally, transferability refers to the potential for results to transfer to other contexts. In the medical field, Greenhalgh and Taylor (1997) offered a number of factors that were suggested as appropriate criteria for the critical appraisal of qualitative research including the importance of the problem to practice, the appropriateness of a qualitative approach, the selection of participants, the taking account of

the researcher's perspective, description of methods of data collection and analysis, if conclusions are justified by data and if the findings are deemed transferable to other settings. Criteriology based approaches, such as these, have been criticised in the literature as lacking rationale, not being appropriate to the logic of qualitative research and philosophically contradictory (Sparkes, 1998). Thus, it has been further suggested that criteriology based approaches offer a false sense of security, blunting knowledge in disciplines and stifling creativity (Sparkes & Smith, 2009). Alternatively, judgments regarding qualitative research may alternatively be made as a matter of 'connoisseurship', but "gaining this intimate familiarity is not easy since it involves investing time and effort to read widely and to gain practical experience" (Sparkes & Smith, 2009, p. 496). Rather, Smith and Deemer (2000) suggested that the use of lists to judge qualitative research should be subject to change, based on the standpoint adopted on a given issue. Subsequently, it was proposed that there was a need to judge research using criteria consistent with their "own internal meaning structures and purposes" (Sparkes, 2002, p. 199). Thus, criteria may act as a starting point, but may not apply in all circumstances (Sparkes & Smith, 2009). In deploying multiple methods, this thesis therefore uses a number of approaches to optimise trustworthiness in data collection and analysis.

Given that the process and outcomes of interviews are shaped by trust and rapport with participants (Sparkes & Smith, 2009), these features were enhanced by my role in elite sport, awareness of the issues being discussed as an experienced practitioner and knowledge of the socio-cultural factors impacting on the sport. The status of 'insider' allows for increased empathy with the experience of the participant and enhances the process of data collection (Berger, 2013). It can however influence the process of analysis and consequently, I used a variety of reflexive tools used to be aware of varying perspectives (Lietz, Langer, &

Furman, 2006) and ensure findings as closely as possible represented the meanings as described by participants (Lincoln & Guba, 1985).

In line with the recommendations of Smith and McGannon (2018) all studies presented in the thesis used member reflection as part of research process. This gave participants the opportunity to be presented with and give feedback on the themes generated in the initial research process. Member reflections allow both participant and researcher to explore connections and differences between the researcher's and participant's understanding of their accounts (Smith & McGannon, 2018). The use of member reflections sits in contrast to member checks which proposed the validation of data through the return of the full data set to the participant, typically in the form of the full interview transcript. The concept of checking, suggested that the participant needed to validate that the data accurately reflected their experience (Lincoln & Guba, 1985). Member checking has been criticised based on the grounds that the knowledge generated from it cannot be value free and ultimately contain subjectivities (Braun & Clarke, 2013). Thus, claims of increased rigor cannot be substantiated and additionally, there appears no evidence that member checks enhance research findings (Thomas, 2017). Consequently, member reflections were used throughout the thesis to generate further insights and dialogue, enhancing rigour, rather than seeking verification (Smith & McGannon, 2018).

The use of critical friends can be seen as a characterising trait of quality and rigour in research, as it allows for dialogue and reflexive acknowledgement of other perspectives in the research process (Smith & McGannon, 2018). As a result, my supervisory team were used as critical friends throughout the process of data collection and analysis. Interpretations of data were challenged through the presentation of meaning units and the themes to which they had been coded (Faulkner & Sparkes, 1999). Where alternative coding was suggested, discussion occurred until agreement was reached. This process, and the transparency of data analysis,

was further enhanced by the use of qualitative software (QSR NVIVO 12) and the use of conceptual memos to log interpretation of the data, stimulating later discussion. Throughout the thesis a large number of direct quotations are presented in order to promote the voice of the participants, minimise the impact of my personal bias and for the reader to engage with their lived experience. In the interests of confidentiality, these quotes do not contain information enabling the identification of the participants is reported (e.g. club name, coach or player names). In addition, a reflexive journal was also kept throughout the research process to consider how any personal biases might interact with the research process (Patton, 2002). The journal was used to collate and reflect on thoughts captured during the process of data collection, this allowed me to consider my own impact on the research process. This was especially important given that the research was taking place in my own professional field. As such, it allowed me to consider how my own thoughts and feelings were interacting with participants in the first two studies as I was collecting data with participants in similar roles to myself. Similarly, it was used to reflect on my position and interpretation during data collection with athletes presented in the second half of the thesis. This seemed especially important given my professional role and the need for me to make sense of their own meaning as individual participants.

Finally, given the philosophical orientation and the objectives of the thesis, transferability was considered a priority in order to contribute to the TD field. Accordingly, it was considered that transferability would reinforce the quality of the research. In contrast to the conceptualisation of Lincoln and Guba (1985) which considered transferability being underpinned by trustworthy interpretations of reality, underpinned by a positivist epistemology. Transferability can instead be seen in terms of “findings that can be extrapolated beyond the immediate confines of the site, both theoretically and practically” (Charmaz, 2005, p. 528). Transferability occurs when the reader perceives the research

findings overlapping with their own situation, which in turn is a critical ‘marker’ of quality (Tracy, 2010). I hope that, given the range of findings from a number of contexts, the reader will be able to find these ‘overlaps’ with their own practice.

1.4 Overview of work programme

The thesis is presented in broad two parts, the first addressing the main aim from the coach perspective, examining risk factors and the second from the athlete’s to understand lived experiences of support. Chapter 2 presents an overview of the current state of literature in the field of TD and highlights key points, exemplifying methodological and philosophical implications of these bodies of knowledge. It offers a particular focus on the nature of challenge, what performers need to navigate the journey and their combined impact performance trajectory.

Chapters 3 and 4 address the aim of the thesis by examining the perspective of the coach, an underrepresented voice in the literature as a whole. Chapter 3 presents a study of TD failures, those performers who were deemed to be high potential athletes but failed to realise their talent. Applying interpretational qualitative analysis to explore the perceptions of elite development rugby union and football coaches as to individual players that they worked with had fallen away. Chapter 4 then presents a study of the barriers to effective TD practice amongst a cohort of rugby league academy and international staff. Using a focus group methodology, it addressed the second objective in seeking to understand the barriers to effective TD practice within a performance organisation.

Taking the athlete perspective, Chapters 5 and 6 focused on the third and fourth objectives. Chapter 5 deployed multiple methods to investigate the nature of developmental experience of rugby league players and provided insight into the experience of the support they received over the course of the senior transition. Chapter 6 longitudinally examined the

experiences of individual performers when interacting with a critical aspect of performance support, the feedback they received, in doing so, it addressed the fifth and sixth objectives.

In line with the seventh objective and the desire to produce practical usable knowledge, Chapter 7 locates the findings of the thesis within the wider body of knowledge, considering the nature of optimal athlete experience. Finally, in Chapter 8, conclusions are drawn on the thesis and implications for applied TD practice are offered. In doing so, an emphasis is placed on the need for a more granular understanding of the athlete's experience and the support offered to them in the development pathway.

Chapter 2 - The Evolution of Excellence in Literature and Practice

2.1 What we know

2.1.1 *The nature of talent development*

Rather than attempting to offer a review of all literature in a broad and broadening field, this chapter offers an overview of the current state of the literature in the field of TD relevant to the thesis. In doing so, it highlights key points in order to exemplify the methodological and philosophical implications.

There are a number of different approaches to the definition of talent. This has led some to view talent as being an innate quality (eg. Baker & Wattie, 2018; Howe, Davidson, & Sloboda, 1998). In an attempt to offer a unifying definition for the field, Baker, Wattie, and Schorer (2019) proposed that talent is a “component of development that is present at birth” (p.9) and an “antecedent of skill-based outcomes” (p.10). Based on this definition, however, the term ‘Talent Development’ would be inappropriate given its innate and heritable nature. This would be a strange state of affairs given the voluminous and growing literature which uses the term! Alternatively, the ecological paradigm suggests that talent is defined by the functional strength of relationship between an individual and their environment, mediated by the resources of the individual, the task constraints, and the physical and social environments (Araújo & Davids, 2011). It further suggests that there is no place for the concept of innate talent and the identification of athletes with a predisposition for specific tasks is more myth than reality (Davids & Araújo, 2019). Once again, a position which stands in strong contrast to popular opinion *and* volume of literature!

Others have chosen to emphasise the role of innate gifts *and* the role of development in the acquisition of talent. François Gagné’s Differentiated Model of Giftedness and Talent (DMGT) makes the distinction between ‘giftedness’ and ‘talent’, the latter of which can be defined as “outstanding systematically developed skills” (Gagné, 2004, p. 119). Consequently,

from this perspective being ‘talented’ reflects *both* genetic (gifts) and the experiences of an athlete, the process by which someone develops their ‘giftedness’ is moderated by the resources of the individual, their environment and other serendipitous factors (Gagné, 1995). In my own opinion, and reflecting the balance of the literature to date, this compromise position would seem the most tenable and this, forms the basis of this thesis.

Traditionally, TD research and practice has focused on the linear progression of various characteristics towards elite performance, which has led to concepts like ‘cascading’ practice applied to elite performers to those in development pathways. An example of this ‘cascading’ of practice was the use of periodisation literature in the Long Term Athlete Development model. A model that that sought to distinguish between four stages of training development and proposing that training protocols could be prescribed using objective physiological assessments (Balyi & Hamilton, 2004). The highly impactful Deliberate Practice theory (Ericsson, Krampe, & Tesch-Römer, 1993) also suggested a linear relationship between the accumulation of deliberate practice hours and eventual superior performance. Subsequently, a misreading of the work of Ericsson’s work was used to generate a series of pseudoscientific books suggesting that the only factor in the development of performance was practice (Coyle, 2009; Gladwell, 2008; Syed, 2010). Linear approaches, such as these, ignore the complex, multidimensional and hyper-dynamic nature of TD (Abbott et al., 2005; Baker & Horton, 2004; Bergeron et al., 2015; Van der Sluis, Van der Steen, Stulp, & Den Hartigh, 2019). This is supported by a growing body of evidence suggesting that early high performers typically do not maintain the same level of performance in a linear manner through to adulthood (Gulbin, Weissensteiner, Oldenziel, & Gagné, 2013; Güllich, 2014; Güllich & Emrich, 2006). Evidence of this nature has led literature to place greater emphasis on the developmental factors involved, rather than a focus on the identification of gifted performers (Bailey & Collins, 2013; Gagné, 1995).

2.1.2 The Biopsychosocial approach

In acknowledging the complexity of TD, the Biopsychosocial model has been suggested as a meaningful approach to consider the progression of talent (Bailey et al., 2010). The approach suggests an interdisciplinary and multifaceted approach, recognising the dynamic interaction between biological, psychological and social factors involved in human functioning (Engel, 1977). Biological factors include: the physiological and the anthropometric; social factors: parents, peer groups, geography, socio-economic status and luck; and psychological factors represent the behavioural and cognitive elements of the development of talent. The implication of this approach is that, whilst individual elements of the model can be analysed to enhance understanding of the TD process, human development is too complex to be seen in a mono-disciplinary manner (Bailey et al., 2010).

2.1.3 The Role of Challenge

In keeping with a multi-dimensional approach to TD, a factor consistently identified in the literature is the potentially beneficial consequences of challenge exposure throughout a TD journey. Without seeking to reduce complexity, or focus in a mono-disciplinary manner, there appears to be broad support for the benefit of developing athletes having to overcome a range of challenges along their development pathway (Bull, Shambrook, James, & Brooks, 2005; Rees et al., 2016; Sarkar et al., 2015; Van Yperen, 2009). As an example of this phenomena, the early stages of talent pathways will typically select those with early advantages, leading to an over representation of those born earlier in the selection year, or those who are more biologically mature than their peers (eg. Helsen, van Winckel, & Williams, 2005; Johnson, Farooq, & Whiteley, 2017). In essence, those who have early advantages tend to be selected in greater numbers than those who do not. Additionally, evidence presented from rugby league academies suggests that those who are later maturing are significantly more likely to progress to a professional level than their earlier maturing

peers (Till et al., 2016). Yet and in contrast, there is a body of evidence showing the reversal of the Relative Age Effect at senior levels (Connor, Renshaw, & Doma, 2019; Gibbs, Jarvis, & Dufur, 2011; McCarthy & Collins, 2014; McCarthy, Collins, & Court, 2016). Furthermore, most senior levels of sport seem to exhibit a diminution, or even absence, of the RAE which is so apparent at early stages (McCarthy, Collins, & Court, 2016). The differential persistence of RAE notwithstanding, for my present purpose this body of work suggests that those who ‘suffer’ from early advantages may drop out of pathways at significantly higher rates than those who have relative performance disadvantages.

Building on the apparent advantage conveyed by higher levels of challenge, it was suggested by Collins and MacNamara (2012) that the trajectory to elite performance was a ‘rocky road’ and that the experience of a variety of challenges was additive to an athlete’s performance over the long term. When coupled with the non-linearity inherent in the nature of progression through a pathway, this would suggest there is a problem for the TDE seeking to offer a challenge-full diet. Significant levels of challenge appear optimal in supporting the development of excellence, the suggestion in the broader literature that reported rates of mental health problems in young people are increasing rapidly (Gunnell, Kidger, & Elvidge, 2018) and young people are experiencing inappropriately low levels of stressors to help prepare them for optimal functioning later in life (Haidt & Lukianoff, 2018).

Transitions. There is a significant body of work that has examined the role of transitions in the career development of athletes. Transitions can be seen as an “event or non-event resulting in a change in assumptions about oneself and the world and thus requires a corresponding change in one’s behaviour and relationships” (Schlossberg, 1981, p. 5). The transitions faced by performers have been classified based on the domain within which they occur (athletic, non-athletic or simultaneous) and based on the predictability of the transition, from normative through to non-normative and bridged by quasi-normative (Schinke,

Stambulova, Trepanier, & Oghene, 2015; Stambulova et al., 2020). Supporting this body of work, career development frameworks suggest that the athletic career can be seen in terms of stages and transitions (Wylleman & Lavallee, 2004; Wylleman, Reints, & De Knop, 2013). An example, such as the Holistic Athletic Career Model suggests a number of interrelated layers including the athletic, psychological, psychosocial, academic-vocational, financial and legal (Wylleman & Rosier, 2016). Whilst a potentially useful frame of reference at the population level however, models that represent the complexity of an athlete's career journey are at odds with the biopsychosocial approach adopted in this thesis and offer limited utility at the individual level.

The junior to senior transition. Despite the above concerns with the limitations of a career modelling approach, it does however identify the stages of an athlete's career that present of the most critical developmental challenges. The junior or academy to senior transition has historically been characterised as being the most difficult transitional period for the individual to navigate (Bruner, Munroe-Chandler, & Spink, 2008). Whilst there are clearly a variety of contextual factors causing this difficulty, the holistic factors involved in becoming an adult (Wylleman et al., 2013), the differences in performance demands (Røynesdal, Toering, & Gustafsson, 2018) and the increased number and intensity of environmental stressors prevent a significant number of performers from effectively transitioning to the senior level (Morris, Tod, & Eubank, 2017; Richardson, Relvas, & Littlewood, 2013). Ultimately, the period appears to be where the majority of performers experience the broadest range, intensity and complexity challenges (Røynesdal et al., 2018) and is therefore a significant opportunity for those researching the risk factors in TD.

2.1.4 Theories of response to challenge

Given this problem and a desire to further conceptualise the nature of challenge variables in the talent pathway. This section offers a synopsis of the development of the literature in the fields of stress and coping.

Homeostasis. Claude Bernard first offered the idea of an individual's response to a changing external environment being the stability of internal milieu to support critical functions and the protection of tissue and organs (Bernard, 1957). This was reflected in the work (and substantial citation/employment) of Yerkes and Dodson (1908) who positioned arousal as a quantitative phenomenon and that performance could be seen as an inverted U relationship. Individuals perform best under a certain volume of arousal, but when that person is pushed beyond an optimal point, performance will decline. Building on the work of Bernard, Walter Cannon proposed the term Homeostasis to describe the process by which a number of independent physiological systems attempted to maintain internal stability in the face of environmental change. He proposed that the failure of the body's internal processes to meet these challenges could result in damage to the internal bodily environment (Cannon, 1929). The implication being that from a biological point of view, once an individual has experienced stress, they will use a set of internal resources to return to a homeostatic set point.

Stress. The term stress was coined by Hans Selye to describe nonspecific responses of the body to external demands. His General Adaptation Syndrome (GAS) suggested that, following exposure to stressors, the body would follow a predictable and linear trajectory through a sequence of phases in response to exposure to prolonged stressors. Eventually, if, what he termed aversive stimulation persisted, it would lead to a state of exhaustion and irreversible tissue damage for the individual. He proposed that anything which changes the

internal conditions of the body, requiring adaptation, produces stress and that both positive and negative stressors produced the same stress response (Selye, 1956).

Notably, Selye's position evolved over time and latterly he hypothesised that stressors were the various demands experienced by individuals that were capable of evoking a stress response. He also suggested a contrast between 'Eustress' and 'Distress' as distinct, based on the adaptive and maladaptive consequences of the stress response, Eustress being the concept of 'good' stress (Selye, 1976). Allen (1983) expanded this idea by asserting that eustress and distress can be differentiated by qualitative characteristics. Yet, Selye's positioning of stress and the associated responses have been criticised for being too simplistic and lacking emphasis on the psychological state or environmental context of the individual. By the 1970's many of Selye's concepts were subject to significant scrutiny with John Todd the English physician describing the GAS as being one of "the errors of medicine" (Jackson, 2014). This was in opposition to Selye, who saw individual differences in responses to stressors as being biologically or externally mediated. Driving a new perspective, Lazarus (1974) and Mason (1975) were among the first to highlight the role of psycho-emotional state in mediating response to stress. As a later development, Lazarus and Folkman (1984) offered their model of coping with stress as a transactional model that positions individual differences in stress response as a result of cognitive appraisal taking place when environmental demands exceed the resources of an individual. Although not considered as diametrically opposed, positive appraisal would see an individual interpreting external stimulus as being favourable and offering the potential for growth; negative appraisals would focus on potential harm. In this sense Eustress can be seen as a positive response to cognitively appraised stressors and conversely Distress as a negative psychological response to a stressor, indicated by the presence of negative psychological states (Nelson & Simmons, 2003). Accordingly, manifestations of coping can be seen as both the result of individual and

situational characteristics (Ridder & Kerssens, 2003). Stress is therefore a relational concept, depending on the relationship between individuals and their environment (Lazarus, 1991) rather than a simple linear and highly correlated relationship.

Coping. The deployment of coping skills can change an athlete's cognitions, management of emotion, arousal and environmental interactions (Compas, Connor-Smith, Saltzman, Thomsen, & Wadsworth, 2001). These coping efforts are mediated by both personal and environmental factors, are age related and highly contextual (Compas, 1987; Compas et al., 2001). With this in mind and given the challenges faced by developing performers, it has been proposed that excellence in coping precedes excellence in performance (Poczwadowski & Conroy, 2002). This concept also led to the proposal of Proactive Coping referring to efforts taken by individuals to equip themselves with the resources and skills to cope with future potential stressors (Aspinwall & Taylor, 1997) and the early deployment of these as a first response. These skills include, or are concomitant with, the use of goal setting, the holding of efficacious beliefs and the psychological resources for self-improvement (Greenglass & Fiksenbaum, 2009). It may also involve the anticipation of future stressful events to ensure that developed resources are deployed during acute stress (Aspinwall, 2011). The deployment of Proactive Coping and the associated *a priori* build-up of resources may help performers positively interpret traumatic situations, mitigate chronic stress and encourage approach behaviour (Aspinwall, 2011; Blascovich & Mendes, 2000; Greenglass & Fiksenbaum, 2009). In addition, those performers who have developed a wide range of psychosocial resources are more likely to use proactive coping (Aspinwall & Taylor, 1997). It is this range of psychosocial skills that athletes will need to deploy as coping is only part of a range of self-regulatory skills (Richards, 2011).

Allostasis. More recently, Allostasis has added to our conceptual understanding of the impact of stress and individual differences in response to stressors. Allostasis suggests "the

biological systems of the body are in constant flux, adjusting to the demands placed upon it, with the aim of achieving stability through change” (Sterling, 2004, p. 18). Further, it suggests that when activated by a stressor, an individual makes wide ranging changes to find a new set point that fits the circumstances (McEwen, 1998b). This is in contrast to Homeostasis, which posits a process by which the body attempts to reach/return to a fixed state of stability. Notably, allostatic responses to stressors are primarily mediated by the emotional regions of the brain through a process termed Allostatic Accommodation. This process allows the body to respond to a stressor and return to a set point, or through adaptive response create a new state (Ganzel, Morris, & Wethington, 2010). If the individual is able to meet the demands it may lead to growth, adaptation and learning (McEwen & Gianaros, 2010).

There is a need to be aware that all Allodynamic processes have a cost to the individual however (McEwen & Gianaros, 2010). Where stressors are prolonged, uncontrollable, unpredictable or an individual lacks the capacity to meet their demands (Kirschbaum et al., 1995; Parihar, Hattiangady, Kuruba, Shuai, & Shetty, 2011) Allostatic Load (AL) may result. AL may in turn compromise an individual’s ability to learn (McEwen, 2006). Young people are at significant risk of maladaptive consequences of stressors and exposure to environmental stressors has a significant impact on child development (Compas et al., 2001; Evans, 2006). Accordingly, moderate increases in exposure, at an appropriate stage of development with allowances made for periods of recovery are most likely to yield a positive response and learning (McEwen & Gianaros, 2010). This work represents a further step away from the work of Selye who positioned the stressor itself as being positive or negative. Allostasis suggests resources of the individual (and their perceptions of this) as being the key to individual response or benefit (McEwen, 1998a).

The implication of this work would suggest that no stressor can ever be seen in a purely input - output manner. The psycho-behavioural resources of the individual play a significant role in an individual's experience of stressors and therefore, no stress response can ever be considered uniform. Thus, if the TDE can manipulate the demands faced by a given performer, gradually increasing the level of challenge to match their resources and ensuring external support, the performer can benefit from Allodynamic processes.

2.2 What do they need?

Reflecting the epistemological position presented in the previous section, in tandem with the provision of challenge, there appears to be a critical need to develop the skill set of performers. There is, however, significant disagreement in the literature as to optimal approaches to TD and presented below are the three broad categories of approach identified by Collins et al., (2016).

2.2.1 Approaches in common use

Life Experiences. The life experience approach suggests that the experience of life trauma being a catalyst for later outstanding sport performance. Initially, the work of Van Yperen (2009) found a correlation between football academy players who progressed to the professional level and life related adversity factors, such as having divorced parents. Later, the work of Fletcher and Sarkar (2012), in seeking to develop a grounded theory of resilience in Olympic champions suggested that: “most of the participants argued that if they had not experienced certain types of stressors at specific times, including highly demanding adversities such as parental divorce, serious illness, and career-threatening injuries, they would not have won their gold medals” (Fletcher & Sarkar, 2012, p. 672). The implication being that life related adversities were causative of future performance levels. Expanding this notion, Howells and Fletcher (2015) used data from the autobiographies of 7 swimmers and suggested a close correlation (although surely difficult to calculate from qualitative data!)

between life adversity and sporting success, the life changing adversities were seen to act as extreme motivational triggers. A subsequent paper utilised semi-structured interviews with 10 Olympic Gold medallists to suggest that life adversity was used to fuel ambition (Sarkar et al., 2015). It has also been suggested that there is no evidence that of any Olympic Champion who has not experienced significant life adversity or trauma and that “The evidence suggests that he or she will not be successful at the highest levels” (Sarkar & Fletcher, 2017, p. 162). Once again, however, such a firm conclusion would seem questionable based on qualitative examination of only one subset of the full picture.

Notably, this final claim appears to run contrary to evidence presented by Collins et al. (2016b) who found that the developmental experiences of 18 ‘super champions’, including Olympic gold medallists, reported little major trauma, less trauma than those who were classified as ‘almosts’ and the trauma that was experienced was primarily sport related. Collins et al. suggested that the characteristics that athletes arrived at the challenge with, how they were deployed and the support they received that appeared critical. Given evidence to the contrary and methodological concerns such as the use of autobiographical data (Stewart, Smith, & Sparkes, 2011), the concept that life trauma is either necessary for, or causative of effective development is questionable.

Attitude. The second broad school of thought focuses on the role of attitude and how it mediates the response to challenge. Attitudinal constructs such as ‘Grit’ and ‘Growth Mindset’ have been positively correlated with the development of talent. Grit, defined as “passion and perseverance for long term aims” (Duckworth, Peterson, Matthews, & Kelly, 2007, p. 1087) has been associated with successful outcomes in several domains including the military, high school and spelling bee performance (Duckworth, Kirby, Tsukayama, Berstein, & Ericsson, 2011; Duckworth et al., 2007). Grit was found to predict the long term progress of individuals above factors such as intelligence, physical aptitude and the Big Five

personality traits (Eskreis-Winkler, Duckworth, Shulman, & Beal, 2014). Additionally, the implicit theories of performers, or the more commonly termed construct ‘Growth Mindset’ has also been demonstrated to support development (Dweck, 2006). Implicit theories are individual assumptions about the changeability of personal qualities (Dweck, Chiu, & Hong, 1995) and those people who believe that their abilities are malleable qualities respond more adaptively to high challenge (Yeager & Dweck, 2012). The combination of a growth mindset influencing an orientation towards learning, rather than performance and the belief that effort is a critical factor in overcoming challenge (Rattan, Savani, Chugh, & Dweck, 2015).

Although these constructs might offer a level of face validity, there is the potential for ‘sticking at it’ to prove counterproductive, a phenomena termed ‘non-productive persistence’ (McFarlin, Baumeister, & Blascovich, 1984). Put simply, if you persist ineffectively it is unlikely yield desired outcomes. In addition, both bodies of work have been the subject of methodological critique with suggestions that grit is conceptually indistinct from self-control (Vazsonyi et al., 2019) and that the demonstrated effects are a function of persistence, calling into question the status of grit as a distinct construct (Credé, Tynan, & Harms, 2017).

Similarly, Burgoyne, Hambrick, and Macnamara (2020) tested the claim that people with growth mindsets have greater capacity to respond adaptively to failure feedback and found no significant association with a growth mindset and those who ‘bounce back’ following failure. In short, it appears that individual response to challenge is more complex than these distinct psychological constructs might suggest.

Skills. The third category is the skills-based approach, already well supported in the literature as a necessity for those who have already attained high levels of performance (Golby & Sheard, 2004; Gould et al., 2002; Gould & Maynard, 2009; Krane & Williams, 2006; Orlick & Partington, 1988). The approach offers guidance to the practitioner as to how they go about equipping performers and is based on the mechanisms and processes that

enable young athletes to make the most of the experiences they have (Collins, MacNamara, & Cruickshank, 2019). This is congruent with the body of literature in allostasis and coping presented earlier in this chapter, suggesting that the development of coping skills facilitate successful adaptation to stress through influencing cognition, management of emotion, arousal and environmental interactions (Compas, 1995; Compas et al., 2001). It is additionally proposed that attitudes such as grit may be the outcome of process constructs (MacNamara, Button, & Collins, 2010a, 2010b). As such, given the nature and magnitude of challenges that performers are exposed to, it has been suggested that adequately preparing athletes for challenge is a necessity (MacNamara & Collins, 2010). This would seem especially important given research showing that those athletes who arrive at challenges with a broad range of mental skills and the confidence with which to deploy them during demanding periods are more likely to progress (Collins et al., 2016b).

As previously identified, a critical period of challenge in the development of an athlete is the junior to senior transition and there is significant evidence to suggest that those performers that arrive at the transition with a fully developed set of psycho-behavioural skills appear most able to navigate the transition effectively (Jones, Mahoney, & Gucciardi, 2014; MacNamara & Collins, 2010; Poczwadowski, Diehl, O'Neil, Cote, & Haberl, 2014). It therefore appears critical that, in order to support the individual athlete, TD pathways should seek to equip athletes with a range of psycho-behavioural skills to be able to both cope with and learn from a range of developmental challenges (Alfermann & Stambulova, 2007; Larsen, Alfermann, Henriksen, & Christensen, 2014). Additionally, the possession of self-regulatory skills has also been found predictive of progression to the elite level in a team sport context (Toering, Elferink-Gemser, Jordet, & Visscher, 2009).

Psychological Characteristics of Developing Excellence. The PCDEs are a constellation of different psycho-behavioural factors that encompass both trait based characteristics and

state deployed skills (MacNamara, Holmes, & Collins, 2006). Abbott and Collins (2004) initially suggested that they defined the manner in which individuals interacted with their environment and were supportive of transfer into other domains. This adaptive nature of PCDEs was highlighted by their investigation in the musical (Kamin, Richards, & Collins, 2007; MacNamara & Collins, 2009; MacNamara et al., 2006; MacNamara, Holmes, & Collins, 2008) and sporting domains (Hill, MacNamara, & Collins, 2015; MacNamara et al., 2010a, 2010b; MacNamara & Collins, 2010, 2015). Most recently, this stance has been strengthened by studies with performers who fell away transferring to other domains (Williams & MacNamara, 2020). Although the titles of the PCDEs have been refined over time, the most up to date list is represented below (Collins & MacNamara, 2017a):

- Focus and distraction control
- Realistic performance evaluation
- Role clarity
- Coping with pressure
- Planning and self-organisation
- Goal setting
- Quality practice
- Effective imagery
- Actively seeking social support

Although PCDEs are a range of generic psychological characteristics, they are deployed in a highly individual and contextual manner (MacNamara et al., 2010a, 2010b). They are also considered interactive in nature rather than discreet entities. For example, realistic performance evaluation will support the deployment of goal setting, in turn building the commitment resources of a performer. Consequently, during challenging experiences, a young person's capacity to cope will draw heavily on their psycho-behavioural and psycho-

social skills (Bailey et al., 2010). It is this multidimensional interaction of characteristics that appears to enable performers to *cope with* and *learn from* testing exposures to challenge and realise self-regulatory processes (cf. Savage, Collins, & Cruickshank, 2017). Other work has seen the development of a Psychological Characteristics of Developing Excellence Questionnaire (MacNamara & Collins, 2011) and its update (Hill, MacNamara, & Collins, 2018). Despite being a formative tool, the PCDEQ appears to offer a level of classification between different levels of athletes (MacNamara & Collins, 2013). Thus, to maximise their potential, performers need to be equipped with a range of psychological skills from the earliest possible stage of their development (MacNamara & Collins, 2015). Additional evidence suggests that PCDEs can be taught, as an example, Collins and colleagues, (2010) demonstrated significant improvements in psychological outcomes such as perceived competence, self-determination and self-motivation through a multi layered intervention. Thus, based on the extant evidence base, it appears clear that a skills-based approach has the best empirical support and accordingly the next section considers what is known about how performers can best be equipped with this skillset.

2.2.2 Teach-test-tweak-repeat

As identified by Collins, MacNamara, and McCarthy (2016a), the teaching of skills may optimally be approached through in a Kolb like cycle of *teaching* skills, *testing* their deployment through realistic challenge and *tweaking* through review, encouraging self-management. The approach seeks to proactively equip the individual with the resources to cope and rebound from the drop in performance and perceived performance potential (Aspinwall & Taylor, 1997; Savage et al., 2017). As such, this approach seeks to ensure that the development of skills isn't reduced to a process of didactic 'mental skills training'. Instead, the systematic teaching, deployment and refinement of skills, both implicitly and

explicitly, allows for the potentially lengthy and non-linear process of acquisition (Abbott, Collins, Sowerby, & Martindale, 2007).

The use of challenge to test previously acquired skills can occur in a number of ways. Normative challenges are those that can be prepared for and predicted, for example the step up to a higher level of performance, or a particular competition. Non-normative challenges are those that cannot be predicted such as an unexpected slump in performance, or an injury. (Collins & MacNamara, 2017c). Finally, imposed challenges are the deliberately deployed speed-bumps that are used by the TDE in order to prove previously developed skills and to induce a performance 'rebound' (Collins et al., 2016a; Savage et al., 2017). This type of challenge may take the form of drip-feeding athletes into senior level competition, competing outside of chronological age group, playing out of position or non-selection.

Following a period of challenge, there is a need to *tweak*, encouraging active sensemaking on the part of the athlete, typically through reflection on deployed skills, facilitated through review and feedback. Active engagement appears critical to help frame the challenge against prior experience and their longer term aims and objectives (Sarkar et al., 2015; Savage et al., 2017). Once a period of tweaking has been engaged with and in order to prevent the maladaptive consequences of chronic stress, there is a need for re-accumulation of the necessary psychological resources to cope with future periods of challenge (Aspinwall, 2011). Finally, as part of a cyclical approach, the process of teaching should begin again with a focus on the reinforcement of target skills needed for the next challenge. This explicit and implicit approach requires both a targeted focus on the individual and on their surroundings, accordingly, the next section will consider what is known about the role of environment in TD.

2.2.3 Manipulation of the environment

Manipulating the outward characteristics of the TDE has been a prominent feature of recent research. Originally, the work of Martindale et al. (2005) proposed four key features of effective TD: long term aims and methods, wide-ranging coherent messages and support; an emphasis on appropriate development and individualised, ongoing development. Each of these key features proposed methods with which to engineer the wider environment to promote effective TD. The work of Martindale and colleagues was then followed up by Henriksen and colleagues in their ecological paradigm, proposing the concept of the Athletic Talent Development Environment and identifying the shared features of successful environments in Denmark (Henriksen, Stambulova, & Roessler, 2010a, 2010b). Using a relatively novel design, the concept was further developed by identifying characteristics at the opposite pole, or what characterised failing environments (Henriksen et al., 2014). Not dissimilar features were identified: training groups with supportive relationships; proximal role models; support for sporting goals by wider environment; support for the development of psycho-social skills; training that allows for diversification; a focus on long term development; coherent organisational culture and the integration of efforts (Henriksen & Stambulova, 2017). Taking a different approach, Fletcher and Sarkar (2016) took an individual level theory (Challenge and support - Sanford, 1967) expanding it to the level of environment, proposing a 2 x 2 typology based on levels of challenge and support. It was suggested that environments could be classified based on the uniform behaviour of the individuals within them as: stagnant, unrelenting, comfortable or facilitative. It was subsequently hypothesised that in order to be facilitative of resilience for sustained success, a highly supportive and highly challenging environment was required, characterised by features such as: “people thriving in a challenging but supportive environment”, “individuals craving feedback” and a feeling that “we are in this together” (Fletcher & Sarkar, 2016, p. 142).

2.2.4 Coherence of system/message

A critical factor identified by the work examining the characteristics of effective TDEs was the coherence of messaging, support, philosophy, aims and methods at a number of levels (Martindale et al., 2005). Similarly, (Henriksen et al., 2010a, 2010b) found that a coherent organisational culture and the integration of efforts to offer a coordinated experience for the athlete by the wider environment, were features of effective TDEs. Latterly, Henriksen et al. (2014) found that an unsuccessful TDE was characterised by an incoherent culture with very little integration of efforts between stakeholders.

A lack of coherence of system and of messaging between the multiple levels of social interaction appears to be a risk factor, particularly at times of experiencing or reflecting on challenge. A lack of coherence between a group of trusted advisors can have a undesirable impact on the athlete's ability to learn from challenge, especially if some have negative views on challenge (Haimovitz & Dweck, 2016). Alternatively, even if a performer's initial reaction to a testing situation is negative, coherent messaging from a number of parties can be used as a stimulus to positively reappraise the experience (Blascovich & Mendes, 2000; Morgan & Giacobbi, 2006) resulting, I would suggest, in a more positive outcome (cf. my earlier comments on allostasis).

In a 2016 paper, Webb et al. (2016) sought to identify how coherence can be developed throughout talent pathways by offering principles and identifying the mechanisms of coherent coaching. This coherence was characterised by logical, intentional, progressive and appropriately consistent coaching practice, where different parties offer appropriate levels of difference that align with the system's broader objectives. To achieve this, it was suggested that SMM intentions at each stage should be developed across various stakeholders. This horizontal coherence (across a level) and vertical coherence (between levels) was proposed as

a critical factor in managing the messaging, support, philosophy, aims and methods at a number of levels (cf. Martindale et al., 2005).

2.2.5 Role of support

Subsequently, it appears clear that the provision of and role played by the various levels and types of support needs to go beyond the coach alone. This presents a problem for those seeking to facilitate the development of talent. If the active engagement and reflection following a challenge is critical for a performer is to ‘learn from it’ then there are a number of stakeholders around the athlete that can serve to support or derail the process, especially as the quality of social support can be seen as vital in adapting to stressors (Petersen et al., 1993). As identified by Collins et al. (2016b), amongst other factors, the different types of support received by performers on the development journey appeared to discriminate between levels of eventual performance. For example, those classed as ‘almosts’ had significant others playing very significant roles in directly supporting or even pushing their development, acting as dominant figures. In contrast, ‘super champions’ experienced positive facilitation and encouragement without being ‘pushy’, leading to parents taking a peripheral role at appropriate times.

Feedback. A critical role of the coach and element of the support available to performers is feedback and has long been seen as a crucial element of performance enhancement (Ericsson et al., 1993; Nash, Sproule, & Horton, 2017). In a seminal meta-analysis Kluger and DeNisi (1996) highlighted that the most important characteristics of feedback were not the specific elements of the feedback offer, but instead, what the learner does with it. Later work has furthered this and has positioned feedback as a process, rather than merely information to be given (Carless & Boud, 2018). As such, feedback can be seen as “processes where the learner makes sense of performance-relevant information to promote their learning” (Henderson, Ajjawi, Boud, & Molloy, 2019, p. 17). Consequently, there is a need to

focus on the *impact* rather than just the content of feedback and the broader support offered to the athlete. It is for this reason that Henderson and colleagues (2019) identified impact in feedback as a process within a system, rather than an input alone and, therefore, as a component of the overall feedback loop that also relies on the individual sense making of the learner and their ‘feedback literacy’ an analogous construct to the PCDEs mentioned earlier in the chapter (cf. Carless & Boud, 2018). As such, impact can be seen as a changed state within the learner as a result of the feedback process (Henderson et al., 2019) and an enhanced understanding of the interrelationship between the emotional state of the learner and the feedback process would support optimise learning and development. This is an important distinction as previous work in the field of sports psychology has focused on feedback as being information offered to an athlete rather than a process of interaction (eg. Carpentier & Mageau, 2013).

Emotions have historically been seen as something to be managed away and a hinderance to feedback effectiveness (Molloy, Noble, & Ajjawi, 2019). It is the perception of need for the balancing of affective state and the removal of emotion to support learning that has led to folk-pedagogical concepts such as the ‘feedback sandwich’ which lack empirical support (eg. Henley & DiGennaro Reed, 2015). It has even been suggested by some in the business domain that any feedback that offers critique should not be used because “criticism inhibits the brain’s ability to learn” (Buckingham & Goodall, 2019, p. 94). Reflecting these often-unfounded assertions, Molloy and colleagues (2019) have argued for a more nuanced view of how feedback processes interact with emotion, especially as the dominant narrative has been the need to reduce emotional impact on the learner.

Individualisation. The above dimensions of individual difference identified in response to feedback through individual sensemaking highlights the necessity of an individualised approach by TDEs (Martindale et al., 2005). The challenge for the TDE in providing coherent

support, across the various disciplines and levels of organisation appears a significant. Suggested good practice would see the use of Individual Actions Plans that were formulated as part of a Case Study Review process led by the performance manager, bringing together the relevant levels of support (Collins et al., 2016a). To inform this approach, the use of a formative assessment tool such as the PCDEQ would allow for individual needs to be identified and inform interventions (A. Hill et al., 2018).

When combined with the principles of training: specificity, progression, overload, reversibility and tedium (SPORT) (eg. Farrow & Robertson, 2017). This would suggest the need for support that engages the performer with ecologically valid challenge and support, that is specific to long-term needs. That provides a level of progression, progressively greater challenge or gradually reducing the level of support to the performer to encourage more individual responsibility, Overload, offering challenges of greater intensity to invoke greater challenge over time. Reversibility, ensuring that challenge is offered at regular intervals, to prevent 'detraining'. Tedium, ensuring that the type of challenge and support available doesn't become monotonous, to keep variety in the short and long term.

2.3 Consequent actions and questions

This chapter has presented a variety of research that characterizes effective TD practice, yet, relatively little empirical work has considered failures in TD, or more specifically what prevents efficacious practice. There is a wide body of evidence demonstrating that performers who have already reached the top have a broad skill set of psychological skills (Gould et al., 2002). What has not previously been considered is the extent to which a lack of these skills indicates a risk of failure, or how it interacts with challenge variables. This appears vital given the widespread acceptance of the role played by challenge and growing support for a skills-based approach ensuring that athletes are prepared to cope with and learn from experience. Additionally, whilst some features of ineffective TD practice have been identified

in a particular context (Henriksen et al., 2014), what is yet to be identified is an understanding of the barriers that lead to incoherent practice. Subsequently, the first part of the thesis seeks to address these research gaps and taking the perspective of the coach, the study presented in Chapter 3 examined the causes of individual TD failures. Chapter 4 identifies the factors that prevent TDEs offering an optimal set of experiences to developing athletes.

A particular concern highlighted by this overview is the centrality of personal interpretation and the extent to which individual sensemaking (Klein, Moon, & Hoffman, 2006) is mediated by psycho-social factors. Consequently, the second part of the thesis examines the perspective of the individual athlete moving into, through and out of a talent pathway. Following the call to understand the experience of the athlete in greater depth, Chapter 5 investigated the nature of the transitional challenge experience and understanding perceptions of impactful support. Chapter 6 extends the understanding of individual sensemaking by longitudinally tracking athletes, investigating their sensemaking of feedback and moderators of impact.

Finally, and following the call for greater understanding of the mechanisms that underpin the phenomena of TD to support practice (Collins et al., 2019) Chapter 7 considered a mechanistic explanation of the factors involved in the use of challenge.

Chapter 3 - Shoulda, Woulda, Didnae: Why Don't High-Potential Players Make It?

3.1 Introduction

3.1.1 Overview

The preceding chapter considered what we know about the nature of the talent development process. This suggests a variety of means by which performers progress through pathways and what they need in order to navigate and exploit the challenges that are presented to them. Those who do reach the highest levels of performance appear to have developed a set of psychological skills that help them to both navigate and optimally benefit from the various challenges they experience. Accordingly, it has been suggested that the pathway should provide an 'optimal' level of variability to support the development of performers who have the ability. Furthermore, Chapter 2 also suggested the need for a critical focus on the personal experience and perceptions of the individual performer, in addition to the outward characteristics of an environment. Given that these challenge experiences are acknowledged as being critical features of the TD pathway, the next logical step would be to consider the TD journey as a whole and what might prevent the fulfilment of potential. Consequently, this chapter considered the range of experiences of those performers who did *not* make it, exploring the individual characteristics of those who could (or perhaps even should) have made it but failed. Furthermore, and importantly, the impact that their individual experiences had on the trajectory of their performance development.

As identified in Chapter 2, there is a wide body of extant literature that has investigated the characteristics of those performers who *have* made it to the highest levels of performance by identifying contrasting strengths in individuals (eg. Van Yperen, 2009) or environments (eg. Bean, Harlow, Mosher, Fraser-Thomas, & Forneris, 2018). Yet, this approach has ignored the considerable learning opportunities (not to mention the ethical imperative) from explicitly considering failure and perhaps countering a survivorship bias in the extant

literature (Smith, 2014). In this regard, Bailey and Collins (2013) claim that signs of success within a system are often an illusion rather than ‘evidence’ that the system is working effectively. In fact, they continue to state that “there are no ways of knowing who might have succeeded through different systems, and who... (if) selected from the system... might have (under different circumstances) gone on to achieve high performance” (Bailey & Collins, 2013; p. 249). Only very limited research has considered those who have failed on a pathway (Holt & Mitchell, 2006). Therefore, to truly understand the role played by the experience of developing athletes and its impact on those who do *and don't* ‘make it’, there is a need for greater ‘granularity’ in our understanding of how athletes progress (Gulbin et al., 2013). The question remains, why do those with high perceived potential fall away?

3.1.2 Purpose of the Investigation

The theoretical and conceptual approaches presented in Chapter 2 offer a view on how development *should* happen. The study presented in this chapter aimed to build on the existing base of evidence examining those who have made it, exploring the reasons why high potential performers are perceived to have failed along their development pathway. In taking this approach, the investigation had the following purposes:

- (a) to understand the causes of athletes’ demise across two professional team sports;
- (b) to identify any causes perceived to have occurred more frequently than others, and;
- (c) to understand what the coach or talent system could have done to prevent this.

3.2 Method

3.2.1 Research Design and Methods

In accordance with the pragmatic approach throughout this thesis, the examination of why apparently gifted players fail to realize their presumed potential was seen as highly relevant, most especially to those practicing in TD environments. In addition, given the gaps

in the literature, this was a critical topic to consider from the point of view of adding to the extant evidence base.

3.2.2 Participants

Participants were two purposefully recruited samples of experienced TD coaches from high level, professional academies or individuals holding positions in national UK pathways.

These were 10 rugby coaches drawn from 8 academies, aged between 28 and 48 years ($M=37.8$ years; $SD = 6.36$) with between 5 and 18 years coaching ($M=11.2$ years; $SD = 5.15$) and 10 football coaches drawn from 4 academies aged between 27 and 62 years ($M= 37$ years; $SD = 7.9$) with between 9 and 32 years coaching ($M=21$ years; $SD = 8.2$). The samples were chosen as a result of the need for highly experienced TD coaches who had the requisite experience to have worked with players that fitted the sampling criteria. My request for their views on three players was based on pilot work, which suggested this as a suitable number for clarity of recall. Finally, the two sports selected and my focus on male players represented the best resourced and largest academy systems currently in the UK.

The players for whom data were gathered were all male and, on first sight, were all perceived by these experienced talent developer participants to be a 'dead cert' for future success. Their potential remained 'obvious' for an extended period of time; yet fell away later. All coach participants were invited to take part through personal contact and, following the protocol approval by the University Ethics Committee, completed informed consent.

3.2.3 Data Collection

Contact was made with each participant at least one week prior to interview. Each was asked to consider 3 players who had, on first observation, been perceived to possess very high potential but who subsequently did not make it to the top of their sport; the standard originally expected of them. Guided by the exploratory nature of the study and based on the pragmatic approach (Giacobbi et al., 2005) a semi-structured interview guide was developed

and refined through pilot work with two coaches in each sport of similar qualification and experience. It consisted of open-ended questions that elicited responses informed by literature and my applied experience; in addition, follow-up probes and prompts were developed to allow elaboration on key points and promote consistency across participants (Patton, 2002). The guide is presented in Appendix A.2.

Interviews were arranged at a quiet location to suit the participant, whilst a pre-briefing allowed them to reflect on the players that were to be discussed. Interviews, after initial briefing and warm up questions, lasted between 45 and 75 minutes and were taped for subsequent analysis.

3.2.4 Design and Analysis

Interviews were transcribed verbatim and, given the lack of prior research in the area, an inductive content analysis was conducted to identify the factors implicated in the failure of players 'making it'. The procedure used by Côté, Salmela, Baria, and Russell (1993) was followed, starting with each transcript being read several times to ensure familiarity and understanding. Qualitative analysis software (QSR NVIVO 12) was then used to take raw data units and build thematic hierarchies by creating tags (eg. "Unwilling to spend time training"; "Inability to cope with performance errors"; "Poor interaction with coaches"), similar tags were then grouped into sub-themes and then a framework of higher order themes.

3.2.5 Trustworthiness of the Data

As with all studies presented in this thesis, member reflections were utilised (Smith & McGannon, 2018), all coaches were contacted to garner their reflections on the results of data collection, having been sent a copy of the tabularised summaries (see Tables 3.1 and 3.2) in advance. Of the twenty, eighteen responded and took part in a follow up interview. All perceived the results to be highly representative of their experiences in TD, actually

acknowledging and endorsing ideas presented by other participants; both within and outwith their own sport.

For example, one rugby coach commented, “hindsight is always 20:20, but there appear to be a lot of factors here that are highly influenceable (sic) by the coach and academy”. Another stated “it’s knowing the player inside out that really counts”. A football coach observed, “suppose it’s not surprising that the egg chasers [rugby coaches] have the same issues as us...same country, almost the same kids!” Furthermore, given the resources and status involved, several coaches from both sports also expressed surprise at the clear systemic failures that took place.

Importantly however, none expressed any disagreement with the content or nature of the coding, nor reported any additional factors that would explain why highly gifted players might be derailed. Encouragingly, all coaches expressed how practically useful they found this work to be and there was significant interest in how it could be operationalized to further enhance talent development systems.

3.3 Results

3.3.1 Overview and Summary Tables

The purpose of the study was an exploration of the reasons why high potential/apparently gifted football and rugby players failed to realize their potential. Accordingly, and reflective of the high order themes identified, data are presented under the five categories which emerged; lacking mental skills, serendipity, pathway-based failures, maladaptive family input and lacking physical skills). The derivation of these themes are shown in Tables 3.1 and 3.2, with the two sports presented separately so that readers can evaluate the degree of overlap in the data. In all cases, quotes are marked R or F, depending on the sport pertaining.

Prescribed Themes	Higher Order Themes	Lower Order Theme	Raw data exemplar
Mental	Lacking motivation (24)	Over confidence (9)	“F was just too cocky – he thought everything was easy and he lost interest when it wasn’t”
		Selective on training (5)	“Y would do what he wanted to do, what he was good at. But when it came to the weaknesses...”
		Distracted by money (4)	“The problem was that he got too comfy too quickly. After that he seemed to lose interest”
		Too much attention (6)	“G had everyone round him...agents, family, fellow players. All telling him how great he was going to be”
	Lacking Commitment (14)	Poor lifestyle choices (4)	“He learnt bad habits from the wrong crowd and just went deeper and deeper”
		Unwilling to spend time practicing (3)	“He would do the team sessions but just didn’t want to know about other stuff...the stuff he really needed”
		Lack of application to training (5)	“ I would have to work to gee him up all the time...otherwise he really wouldn’t try”
		Overly focused on games (2)	“As H got older, he was only interested in playing.”
	Lacking Coping Skills (21)	Inability to cope with performance errors (6)	“He just couldn’t handle making mistakes. Either blamed others or refused to see that he was wrong”
		Inability to cope with performance pressure (7)	“As he got towards the top end his form just dropped away. He couldn’t handle the pressure of expectation and became a shadow of the player he was”
		Coping with competition from others (3)	“As everyone around him got better, D just dropped away. Seemed like he didn’t like not being the centre of attention anymore”
		Need for recognition/praise (5)	“W just needed constant praise and attention. When he didn’t get it he sulked!”
	Lacking Focus (7)	Poor ability to adapt to demands (5)	“I think he found it hard when he got to Youth level...varying demands, challenging opposition...just a lot more work”
		Unforced tactical errors (2)	“As he got older, J just didn’t read the game well enough. As things got more tactically complicated, he stayed still”

	Lacking self-regulation (15)	Difficulty managing freedom (4)	“Moving into digs was an issue...moving to his own place even more so. He just couldn’t resist the ‘distractions’”
		Poor learning skills (3)	“I think his tactical problems were down to poor learning skills...he was a bit thick!”
		Poor training behaviours (3)	“J was very easily distracted...anything out of the ordinary and he just lost focus”
		Lack of focus on weaknesses (5)	Like I said, he just wouldn’t get focused on his areas for development. IAPs just didn’t work with him”
	Lacking social skills (16)	Narcissism (3)	“What a cocky bugger! Like a bloody peacock...always preening himself”
		Not ‘fitting in’ with team mates (2)	“Never really part of the group...always a bit of a loaner”
		Poor interaction with coaches (4)	“We just didn’t know what made him tick. Almost like he didn’t want to know us even when we were evaluating him”
		Cognitive maturity (3)	“Coupled with that, K was just childish”
		Emotional maturity (4)	“He just couldn’t talk to people...see their pint of view, use their opinions. He didn’t notice even when people were pissed with him”
	Serendipity	Lack of opportunity (5)	Other players preventing selection opportunities (3)
Injury (2)			“Very unlucky with injuries...eventually he just couldn’t get back”
System	Too little challenge (9)	Early maturation (3)	Way ahead of his peers in skills. Playing him was a problem because of his attitude. He fell between two stools really”
		Dominance of performance at lower level based on physical (4)	“He was one of the biggest and just used size and aggression to win. Unfortunately, he never went beyond that”
		Lack of technical/tactical development (2)	“One moment he found everything simple, the next he was confused. I wondered if he felt the challenge to improve early enough”
	Too much challenge (9)	Avoiding challenge (3)	“As the pressure came on, D just hid”
		Steep step change (6)	“I think the jump in demands and pressure was just too sudden. One minute he looked really good, the next he was under pressure”
		Lack of support (8)	Lack of understanding when given opportunities (4)

		Poor use of coaches (4)	“This was another one who just didn’t use us. His sources outside always seemed to know better, so J didn’t make the changes he needed to.”
	Not facilitating opportunity (4)	Lack of game time (4)	“Just unlucky really. Lots of good players in his position so by the time he got to the Youth Team, he just wasn’t getting time on the pitch”
Family	Maladaptive Family input (24)	Wider family input (7)	“Family from Hell! Uncle putting his oar in. Mother like a frightened rabbit”
		Preventing engagement with challenge (2)	“I think they were so worried about him getting damaged, mentally or physically, that they just kept him away from it”
		Spoiled child (6)	“God,,they thought the sun shone out of his arse. He got everything he wanted...sometimes even without asking for it.”
		Business involvement by family members (2)	Brother saying what he could and couldn’t do.
		Parent driving development (7)	“Dad was in charge. We couldn’t make a decision without him questioning it”
Physical	Physical Characteristics (5)	Didn’t grow as expected (3)	“H just fell away. Fantastic prospect at 11, just way too small at 17”
		Didn’t like the physical confrontation (2)	“What a talent ...could do anything with the ball. But didn’t like the physical challenge”

Table 3 1: Issues identified as blocks to achieving potential – Football
 (Numbers refer to the number of players displaying this characteristic)

Prescribed Themes	Higher Order Themes	Lower Order Theme	Raw data exemplar
Mental	Lacking motivation (25)	Over confidence (2)	“I don’t think he had the drive, I think it came to easily to him”
		Burnout (1)	“he is a kid who played at five, he played all the way through prep, he went to (rugby playing school), I actually think that he was rugby burned out.
		Other career priorities (1)	“he didn’t necessarily have the.... Desire to take on a full-time career in rugby”
		Selective on training (14)	“the extra level of physical training which weren’t necessarily his perceived strengths, didn’t really inspire him so I think he lacked motivation on that”
		Wealthy Background (3)	“Did he have the desire to push on? I questioned that at times because he had a very comfortable upbringing.”
	Lacking Commitment (30)	Poor lifestyle choices (11)	“he’d had a year out to focus on rugby but just ended up going out on the piss two or three times a week, really loved that lifestyle as opposed to getting his head down and working hard.”
		Unwilling to spend time practicing (5)	“Fundamentally a bit lazy, so again some of his work that would be quite, that needed to be quite methodical and time consuming as a hooker, the throwing in, then he didn’t find it as appealing.”
		Lack of application to training (14)	“P wanted to play the game, but I think the training was very much something secondary to that”
	Over commitment (1)	Leading to injury (1)	“He was so obsessed to be the best that he would be out doing a lot of extra skill work. He would...go into the gym and not follow what he was meant to follow and probably the load on his body couldn’t handle”
	Lacking Coping Skills (10)	Inability to cope with performance errors (6)	“you just knew that if it made one mistake that would be the end of the game for him, he just couldn’t come back from it. It was a regular pattern throughout his U16 season”
		Inability to cope with performance pressure (5)	“it was his ability to perform under pressure, he had all of the skillset and the physical attributes to play in the academy level competition. But when in came down to, when the pressure was really on, he shrank”
		Coping with competition from others (3)	“He preferred to come and train with the younger group, than be challenged with that pretty challenging great group that we had coming through at the time, with the players that were in it.”

		Need for recognition/praise (3)	“he was always looking for... and the chat with his dad was that he wanted recognition.”
	Lacking confidence/ Focus (8)	Poor ability to adapt to demands (5)	“A very fragile confidence. So, I think he bluffed his way through a lot of things”
		Unforced tactical errors (3)	“he always had a very high work rate, sometimes it was just like hot air, busy doing nothing”
	Lacking self-regulation (12)	Difficulty managing freedom (2)	“This kid was always late and there was always an excuse”
		Poor learning skills (3)	“There’s little bits of shape and his attack and he is like, you know he has done it as a 16 year old, as a 17 year old and you are coming to the end of the academy league and you are asking him to draw it on a whiteboard and he can’t do it. I can remember one session in particular and it wasn’t to embarrass the kid, but I knew he didn’t know it and I’m like, how do you not know this?”
		Poor training behaviours (5)	“we had to force him to do extra 1 on 1 tackling stuff. That would always be coach driven, not player driven”
		Lack of focus on weaknesses (2)	“he had a particular strategy that brushed over any weaknesses or any areas that he just wouldn’t confront...so would not want to spend time on things that weren’t good in his game”
	Lacking social skills (13)	Narcissism (1)	If we had played a game, if it was a chance to pass the ball to a person in a similar position to him to score a try, he would not pass the ball. That’s the focus that he would have, so he would rather throw it on the floor than pass it to someone else that may score, his read was ‘they may look better than me’
		Not ‘fitting in’ with team mates (4)	“he was very asocial person, he would be a massive, massive loner would always be with himself. Communication skills very poor, social interaction very poor. Very much a loner in an achievement environment would sit on his own at the table, social interaction very limited.”
		Poor interaction with coaches (3)	“he had a fall out with us and because of that he decided to go to the other franchise. He went to the other franchise and he had exactly the same problem”
		Cognitive maturity (3)	“I think he was just far too young as a person, even though he was massive, he was in a man’s body, but he was just a 14/15 year old in his head and I think that was a big factor”

		Emotional maturity (2)	“T used to do that in training... would take himself off to the side of the pitch and scream, have a minute to himself and then come back in”
Serendipity	Lack of opportunity (6)	Other players preventing selection opportunities (3)	“I think in any other club, in any other moment he would have been taken on. It was between him and T to support as a third choice inside back, so we had D, J and we went for T”
		Injury (3)	‘he has missed so much time from injuries he has almost lacked time to develop “
System	Too little challenge (32)	Early maturation (7)	“He was a very mature 16 year old, very physical hence why he was able to play up in age group so quickly. That might have caught up with him in the end”
		Dominance of performance at lower level based on physical characteristics (17)	“as soon as he struggled to use his physicality to exert himself on the game, he didn’t have the psychological skills to cope with not being dominant and his confidence took a real big knock”
		Lack of technical/tactical development (8)	“in hindsight collectively I don’t think we developed other aspects of his game. It was very much ball in hand, play what you see, well I think he then struggled when he was in environments where it was more tactical, where it was more strategic and he was actually asked to do things not based on the pictures in front of him, just based upon building pressure and territory.”
	Too much challenge (12)	Avoiding challenge (3)	“maybe playing him up all of the time was a mistake and if we had pushed him back down into his age group, he may have been able to develop some of those skills that he was lacking”
		Steep step change (9)	“I think there was probably significant challenge when he moved up and didn’t necessarily cope that well.”
	Lack of support (10)	Lack of understanding when given opportunities (1)	“When he started his first few games he looked like a man, but he wasn’t, he was a kid and this is where the club will learn from it and this is my issue about pushing kids far too quickly.”
		Lack of preparation for transition (3)	“the preparation in to coming into senior rugby, or coming into a senior academy position was poor... I don’t hold them fully responsible, I hold the job of the academy to prepare them was poor”
Poor use of coaches (6)		“There was one session when M came in, but the session nearly ruined the kid. He just tried tweaking a few things and the young lad couldn’t get his head around it”	

	Not facilitating opportunity (2)	Lack of game time (2)	“they are now in the senior academy with five players ahead of them in their position, unless those players are badly injured, they are not going to play”
Family	Maladaptive Family input (8)	Wider family input (2)	“I think he’s put his parents and some of his school teachers and some of the people around him probably had an influence, his parents weren’t actually rugby people at all, which is probably a strong indicator, they were doctors, he wanted to be a doctor, that was more important for him to go down that route, than it was a rugby player”
		Preventing engagement with challenge (3)	“He was the golden child at times and could do no wrong. If he wasn’t selected for England, then whose fault was that and those sorts of conversations. It was never R’s fault”
		Spoiled child (2)	“He was a single kid, single son, he was very pampered at home”
		Parent driving development (1)	“he said ‘look, I will never touch a rugby ball again’too much pressure from my dad”
Physical	Physical Characteristics (6)	Didn’t grow as expected (3)	“Probably the most skilful player I’ve ever worked with...unfortunately for him, size caught up with him. He never grew, when he left us he finished on 1 metre 65 as a fly half and he weighed less than 70kgs”
		Didn’t like the physical confrontation (1)	“he didn’t enjoy contact, so we had to force him to do extra”
		Preventing ability to compete (2)	“I think a couple of times in the collision situation where he just folded like a deck chair unfortunately. He just got brutally outmuscled and he just couldn’t stop people in his channel. He either made a clean line break or he got folded up like a piece of paper”

*Table 3 2: Issues identified as blocks to achieving potential – Rugby
(Numbers refer to the number of players displaying this characteristic)*

3.3.2 Key Themes

Constellation of Mental Skills. Participants repeatedly identified players who failed to reach their potential as lacking a variety of psychological skills. Players frequently lacked the motivation or commitment necessary to succeed, as demonstrated in a number of ways, including a lack of application in training: “I would have to work to gee him up all the time...otherwise he really wouldn’t try” (F). They made poor lifestyle choices: “he’d had a year out to focus on rugby but just ended up going out on the piss two or three times a week” (R) or were unwilling to spend the requisite volume of time practicing: “some of his work that would be quite methodical and time consuming as a hooker, the throwing in, he didn’t find it as appealing”. (R) Other players were unable to properly apply themselves in training and overly focused on games rather than training: for example, “as H got older, he was only interested in playing”. (F) Other athletes lacked the motivation to support a journey to high performance, being selective with their training “He is the sort of guy, if he sees you looking, he will bust a gut. If you are not looking, he will just stay in that same pace.” (R), being overconfident “F was just too cocky – he thought everything was easy and he lost interest when it wasn’t” (F), or burning out “he is a kid who played at five, he played all the way through prep, he went to [rugby playing school]. I actually think he was rugby burned out.” (R).

A distinct difference between the themes identified by football and rugby coaches underlying motivation, particularly related to the impact of external rewards. Football coaches identified the impact of being distracted by money: “the problem was that he got too comfy too quickly. After that he seemed to lose interest” (F) or getting too much attention “G had everyone round him...agents, family, fellow players...all telling him how great he was going to be” (F). In contrast, rugby coaches identified the role played by a wealthy *personal* background as reducing levels of motivation: “did he have the desire to push on? I questioned

that at times because he had a very comfortable upbringing” (R) or having other career priorities “he didn’t necessarily have the.... desire to take on a full-time career in rugby” (R).

Of interest, and in line with literature highlighting the potential role played by dual-effect characteristics (cf. Hill et al., 2015), one athlete was identified as struggling with repeated injuries as a result of *over* commitment:

He was so obsessed to be the best that he would be out doing a lot of extra skill work.

He would...go into the gym and not follow what he was meant to follow and generate a load his body couldn’t handle. (R)

A lack of coping skills and focus was also seen as a critical factor in maximising potential. Key issues identified were the inability to cope with performance errors. “He just couldn’t handle making mistakes. Either blamed others or refused to see that he was wrong” (F), or the inability to cope with performance pressure. As one coach stated:

It was his inability to perform under pressure, he had all of the skillset and the physical attributes to play in the academy level competition. But when it came down to it, when the pressure was really on, he shrank. (R)

At times, this manifested in an excessive need for recognition and praise “W just needed constant praise and attention. When he didn’t get it he sulked!”. (F) Also identified was coping with the pressure of competition from others as time in the pathway progressed: for example:

He preferred to come and train with the younger group, than be challenged with that pretty challenging great group that we had coming through at the time, with the players that were in it. (R)

Coaches also highlighted a lack of self-regulatory capacity, with players having difficulty managing freedom “Moving into digs was an issue...moving to his own place even more so. He just couldn’t resist the ‘distractions’” (F), demonstrating poor learning skills “I think his

tactical problems were down to poor learning skills...he was a bit thick!” (F), Poor training behaviours were also seen as a problem, with one coach stating: “we had to force him to do extra 1 on 1 tackling stuff. That would always be coach driven, not player driven” (R) as was lacking a focus on individual weaknesses “he had a particular strategy that brushed over any weaknesses or any areas that he just wouldn’t confront” (R).

A number of players also lacked the social skills to cope in team sport environments, such as demonstrating narcissistic tendencies:

If we had played a game, if it was a chance to pass the ball to a person in a similar position to him or score a try, he would not pass the ball. That’s the focus that he would have...he would rather throw it on the floor than pass it to someone else that may score, his read was they may look better than him. (R)

Other players were identified as having difficulty fitting in with team mates, “never really part of the group...always a bit of a loner” (F), with one lacking the cognitive maturity to progress: “I think he was just far too young as a person, even though he was massive, he was in a man’s body, but he was just a 14/15-year-old in his head” (R) or another the emotional maturity: “he just couldn’t talk to people...see their point of view, use their opinions. He didn’t notice even when people were pissed with him” (F). Others demonstrated an inability to interact with coaches in a productive way: “he had a fall out with us and because of that he decided to go to the other franchise. He went to the other franchise and he had exactly the same problem” (R).

Finally, some players lacked the ability to adapt to the demands they faced: “A very fragile confidence. So, I think he bluffed his way through a lot of things” (R). Others lacked focus on the pitch and made numerous unforced tactical errors: “as he got older, J just didn’t read the game well enough. As things got more tactically complicated, he stayed still”. (F)

Serendipity. Serendipity was also identified as a factor in the downfall of high potential players, with others of similar potential preventing selection opportunities: for example:

I think in any other club, in any other moment he would have been taken on. It was between him and T to support as a third choice inside back, so we had D, J and we went for T (R).

Or similarly in football “just unlucky really. Lots of good players in his position so by the time he got to the Youth Team, he just wasn’t getting time on the pitch” (F).

Another significant serendipitous factor was injury, with players who suffered injuries consequently lacking the time to develop or grasp opportunities, “very unlucky with injuries...eventually he just couldn’t get back” (F).

Failures of the Talent Development System. Systemic failures were also identified as factors in a player’s lack of progress. Examples cited were a lack of challenge, either through early maturation: “he was a very mature 16-year-old; very physical hence why he was able to play up in age group so quickly. That might have caught up with him in the end” (R), early dominance through physical characteristics: “he was one of the biggest and just used size and aggression to win. Unfortunately, he never went beyond that” (F), or a lack of challenge preventing appropriate technical/tactical development. As identified by a rugby coach:

...in hindsight collectively I don’t think we developed other aspects of his game. It was very much ball in hand, play what you see. Well I think he then struggled when he was in environments where it was more tactical, where it was more strategic and he was actually asked to do things not based on the pictures in front of him, just based upon building pressure and territory (R).

Just as too little challenge was seen as a factor that derailed progress, so also was too much, leading to players’ avoidance of challenge. In one example, a rugby coach reflected that:

“maybe playing him up all of the time was a mistake and if we had pushed him back down into his age group, he may have been able to develop some of those skills that he was lacking.” (R)

A similar issue arose from a steep step change in demands proving too much for the player: “I think the jump in demands and pressure was just too sudden. One minute he looked really good, the next he was under pressure” (F). The role of challenge in the development of players appeared to be a significant factor for both samples of players, but it appeared especially prevalent in rugby. This is notable given the reported difference between samples in the frequency of the lack of coping skills being a factor in a player’s demise.

TDE’s were also identified as not supporting players enough, with some being guilty of lacking understanding when young players were given opportunities: “I am not sure that the club gave him the support he needed. He got the breaks but just didn’t step up” (F), or by failing to prepare players for transitions: “the preparation coming into senior rugby, or coming into a senior academy position was poor... I don’t hold them fully responsible; I hold the job of the academy is to prepare them...but this was poor” (R). Poor use of, or action by coaches was also mentioned. Either players failing to match coaches to their needs as individuals: “this was another one who just didn’t use us. His sources outside always seemed to know better, so J didn’t make the changes he needed to” (F), or coaches failing to engage with players well enough: “I never met his mum, but again probably someone we should have engaged with them early”. (R)

Family. Players’ families were also seen as being a significant factor in the derailing of performance potential; whether through wider family input: “family from Hell! Brother saying what he could and couldn’t do. Uncle putting his oar in. Mother like a frightened rabbit” (F), or by the family preventing the engagement of the player with challenge: “he was the golden child at times and could do no wrong. If he wasn’t selected for England, then

whose fault was that and those sorts of conversations? It was never R's fault" (R). Coaches also identified players being set up to fail by families who spoiled them: "God, they thought the sun shone out of his arse. He got everything he wanted...sometimes even without asking for it" (F). Although no evidence was found of this in the rugby sample, footballers were also seen to be derailed by the business involvement of family members: "it was Team [player's name] – everyone was involved, advising on clubs, playing styles, tactics but most of all, business!" (F). Other parents were simply seen as excessively driving their child's development: "he said 'look, I will never touch a rugby ball again.....too much pressure from my dad'" (R).

Physical. Finally, coaches highlighted a lack of physical characteristics as being a factor in the failure of some player's progression. Some didn't grow as expected "H just fell away. Fantastic prospect at 11, just way too small at 17" (F), whilst others didn't enjoy physical confrontation: "what a talent ...could do anything with the ball. But didn't like the physical challenge" (F). Amongst the rugby sample, coaches pointed to a lack of physical size preventing the ability to compete, for example:

A couple of times in the collision situation he just folded like a deck chair unfortunately. He just got brutally outmuscled and he just couldn't stop people in his channel. He either made a clean line break or he got folded up like a piece of paper.
(R)

3.4 Discussion

Gagné's Differentiated Model of Giftedness and Talent (1995) proposed that the process of talent development is moderated through the resources of the individual, their environment and other serendipitous factors (Gagné, 1995). Support for all three of these factors was identified in both samples and, whilst there are contextual differences that highlight the importance of domain specific TD processes; there were also clear similarities which suggest

that many of the prerequisites for developing talent are transferable across domains: at least in this UK team sports context. Accordingly, I now consider the detail and implications of the results under three headings; namely, the individual, serendipity and the environment.

3.4.1 The Individual

These results build upon the body of work identified in Chapter 2 that focuses on the centrality of a constellation of mental skills in facilitating a performer's journey and across transitional stages of development (Larsen et al., 2014; MacNamara et al., 2010a, 2010b; Van Yperen, 2009; Wylleman & Lavallee, 2004). Previous investigations have established that elite level performers have appropriately high levels of psychological resources and athletes will demonstrate a constellation of mental skills on their way to the top (Collins et al., 2016b; Gould et al., 2002; Orlick & Partington, 1988). Supporting the previous work of Holt & Mitchell (2006) at a lower level of academy performance, this investigation of the talent graveyard suggests that, albeit one of several factors, the most common reason for failure amongst a group of 60 high potential athletes was their individual *lack of* sufficient psychological resources. This despite them possessing many other prerequisites of attaining elite performance, as shown by their selection to the academies and identification by these experienced participants. Data support the contention that ability alone may be a necessary but not sufficient factor to support the development of expertise (Baker & Young, 2014; Toering et al., 2009; Tucker & Collins, 2012).

Of significance to this examination of failure in developing performers was the perception that many didn't have the commitment or motivation to take them to the next level of performance. On its own, this is hardly a revelation, yet clearly illustrative of the nature of motivation and commitment-like resources being critical for the realization of talent. Perhaps, in keeping with the findings of Savage, Collins and Cruickshank (2017), motivational and

commitment-based resources may be foundational characteristics for other capacities to be fully realised.

It is also clear that some players can achieve a very high level of performance at the academy stage without necessarily having a ‘full set’ of the appropriate psychological resources. Support was also found for the importance of self-regulatory processes to progression, especially at the high end of the pathway as pressures really began to bite (Toering et al., 2009). Therefore, given that players were derailed by a variety of psychological factors, it would seem prudent that the full set of skills are systematically introduced and developed as a curriculum in academy settings (cf. Psychological Characteristics of Developing Excellence (PCDEs) Larsen et al., 2014; MacNamara et al., 2010a, 2010b). The subtle distinctions between specific players’ issues is illustrative of the importance for providing a *range* of skills, from which individuals can draw to address their particular range of challenges. The pathway is full of different challenges, however, and developing athletes should be optimally equipped to handle as many as possible, including being able to ask for help (cf. the PCDE of ‘seeking and using social support’). These varied demands, and the impact of an associated lack, are clear within the data.

Finally, the power of family influences on individuals stresses the importance of interactions with parents to ensure common understanding and direction of development (Martindale et al., 2005; Pankhurst, Collins, & Macnamara, 2013). The aim of this being to build understanding and harmonize development. Problems may reach a terminal level, however, and coaches may need to have some quite ‘direct’ conversations, even to the extent of removing players from the pathway to prevent others being affected.

3.4.2 Serendipity

It is also clear that, for a number of reasons, some athletes were derailed by a constellation of serendipitous factors. These came in the form of other similarly high potential players

blocking competitive opportunities, injury preventing players engaging with the necessary practice, or playing opportunities. In several cases, there was very much a '*wrong place at the wrong time*' effect. Very much in line with previous recommendations, the prevention of this can occur if best practice would consistently focus on planning for these instances to prevent a lack of game or training time. Such deliberate thinking should inform and support the operationalization of an individualized pathway with long-term aims and objectives (Henriksen et al., 2010a; Ivarsson et al., 2015; Larsen et al., 2014; Martindale et al., 2005). This should certainly be the case with foreseeable issues, such as physical development, which should surely be identified early as a limiting factor and, as far as possible, addressed.

3.4.3 The system

What is clear from the data is the role played by appropriate challenge along a talent pathway and its' crucial role in the development and reinforcement of mental skills. As identified in Collins et al. (2016b), many of the performers who didn't quite '*make it*' were characterized by a smooth ride through the early stages of academy level performance. Subsequently, however, this smooth ride was perceived to derail their potential in several ways. The first being a sudden step increase in the challenge level that they faced but which felt ill equipped to deal with. Comparatively, those performers who *do* go on to become the very best are more likely to approach challenge with a 'can do attitude' Collins et al. (2016b).

The second but related factor was seen as too little challenge early in their development. This was perceived to be a greater issue amongst rugby players than footballers (although both sports reported it), which may be representative of the more physical nature of the game and comparative ease with which advantage can be found at lower levels of the sport. This, in turn, may then inhibit the development of the necessary skills to compete at a later date. These differences may also be representative of the structured nature of football pathways that can support the changing of training/playing age groups at an earlier stage than

rugby, with a later selection processes and limited opportunities to manage challenge levels. Whilst it was not the focus of the study, these differences are notable and perhaps point to the role played by the interaction of individual characteristics and challenge situations. The football pathway allowed for a greater variation of challenge for more gifted players, whereas the rugby pathway didn't offer the same flexibility. The football sample also identified a higher number of players lacking coping skills, but in the rugby sample this appeared lower. This serves to highlight the importance of both equipping athletes and the management of challenge itself. This is significant, because just as a lack of a bumpy path was found to derail, so was a pathway that went beyond the bump to the crash. Those athletes who experienced *too* great a challenge either went into their shell and avoided further challenge or it had such a significant impact on their confidence that they were unable to recover. This in itself would suggest that the individualization of challenge is complex and a '*gung ho*' attitude to throwing athletes into traumatic experience is unlikely to yield optimal benefit (Savage et al., 2017).

Talent systems were also perceived to be at fault for failing to provide adequate support for athletes, particularly around transitional phases; also lacking understanding when athletes were engaging with a period of challenge. The process of supporting challenge and the facilitating the essential reflective process is vital if traumatic experience is to be effectively deployed throughout a pathway (Collins et al., 2016b; cf. Sarkar & Fletcher, 2016). It would therefore seem prudent for pathways to deliberately deploy challenge factors and plan for transitional periods (Collins et al., 2016a) *but* in careful association with growth-facilitating debriefs.

Extending this point, the support network around an athlete is a vital dimension of talent development and the interdisciplinary team around the player is key in their development. Based on the data it is clear that, in many cases, the staff support network

around the athlete was insufficiently focused on, or understanding of, the nature of challenge experiences for athletes. For example, in the case of one rugby player: “There was one session when M came in, but the session nearly ruined the kid. He just tried tweaking a few things and the young lad couldn’t get his head around it”. Talent systems therefore need to carefully consider the appropriateness of the staff members that are placed with specific performers and sufficient knowledge of the athlete or an inappropriate coach placed with an inappropriate athlete (Webb et al., 2016). In addition, it is clear that coaches highlighted the centrality of parents, whilst seen as less of a problem for the rugby players, it appears that for footballers, parents predominantly became problematic as a result of over involvement. The role of parents and the effectiveness of sports parenting is well established in the literature (Harwood & Knight, 2015; Knight, 2019). The findings of this study build on the work of other authors who have suggested that an overly pressurising approach from parents was the antecedent for negative sporting outcomes (Holt & Knight, 2014). Building on that body of work, it also appears that the wider family began to influence the process of TD and in a small number of cases this was seen to be exacerbated by their financial involvement with the player. Given the extant body of literature in the field has tended to focus on the role of parents and siblings, the role of additional family members may warrant further empirical investigation. Clearly, it appears that for the players identified in this sample, the role of the parent and broader family played a critical role in shaping their experience and perceptions of the coaching environment (Knight, 2019).

Clearly this study is not without limitations. Firstly, as with any retrospective enquiry, there is a risk of hindsight bias in addition to recall errors. Given that I was asking coaches, at least in part, about their own potential errors, there are significant risks of self-presentational bias. There is also a risk that, although the players were perceived by the coaches to be of high potential, decisions about the future potential of athletes are deeply complex and certainly

influenced/potentially biased by the coach's overall impression of the athlete (cf. Christensen, 2009; Den Hartigh, Niessen, Frencken, & Meijer, 2018). Furthermore, in this regard the data collected are clearly not triangulated with other views of the player's experience; for example, from the player himself, their parents, or other staff members. Nonetheless, it is important to recognise that the impressions of the coach are critical given their role in the decision-making process about the player's future. Therefore, whilst the viewpoints they offer cannot be seen as the whole truth, the impressions that coaches formed of each player were critical features of the reasons why players were later excluded by the respective pathway and were highly impactful. It is also worth noting that, with regard to personal bias, expectancy or self-fulfilling prophecy, all the players discussed were presented by the coaches as positive examples; players who should have made it.

Of course, albeit against the lack of previous work in this area, this exploratory investigation was deliberately wide ranging and, consequently, can only offer limited or tentative causative inferences based on the data. The data present a number of reasons for those performers marked out as 'sure things' for future elite performance, failing to reach their potential. Unsurprisingly, these included injury, systematic failure and physical limitation. Notably, however, the most common derailer of talent was a *lack* of psychological resources and the associated lack of appropriate challenge throughout a developmental journey. Of course, in presenting the importance of mental aspects of TD in a psychology-focused thesis, I may be preaching to the converted. I would stress, however, that even though the importance of mental factors would seem well established, failure to address/cater for this element was the major factor in the derailment of these high potential athletes.

Data also demonstrated the need for a range of skill development with young developing athletes. Although a lack of motivation or commitment was seen more commonly than other factors, these were wide ranging and went beyond uni-factor constructs or

causative experiences. Therefore, to understand why very gifted performers fail to realize their potential, coaches and other support practitioners need to consider their individual resources, as well as the environmental and stakeholder input to their development, against a breadth and depth of skills.

Finally, it is worthwhile stressing the importance of the approach employed; namely, looking at the failures of a system as offering as many insights as a focus on those who succeeded. As Kiely (2011, p. 144) succinctly puts it:

Employing isolated examples to support any stance, as is frequently the norm in performance environments, is a one-sided and ultimately irrational argument. A valid assessment of the worth of any training scheme necessitates that both the scheme's successes and 'failures' be factored into analysis.

Therefore, building on the data presented in this chapter, Chapter 4 sought to further examine the barriers to the fulfilling of potential and understand what 'gets in the way' of effective practice for the TDE.

Chapter 4 - Getting in the Way: What Prevents Effective Talent Development?

4.1. Introduction

Chapter 3 investigated what limits the individual performer in the talent pathway to understand what causes a failure for those with high potential to develop. As described, it suggested that a *lack of* psychological skills is a significant barrier to the high potential athlete progressing through a pathway. In addition to the individual factors that were perceived as barriers, coaches also identified several failures of the talent system in effectively managing the progress of athletes. These findings reinforce the need for TDEs to optimise their practice; working towards a system that offers an appropriate level of challenge and managing the support of various stakeholders (Martindale et al., 2005; Pankhurst et al., 2013). Building on the findings of Chapter 3, this chapter investigated what prevents effective TD process through challenging periods for the performer. An example of a critical challenge is the senior transition, which has been established as the most difficult for developing performers to navigate (Bruner et al., 2008). Effective TD practice will prepare athletes to be able to cope with the challenges that are both current within but also beyond the current environment (Alfermann & Stambulova, 2007). In short, equipping performers with a range of psycho-behavioural skills appears critical in making the most of the senior transition (Jones et al., 2014). Highly effective TDEs have been characterised by holding long term aims and methods, offering coherent support, emphasising development over early success and individualising support. (Henriksen & Stambulova, 2017; Martindale et al., 2005).

Chapter 3 offered evidence to demonstrate failures of the TD system and the consequent impact on the development of performers. Given that the majority of research in the area of environmental influences on TD has sought to identify success factors, only a limited amount of research has been conducted on barriers to effective TD practice (Henriksen et al., 2014).

The study presented in the following chapter offers the perspective of the TD coach, an underrepresented figure in the literature as a whole. Consequently, the purposes of the study were to:

(a) understand what prevents individual athletes capitalising on their experiences to successfully progress through a talent system

(b) what ‘gets in the way’ of the TDE offering a set of optimal experiences to the performer.

4.2 Method

4.2.1 Research Design

Reflecting the aims of the study and the desire to understand what challenges were faced in a specific population of TD practitioners, a focus group methodology was deemed most appropriate given the potential to draw from a set of complex personal experiences, beliefs, perceptions and attitudes through moderated interaction (Morgan, 1996). Focus groups were also appropriate given the lack of sensitivity about the topic area amongst participants, whilst group sizes were selected to allow for multiple viewpoints and to allow each participant to discuss their views and experiences (Morgan, 1996).

In contrast with other types of qualitative methodology deployed throughout this thesis, focus groups allow for informal group discussion amongst a purposely selected group of individuals. These discussions also have the potential to be more naturalistic than interviews, allowing participants to speak freely amongst peers (Wilkinson, 1998). Consequently, they allow for the opportunity to hear from different paradigms and world views. As such, the discussion in focus groups can be more than the sum of individual interviews. The interaction between participants can also provide important data on the extent of diversity amongst them (Morgan, 1993). This peripheral role allows for the generation of collective views and the meanings behind those views (Nyumba, Wilson, Derrick, & Mukherjee, 2018), yet also

provide encouragement for quiet participants and prevent bias generated in the group setting (Krueger & Casey, 2000).

4.2.2 Participants

I deployed a purposeful sampling criteria to approach academy staff in the Rugby Football League's (RFL) academy system as part of a Head's of Youth bi-annual meeting. This led to the recruitment of a total of 29 participants (all male) ranging in age from 29 to 55 ($M = 41.2$, $SD = 6.9$). Participants were all staff of Super League academies or the RFL player development department. Prior to data collection, I engaged informally with participants to build rapport (Morgan, 1996) and all were informed that the data would not be attributed to them, nor could any features of the data that could be used to identify them.

4.2.3 Data Analysis

Following initial set up, the focus groups ranged in duration from 38 to 42 minutes ($M = 40.4$, $SD = 1.62$) and were transcribed verbatim. Analysis was completed using QSR NVivo Version 12 using a six-step process for inductive thematic analysis (Braun & Clarke, 2006). The first phase of analysis involved the reading and re-reading of transcripts, highlighting of relevant material and the making of annotations. This was followed by the generation of initial codes; data being categorized into lower order themes and then into higher order thematic labels. Next, a review of these higher order themes was completed, with the validity of individual themes being considered in relation to the data set. In the final phase, themes were defined and named according to the nature of the data codes within each theme.

4.2.4 Trustworthiness of the data

Given my partial 'insider' status, to further support trustworthiness and to counter the potential for research bias, a reflexive journal was used throughout the research process to record thoughts and emotions related to the interpretation of data (Patton, 2002). Similarly, throughout the process of data collection and analysis, my supervisory team acted as critical

friends, demonstrating a commitment to reflexive acknowledgement of the existence of other plausible perspectives (Smith & McGannon, 2018). This led to the challenging of initial codes, following discussion it was decided that the merging of some lower order themes better represented the experience of participants. In line with the methodology used throughout this thesis, member reflections were used and overall themes from focus groups were shared by email with a group of (n=10) coaches and academy staff drawn from all focus groups. This gave participants the opportunity to challenge the themes or provide additional insight to further enhance the robustness of findings. Engagement with the process of member reflections was mixed, with a number of coaches and staff sharing their reflections by email (n=5) and others taking part in follow up interviews (n=3). These follow ups were notably useful for the participants, engaging them in the research process and a number commenting on the utility of the engagement to help them reflect on their own practice. The interactions were of particular utility in supporting further sensemaking of the data. In particular by drawing out the extent of the socio-political barriers to effectively integrating practice throughout an organisation. Additionally, the data below are presented with a number of direct quotations to ensure that the voice of the participant is promoted and to allow the reader to engage with their lived experience (Jones, Brown, & Holloway, 2013).

4.3 Results

4.3.1 What gets in the way for the individual?

A number of individual factors were identified as critical barriers that prevented individual players maximising what they took from their transitional experiences between academy and senior team. These factors were broadly grouped into a lack of previously developed psychological factors and the previous experience of the player, with lower order sub themes italicized.

Lack of psychological skills. Unsurprisingly, a range of different psychological factors were identified as being critical for players to make the most of transition into the senior environment. One coach suggested that a critical reason why players failed to transition effectively came down to mental factors: “we have loads of big, strong athletic players who are technically and physically quite good, but mentally poor. They just drop away” (Coach). This lack of mental skills was seen as a critical factor in players not being able to make use of the different experiences to which they were exposed. Focus groups commented on the risk posed by an overall lack of responsibility for own development, players who saw others as being responsible for their development and *lacking the skills to take responsibility*: “too often, these types of players expect the coach to do it for them, the players have to take responsibility” (C).

Given the challenges posed by the transition, *a lack of coping skills* was seen to be a factor in what got in the way for players as they became subject to an increased number and

Higher Order Themes	Lower Order Theme	Data
Lack of psychological skills	Lacking the skills to take responsibility	Expects coaches to do it all Maladaptive impression management
	Lack of Coping Skills	Can't cope with increased negativity Can't bounce back from disappointment
	Lack of social skills	Unable to coordinate support Can't speak to 'adults' Doesn't fit in
	Low feedback literacy	Not using feedback offered Listening to all feedback sources Unable to realistically evaluate own performance
Previous pathway experiences	Low previous exposure to challenge	Lack of previous physical challenge Not losing matches at junior level Never been deselected
	Lacking experience of negative feedback	Low levels of previous change-oriented feedback Generational Differences

Table 4 1: Individual factors identified preventing progression

intensity of stressors: “if you think about that step up, if they get all that negativity, they have to be able to cope” (C).

Those players unable to effectively transition to the senior level were seen to struggle with the demands of the environment; some who failed to make the step up were characterised as: “not liking being in a dark place, small fish in a big pond, they would rather think they were brilliant, than actually doing a good job” (C). Those players who struggled during the transition were perceived to lack the ability to recover from the inevitable setbacks that came their way.

Additionally, it was perceived that those players who *lacked social skills* to coordinate the support around them, both from other players and staff members was a feature in failing to effectively transition:

They need the social skills to speak to coaches about how they can get better and have good social skills with physios and S&Cs makes a big difference. One of our young players didn't have the social skills to speak to adults or to interact with them, they didn't know what to do with it (C).

Player's lack of feedback literacy (the capacity to self-generate or use feedback (Carless & Boud, 2018) was perceived to prevent progress, particularly as the level of challenge increased. This was seen in the effective use of feedback received, with one coach reflecting on a player who failed to make the step up, characterising him as “didn't want to accept any feedback, he didn't accept anything at all”. It was additionally perceived to be a critical need for players to make effective decisions about what feedback to ignore: “too many follow everything that they hear; it takes a strong player to go: ‘no, this is my pathway and I appreciate you giving me feedback, but I know where I am going’” (C). Underpinning feedback literacy, players who lacked the ability to deploy skills like realistic performance

evaluation were seen to struggle with the various inputs that they received: “they need to be able to self-evaluate, then they will be able to take what they need from it” (Head of Youth).

Previous Pathway Experiences. The previous experiences of players in the pathway were also perceived to be critical features in preparing them for the challenge of the senior transition. Focus groups suggested that those players who had *low previous exposure to challenge* were at risk during the senior transition. This was identified, both as a feature of the academy and community game experience:

A lot of our players who have been in these super teams as young players struggle.

They are not used to adversity, getting beaten, being challenged by bigger stronger players. Having those experiences to draw back on, on the pitch and social life makes them mentally and socially stronger (H).

High challenge levels were also perceived to be a useful vehicle to draw a player’s attention to potentially career limiting weaknesses: “you can give them the same feedback for two years, but until it is really exposed and tested, they might not realise how important it is” (C).

Focus groups also suggested that a *previous lack of negative feedback* was a barrier to making progress: “with so many players, you tell them what you think and it could be the first time they have ever heard a negative and they don’t know what to do with it” (H). It was also suggested that there was a generational difference perceived to be a critical barrier to player’s successful transition: “I find with a lot of the kids of today, they have never heard the negative. It is different to my generation that is only 10-15 years ago” (C).

Participants in focus groups identified a number of factors that were seen to challenge the environment’s ability to offer the player the set of experiences that they required in order to successfully transition. These factors were broadly identified across two dimensions; the coherence of experience across a level and how that experience was effectively integrated, taking account of what had gone before and what comes next (Webb et al., 2016).

4.3.2 TDE challenges: what challenged coherence?

Coaching practice failures. A number of failures in coaching practice were identified by participants, with many reflecting on their own coaching and considering the impact on players. One coach reflected that, at the start of his coaching career, he was unable to offer players what they needed:

My theory is that the most uneducated people in the club are the coaches because they are just ex-players. The reason that their path isn't managed well is because we are just trying to figure out what to do with them. We just tell them to just get bigger because it is the obvious thing. (C)

Failures in coaching practice were also seen as a result of coaches not working together to offer a coherent message for the player: "There is no education for the coaches on it. I don't think we know how to do this" (C).

Difficulty shaping the SMM. The generation of a SMM and subsequent messaging to the young player was perceived by coaches to be a critical factor in their development. Participants reported that their ability to do this was limited by the difficulty of getting a relatively large number of stakeholders to agree on appropriate ways forward for a developing player:

The biggest challenge is that there are a million ways to do it, everybody is right and everybody is wrong. It is a nightmare to get everyone to agree what the player should be doing. If you get ten people in the room who all know what they are doing, they would all be doing it differently (C).

Higher Order Themes	Lower Order Theme	Raw data exemplar
Challenging Coherence	Coaching practice failures	“I think the levels of understanding aren’t good enough, I did it myself, I got jobs because of what I did as a player.”
	Difficulty in shaping the SMM	“It is all about consistency of message, we need to be on the same page. We all need to sit around a table and decide what the current messages are for that player”.
	Number of feedback offers	“I think they have got different people telling them different things and it gets confusing as a player.”
	Impact of unhelpful inputs	“We need to build relationships with players, such that they trust us above all the other voices around them and not just listening to the nearest person to them”
Challenging integration	Short termism	“One of the big ones is the time factor that a head coach has... his job is on the line, owners need results”
	Senior coaches’ philosophies	“I think that is a great point about head coaches not understanding, they forget what it is like to be young”
	Step change in challenge level	“As soon as a kid shows potential, they get pulled up. They can be missing from 2nd year academy and I have done that as a coach of 1st grade, pulled players up too quickly.”
	Excessive early positivity	“A lot of these lads, they just get too much smoke blown up them”
	Intra-club role clarity	“A coordinated system of doing it is important, you can’t just rely on getting the coach on a good day. It is coordinating over years; it cannot be ad hoc”

Table 4 2: TDE factors identified preventing effective practice

One coach summed up the challenge posed to a coherent SMM when commenting that “it is everyone, parents, friends, scouts, agents, managers, anybody that you can think of” who is actively impacting on the experience of the player.

Number of feedback offers. Even where participants believed that a clear SMM for the performer’s developmental needs had been generated and operationalised, there were still a large number of voices around a player offering feedback. This was perceived as being a key factor in players failing to make performance improvements: “I feel that young players stumble because they get too many people telling them too many different things” (C). A Head of Youth suggested that the number of voices around a player increased as their individual reputation and performance levels increased as a function of their desire to influence the player’s trajectory in some way: “with everybody wanting their little bit of the player to be able to say that they helped him along the way, especially when they are perceived to be very high potential” (H).

Specific stakeholder groups were identified as being critical factors in adding to the ‘noise’ experienced by the developing player. For example, when players went on loan to a junior club and where the coach of the loan team didn’t share in the SMM generated by the club: “when they go to dual reg, the coach that they are going to doesn’t necessarily care...he won’t necessarily buy in” (H).

Parents were also identified as a common factor in the breakdown of coherence, with some even suggesting that the problems posed by some parents were insurmountable: “you are going to get uneducated parents who have coached the lad for ten years... there are jealousies. It is nearly impossible” (C). Additionally, the incoherent messages that a player might be getting from senior coaches and academy coaches at the start of the transition impacted their experience. This was identified partially as a function of a lack of appropriate communication between academy and first team: “sometimes the first team coach doesn’t

understand what they are getting and hasn't had an appropriate handover which can cause problems.. they can have no idea who the kid is" (C). One coach commented on the number of potential inputs to the player experience:

I had two calls from agents telling me who should be playing, how they should be playing. I got a call off an agent when we dropped a player who was nowhere near, telling me how wrong I was. I got a call from a parent about her son needing to do x, y and z in training to keep him happy. I think our young players get it from everywhere.

Impact of unhelpful inputs. The other significant factor challenging the shaping coherence around an athlete was the impact of potentially unhelpful feedback. This challenge was seen to come from even potentially peripheral figures who had not been considered in the shaping of the SMM: "scouts and dads can tell them what they want...but, that scout might have been the player's first point of contact with the club as a 14 year old...they might trust them" (H). This was also seen to be generated from first team coaches: "a throw away comment from a head coach that could be made to a more senior player can have a massive impact. They will remember that more than years of work by an academy coach" (H).

4.3.3 TDE challenges: what challenged integration?

In addition to the challenges posed to the coherence of athlete experience across a level, academy staff reported a series of challenges that prevented consistent and appropriate integration of the experiences of a performer over the longer term.

Short-termism. Focus groups consistently reported that a barrier to integration occurred when the orientation of various stakeholders was short term, rather than long term. This was seen to work against the interests of young players who required a longer-term orientation. This short-term focus was seen as being motivated by a number of factors, the

first being the outcome orientation of owners and fans who were characterised as not accepting of losing games at any level:

It comes back to the challenge that comes with winning games getting in the way of genuine development. We all talk about developing decision makers and independent thinkers, but we lose a game and it returns back to, why did you do this and why did you do that. Results get in the way (C).

Similarly, owners were perceived to be putting academy staff under pressure to see players progressing quickly in order to evidence value for money on academy investment: “we talk about owners, they just want to see players progressing quickly” (H). The contrast between the club and international game was also noted with one Head of Youth suggesting that it is possible for international coaches to offer a more appropriate long-term developmental experience because there is less outcome pressure on them: “clubs.. feel they need results now because their job might be on the line. [Coach name] can give them a longer time to develop because they don’t need them to come good now” (C).

Senior coaches’ philosophy. This short-term focus was also seen to act on the philosophies of senior coaches and acted as a significant blocker for integration and stage appropriate experience for transitioning players. This was perceived to encourage some senior coaches to operate with an emphasis on winning the next game, for example: “if you chat to most head coaches, all they are bothered about is which players will get them a win at the weekend.” (H). Academy staff highlighted that senior coaches often had a different reference point for their feedback, lacking understanding of where a young player was in their overall developmental journey: “it is hard to educate a first team coach. I think it is helping them to understand that the background of the young player is very different to a ten-year veteran who had a very different experience” (C). One member of a focus group, a former senior coach reflected that:

One of the things I have done as a head coach is be very frustrated and lacking patience, I needed to put myself in their shoes. It is important that we have a much better understanding of the player... Sometimes to bowl them out in front of everybody isn't a good way to go and I have done that (C).

At times, coaches reported that even when efforts were made, they were often ignored by senior coaches with different priorities:

I sent a player up last year.. I went to watch the session and the first thing that I saw was the coach doing all the things that we had asked them not to do! Afterwards they asked, 'why is he coming up to us!' (C).

Academy staff recognised these differences and highlighted that they “can't expect academies to be delivering what the 1st grade do because they have different needs and they are different levels of the game” (C). As a result of this difference, coaches often suggested that young players had sub-optimal development experiences, one Head of Youth reflected: “how many times have we seen an academy player been sent out to stand on the wing, and I have done it myself without understanding, they fuck up and get an absolute bollocking”.

Step change in challenge level. It was frequently acknowledged by participants that the differences between the academy and senior level were significant and were very often too great a step change for players to cope with: “we have a separation between 1st grade and academy and no matter what you do, there will always be a separation” (C). Players were seen to train up before they were deemed ready, as highlighted by a coach: “I think we rush young players... We have a group of young players who do the whole pre-season with the first team, their needs weren't being met”. First team coaches were also reported to require players from the academy to make up the numbers in training and be used as opposition for the Super League team: “sometimes it is ‘I need a winger in this session’ and you don't expect them to get that opportunity. You can't prepare them properly” (H).

Excessive early positivity. The challenges posed by the step change in challenge when moving to the first team and attendant breakdown in integration were perceived to be exacerbated by an excessively positive developmental history, devoid of challenge. This was seen from both a coaching point of view: “it is easy for an academy coach to keep giving positive feedback, but it isn’t what the kid always needs. Understanding them and giving the appropriate feedback is critical” (C). This was also identified as coming from external stakeholders: “most kids have been told a shit load of stuff, most of it positive, it is getting harder to give them more negative feedback” (C).

Intra-club role clarity. Academy staff reflected the critical need for role clarity between staff within the club to support the development of players through the transition. A lack of coach understanding at each level and a failure of the systems that underpin this were perceived to be critical features in failure to integrate. The academy staff’s role clarity was seen to be challenged by an approach that did not demarcate the approach of coaching senior level performers and academy players. As highlighted by one coach: “some of the problem is that they might then treat the academy as a watered down first team and coach inappropriate things”. A break down in this role clarity was perceived to be a critical barrier in the development of players and had the potential to cause conflict:

I’ve had one of the coaches knock on the door to talk about two players who have spent the whole preseason with 1st grade and he was telling me that I should be doing some more work with these boys because they aren’t good enough. I was kicking myself because I should have picked him up and thrown him through the door. He’s had them all the way through preseason and he is having a fucking pop at me because they aren’t good enough! (C).

The lack of appropriate systems and processes to support the differential needs of the transitioning player were also identified as problematic, where it was perceived that there was a lack of support for these specific needs:

I didn't think the young players were getting enough attention or development. I suggested that when the first team players went home at lunchtime, that they have another block of specific work. I think there is a massive void between junior and senior players (C). A lack of appropriate long-term planning was seen to contribute to a lack of role clarity and appropriate focus on the developmental needs of the player and in setting expectations of the wider organisation:

Sometimes the players are on a hamster wheel, they run like mad for 10 months, they aren't ready yet. Take a three-year planning process, give them a profile and assess them in all aspects of their game. Say they aren't going to be ready in 12 months, but ready in two, three or four years (H).

It was also suggested that there was an additional barrier in clubs that did not have a specific coach whose role was to work with transitioning players: "having a coach who works across both groups is the most important element of all of this" (C).

4.4 Discussion

The purpose of the study presented in this chapter was firstly to understand coach and talent pathway staff's perceptions of what prevented individual athletes capitalising on their experiences in order to progress through the talent system. Secondly, to explore what 'gets in the way' of the TDE seeking to offer optimal experience to the individual athlete. The findings suggest a number of factors that were perceived to impede the transition of players and the optimal function of the TDE.

In line with previous research in other male team sports, experience of the transition was characterised as being highly challenging with a number of competing demands, such as

the need to communicate and seek support from staff; yet also manage the coach's impression of them (Røynesdal et al., 2018). As identified in Chapter 2, the characteristics that players arrived at the transition with were seen to be critical determinants of whether players managed the transition into the senior squad (MacNamara & Collins, 2010). The need for athletes to develop and deploy a range of psycho-behavioural skills is certainly not new but, supporting the findings presented in Chapter 3, results suggest that it was possible for players to progress through a pathway, *without* developing the psychological skills necessary to function at the senior elite level. Importantly, it was perceived that the challenge posed by the experience of the senior transition required the use of skills that hadn't been challenged at younger ages (cf. Olszewski-Kubilius, Subotnik, Davis, & Worrell, 2019). In line with previous research (Bjørndal & Ronglan, 2018) participants perceived effective TD practice to be the result of multiple inputs to the transitioning player. Factors that were seen to 'get in the way' were typically a result of complex socio-political interactions that influenced the overall milieu of the club (Cruickshank, Collins, & Minten, 2013). Additionally, participants all identified factors that had previously been linked to individual failures of the talent system. Notably, participants felt frustration about how obvious some of these failings were in hindsight. Yet, given the socio-political backdrop that influenced these failings, it is unlikely that there is a quick or simple solution to adequately address. As a result of the factors identified in the present study, I would suggest that the senior transition presents just as great a challenge for the TDE as it does for the individual athlete seeking to make the step up from the junior to senior level.

Finally, it is important to note that the findings of this chapter are not intended to comment on the overall effectiveness of talent development in Rugby League. Focus groups were asked to comment on features of their environments that challenged effective TD

practice, rather than offering general comments on the effectiveness of the TD system in the sport.

Building on these findings and those of Chapter 3, the following chapter has explored the experience of the senior transition for the performer. In doing so, considering previous pathway experience and the extent to which it prepared athletes for the challenge they were about to face.

Chapter 5 - Navigating the Winds Of Change on the Smooth Sea - The Interaction of Feedback and Emotional Disruption on the Talent Pathway

5.1 Introduction

Chapters 3 and 4 considered the nature of what blocks effective talent development from the perspective of the coach. Chapter 3 found that performers deemed to be highly gifted, often failed to develop talent as a result of a lack of psychological skills and systemic failures on the part of the TDE. Chapter 4 supported previous findings and, in addition, suggested a number of socio-political features of the organisations housing TDEs that could prevent effective TD practice. The failure to develop an appropriate set of psychological skills contributed to the performer not being able to cope with and maximise development as a result of challenge. When these findings are combined, they suggest a need to understand the experience of the athlete in the TD pathway in greater detail, especially as previous literature suggests that those who have attained an elite level have benefitted from high levels of challenge along their developmental journey (Collins et al., 2016b; McCarthy et al., 2016; Sarkar et al., 2015). Subsequently, however, it has been proposed that, rather than challenge itself being the direct provocation of new learning and development, it also acts as a proving experience, testing previously developed characteristics (Savage et al., 2017). Indeed, a 2017 book chapter Collins and MacNamara making use of the idiom: ‘a smooth sea never made a skillful sailor’ suggested that the skills to cope with a variety of developmental challenges can be taught and need to be deployed in order to facilitate the navigation of the talent development pathway (Collins & MacNamara, 2017b). Given the complexity, and in seeking to fill some of the research gaps identified in Chapter 2, there is need for a more granular understanding of the development pathway (Gulbin et al., 2013). As also demonstrated in Chapter 4, previous research has characterised the senior transition as being the period of

most significant challenge for the TD athlete (Stambulova et al., 2020). Additionally, based on evidence presented in Chapter 4 the TDE's provision of coherent support can be significantly challenged by prevailing milieu. Consequently, in order to address some of the gaps in the literature and to enhance both practical and theoretical understanding, this study had three specific objectives:

- (a) establish player's perceptions of the level of challenge prior to and through senior transition
- (b) understand the extent of emotional disturbance occurring from those challenges
- (c) to investigate what impacted players to help them progress through the transition.

5.2 Methodology

5.2.1 Research philosophy

Numerous researchers have advocated the use of multiple methods (Onwuegbuzie & Leech, 2005) and specifically in understanding challenge in the talent pathway (Sarkar & Fletcher, 2014; Savage et al., 2017). As a result, a multi method approach was deemed most appropriate to explore the specific research questions. Multimethod approaches are those that use complementary methodologies chosen to meet the needs of the overall research goal (Anguera, Blanco-Villaseñor, Losada, Sánchez-Algarra, & Onwuegbuzie, 2018).

5.2.2 Participants

Participants (n=8) were purposefully selected from an England Rugby League national age group based on the criteria that they were likely to make the senior transition in the following year. Participants were between 19 and 20 years of age (M = 19.37; SD = 0.48) and at the point of the second interview had made at least one senior appearance, playing a mean 11.38 (SD = 10.14) times in the Super League (the highest level of competition in the UK). A homogenous sample were deemed appropriate as a result of the desire to conduct an

exploratory analysis of the experiences of developing performers as they navigated their first season as a senior elite player (Røynesdal et al., 2018).

5.2.3 Procedure

The study followed a pre-post design, whereby participants were interviewed at the start of the transition and at the end of the transitional year. In order to manage a degree of uniformity between interviews, data were collected by means of semi-structured interviews, the guide for which were developed using appropriate talent development literature. One on one interviews lasted between 49 and 61 minutes ($M = 54$) and were audio recorded for transcription and analysis. The first interview sought to gather information regarding the participant's previous experience of challenge in the pathway. The second was used to understand the participant's experience of the transitional year.

5.2.4 Graphic timeline

At the start of the second interview, adopting a retrospective tracking protocol previously used by Cruickshank et al. (2013); Savage et al. (2017) and Ollis, Macpherson, and Collins (2006), participants were asked to draw a timeline marking critical events through their transitional year into senior performance (x-axis). Participants were then asked to reflect on the key chronological events that occurred throughout the year and plot their subsequent emotional state. All timelines were gridded to the same scale with positive emotion labelled on a 1 to 5 scale and negative emotion on a -1 to -5 scale (y-axis). For example, participants plotted events such as being selected for 1st team fixtures, changes in coaching staff and negative feedback. Although a two-dimensional model of emotion has been criticised in the literature as being an inadequate description of emotional experience (Mellers, Schwartz, & Cooke, 1998), it was decided that the two-dimensional model would be most appropriate to investigate the intensity and valence experienced by the participants for two reasons. The first being the desire to understand the intensity of valence, rather than asking players to reflect on

discreet emotions and secondly, to allow the richness of experience to be fully explored in the interview. In addition, given the potential for hindsight bias and recall inaccuracies, the timeline was then used to aid to recall and promote retrieval by moving through the year several times with each participant to avoid parallel sequences being left out (Drasch & Matthes, 2013).

5.2.5 Interview Guide

Interview guides (see appendix B.1 and B.2) were informed by literature in both the talent development and feedback domains. The former suggesting that the experience of ‘memorable challenge’ or ‘trauma’ is a highly individual personal interpretation (Savage et al., 2017) whilst the latter calling for a greater emphasis on the role of the learner in the feedback process. Taking this into account, I aimed to take a more holistic approach to more fully understand the participant’s lived experience (Ajjawi, Boud, Henderson, & Molloy, 2019). This was further supported by the use of the graphic timeline as an impetus for discussion, allowing participants to share their personal narrative. Probes and prompts were used to encourage the development of answers and the clarification of key points (I. Jones et al., 2013).

5.2.6 Pilot study

Prior to interviews being conducted, pilot semi structured interviews were conducted with two participants who met the inclusion criteria of the main study as contracted professional players in adult male team sport who had just completed the transition to senior performance (Aged M=20; SD=0). Following the pilot, participants were asked for their feedback on the procedure and no changes were deemed necessary.

5.2.7 Data analysis

Given the need to understand the experience of the individual and the meaning that they make, IPA was deemed the most appropriate method to analyse each narrative in detail. The recommendations of Smith and Osborn's (2007) step by step approach to IPA were used to complete the analysis. Following the transcribing of each interview verbatim, each was read a number of times and the left hand margin used to annotate points of interest. The right margin was then used to document emerging themes and subsequently emergent themes from all transcripts were listed on a sheet of paper prior to clustering. Finally, a table was created with all higher order themes (see Table 5.1).

5.2.8 Trustworthiness

Given the role played by trust and rapport in shaping the process and outcomes of interviews, these features were developed as a result of my knowledge of each individual's career, attendance at training camps with participants, and awareness of the context of the transition into senior elite male team sport as a function of a career in elite sport. This role of 'insider' supports enhanced understanding of the experience of participants and approaches the study with cultural insight and address topics with greater ease (Berger, 2013). Clearly, whilst recognising the potential for further insight generation, it was also important that I recognised other possible alternative interpretations of the player's experiences. Given that the focus of an IPA approach is the search for meta-meaning, a reflexive journal was utilised significantly to ensure that I kept the participant's search for meaning at the forefront of my approach. The journal allowed me to reflect on thoughts captured throughout the interview process and my own role in the research process (Patton, 2002).

Following the first interview, all participants engaged in the process of member reflection. At the second, although all were offered the opportunity, only four of the eight participants actively engaged by offering reflections on their reported position. This

difference in response is potentially a consequence of the second period of data collection occurring at the end of a playing season and with players being out of training during the off season. Despite the relatively limited response to the second round of member reflection, all participants engaged in the process following the first round of interviews. Given the importance of a more participatory research approach, inherent in the use of member reflections, it was notable that participants commented on the utility of the process to augment their reflective process with one commenting: “Despite it being such a good outcome, it really has been an up and down year for sure”. Finally, given the importance of presenting the lived experience of the participants, thick description is used through significant direct quotation to preserve the richness of the participant’s accounts.

5.3 Results

5.3.1 The smooth sea - experiences on earlier developmental pathways

Community game. Prior to entry into their respective club’s academy, the majority of participants reported their developmental journey being characterised as lacking significant challenge. Indeed, one participant reported that: “I had quite a successful amateur team, we never lost. I think it was U13s and we lost our first game ever” (P6). Some players often found it hard to recall any period of time playing the game that they found challenging until they reached the academy stage at 16. Indeed, very few of the players reported the experience of any challenge until international representative teams: “the biggest was non-selection, if you aren’t picked for England...it is quite hard” (P3).

Transition into academy. On transitioning into the academy, some players reported experiencing some level of perceived challenge, though this was still seen to be very moderate in nature. Some of this was training and competition related: “that was tough, the pace of the game, the size of the players we were playing against when they were three years older” (P2). Yet, challenges were mostly organisational in nature; for example, player 4

recalled: “some of your days were quite long and sometimes we had 7am in the gym, I had to get up at 5.30am. I wasn’t getting home until 6 or 6.30pm at night. You looked forward to sleeping” (P4). Typically, players tended to report low frequency and an overall level of challenge such as player 5 who reflected at the first interview point: “to be honest, it has all been pretty easy so far, touch wood”.

5.3.2 The winds of change: experience of the senior transition

It was during the transition into the first team that players began to report a significant increase in the intensity and number of challenges that they faced; and concomitantly, a level of emotional disturbance not previously experienced in their pathway journey. Whilst the individual journeys of players were clearly different, the themes presented below offer a timeline of when different events were experienced to illustrate what prompted emotional disturbance. Figures 1-8 offer an individual timeline for each player, including their respective initial success in the transition. Table 5.1 offers a summary of the typical emotional response to an event.

Initial entry experience to the senior environment. At the initial stages of first team transition, players typically expressed a positive emotional state despite a higher level of perceived challenge. There was a level of satisfaction with having attained a level of performance that they had been working for: “it was harder competition, but I preferred it a lot more than just playing for the academy” (P1).

Struggling with academy. Later in the transition, all players who found themselves moving between the 1st team squad and the academy began to express significantly negative affect as a function of increased involvement in the academy. This was a significant change in orientation, with players becoming frustrated with the level of challenge offered by the academy: “the academy never did anything for me...I scored 6 tries in 2 games... Playing against young kids who are 16 years old...they are nowhere near the standard of Super

League” (P5). Indeed, the perception amongst players was that playing in the academy was proving a barrier to their future development: “you are playing with kids two years younger, sometimes you do get down, you just feel like you are treading water and there is nothing you can do...I can’t wait for the season to end really” (P2). Notably, some players experienced negative affect when playing at lower levels of performance as a function of other’s perceptions of their ability: “they know I have played Super League, there is demand to always be on my game because I am known as a good player, people always expect you to be good all the time” (P8).

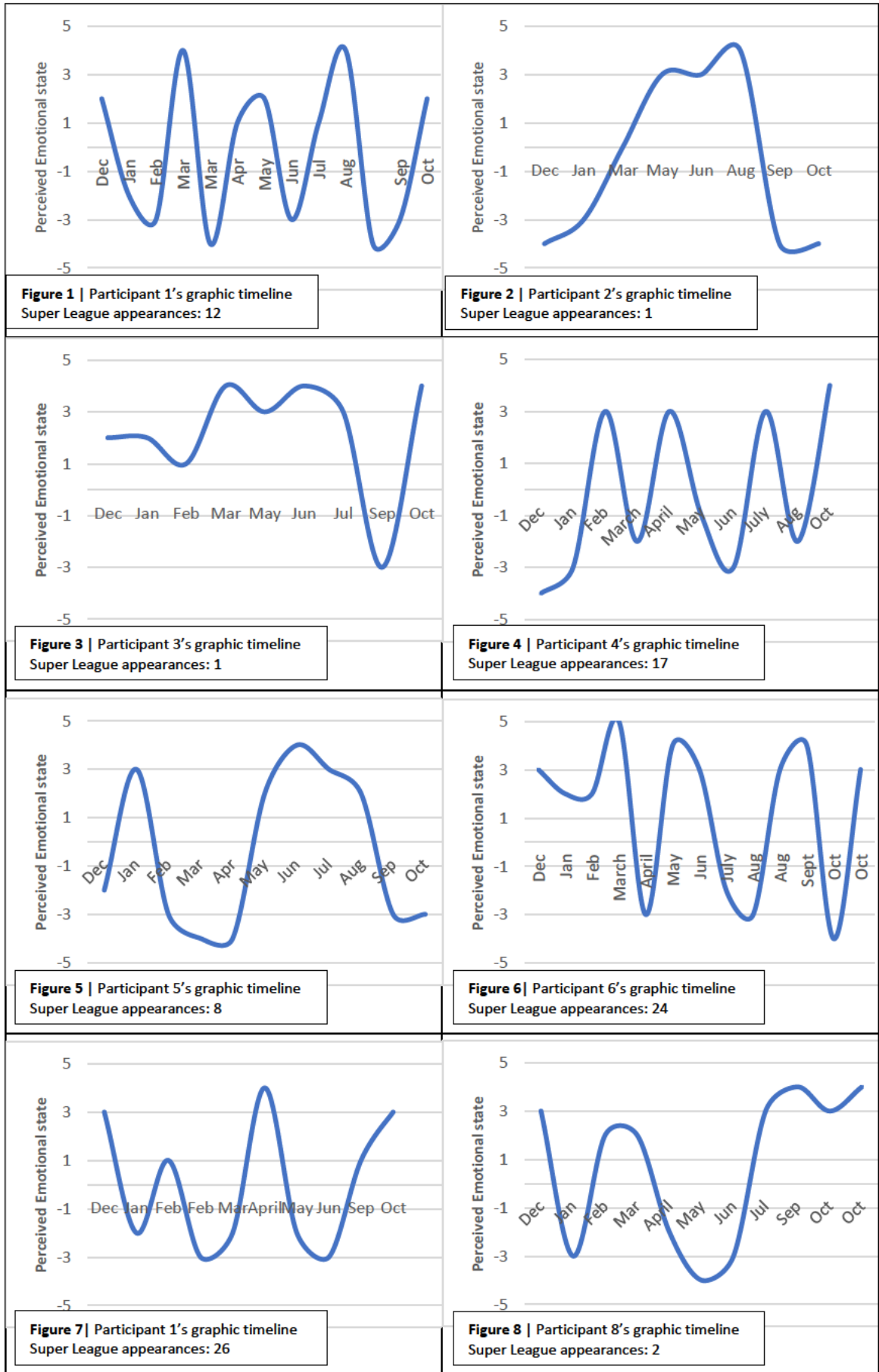


Figure 5.1-5.8 – Experience of the senior transition

Higher Order Themes	Lower Order Theme (N = number of participants mentioning this)	Raw data exemplar
Provoking Negative valence	Negative feedback (7)	“it got pulled up in the review. It was embarrassing”
	Increased performance pressure at the senior level (7)	“The hardest times were in the relegation battle”
	Lack of appropriate feedback (5)	“I got frustrated getting through training, not getting enough feedback”
	Poor individual performance (5)	“I was given a gig, but I had a stinker”
	Changing perception of training/playing in the academy (5)	“I enjoyed playing in the academy before, but I felt like I was getting to a state where I was too old and developed to be playing for the academy.”
	Deselection (5)	“I missed out. I thought it was unfair at the time”
	Lack of first team opportunity (4)	“[Coach] would reshuffle the team rather than putting me in... I was waiting, it was frustrating..I knew I could play at that level.”
	Pressure to demonstrate worth (4)	“If you get picked you are expected to play well. It put pressure on you”
	Raising of profile (3)	“It was tough for me, I played quite a few good games so people started to expect me to play well, so when I didn’t have a good game, they weren’t very happy”
	Pressure to prepare effectively (2)	“it was tough to maintain my consistency in preparation, how you warm up and how you play”
	Injury (2)	“This injury has been hard, I haven’t played”
Provoking Positive Valence	Initial entry experience to the senior environment (7)	“I was positive and training with the 1st team in the week and playing with the academy, I was playing so I was happy.”
	Making first team debut (6)	“Making my debut, it was completely unexpected, I got the call on the Wednesday that I would be playing on the Friday. I didn’t expect it at all...it was something that I will remember for the rest of my life.”
	Positive feedback (6)	“[Coach] said that he didn’t expect that from the first game, and I thought I would need to settle in, so that was another memorable one. I could go into a team in my first game and make such an impact.”

	Good individual performance (6)	“It doesn’t get much tougher than [club] at [stadium] and felt I did myself justice with my performance.”
	Loan club experience (4)	“I ended up on dual reg at [club] and I enjoyed it a lot more.. It was playing in a pro game with fans. It was harder competition, I preferred it a lot more than just playing for the academy.”
	External validation of performance (4)	“I was the youngest player to play for [club] in the past few years, I got a lot of publicity off that and some of the fans went to watch my debut at [club]. I had a lot of backing.”

Table 5 1: Transitional year challenges

Lack of first team opportunity. Unsurprisingly, players also reported negative affect as a result of a lack of 1st team selection opportunities and not playing: “I thought I was in contention, so I was frustrated... It was 6 weeks until I played again a while after. It was very frustrating because I knew I could play at that level” (P4).

Pressure to demonstrate worth. Players became increasingly aware of the need to demonstrate their ability to coaches, reported a sense that performance in training needed to be at a consistently high level in order to manage the impression of the coaches. For some, this was reported as a relatively chronic stressor throughout the transition year with acute peaks where poor performance in training prompting negative affect: “there was one session where I didn’t have a great time, I didn’t make good decisions and I knocked on twice and it was a wakeup call...The coaches were telling me that I needed to wake up” (P8).

Playing for the 1st team. Unsurprisingly players making their 1st team debuts reported the event as the stimulus for very positive emotional states perceived to be life changing: “I started to get more involved in training and at team run, he told me that I would play. It was one of the best moments I have ever had” (P8). As players began to progress, making more appearances some began to experience higher levels of pressure and consequent negative affect: “my first team debut was a bit of a blur...but after that I found it a lot more challenging because of the build-up to the game, a lot more pressure” (P2).

In some cases, players were involved with teams fighting against relegation, this resulted in moderately high levels of negative emotion, for example, player four reflected: “it has been very pressurised; it is a win or relegated situation. There is a lot of pressure”. Players at clubs in different circumstances also reported negative valence prompted by performance pressure, but for different reasons: “playing at [club], if you get picked you are expected to play well. It kind of put pressure on you. So, when I didn’t have a good game, they weren’t happy” (P6). This heightened sense of pressure led players to have a very

negative response to poor team performances: “we got absolutely hammered, it were [sic] embarrassing we went 12 points up and it finished 60 odd points to 12” (P5).

Deselection. Another significant stimulus for negative emotion was deselection with players finding it hard to manage the disappointment of being dropped after first team involvement:

The Challenge Cup quarter final against [club], I had played the three weeks leading up to it and then I was dropped to 18th man when some of the other players became fit. I was gutted, I thought I had done enough to get a shout (P5).

Social Difficulties in the 1st team. In addition to performance related challenge, players also reported negative affect as a result of exposure to the social milieu of the 1st team and the challenges posed by the associated dynamics: “people were getting on each other’s backs. It wasn’t the best situation to be in, people weren’t looking forward to coming into training...especially the senior players, it was pretty tough” (P3).

Loan Clubs. Broadly, players reported the experience of loan clubs as eliciting positive affect as a function of where they were relative to 1st team selection. Players saw it as an opportunity to develop their game at a higher level of performance than the academy game: “it was really good, really positive. I had enjoyed the speed step up, faster and bigger bodies in the Championship [the second tier of the professional game in England]” (P8).

External validation of performance. Players also reported the positive emotion that followed the external validation of their performances. For example, the experience of being selected for representative teams: “I got a call from ([national coach] who said that I am in the squad. I was really honoured to get the opportunity to play at a high level, I was really thankful” (P8). Similarly, players reported the positive emotion experienced when receiving man of the match awards: “I played well at [club] and [club] as well, I got Sky man of the match, they were tough games, that was great” (P7).

Notably, due to the raising of their profile, players started to face challenges posed by interaction with fans, particularly on social media and in the written press: “there was quite a bit of social media, mainly just fans, I tried not to look at comments, I would obviously see them now and again.... I didn’t get slated too much” (P6). It was also suggested by some that social media use intensified both positive and negative emotion experienced as a function of performance in matches: “social media now, if you lose a big game, then everyone is talking about it, you can’t get away from it” (P1).

Injury. All players who suffered injuries reported them as events leading to significantly negative affect. In some cases, this was relatively acute such as player 8 reporting: “with [loan club] in late April I really hurt my shoulder but had to keep playing because I didn’t want to miss out on anything, so had to play 3 or 4 weeks with a really injured shoulder”. In others, injury led to prolonged periods of negative emotion:

The week before Christmas I got concussed... After then I got a back injury in training so was out for 3 weeks, could barely move. Came back and played one game in the reserves, got concussed in the 1st team which was my second concussion of the year... That took me through until I injured my shoulder. This injury has also been hard, I haven’t played, it took me six weeks from the injury to the operation and now I am in the brace, it has just been very frustrating (P5).

5.3.3 What was impactful?

Despite participants reporting a number of stimuli that provoked negative emotional states, these were often perceived to be facilitative of long-term development. In addition, nearly all participants also reported a series of feedback instances that induced a range of emotional intensities that were considered to be highly impactful.

It was consistently reported that the most impactful feedback was coupled with an event that provoked an affective response or where the feedback itself induced emotional

disturbance. For example, player 8 reflected on the most impactful feedback he had received commented that: “it was so personal and brutally honest with me. No bullshit, just straight to the point. I just knew that he meant it in the way that he said it”.

Events that provoked negative emotion were perceived to provoke periods of deep reflection and subsequent action. For example, player 4 discussed an event that provoked a significant amount of reflection on his part:

My performance that day had a big impact on the team, I dropped a ball and they went on to score. I learned that if I have an off day in the academy then I might get away with it, if I have an off day in the first team then we will get beaten (P4).

Similarly, players reported the offer of feedback which induced negative valence, provoked a similar response:

[Head coach] pulled me in and showed me a clip of their try and he asked me what was wrong with it. I said [player] has missed an inside shoulder and they have scored. He showed me a clip of me walking back and said that if I was running hard back then I would have tackled him. He said if I was working harder, I would have made the tackle and it gave me a new perspective...if I'm not walking, then I stop that try. The lesson I learned was that it wasn't all about the big play, more about the little things that we all do together. I really focus hard on the one percenters now; I work on the little things harder (P1).

Feedback was perceived to be even more impactful when an underlying negative valence was coupled with a negative perception of the feedback offer. Importantly though, it appears that players actively deployed a range of meta-cognitive skills to support sense making and reflection, prompting the participant to take adaptive action:

He just said that he felt the player picked ahead of me was better defensively and that I didn't have a big enough impact in the first game. It was defining really. At that

point I wanted to leave because I thought if I am not playing, what is the point of me being here... but after thinking about it..it focused me on my defence and getting better (P4).

Extended periods of negative emotion. Critically, two participants reported extended periods of negative affect, both as a function of long term or persistent injury. At this stage, players reported that a negative feedback offer would likely have not been appropriate for their needs:

I was in a negative headspace and my confidence was shot to pieces. I just thought that a little bit of positivity went a long way. It was one of their ways of saying they knew what had happened to me, they knew that I was frustrated having missed opportunities, but the way that I reacted was what they like in me (P5).

Positive valence. During a period of positive affect, the receiving of feedback was recalled by participants as highly memorable but offering limited impact. Notably, players were typically able to recall this feedback, but it was seen as being supportive of motivation or confidence rather than prompting any deep reflection or future action. For example, after receiving positive feedback after a senior team fixture, player 3 suggested that it was the most memorable event of his season: “I got told that I was one of the better players on the pitch, I can’t remember the feedback really, it was just a case of: ‘keep doing what you are doing, you are playing well’ ...I didn’t play again”.

This often proved to be the case when the content of the feedback was positive and players reported having their motivational resources reinforced as a result of positive feedback, for example player eight commented on a meeting with the head coach: “I can’t remember anything specific; it was just really good to hear that from the two main people at the club who make the decisions, it was really positive. It gave me a lift to be honest”.

Feedback aimed at managing positive affect. Notably, several players reported that feedback providers were sometimes wary of the side effects of significantly positive events:

It was one of the biggest points of my career and I think that is something I will hold with me all the way through. It was [coach] speaking to me after that made me realise that you have never made it, you will never be the complete player. It is just something to keep thinking, even when you hit the high points, there are still things I can improve on (P5).

Importantly, all players reported regularly receiving high volumes of feedback on a day to day basis as a professional player. Yet, there were no reported instances of impactful feedback that weren't paired to an emotional response by the player.

5.4 Discussion

The purpose of this chapter was to expand on the findings of Chapters 3 and 4 in considering the experience of the performer during a challenging period and what might block effective talent development. Data suggest that players typically experienced a low level of challenge prior to the senior transition through the community game and their academy experience (the smooth sea). This smoothness changed in the transition to senior performance, with the intensity of emotional disturbance provoked by experience reported as being significantly greater (the winds of change). Finally, participants reported that all feedback they were offered that they considered to be impactful was either paired with peaks of emotional intensity or provoked a level of emotional disturbance.

The first aim of the study was to understand player's perceptions of challenge prior to the senior transition. In contrast to 'super champions', the players in this sample were reported to have experienced relatively smooth trajectories through their pathway, characterised by an "ease of progression", matching the 'almosts' identified by (Collins et al., 2016b, p. 6). This began as players in the community game, where all participants reported a

near total lack of any challenge and in some circumstances could never recall losing a game. Players did not report any memorable challenges at this stage, with the exception of the end of scholarship where some reported disappointment with a failure to be selected for the England 'Youth' squad.

Even at the next stage of performance, transitioning into a Super League academy, the experience of the pathway was perceived to be a relatively smooth, with players rarely experiencing challenges of a nature to illicit significant negative emotion. Players reported the experience of some additional challenge, but this was again moderate, with the transition to more frequent training and playing with older players being the most common. Critically, players reflected an overall lack of significant or memorable challenge.

Notably, however, at the stage where players began to make their transition between academy and senior performance levels, players reported significantly greater levels of emotional disturbance (both positive and negative) provoked by the increased level of challenge. These 'wave like patterns' (cf. Ollis et al., 2006) were experienced by all performers, but notably those participants who featured more often in the first team experienced more frequent highs and lows. The highs tended to be associated with the validation of their performance level through either selection for the senior team, or international squads; winning of awards based on their performances or, attaining a level of status within the senior squad. The lows came as a function of the increased level of scrutiny on their individual performances in both training and games, 'fitting in' to the social dynamic of a senior dressing room (cf. Røynesdal et al., 2018), deselection and injury. Without seeking to suggest a causation in terms of performance, which would require a far longer longitudinal investigation, including significantly more participants and extend beyond the transitional year. To highlight the point, one of the players who made the most appearances in the transitional year failed to make a senior appearance at the initial stages of his second season.

What does appear clear is that those performers who had the most objective success in terms of senior appearances, experienced more frequent emotional highs and lows. In contrast, those who had the least success appeared to experience fewer emotional peaks and troughs and indeed, in the case of participant 3, reported experiencing little negative emotion over the course of the year, despite only making one senior appearance. Notably, for all players social media had a significant impact, acting as an amplifier, particularly of negative emotion following poor performance.

This should elicit a number of concerns for the talent pathway seeking to offer an optimal developmental experience for a transitioning elite performer. For example, a player who experiences lengthy exposure to negative emotion is at risk of the ill consequences of the attendant stress cost (McEwen & Sapolsky, 1995). Additionally, in keeping with the need to focus on the experience of the performer the emotional valence experienced by players might not fit the simple stereotypes of ‘playing down’ that encourage a reduction in challenge level (eg. Cumming et al., 2018). If the data shows anything, it is that simplistic ‘one size fits all’ solutions will rarely if ever be effective.

During the transitional year, players reported no instances of impactful feedback that weren’t paired to either an event that had provoked an affective response or where the feedback itself prompted an emotional response. Players reported broad differences in the consequent reflections experienced by players as a consequence of the emotional tone of their experience. Negative emotion and attendant feedback was reported by players to provoke deep reflection about elements of their performance that they hadn’t previously considered to be important, or hadn’t been motivated to develop at previous stages of their journey. Positive emotion was seen to provoke reflections supportive of motivation and confidence and was perceived to be less impactful than negative (cf. Baumeister, Bratslavsky, Finkenauer, & Vohs, 2001).

Consequently, results serve to highlight the value of investigating the experience of the athlete and not external input alone. Young players' initial interaction with the level of challenge at the senior level forced them to mobilise skills that hadn't previously been required. This increased demand was also required in situations where they would outwardly appear to be 'cruising' through the transition, making a significant number of appearances and quickly making themselves a regular selection in the senior team. In line with the findings of Chapter 4, the results of this study serve to emphasise the centrality of the individual's experience being a focal point for both practice and research, highlighting that an individual's response to challenge are layered against a highly individual psycho-emotional backdrop (Kiely, 2016). Therefore, what might be experienced as a relatively minor challenge by one individual, can be experienced in a completely different manner by another. The individual nature of challenge responses was highlighted by the changing nature of emotional state through the period of the study. Some players reported the experience of playing at the senior level very differently over the course of the same year. It is also clear that many of the players in this sample had their first encounter with a challenge at a level that could be referred to memorable or inducing a traumatic response over the course of the transition to the senior level (cf. Savage et al., 2017). This should be of particular concern given a lack of previous challenge experience and preparation for what was coming (Hill, Den Hartigh, Meijer, De Jonge, & Van Yperen, 2018).

Data also clearly support the well-established difficulty of the senior transition (Røynesdal et al., 2018) and highlight the differences between the experience of the previous experience of challenge and transitions on the developmental pathway. This would in turn suggest that, in addition to the development of a range of psychological skills to navigate the transition, a critical feature of the talent pathway is that it provides a 'challenge full' and bumpy pathway prior to the senior transition (cf. Collins & MacNamara, 2017b). Indeed, it

may be the case that other transition points are designed to ensure that individuals do *not* experience a smooth move from one stage of performance to another. Clearly, there are limitations to this; it would not be desirable to have too great a step change in challenge that causes potentially talented performers to fall away, as evidenced in Chapter 3.

Overall, this chapter explored the interaction of challenge, emotional disruption and impactful feedback processes amongst a cohort of rugby league players transitioning into elite sport. Players in the study reported significant differences in both perceived challenge and emotional disruption in their transition year compared to their experience of the community game and academy. In addition, when considering what was impactful in supporting their progress, they referred to events and feedback that were emotionally laden. Consequently, emotional disruption was reported as a critical part of their developmental experience to be used for maximal impact, rather than something just ‘coped with’.

Although data were collected at two time points, enhancing the participant’s recall and accuracy of events, players were asked to draw the timeline of the year and reflect on their overall valence retrospectively. As such, this may have prevented participants being able to recall the nature of their emotional intensity retrospectively.

Notably, since players reported the critical role that feedback played in supporting their journey, Chapter 6 will seek to consider the experience of feedback by athletes in the talent development pathway.

Chapter 6 - Too Many Cooks: Examining the Coherence of Feedback for the Transitioning Athlete

6.1 Introduction

The previous chapter investigated the nature of the experience of the athlete moving through the senior transition and potential blocks to optimal development. Further, it established perceptions of challenge prior to and during the transition, the nature of emotional experience and finally identified what helped them to progress. Impactful feedback was identified by participants as a critical factor in supporting their progress through challenge. Additionally, Chapter 4 identified the coherence of feedback received by performers being hindered by a number of the socio-political conditions of their organisation. Finally, the study presented in Chapter 3 demonstrated the potential maladaptive impact of a wider range of inputs around an athlete's development. Accordingly, Chapter 6 considered the role of feedback more broadly, investigating the individual athlete's experience of feedback throughout a TD pathway.

If the navigation of a transitional experience is positioned as dependent on the dynamic balance between coping resources and barriers (Stambulova, 2010) the network around an athlete needs to be adequately prepared to make effective decisions about the nature of the support and advice needed (Henriksen, Storm, & Larsen, 2018). In this regard, recent investigations into athlete experiences through a talent pathway have highlighted the potential utility of the coach as 'orchestrator' (cf. Jones & Wallace, 2006), facilitating the range of inputs to development both within and across settings (Bjørndal & Ronglan, 2018). This would appear challenging, however, given previous research highlighting the potential for disconnect between the perceptions of stakeholders around an athlete and their coaches or talent systems (Kearney, Comyns, & Hayes, 2020; Pankhurst et al., 2013). As highlighted in chapter 2, research has demonstrated that successful TDEs are underpinned by high levels of

communication to support coherence (Henriksen et al., 2010a; Martindale et al., 2005). In contrast, less successful TDEs appear to be characterised by low levels of communication across levels (Henriksen et al., 2014). Indeed, research in other fields would also suggest that a lack of coherence and integration has the potential to impact on athlete outcomes and development (MacPherson & Howard, 2011).

Building on research presented in Chapter 2 that suggested that impactful feedback is that which has a critical long-term dimension in order to provoke thinking, reflection and future action (Carless, 2019); it is suggested that learners who are ‘feedback literate’ are able to make sense of feedback and have the self-regulatory capacity with which to review and use it to enhance future performance. This literacy has a significant mediating effect on the impact of feedback and would suggest that feedback is more likely to promote learning if it is a two way process that allows people to make sense of comments about their development to inform their future performance or learning strategies (Boud & Molloy, 2013; Carless & Boud, 2018).

As the previous chapters have identified, there appear to be several interacting constructs which must be effectively developed and orchestrated if the TD pathway to prevent blockages. Consequently, the specific aims of this study were to understand the experience of coherence and integration of feedback within a talent pathway during transition to the senior level of performance. Specifically, I investigated a) the number and nature of different feedback sources that young players experienced during their pathway journey, both prior to, and during the senior transition. Secondly, I wanted to b) monitor the coherence and contrast of feedback received to clarify the nature of the challenge faced. Finally to c) understand the individual player’s sensemaking of this feedback by understanding the decision criteria they used to judge the validity of what they were offered.

6.2 Method

Given that the main aims of the study were to generate an in-depth understanding of the participant's experiences of feedback and how they made sense of the context they were in, an IPA was chosen to examine each narrative in detail (Smith & Osborn, 2007). IPA was deemed the most appropriate method given the commitment to the examination of individual's sense making of their experiences (Smith et al., 2009). To support consistency, a semi-structured guide with open ended questions and follow up probes was generated and data were collected in three phases (see appendix C.1-C.3). The guide was informed by relevant talent development literature, enabling relative consistency across interviews, whilst not preventing exploration of individual themes with each participant.

6.2.1 Participants

In line with IPA guidelines (Smith & Osborn, 2007), a homogenous sample of players were purposefully selected to participate identified by the Rugby Football League on the basis that they represented multiple clubs (N= 6) and were approaching the senior transition. At the time of initial interview, players were between 18 and 19 years of age (M = 18.25; SD = 0.43). All were contracted professionals at English Super League teams (the highest level of RL competition in the UK). Prospective participants were contacted via their National Governing Body who forwarded information letters regarding the study. Data were collected longitudinally via three semi-structured interviews with each player, conducted between August 2018 and November 2019.

6.2.2 Developing and evolving the interview guide

Prior to conducting interviews, the procedure was reviewed by the research team and pilot interviews were conducted with two participants aged 19 years old (M = 19; SD = 0) who met our inclusion criteria as contracted professional players in male professional team sport. Following these interviews, participants gave feedback on the overall content of the

interviews, with no changes deemed necessary. Interviews with the main participants were conducted by the first author at three time points over 18 months representing the start of transition into senior performance, the midpoint of the transition and finally, their full integration within the first team squad. After initial setup, interviews lasted between 34 and 46 minutes ($M = 39.87$) and were audio recorded for transcription and analysis.

6.2.3 Data analysis

Interviews were transcribed verbatim, then analysed utilising the IPA guidelines formulated by Smith and Osborn (2007) and Biggerstaff and Thompson (2008). Transcribed interviews were read multiple times to ensure familiarity with their content and this phase was used to record observations and thoughts. Meaningful units were then identified and coded. I was very aware of my potential influence on data interpretation and, as such, endeavoured to concentrate on a detailed examination of each participant's account, notwithstanding the interpretative role of the researcher (Smith & Osborn, 2007). At the next stage, emerging themes were clustered with higher order themes being highlighted and identified. This process was repeated with each interview transcript, which allowed for analysis across the cohort both at a given time point and longitudinally. Finally, groupings of themes and meaning units were referenced against original data throughout to ensure accuracy.

6.2.4 Trustworthiness

Given that IPA approaches are usually conducted with non-longitudinal designs, it is typically suggested that data analysis takes place following the collection of all data. In the current context however, given the longitudinal nature of the study and to ensure trustworthiness, a distinct round of data analysis took place following each round of interviews. This was supportive of greater understanding of participant meaning and in line with the methodology used throughout the thesis. Specifically, it allowed for member reflections to be utilised with participants between interviews and these insights to carry forward to subsequent collection

episodes; surely a procedure in keeping with the epistemological aims of the IPA process (cf. Smith & McGannon, 2018).

The first round of member reflections led players to comment that the themes were representative of their experiences through the talent pathway in terms of the number of coaches with one commenting “it isn’t just me with loads of coaches then!”. Another commented: “when you see it like that, you understand how you can get confused”. Member reflections used following the second and third rounds of interviews allowed participants to reflect on the nature of the level of difference that they were exposed to. Although all players engaged with member reflection at following the first and second rounds of interview, the sample of players who chose to engage following the third was slightly lower (n=4). This difference can be attributed to the third interview stage being conducted at the end of the season and therefore member reflections being sought from participants during the offseason. Data are presented below using a number of direct quotations to promote the voice of the participants and for the reader to engage with their experience (I. Jones et al., 2013).

6.3 Results

The aims of the study were to (a) understand the number of feedback sources young players experienced prior to and during transition to the senior level of performance (b) understand the coherence of feedback received and (c) understand the individual player’s sensemaking of this feedback.

6.3.1 Number of feedback providers

Stage	Most feedback providers	Least	Mean	SD
Community level	5	3	4.12	0.78
Scholarship (pre-academy)	14	9	11.12	1.61
Academy	16	8	13.37	2.34

First team transition	24	11	18.62	4.47
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Table 6.1: Number of feedback providers at each stage of player’s development pathway

Throughout their talent development journey, players were exposed to an increasing number of feedback providers. Beginning with entry to the community game, joint roles were frequently played by parents as the coaches of participation level teams: “at U13s to U14s was my dad because he used to coach us and then my grandad because he used to play” (P2).

It was at the next level of performance (scholarship) that players experienced an increase in the number of feedback and mentor figures. This included increased investment from parents and other family members: “my dad was always on at me about my organisation skills, I was the main talker in the team, bossing the team around. He was always into me, making sure that the team did as I said” (P8). Others experienced their family highlighting perceived areas of improvement: “my grandad used to play, he would tell us like it was. I would have a dead good game and he would say that you’ve played well, but you need to improve this.” (P2).

The move into the academy typically coincides with community club coaches no longer engaging with young academy players. Despite these feedback figures dropping out, however, there was an increase in the number of feedback figures around a young player including rugby coaches, strength and conditioning coaches, medical staff, psychology support and the addition of regional, national coaches and further support staff.

Indeed, as players continued to progress through their club’s academy, they were increasingly balancing input from both the academy and the 1st team:

I went back into preseason, it was a bit of a mix, most days I was with first team, sometimes I was with 19s. I spent most of my time with the first team. It was mix and match really with what was expected of me, a bit of an odd one really (P8).

This was also the time that players began to report an increase in external input from figures like agents, senior first team players and other figures at the club (scouts, chaplains etc.). For example, a number of players reported significant senior players who consistently offered them advice. In some cases, clubs attempted to support the development of formal mentoring relationships with positional specific coaching: “[Senior player]...is one of the best. Giving me advice, going through my games and telling me what I can work on.” (P3). In addition, the role of a player’s agent became a prominent one from the point of view of contracts, advice about career and, in some cases, offering playing feedback: “the agent I am with now, he was also a similar position to me, so he watches and he tells me different things that I can improve on” (P3).

6.3.2 Coherence/contrast of Message

Given the number of different feedback sources offered to the young players, a number of challenges emerged for the players trying to navigate their way through the complex milieu and number of stakeholders engaged with their progress.

Differences within the club structure. A key area of identified difference was between the perceptions of senior first team coaches and those of the academy: [Academy coach] has been telling me that I need to be looking at the game like I’m not playing for the academy, but for the first team so I need to improve my physicality. [senior head coach] says that it isn’t the physicality but it’s the skill to move on to the next level (P1). With players transitioning *between* the academy and the 1st team squad but often playing for both, some players began to miss out on the more formalised feedback processes that were embedded *within* both the academy or the senior team. Some players felt that they were embedded within the first team and should be going to first team coaches for feedback: “ I was expecting to go with the first team for feedback, it was sprung on me at the last minute, the day before. I didn’t get told why.” (P8). Others felt a reduction in feedback

frequency and quality: “I stopped getting specific feedback on a one to one basis regularly, I only had a season review but it was with the academy not the first team coaches” (P3).

As a result, some of their feedback became more casual and lacking coordination with other coaches, leading to frustration. In short, a lack of the horizontal coherence seen as necessary for performance settings (cf. Webb et al., 2016):

I went through a lull, just getting through games, not getting as much feedback as I wanted and not knowing where to go next. I felt [academy coach] should have been giving me feedback and maybe a bit off [senior coach], but he didn't really speak to me. There was nothing for me to try and reach for next, I wanted something else to achieve, I thought I was playing well enough to get a debut earlier than I did, there was no direction about how to get there (P7).

Differences between community club and scholarship. At the pre-academy stage, one of the first challenges faced by young players was the number of contrasting messages between community club coaches and other coaches. For example, player six reported “my community coach was telling me to lead with your actions and not talk too much but my scholarship coach was watching and was telling me to talk more”.

In some cases, there was direct conflict between the community club coach and the scholarship coaches: “it was bickering and stuff. [community club coach] would say that they are telling you to do it wrong, don't listen to what they say” (P1).

Higher Order Theme	Lower Order Theme	Raw data exemplar
Lacking coherence	Differences within the club structure - perceptions of academy and senior coaches (7)	“the coach underneath the head coach prefers something slightly different to the head coach and was telling me to look at different things.”
	Differences between community club and scholarship (6)	“(Community coach) would tell me that I need to improve my game awareness, my skill needed to be better and put some weight on. It was confusing because it was different to (scholarship) coaches.”
	Differences between club, regional and international coaches (6)	“It was very different; the only feedback was between the two games and it was different to (club).”
	Between coaches and senior players (6)	“He (senior player) said it is uncharacteristic for me, don’t let it get to your head, it is because the other players are losing tackles. It was different to what the coaches said, they just saw me making the wrong decision and pulled me up on it”
	Between coaches and parents (5)	“The coaches say that I should work on kicking and my dad says that I shouldn’t be working on my kicking, so that is confusing”
	Between coaches and other stakeholders (4)	“The agent I am with now...he watches and he tells me different things than the coaches that I can improve on.”

Table 6 1: Lack of coherence in feedback

(Numbers refer to the number of participants mentioning this theme)

Differences between club, regional and international coaches. Differences were also perceived between the feedback offered by the coaches of club, regional and international teams. Players perceived that, when selected for a representative team (regional or international), there was an explicitly different focus on winning, with that being of more importance than developing as an individual player:

There is a big difference to [academy] the whole idea of [rep team] is to beat [rep team], but at [academy] it is to get better individually. Here we are, no matter how we score, it doesn't matter if it is a rubbish score, someone falls over the line, but [club] want you to play good rugby, be a good player instead of just winning (P1).

Players also noted that feedback changed significantly from what they heard at their club based on performance in individual games: “with [rep team] I had a bit of an off day in the game and missing a couple of tackles, it isn't like me. From that, they are telling me to work on my tackling” (P4). There were also significantly different cultural norms and perceptions that players had to navigate: “at [rep team] when it all kicks off they just want us to cool down and not get involved. At [club] they want you to be aggressive, if someone starts a fight then everyone will get in a fight” (P7).

Differences between coaches and senior players. As players became more embedded within senior squads, the modelling role of senior players started to become more influential. At times, this meant that young players started to listen more to the advice of the senior players who are playing next to them, *before* listening to the coach: “he [senior player] picks up on stuff being in the game that the coaches don't pick up because they aren't playing, they are a step back from us.” (P1). At times, this led to senior players directly contradicting the advice offered by the coach to the young player:

We had a video session and the coach showed me where I went wrong. Players spoke to me as well and said that the reason why I was making those decisions was because the players inside me were losing the ruck, so I had to jam in, it made me look worse by putting pressure on the edges. He [senior player] said it is uncharacteristic for me, don't let it get to your head, it is because the other players are losing tackles. It was different to what the coaches said, they just saw me making the wrong decision and pulled me up on it (P3).

Differences between coaches and parents. Where parents had experience of the game, their input often had significant implications for a player's understanding of the feedback offered to them, acting potentially as a critical moderator of the feedback of coaches. In the earlier stages of the development pathway, some parents offered feedback in relation to commitment-based factors such as: "my dad...will tell me, you should have stayed after training and done this skill if you haven't done it in training. If you haven't done it, then go and catch the ball after training." (P7). A number of participants reported levels of confusion as a result of feedback, with parents contradicting the feedback being offered by coaches: "The coaches say that I should work on kicking and my dad says that I shouldn't be working on my kicking, so that is confusing" (P8). Indeed, there were instances of parents becoming quasi-coaches (cf. Harwood & Knight, 2015) even up to the professional game and filling perceived feedback gaps from coaches:

My dad gives the most feedback, at your club you just get general feedback or one to one every few weeks but my dad gives me feedback after every game, what I've done well and what I can improve on for the next game (P2).

Differences between coaches and other stakeholders. Other stakeholders sometimes played a significant role in adding another layer of incoherence for a player. Those players who

chose to contract the services of an agent led to the feedback received sometimes contradicting the advice of coaches:

His [agent] views are not the same as [coaches']...He always keeps telling me to keep my eyes up and tells me not to lose track of my opposite man. He says that if you lose sight of your opposite man, even for a split second you can lose him (P5).

There were other examples of incoherence offered to players with other stakeholders such as scouts offering feedback on how a participant was performing: “I got told by a scout that I could have the chance of moving up to the first team but the coaches said that they weren’t 100% sure that it was the right thing for me....it was frustrating” (P8).

6.3.3 Levels of coherence.

Appropriate difference. Despite significant levels of reported incoherence throughout every player’s developmental journey, a number of participants did report an acceptance of appropriate difference between different feedback sources. This was characterised by some but not too much difference (cf. Webb et al., 2016) between the sources: “[club] coaches, if I’m carrying the ball want me narrow, the [rep team] coaches want it a bit wider. Just different preferences” (P7).

Community coaches accepting academy lead. Earlier in the talent development journey, at scholarship level, there were examples of academies communicating with community club coaches to support the coherence of feedback offered to young players. This led to the coaches of community teams recognising the role of the academy as the main ‘provider’ of feedback and reduced the level of feedback they offered: “he just let me get on with it. He knew I was getting coached a lot at [academy]” (P4). Other examples of cross-environment communication were seen with loan clubs, with deliberate decisions being made about the key feedback lead or feedback being coordinated between the loan club and the Super League club to ensure that the player was presented with a coherent message: “The

head coach was speaking to [loan team] coach and I would go through my clips with him in the week...This was communicated clearly so feedback was very similar” (P8).

6.3.4 Examining the ‘pecking order’ – what feedback counts?

Several key factors emerged as being central to the criteria that players used to make decisions about the feedback they were offered. The nature of the relationship between the feedback provider and the player, their perceived status in the sport, the power held by the provider in relation to their career status and their history as a player (cf. Telio, Regehr, & Ajjawi, 2016).

Perceived status of advisor in the sport. The perceived status of the feedback provider was seen as a critical variable in the decision criteria. There were two factors that players saw as critical to understanding the reputation of the coach. The first was simply the status of the coach in the sport. Some were classified by their appointment to be credible: “they are head coaches of top clubs; they have the reputation” (P3). Others were seen to hold a level of reputation as a result of their winning record: “the head coach has won Super League titles and probably had the best group of players, so I trust their system.” (P7).

Playing career of feedback provider. Of interest was the consistent value placed by the developing players on the playing career of those offering the feedback. Player 3 offered the impression that to trust the feedback that the coach needs to have been an: “..established player, [coach] has played for Great Britain...you need to have played the sport to know it”. This trust was enhanced further by the developing player seeing a connection between the position that they play and the position that the coach played historically: “[coach] in particular, played the same position as me, so I trust what he says” (P8). In addition, some players regarded a coach not having played at the senior elite level as being a reason not to trust the advice they might offer: “[coach] has been there and done it, he knows what he is

Higher Order Themes	Lower Order Theme	Raw data exemplar
Decision Criteria used by player	Perceived status of advisor in the sport (8)	“Trusting the coaches who had been there for a while, who have done it at the top level.. if people have been there and done it for a long time and have seen success in the club, then you are going to believe it and take their advice”
	Playing career of feedback provider (8)	“He was the same position as me. He was one of the best, giving me advice, going through my games and telling me what I can work on.”
	Power of the coach (8)	“You need to give the coaches what they want, they are in charge and you need to play it as they want you to... you need to do what they are saying”
	Nature of the relationship (7)	“If you have a good relationship then it is easier to talk to people. If they are giving you feedback, it can feel personal if you haven’t got a relationship with them.”
	Openness of coach (6)	“It is massive being able to go up and just say: ‘I don’t understand’...when we were at (community club), you couldn’t question anything. At (club) it is more like everyone being open, so it has really helped”
	Balanced content of feedback offer (3)	“if they give you feedback that is all positive or no positives at all”.
	Valence of feedback offer (2)	“sometimes can be a bit heated in a game, someone could tell you something and it might not be true. It depends on who it is from and the situation.”
	Professional competence of coach (1)	“I know that they (coaches) do a lot of detail work throughout the week that we don’t see. If it comes from them, there is [sic] a lot of hours and work put into it”
	Perceived credibility gap (8)	“No, because in the U19s I was in the leadership group, but in the first team, I am one of the youngest. I am not in the leadership group.”
	Rejecting difference (8)	“If it was different, I would just go back to my old ways and play as I wanted to”.
	Impression Management (8)	“it doesn’t go unnoticed; they are always watching and they will pick up on the little things that no one else is watching”
	External Moderation (8)	“(Senior Player) isn’t afraid of offering his thoughts! And so he should, he is a serious player and has earned the right to.”

Moderators of engagement with feedback	Lack of confidence (5)	“personally, I would just struggle to do that myself, having the self-confidence to do that. If I did it, I think the coaches at the club would be fine”
	Authoritarian coaching (3)	“The problem with the coach is that he wouldn’t listen to what you had to say, but the new one would.”
What was the source of the decision criteria?	Personal preference (6)	“If I don’t like it then I won’t take it in to the game.”
	‘Common sense’ (2)	“I have got common sense to judge that myself anyway”
	Trial and error (2)	“if one isn’t working then just try the other. Do it for yourself that bit really” (P1)

Table 6 2: Participant interaction with feedback offer

(Numbers refer to the number of participants mentioning this theme)

talking about but [other coach] hasn't played so, I don't know whether I trust him as much" (P7).

Power of the coach. Players also demonstrated an awareness of the power dynamic within the club setting. All players identified the need to interact with feedback offered by the coach as a function of their power over their career. They were more likely to engage with feedback offered by those who had the most control over their long-term future: "I want to be a professional player and I want to go far, so I would listen to [senior coach], he has the power to sack you" (P7). Further, those players beginning their transition perceived a hierarchy within the club's coaches, between academy and first team level. Some placed a higher value on the feedback coming from senior coaches and as they progressed, began to reject the feedback from academy coaches in favour of first team coaches: "speaking to [academy coach] was getting monotonous, but when the first team coaches started speaking to me it felt better because they are higher up" (P8).

Nature of the Relationship. Players consistently reported that the quality of the relationship they held with the feedback provider was a critical factor in them making decisions about the content of the feedback offered (cf. Jowett & Cockerill, 2003). This was reported by the players as being through the development of trust or respect, for example player 5 reported that:

It is a two-way street,...if respect goes one way then you get it back. If you have a good relationship then it is easier to talk to people. If they are giving you feedback, it can feel personal if you haven't got a relationship with them.

Acceptability was also seen as a function of time and investment in their development.

Players perceived that those coaches who had been working with them for longer periods of time were more likely to understand their own personal needs: "the ones who have been with me most of my career and they know what I can do to get better. That is where the trust

comes from” (P6). Coaches were similarly seen as developing the relationship as a function of the player’s perception of offering high levels of support and interest in their individual development: “if a coach is showing interest, you get something from that and a feeling of excitement because they have shown interest in you. You are more ready to play for them than someone else, there is mutual respect there” (P5).

Given the central role played by the nature of the relationship with the feedback provider, in all cases, parents were seen by players as a primary feedback source. Parental input continued to be a mainstay throughout the player’s journey until their advice typically began to be phased out as the player made his way in the professional game: “when I was younger she would give me some feedback that she thinks is right then I would say that she didn’t know anything about rugby and she couldn’t talk to me about it” (P1). This was especially the case for parents or extended family who fulfilled a dual role as parent and coach in the community game, where their involvement in the feedback process was more significant. In some cases, such individuals were the main source of feedback until the player was embedded within a Super League squad: “I always speak to my dad after training and games, how the game went and he will advise me on how it looked and what worked and stuff like that” (P8).

Openness of coach. Coaches who took the time to present themselves as open to a two-way process, where feedback was seen by players to support their own decision making were more likely to engage with the feedback offer. This was often seen in contrast to the approaches taken by the coaching players experienced at the community level of the game:

[Community coach], everything was his way or no way. [Academy coach] has a bit of “why did you do this?” If I do something that he doesn’t agree with, then he will ask why. If he sees my reasoning as ok, he will just say “no worries, but I would have done this” he will try and tweak. [Community coach] would say: “no you can’t do

that, if you do it again then you won't play". There was a difference in how they feed it back (P8).

Balanced content of feedback offer. Players also reported that they valued feedback that felt like it had balance and were distrustful of feedback that was overly positive in nature:

I get a lot of people blowing smoke, sometimes you just can't take it too far. In my situation, if I took it too much, I would be too cocky and go into the next game unprepared...you can't take that because it will affect you, especially since they probably don't really know what they are on about (P6).

Valence of feedback offer. The emotional conditions in which feedback was offered was reported as a critical factor in deciding if feedback was worthwhile. This was seen both in the sense of the tone offered by the provider: "The way that they come across...when they say it" (P8). Additionally, as a function of the environmental conditions that feedback was offered in:

It was in front of the full squad, we had just conceded a try and he just came straight in my face, having a complete go at me when there were another twelve players on the field who were involved in the play before, who were also wrong, but he came straight up to me. It is frustrating, it is something that I try to block out and ignore because I know that I am just being used as a scapegoat, there are other players on the field that make mistakes as well (P5).

Professional competence of coach. Of note, only one player suggested that he would consider the professional competence of the coach and the time taken to conceptualise the feedback offer before deciding upon its validity: "I know that they do a lot of detail work throughout the week that we don't see. If it comes from them, there are a lot of hours and work put into it" (P5).

6.3.5 Moderators of engagement with feedback

All players reported a number of factors that would influence their interaction with a feedback offer as they began their transition.

Perceived Credibility Gap. All players initially reported this being a result of a perceived credibility gap as a young player in approaching senior coaches, player 4 reported at the start of his transition: “the general thing with young players, they won’t question people who have been there and done it”. Yet, at interview point three, he reported that: “I have more of a status now. I wouldn’t go as far as arguing, but I would get my point across and try to understand their point if I disagreed with them.”

Rejecting difference. Players also reported a sensitivity to difference in making decisions regarding the validity of feedback. As a result, if a player perceived significant differences from the feedback that they were used to receiving, this was often rejected. For example, player eight reflected on feedback received during time with a representative team: “it was different to [club]... I just didn’t get it and I didn’t like the way it was, so I just didn’t really like doing it. It was the opposite of what I thought” (P8).

Impression Management. Some players reported that a coach’s outward openness was sometimes perceived as a Machiavellian test of their suitability for the highest levels of the game: “they do it for a reason, they are doing it to catch you out and to see if you are willing to keep going through really tough times” (P3). The impression of being tested was strongly felt by players at the midpoint of their transition and they saw it as a barrier for effective, reciprocal feedback conversations as a result of impression management: “I want to be playing more games for the 1st team. To do that I need to show the coaches that I am better than others in my position. Hide the weaknesses” (P4).

This resulted in players deliberately acting on the feedback that they had received to manage the impression of coaches. Participants even reflected that the actions suggested by a

coach should take precedence over what the player believed to be their own individual needs: “after sessions I will probably do whatever (coach) says... do whatever he does, it is mainly that I need to be showing the coach what he wants to see” (P4). Yet as players continued into the later stages of their transition into the elite game, they began to understand the potentially contradictory goals of the individual player trying to develop and the head coach needing to win games in the short term. Player five noted that:

You have got to listen to the person in charge who picks you, but then again you might need to sacrifice something one week in order to build you for the future and sometimes that is the risk that you need to take.

Of note, this subtle shift in the schema of the athlete appeared to run parallel to the concept of the need for a differential emphasis of psycho-social skillset necessary at different stages of expertise development (Olszewski-Kubilius et al., 2019).

External Moderation. The majority of players reported the role played by other support figures in the feedback process, with them using other feedback providers as moderators. Parents were seen as critical figures in this process and used to discuss difficult situations. As an example, player 2 reported that, when faced with difficult feedback requiring the use of a decision criteria, he asked: “my close family about what they think and what I should do and what I should say”. In addition, when players were faced with disappointing feedback, it was typically parents who they sought support from first: “it was my mum and dad that helped me with the disappointment of the feedback” (P1). Senior players were also reported as the moderators of feedback and their views were frequently sought by young players. Player five reflected that it was a senior player who offered advice based on coaching feedback: “the senior players have been in the same sort of position when they were younger and know how to deal with it”. In another case, with a player receiving contradictory feedback from coaches and fellow players, he made sense of the situation: “you

don't always need to listen to the coach, listen to those who are next to you in the game” (P3).

Lack of Confidence. This was also identified as a function of lacking confidence: “It has happened a few times, I should have questioned a bit more. I don't really know why, sometimes I just felt that it wasn't worth doing it...Just not being confident to say something” (P8). Though some players began to report a change as they became more established first team players: “It is probably because I have got more experience now....I feel like I have played more games and at that level I feel confident enough to give an opinion.” (P3)

Authoritarian coaching. Regardless of stage through transition, authoritarian coaching prevented young players engaging in feedback conversations: “To be honest. It seems like it is [head coach's] way or the highway.” (P5). This was seen in contrast to players who reported high quality feedback interactions with coaches who actively promoting the need for two-way messaging and conversations: “[coach] always said that if you have anything, then tell me. He likes to think that it improves both ways. If I fire a bit back, then he likes that because it gives him something else to think about” (P8).

6.3.6 What was the source of the decision criteria?

Personal Preference. Notably, players reflected that the ability to discriminate and make effective decisions within feedback conversations was not seen to be a part of their development pathway: “over the years, you don't ever get told about how to think about stuff, you just take what you think” (P2). Some players also suggested that, despite not being willing to voice their disagreement with feedback, they would still act in accordance with their own views: “if I don't think it is right, then I won't say anything, I am only young but I will only do what I think is right” (P1).

'Common sense'. Several players reported possessing a level of 'common sense' to make decisions about the feedback that was offered: "I have got common sense to judge that myself anyway. I have been able to do that, I don't know how, it has just been there really" (P4).

Trial and error. Some saw their decisions as being generated as a function of experience, mixing and matching then rejecting those pieces of feedback that are seen to not work: "I think all feedback...will help you in some way, but the ones that you take on board are the things that work for you....It is an individual thing isn't it?" (P1).

6.4 Discussion

The aims of the study were to build on the findings of previous chapters and firstly, to investigate the number of feedback sources that players had experienced prior to and during their senior transition. Secondly, I aimed to monitor the coherence or contrast of feedback messages and finally to understand each player's sensemaking of the feedback that they were offered and the criteria they used to make decisions about the feedback that they were offered.

In relation to the number of feedback providers, results serve to support the findings of Chapter 4 and previous research suggesting that the TD milieu can be characterised as complex, with multiple stakeholders impacting on the development of an athlete both within and across settings (Bjørndal & Ronglan, 2018). The specific transition experienced by these players involved a large number of stakeholders who held a position to offer feedback. Notably, as players progressed through the pathway, each successful navigation of a transition led to an increased number of people positioning themselves to offer feedback. Thus, at each stage of the pathway there was an increased risk of incoherent feedback for the player. In addition, there was a risk of feedback becoming a 'crutch' given the increasing volume on offer (Salmoni, Schmidt, & Walter, 1984).

In monitoring the coherence and contrast of the feedback offers made, players were confronted with feedback that was either incoherent or even, in some cases, directly contradictory at every stage of the talent development journey. This took place even where academies took steps to minimise the number of feedback offers. These data highlight the confusion caused for players where a disconnect between various stakeholders existed (Pankhurst et al., 2013). Given the difficulty in transitioning to the senior level of performance (Bruner et al., 2008) this would appear to be an additional challenge that developing performers need to navigate. Reflecting this context, the decision-making complexity of the system that these athletes were operating within could be seen as analogous to that of the coach (cf. Abraham & Collins, 2011; Cushion et al., 2006).

In relation to the third aim, it is clear that players were keenly aware of a ‘pecking order’, which they used to make sense of the feedback they were offered. Players described a consciousness of the status of who was offering the feedback and how it might affect the perceived validity of the message. In addition, players clearly valued feedback that came from a well-established coach-athlete dyad (cf. Jowett, 2017). Players also made decisions based on the emotional state of the person offering feedback and a consideration of the balance of the content of the feedback. Of note, very few players considered the competence of the provider in making a decision about the validity of feedback. Findings of the study presented in this chapter certainly support the concept of feedback being more than a uni-directional process from provider to performer; instead being seen as bi-directional process with *what* is said, *how* it is said and *where* it is said interacts with the performer’s individual disposition (Molloy et al., 2019).

Yet, in addition to the ‘*hearing*’ of feedback, players used a separate set of criteria to decide how to engage with the feedback and make decisions about what actions to take. These moderators included their perceived status as a young player, lacking the social capital

and confidence with which to engage with the feedback provider. Or, simply a rejection of any feedback that was different to what they had historically received. Other moderators included the impression management of various people: a decision to show engagement and action with feedback to support their future career, even though they may not truly believe in it. Players were highly cognisant of the coach in their future career progression and all saw the importance of impression management (cf. Røynesdal et al., 2018). Furthermore, players reported the rejection of feedback that appeared to differ from other input they had historically received or where coaches were perceived to hold a short-term winning focus, rather than their long-term development (Larsen, Alfermann, Henriksen, & Christensen, 2013; Martindale et al., 2007).

It is also important to note the degree to which some of these factors were consciously mediated. In many cases, players were unaware of the sources of their feedback decision criteria, typically relying on reporting them as ‘common sense’ or ‘doing what feels right’ and were unable to articulate why a given source might be more valid beyond the simple heuristic.

Given the factors identified in this and preceding chapters, Chapter 7 offers suggestions for the talent pathway looking to generate an optimal experience for developing performers.

Chapter 7 - The Highs and the Lows: Exploring the Nature of Optimally Impactful Development Experiences on the Talent Pathway

7.1 Introduction

Studies presented in previous chapters have investigated the barriers to effective TD practice and the potential opportunities. From the coach's perspective, Chapter 3 showed the individual factors that prevented those with high potential 'making it' and Chapter 4 examined the factors that prevented effective coaching practice within the TDE.

Subsequently, from the athlete's perspective, Chapter 5 examined the individual experience of transition to the senior elite level and Chapter 6 focused on the nature of the experience of feedback longitudinally. In Chapter 7, I seek to locate the findings presented in this thesis within the extant body of research and consider implications for optimal athlete experience. The findings of Chapters 3-6 would suggest that the experiences of performers throughout a pathway may not always be positive and, furthermore, that negative experiences may offer significant opportunity for learning. Yet, a number of barriers have been identified.

Specifically, if the performer lacks the appropriate psychological skills (Chapter 3); if the talent system lacks coherence (Chapter 4); if the performer lacks preparation for challenge (Chapter 5); or if the performer is subject to incoherent feedback (Chapter 6). Of course, these ideas inevitably reflect on the *modus operandi* of the TDE. Therefore, they carry implications for where pathways may best place their emphasis, ensuring a grounded and well-balanced approach. If appropriately operationalised, such balanced approaches should serve to support the experiences of developing performers along a challenge-full pathway.

As such, this chapter will critically consider the nature of optimally developmental experiences, making recommendations for talent systems seeking to both deploy challenge and maximise growth from these events. In the first section, I outline psychological perspectives, utilising extant literature in the fields of emotion, stress, and post-traumatic

growth. In the second section I offer educational perspectives and their implications for applied practice. I argue that experiences which generate peaks in emotional *intensity* are those that are most engaging and energising, prompting performers to engage in significant reflection and offer potential for development. Furthermore, albeit counter-intuitively, that negative experiences *properly prepared for, handled and debriefed* (the lows) may offer greater developmental drive and opportunity than positive and enjoyable ones (the highs).

7.2 Perspectives on optimal developmental experience

7.2.1 Psychological perspectives

Emotion

Reason is, and ought only to be the slave of the passions, and can never pretend to any other office than to serve and obey them

(Hume, 1969, BII, PIII, SIII)

David Hume's famous proposition offers a perspective on the role played by emotion in stimulating cognition. In simple terms, Hume saw emotion acting as a catalyst for motivation and reasoning. Similarly, contemporary literature suggests that emotional influences on cognition have both strong theoretical and empirical support (Schwarz & Clore, 1996; Wyer, Clore, & Isbell, 1999). Emotion can therefore be seen as exerting a strong influence on an individual's cognition and self-schemata, thereby having a significant impact on motivation and effort (Clore & Huntsinger, 2007). In this regard, the feedback loop theory of emotion suggests that conscious emotional experiences drive cognitive processing after an outcome or a behaviour (Baumeister, Vohs, DeWall, & Zhang, 2007). Accordingly, affective states can be seen as facilitative of learning by acting as a stimulus for cognitive processing and reflection. Further, it is clear that emotions motivate people to act and that different emotions prompt people to act in different ways (Carver, Sutton, & Scheier, 2000).

Importantly, however, there is a need to consider both the quantity *and* the nature of these emotional stimuli. From a valence perspective, negative emotions may promote more detail-orientated processing in a careful systematic manner, whereas positive emotions may focus attention more on generalities (Gasper & Clore, 2002; Schwarz & Clore, 1996). This, in turn, would suggest that there are important *but differential* benefits following positive and negative emotional experiences. Indeed, in the case of negative emotion, the effects may be stronger and longer lasting, providing feedback about one's actions and prompting reflection to help learning and guide future behaviour (Baumeister et al., 2001). In short, different emotional states promote different motivational states and types of reflection (Levine & Pizarro, 2004), resulting in different lines of development.

In addition to the valence of the experience, heightened emotional intensity has also been associated with significant increases in thinking about the activity that one is engaged in (Wood, Quinn, & Kashy, 2002). Emotionally arousing experiences are also more likely to be remembered and for these memories to play an adaptive role in responses to future situations (Cahill & McGaugh, 1998). Experiences are also perceived to be more likely to be remembered meaningful as a result of extremity of emotional valence: emotionally intense experiences induce more contemplation. Furthermore, negative events may lead to a greater search for understanding and, subsequently, be perceived to be more meaningful (Murphy & Bastian, 2019). We may therefore see emotion acting as a highlighter pen, focusing people on incoming information and reflecting on it in a solution-focused manner, thus making information more impactful (Levine & Pizarro, 2004). Thus, it has been suggested that a key role of emotion is to focus attention on critical pieces of information and instigate cognitive processing, and the key role of the conscious emotional system takes place following increases in arousal levels (Baumeister et al., 2007). Emotional feedback may also play a vital role in helping learners decide when and how to transfer what they have learned from

one situation to another (Immordino-Yang & Damasio, 2007). As a result, those experiences that offer the greatest opportunity to engage developing performers in reflective processes and energise towards making meaning are those with strong emotional valence.

Stress. Given that stress and emotion could be viewed as exhibiting a somewhat reciprocal relationship, rather than existing orthogonally, there is a notable stress-related ‘cost’ to be paid for highly emotional experiences (Lazarus, 1999) which means that the volume and intensity of strong emotional valence experiences must be monitored and controlled. This is consistent with the theory of Allostasis outlined in Chapter 2 which has added to our conceptual understanding of the impact of stress and individual differences in response to stressors. Allostasis proposes that an ongoing evaluation of the match between internal resources and demands allows for adjustments made in anticipation of stressors over time, with the emotional regions of the brain serving as the primary mediators of an individual’s response (Ganzel et al., 2010). As stated in Chapter 2, the critical implication of this body of work is that the impact of external stressors cannot be seen as a uniform process.

Valence and impact of stress. In line with the overview of literature in Chapter 2 and the findings presented in Chapter 5, where players reported negative experiences as being more impactful and provoking longer term reflection, it seems to be accepted that negative experiences can play a longer-term positive role in development. These negative experiences, such as the significantly negative sport related identified in Collins et al. (2016b) have often been interpreted through the theoretical lens of Post-Traumatic Growth (PTG) (Howells, Sarkar, & Fletcher, 2017; Tedeschi & Calhoun, 2004). PTG can be positioned as ‘growth from the struggle with crisis’ (Calhoun & Tedeschi, 2006, p. ix). It may also be considered as the process that follows a ‘seismic event’ which, in turn, induces significant cognitive disruption, challenging a person’s narratives, beliefs, goals and creating significant negative emotions (Calhoun & Tedeschi, 2006). It is this disruption that can be seen as the key

influence on an individual; the change is due to experiencing something as ‘traumatic’ rather than the severity of the cause itself (Savage et al., 2017). Further, growth has been linked to the period of inquiry in which someone seeks to make sense of an event; it is this sense making that growth can emerge from (Park & Helgeson, 2006). Thus, when working with the young people who tend to populate talent pathways, and who also tend to be highly motivated and committed to their sport (at least the ones that make it – cf. Chapter 3), significant cognitive disruption can take place as a result of what might externally be perceived as a relatively minor occurrence. My point here is that both the impact of the incident and how it is being processed need to be monitored and guided to ensure benefit.

In summary, a wide body of literature from the psychological domain appears to be converging on several key points: emotional experiences drive a cognitive response invoking greater frequency and depth of reflection. Furthermore, differences in the valence of emotion appear to provoke different types of cognition. Of course, these disturbances come at a cost and the young athlete that is unable to cope, or subject to an emotional load for an extended period, can suffer maladaptive consequences. Contrastingly, however, those who are able to cope are likely to benefit in terms of learning and development. These factors support the emphasis stated earlier on preparation for, monitoring through and debrief after traumatic incidents to optimise growth and avoid detriment.

7.2.2 Educational Perspectives

To further conceptualise the design of an optimally engaging and energising experience, I now consider the positioning of emotional disruption in the adult education literature. It was John Dewey who used the analogy of the need to climb a tree when faced with a forked road, or rather an ambiguous dilemma that required reflection (Dewey, 1997). “The origin of thinking is some perplexity, confusion or doubt” (Dewey, 1997, p. 12) or, in other words, it is the experience of difficulty that can catalyse learning and growth.

Inspired by the work of Dewey, John Mezirow's theory of Transformative Learning proposes that a transformative learning experience that changes a person's perspective, will typically begin with a 'disorienting dilemma' leading to a significantly heightened affective state (Mezirow, 1978). Mezirow further states that "The traumatic severity is clearly a factor in establishing the probability of ...perspective transformation" (Mezirow, 1981, p. 7). These disorienting dilemmas can be generated as a result of a sudden incident, or that occur as a result of a series of events leading to critical reflection or transformation. Of importance, 'disorienting dilemmas' are seen as the *beginning* of a process of reflection; it is not the dilemma alone that will lead to adaptive benefit (Mezirow, 1978). Further, these 'dilemmas' have also been identified as having the potential to produce varied and, at times, adverse effects on learners, potentially impacting on long term motivation. As a result, there is an absolute need to understand the characteristics of individuals prior to the experience (Roberts, 2006). In order to achieve an adaptive response, the learner requires expert support, both individually and institutionally (Taylor, 2007). Notably, support should not come in the form of comforting but rather, provide 'good company' as a means of supporting learning for students at the 'edge' (Berger, 2004). In this conceptualisation, learning from an event is a result of the reflective process provoked by emotional upheaval, rather than the emotion itself (Mälkki, 2012). Key issues here are that it is not just the provision of challenging events alone but rather, the preparation for/debrief of (Collins et al., 2016a) and timing/monitoring of impact which ensure optimum positive outcomes.

In addition to the ideas of Mezirow and Dewey, there is a wide body of literature suggesting the benefit of emotional disruption in order to provoke reflection including: Festinger's theory of cognitive dissonance (1957), Schön's proposed need for 'confusion'(1983), or Engeström's 'contradictions' as the source of change and development (2001).

Yet, as with any educational endeavour, along with a consideration of what works, there is a need to consider the potential side effects of any intervention (Zhao, 2017). The practitioner therefore needs to hold a consideration of benefit and possible cost at the heart of any decision making about an intervention that may cause an emotional disruption to a performer. For example, and as shown by Chapters 5 and 6 an athlete who experiences a very stable and accelerated path to a high level of academy performance, might have benefited in the short term from the positive feedback that is both implicit (through selection and social standing) and explicit (through performance review and coach feedback). Yet it is sometimes the case that, consequently, s/he hasn't necessarily developed the full range of skills required to overcome challenge and cope with negative emotional states when they inevitably occur.

Alternatively and consistent with the findings of Chapter 5, an athlete who experiences too great a level of challenge with repeated performance setbacks, negative feedback and resultant negative emotional state is unlikely to benefit and it may have a significant impact on their motivational resources, unless they are already in possession of very strong mental skills and a reliable support network outside the central challenge.

As with the section on psychological perspectives, there appear to be a broad range of sources with significantly different approaches, appearing to converge on a similar point, adding to the evidence that there is a need for emotional *disturbance* to test previous learning and provoke future development. Further, it appears critical that these events are both prepared for and supported in a coherent manner. Thus, if an optimally developmental set of experiences are desirable (both sport related and more broadly educational) for young performers, there is a need to provoke a range of emotional reactions to engage and offer varied points of reflection from which to maximise learning. In short, experiences that leave a person feeling good all the time are unlikely to engage and energise a performer across the range of cognitions that supports optimal future learning and growth. Yet critically, neither

does a consistently negative affect. In short, ‘it depends’! and in order to manage this process, it requires coordinating planning beyond the here and now. Thus, the clear need for a developmental journey offering a range of emotional experiences to support trajectory, will require an elevation of thinking above the micro level and see the broader need to cater for the balance of today and the future. The ability to do this is often significantly challenging given the milieu that many athletes will find themselves a part of; one often characterised by relative incoherence across various levels of the sport and goal conflict between different stakeholders engaged with supporting the athlete (Bjørndal & Ronglan, 2018). Poorly planned developmental experiences across different stages can be confused and lack the essential focus on the future. Reflecting the need to ensure coherence, and, when considering the range of desired experiences for athletes, these are in essence curriculum decisions. Notably, this has already been considered from an educational perspective. In a 2013 paper, Dylan Wiliam offered a list of seven principles of curriculum design that offer guidance about how educational experiences might meaningfully be organised (Wiliam, 2013):

- Balanced
- Rigorous
- Coherent
- Vertically Integrated
- Appropriate
- Focused
- Relevant

These principles might be operationalised across two dimensions to help understand the needs of both today and the future, promoting optimally developmental experiences, and

managing emotional load. Accordingly, in the next section I discuss how the principles could be deployed in the talent development setting.

7.3 Applying both perspectives – designing an effective system

7.3.1 Catering for today - horizontal coherence

In applying these perspectives, I make use of the existing literature outlined in Chapter 2 that emphasises the importance of coherence throughout a pathway (cf. Grecic, MacNamara, & Collins, 2013; Henriksen & Stambulova, 2017; Webb et al., 2016). If the talent system is to effectively cater for today, there is a need to consider how the experiences of athletes combine and overlap, then cumulatively build as they progress. This requires the experiences of an athlete to mutually and progressively reinforce a limited set of clear guidelines, offering coherent connection between them and a clear thread which builds over time to form a heuristic for handling challenge. The principle of focus, deciding on the most important factors within a block of time against what is ‘ignored’; in short, the key procedural lessons. The obverse of the principle of focus is the principle of balance, offering performers the opportunity to develop across a range of areas. Focus and balance should be considered in tandem, however; a range of experiences cannot be both maximally focused and maximally balanced. If a talent system is to mitigate the challenges demonstrated in Chapter 6, it is critical that the different areas of the athlete’s curriculum are coherent and reinforce one another. Finally, for a curriculum to be horizontally coherent, it needs to be relevant to those experiencing it and should connect valued outcomes for the athletes at that stage of the pathway, ideally across the different environments within which the athlete lives.

For example, an academy coach may spend significant time attempting to help an athlete understand the relevance of a technical factor in their performance that is deemed to be a key element of focus for this stage of the pathway. From a negative perspective, another coach may mitigate this work by asking an athlete to work on a broader range of performance

factors because, despite being supportive of the athlete's long-term ambitions, they are unaware of, or not in agreement with, the athlete's perceived needs. In an ideal world, however, different coaches, even at different levels (eg. club and select team age group) will communicate and combine their approaches, both epistemologically and content-wise, to optimise the impact of the greater coherence. Finally, and also as a further promoter of coherence, techniques may be taught, deployed, evaluated and tweaked across a number of settings. Using the example of an academy player, these might include the sport, education, social and lifestyle...the latter particularly when the athlete is resident in an 'away from home' setting.

7.3.2 Catering for tomorrow - vertical integration

Reflecting the same dimensions, an optimal blend of athlete experiences will also be vertically integrated in order to cater for the future needs of an athlete. This integration is bi-directional; so, rather than just being aligned towards the future, it will also take account of prior learning and development; the idea of a forwards and backwards audit. Integration can be understood through two principles, the first being the concept of rigor, or the extent to which what is being experienced now is supportive of long-term future learning. It will shape the development of 'disciplinary habits of mind' that enable sustained engagement with their sport: literally, building, testing and tweaking skills for future deployment (cf. the ideas of metacognition and 'in advance' skill development expressed in a video games approach Price, Collins, Stoszowski, & Pill, 2018). Coaching will also be delivered in an epistemically broad manner, recognising the need for a long-term focus (Claxton, 2014) and offer performers substantial experience in making evaluative judgements about the information they receive (Carless & Boud, 2018) by 'confronting' them with a variety of challenges to be addressed in a variety of ways. Of course, vertically integrated experiences will also be age and stage appropriate and will cater for the developmental needs of an athlete

at a given age/stage of their journey. They will, however, always keep the longer-term needs of the athlete in mind, with these macro needs often taking precedence over the here and now (cf. the nested approach to planning – Abraham & Collins, 2011)

As an example, a coach could spend significant time in case conference meetings to ensure alignment across an age deployed staffing group to offer an athlete some robust feedback to stimulate more detailed reflection about an element of performance necessary for their future development. Yet, as demonstrated in Chapter 4, vertical integration could break down if injuries in the senior squad see the athlete promoted to play up, mitigating the value of the feedback that they received and placing them in an environment that they are neither physically nor mentally ready for. Such ‘real life’ incidents present a challenge for the coach and the talent pathway in attempting to ‘orchestrate’ a process that is both complex and multifaceted within one environment but also which across a development pathway requires significant ‘string pulling’ to facilitate desired objectives (Jones & Wallace, 2006; Jones, Bailey, & Thompson, 2013). This challenge is exacerbated when parents start to see ‘playing up’ for an older age group as a sign of status and progress, leading them to encourage and even demand a situation which can often serve to derail their child’s progress.

Seeking the balance of catering for both today and the future is a critical function of development coaching in seeking to generate optimally developmental experiences for performers. In this sense, an athlete’s curriculum may best be conceptualised as a SMM to shape and understand their developmental experiences. In short, the design and deployment of TD systems must be carefully integrated to optimise the coherence against the variability and variance of challenge (cf. Webb et al., 2016).

7.4 Implications for athlete experience

This section makes recommendations as to how these challenges might be meaningfully approached and offer suggestions as to what coaches and sports psychologists might do. In

pursuing this aim, I again offer different theoretical perspectives and evidence-based processes which might be incorporated.

7.4.1 Professional judgment and decision making

Professional practice can be seen as a series of decisions that assess which issues require attention, prioritising and setting goals then designing appropriate courses of action. As with other support specialist interventions (eg. sport psychology) intention for impact can be seen as the first and primary step in designing effective plans that will see the practitioner formulate their intended outcomes prior to the event, then refine them as things develop (Martindale & Collins, 2005). As such, the practitioner's selection and design of the intervention, then the effective application of it, are critical features of effective Professional Judgement and Decision Making (PJDM). This 'knowledge in action' (Schön, 1987) can underpin subsequent judgments, decisions and actions. Further, PJDM enables a practitioner to design, deploy and refine an optimal blend of strategies dependent on the environmental and interpersonal challenges that they face (Collins & Collins, 2015). PJDM in this regard will influence both individual actions and the design of the sociocultural context.

In order that horizontal coherence and vertical integration are effectively operationalised, there is a requirement for potentially large groups of coaches, specialist practitioners, parents and other stakeholders to make decisions and take actions that support both the now and the future. Abraham and Collins (2011) extended the sport psychology concept of 'Nested Thinking' to operationalise the need for integrated elements of both Classical Decision Making involving slow, offline thinking with effective use of premortems and if-then planning with a more dynamic and the more immediate Naturalistic DM style (NDM cf. Klein, 2008). Offline thinking should seek to develop an SMM of an athlete's curriculum amongst the staff group and other stakeholders. Actions taken to generate this shared understanding are critical and no assumptions should be made that stakeholder groups

are coherent in their views or beliefs without careful checks (Pankhurst et al., 2013). In turn, this approach supports the more flexible NDM that all members of this group will face when making decisions about appropriate interactions with the athlete during peak affective states.

7.4.2 Experience of functional variability

When deployed effectively, the result of this process should support the decisions of a multitude of stakeholders, mitigating the risk of incoherence yet allowing for an appropriate level of difference. This builds on the work of Webb et al. (2016) who proposed the concept of the ‘goldilocks’ approach in which, optimally, performers would engage with different coaches, offering different but still comparatively coherent experiences. This functional variability of coaching, when kept within a certain bandwidth, has the potential to support athletes develop the adaptability to prosper in the future (see also Bjørndal, Andersen, & Ronglan, 2018). Webb and colleagues further proposed that an appropriate level of coherence and integration (both vertical and horizontal) would be supported by the use of SMMs across staffing and stakeholder groups in talent pathways. I seek to extend the point and consider how the emotional experience of performers might be framed. As a result, this functional variability of experience and resulting internal emotional state should form a critical role in the development of talent. This would see periods of time when athletes were subject to increased levels of challenge, followed by periods of lower emotional load in order to recover and consolidate learning.

The question of balance between coherence and level of difference between stakeholders (coaches, parents, staff, support staff) is critical. It is both undesirable and unrealistic to expect this group to hold *exactly* the same perspective and be completely aware of the athlete’s every need, even when extremely autocratic leadership styles are employed. Yet, given the inevitable differences within any such group, overly influential trusted advisors (for example a single high-status mentor - often a current or recently retired elite

performer) can be maladaptive, especially as the quality of social support can be seen as vital in adapting to stressors (Peterson, Maier, & Seligman, 1993). It can also have an adverse impact on the athlete's ability to learn from challenge, especially as external perceptions of challenge or failure as being debilitating may act to prevent optimal consolidation (Haimovitz & Dweck, 2016). The 'face valid' status of the mentor can also lead to an over dependence on their advice, making the developing athlete lazy in his/her reflection (cf. KR Crutch; Salmoni et al., 1984). Put simply, the wrong conversation at the wrong time, even if the advice therein is well intentioned and accurate, can have a significantly negative effect on the long-term trajectory of a performer (Calhoun & Tedeschi, 2006).

Similarly, a TDE should also seek to work with the peer group of an athlete. Depending on the age of the athlete, they may be more likely to utilise social support from peer groups than the family unit or staff (Van Yperen, 2009). Given the context of many young performers, their teammates may be best placed to assist with this element of social support. If group dynamics are appropriate, there may even be benefit to reflection as part of a group (Richards, Mascarenhas, & Collins, 2009). This process would allow athletes to learn from shared experience, the experience of others and initiate intra group social support.

The use of SMMs to support coherence and integration seems increasingly important given the expanding numbers of people engaging with athletes within a pathway; especially when pathway and athlete are successful. As a further complexity, in many sports the athlete will find themselves a part of a number of different environments, working with a number of different coaches, athletes, staff, teachers and, perhaps, agents. In this sense, it is important for the talent pathway to not only consider the direct training environment of the athlete within the sport, but also the other environments that they find themselves engaged with; in short, the *totality* of the performer's experience. Working across these various environments and with various stakeholders, the athlete is presented with a wide variety of inputs that could

significantly challenge the prospect of getting to a ‘goldilocks’ type level of functional variability in experience. Future research should also seek to understand the nature of the social support around a performer and what advice they are receiving from various stakeholders if we are to more effectively manage highly emotional experience throughout a talent pathway.

The point here is that there are significant benefits to the management of the emotional valence of the developing performer, but a lack of coherence within and/or between sources has the potential to offset the long-term benefit and lead to stagnation or confusion. Alternatively, if the emotional experience of the athlete is always positive, it may leave them vulnerable when things *do* become tough (cf. Collins et al., 2016b) as they inevitably will, such as the experiences of participants in Chapter 5. This is especially important given the evidence presented in Chapter 3 of those with high potential falling away, in a similar manner to those born early in the selection year (Connor et al., 2019; McCarthy & Collins, 2014; McCarthy et al., 2016).

Notably, this approach sits in contrast to those coaching relationships and environments that have been identified in the literature as being abusive. Emotional abuse has a number of definitions in the broader literature, including “the sustained, repetitive, inappropriate emotional response to the child’s experience of emotion and its accompanying expressive behaviour” (O’Hagan, 1995, p. 456). In the sporting domain, this has been defined as:

A pattern of deliberate non-contact behaviours by a person within a critical relationship role that has the potential to be harmful. Acts of emotional abuse include physical behaviours, verbal behaviours, and acts of denying attention and support. These acts have the potential to be spurning, terrorizing, isolating, exploiting/corrupting, or deny emotional responsiveness, and may be harmful to an

individual's affective, behavioural, cognitive or physical well-being (Stirling & Kerr, 2008, p. 178).

The emphasis in this definition is the repeated nature of abusive behaviour and its potential for harm (Kerr & Stirling, 2017). The reported behaviours of coaches engaged in emotionally abusive relationships with athletes has included the denial of attention, name-calling, criticising, repeated screaming, belittling, threatening and the throwing of equipment (Wilinsky & McCabe, 2020). Outside of clearly abusive behaviours such as publicly humiliating athletes based on their appearance, this list illustrates the 'grey' spectrum of coaching behaviours that need to be understood based on context (Gervis, Rhind, & Luzar, 2016). For example, one person's criticism is another's negatively toned feedback offer and the denial of attention might be a coach's attempt to enable more autonomy for a highly dependent athlete. Thus, context appears critical in delineating perfectly appropriate coaching practice from emotionally abusive behaviour.

In addition, there appears an inherent tension in the abuse literature, given the identified need for "sufficient opportunities be provided for athletes to experience disappointments and failures within an environment of support" (Kerr & Stirling, 2017, p. 415) and "a balance of overload and challenge experiences within an environment of support be provided" (p. 416). Indeed, a variety of coaching behaviours have been identified as impacting on healthy youth development. For example amongst a group of 'elite' (though perhaps not meeting the threshold definition of Swann, Moran, and Piggott (2015)) 11-13 year old hockey players, the use of 'benching' and alternating positions was identified as being punitive and inhibiting health psycho-social development (Battaglia, Kerr, & Stirling, 2017).

Many of these descriptions appear somewhat draconian. I suggest that the 'goldilocks' approach offers an alternative, where the experience of the developing performer

is varied at an appropriate level in line with their needs. There is therefore a critical, yet underestimated role for talent pathways in generating curriculum SMMs amongst stakeholders and staff groups.

7.4.3 Promoting coherence – A potential curriculum

Psychological Characteristics of Developing Excellence (PCDEs) have been associated with both supporting progress and successful outcomes in talent development (MacNamara et al., 2010a). Additionally, it appears that this constellation of skills helps to support an individual's response to critical episodes on the pathway (Savage et al., 2017). The development of PCDEs should therefore form a critical aspect of an athlete's curriculum. As shown in Chapter 2 and congruent with the skills-based approach adopted by this thesis, PCDEs have been proposed to be optimally developed through a learning cycle of 'teach, test, tweak, repeat' (Collins et al., 2016a). That is, psychological skills taught through a variety of means, tested through realistic and appropriate challenge (inducing emotional disruption) and then tweaked through meaningful debrief. If optimally deployed as part of an appropriately balanced curriculum (cf. Wiliam, 2013), this focus on the development of PCDEs and associated shaping of a broader SMM should serve as a suitable means to keep stakeholders focused on long term, macro goals and maximise the utility of changes in emotional state.

7.4.4 Individualised programming

If TDEs are to offer the type of individualised development opportunities identified as critical in Chapter 2, consideration must be given to the potential benefits of an athlete's experience of a range of emotions as they progress. As one example, this is in line with the work of Collins, Willmott, and Collins (2018), who highlighted benefits from the deliberate planning of variations in emotional load to support the skill development of action sports athletes; a feature which they termed emotional periodisation. Engaging and energising experiences

should be seen in the same way as high risk and high failure activities, which need to be prepared for through development of pertinent skills, then followed up by restful consolidation blocks to embed learned skills before repeating the cycle. Importantly, the foundations of the Collins et al. approach were the high levels of trust between coach and athlete, support from the coach on load management and the taking account of individual differences. These individual differences are the result of the characteristics that are brought to an experience coupled with the psycho-emotional backdrop that they are layered against. As a result, there is a need to understand individual differences in both the intensity of response to experience, but also the extent to which they are likely to experience either positive or negative emotion (Carver et al., 2000).

This can be seen in a similar manner to a coach's need to understand previous training history and current training load before prescribing physical training to prevent an injury (cf. Gabbett, 2016). Coaches need to be just as aware of a performer's previous mental states in order to prevent a maladaptive psychological response. This would see a consideration of the current characteristics of each performer, especially as it has been suggested that excellence in coping precedes excellence in performance (Poczwadowski & Conroy, 2002). This may go some way to tackling the issue of young performers arriving in talent pathways less well equipped to cope than they previously might have been (Haidt & Lukianoff, 2018; Wade, Pope, & Simonson, 2014), due perhaps to the 'excessive care' provided by well-meaning parents and others (cf. Castro, Halberstadt, & Garrett-Peters, 2018).

7.4.5 Primed preparation

The priming stage can be seen as deliberate preparation for challenge, which should be embedded across talent development practice. Pathways should be modelled to ensure appropriate skill development to ensure that when an individual is confronted by an experience that causes significant emotional upheaval, they will already be equipped with the

resources to cope and rebound from the drop in performance and perceived performance potential (Aspinwall & Taylor, 1997; Savage et al., 2017). It is worth emphasising the need for this practice to be embedded throughout pathways, however, especially given that not all highly affective experiences can be deployed deliberately. On the individual level, a formative assessment tool such as the PCDEQ2 (A. Hill et al., 2018) may help to understand the needs of an individual performer and understand their readiness to engage with a significant affective experience.

In addition, there is a need to consider the experience of the athlete both horizontally and vertically to understand their broader needs. This should inform the extent to which the athlete needs to be made aware of an upcoming challenge and the potential priming of the wider group that support the athlete. This needs analysis runs parallel to the concept of athlete centred coaching which suggests that coaches need to focus on the needs of the athlete, rather than the needs of the coach (Kidman, 2010). The decision to take advantage of or induce high levels of emotion is rarely a comfortable one for athlete or parent and, as such, may challenge the extent to which a coach is truly athlete centred (or perceived as such), especially given the propensity for the challenging conversations and the careful management that may be necessary. Maybe yet another example of being cruel to be kind!

7.4.6 Well-structured Follow up

As a follow up, it is critical that the emotional upheaval of the athlete is fully exploited to support future learning and development. As stated in Chapter 5, players reported significant learning as a result of the reflection following engaging and energising experiences.

Importantly, however, without follow up, what is learned may or may not be adaptive for the athlete in the long term. Consequently, there are careful decisions to be made about the extent of and nature of support offered to the athlete, especially given the number of potential ‘supporters’ such as those identified in Chapter 6. This should be informed by the work

undertaken to build SMMs through slow off-line thinking and, given the complexity of this process, we would suggest that this intention for impact should serve as a core feature in guiding these decisions and understanding the effectiveness of an intervention (Martindale & Collins, 2007). The decision that “talent needs trauma” is not an open licence for unthinking and unplanned pressure (cf. Collins et al., 2016a). Rather, it is the careful priming, timing and follow through on the incident (both planned and natural) which reaps the benefits.

Optimally therefore, athletes would engage with the preceding experience, reflecting upon it and deploying appropriate psycho-social resources to support adaptive learning (Hill et al., 2015; McEwen & Gianaros, 2010; Sarkar & Fletcher, 2016). Given that estimates of learning from emotional experience are subject to distortion and inflation on the basis of the size of the emotional reaction (Baumeister, Alquist, & Vohs, 2015), it is therefore recommended that the role of the coach is to be aware of and act upon subtle changes in the performer through careful observation. As a consequence, s/he will be equipped to actively steer reflection as necessary, either pushing or in other cases pulling back depending on the individual (Bjørndal & Ronglan, 2018; Collins et al., 2018). The acting upon and noticing of subtle changes will be supported by the nature of the coach-athlete relationship (Jowett, 2017). As further evidenced by the feedback moderators reported in Chapter 6, if the athlete has a strong relationship with the coach, and there is a level of closeness, co-orientation, complementarity and commitment, it is more likely that the coach will receive honest feedback from the athlete and the athlete will trust the coaches guidance potentially enabling more adaptive outcomes (Jowett, 2008).

As the final stage in this Teach-Test-Tweak cycle (Collins et al., 2016a), the experience should be followed by a period of recovery, allowing for consolidation, the build-up of psycho-social resources and prevention of the negative consequences of sustained emotional load. The process has the potential to be especially impactful if coupled with the

development of skills such as role clarity and critical thinking to support future adaptability and coping. As such, if appropriately primed and followed up, the emotional experiences of performers can be utilised to test previously developed skill sets and act as catalysts for future development.

As an example, if a young athlete makes a significant error, leading to an unexpected underperformance, it is likely to illicit significant negative affect. Of course, this will (or undoubtedly should) lead to careful reflection on the athlete's state of development and whether remediation/a change of plan is appropriate. From a psychobehavioural perspective, however, it also offers the coach with a range of decisions that should be informed by the SMM of the athlete's curriculum: i.e. to what extent do they have the skills to cope with and learn from the event? What are their needs in both the short and long term? If this was the athlete's first experience of this type of challenge, the subsequent reflection may lead to the athlete deciding not to put themselves in the same situation again or for the coach to rapidly reschedule the season's competition plan. Yet, what may be most adaptive for their long-term process is putting in place a technical and mental skill development plan to support the next time they are faced with a similar challenge. As such, rather than ignoring the incident, or overly comforting the athlete, the coach will need to take appropriate steps to utilise the detailed cognitions of the athlete, steering them in a direction to support their long term aims. Horizontal coherence will ensure that all involved are in line with the plan. Vertical integration will ensure that the next steps are planned and followed up to maximise benefit.

7.5 Summary

This chapter has critically considered the nature of genuinely developmental experiences for developing performers and argued for the significant benefits of functionally variable changes in affective state of an athlete and how it can be maximised to support long-term progress. I have sought to present a broad range of literature to highlight the range of

theoretical and empirical positions that appear to converge on a similar point, offering overwhelming evidence for the utility of negative emotion for optimal development. Consistent with the literature and the findings of the study presented in Chapter 5, experiences that offer emotional peaks in intensity are seen to be the most memorable and meaningful (Murphy & Bastian, 2019) and will elicit the highest levels of cognitive engagement in the form of reflection (Baumeister et al., 2007). Yet critically, these experiences must be both prepared for and exploited, whether naturally occurring or deliberately engineered. It is in this sense that the role of the support practitioner (whether coach, psychologist, teacher or parent) can be conceptualised as being more than just someone who continually offers an endless stream of positivity. In contrast, they must meaningfully and appropriately manage the emotional state of individual athletes through an appropriate mix of praise, check, challenge and drive.

It is clear from the body of work that negative emotions can serve as a stimulus for change and positive emotions can serve as encouragement and reinforce motivation. Ultimately, coaches need to be able to deploy both the high and the low to optimal effect, nested within a broader pathway context, in order to optimise experience now, but with the long term in mind. Whilst there are clear benefits of both positive and negative emotional states, it is also clear that there are risks to remaining in either state for too long. In parallel, however, there is a need to be mindful of the potential side effects, as with all pedagogical endeavours (Zhao, 2017). We therefore need to be aware of the overall psycho-emotional backdrop against which experiences happen.

Finally, given the often-competing goals of the various stakeholders that sit around an athlete at various levels of performance, there are significant barriers to the horizontal coherence and vertical integration of an athlete's experience. It is thus critical that time is

spent developing the SMMs of support groups to agree practice against the curricula of performers in order to support decision making during times of peak emotions.

Given that the present chapter has considered the nature of optimally developmental experience in the talent pathway, there are a number of key considerations that arise from this work and require further investigation. As such, Chapter 8 will seek to conclude the thesis and identify potential implications for talent development practice and future research.

Chapter 8 - Conclusions and Implications for Talent Systems

8.1 Addressing the research questions

There is widespread recognition that the development of talent is typically a non-linear and highly individual journey (Abbott et al., 2005; Vaeyens et al., 2009). This has led to growing interest in the role of challenge factors and their interaction with the trajectories of individual performers (Collins et al., 2016b; Sarkar et al., 2015). The specific aim of the thesis was:

To examine the risk factors in TD (the snakes) and understand what factors support the athlete to progress (the ladders).

In accordance with my role in elite sport and the desire to produce knowledge of practical utility (Giacobbi et al., 2005), the objectives were to:

- 1) Understand the causes of individual talent development failures
- 2) Identify the factors that prevent a TDE offering an optimal set of experiences to the developing athlete
- 3) Understand the nature of the transitional challenge experience for the TD athlete
- 4) Investigate what impacts the athlete to support them through challenge
- 5) Longitudinally track the transitioning athlete
- 6) Understand the experience of feedback in the TD pathway
- 7) Provide applied recommendations for the TD practitioner seeking to optimise the TD journey

Accordingly, this thesis was presented in two parts, the first sought to present evidence from the coach perspective (Chapters 3 and 4) and the second from the athlete perspective (Chapters 5 and 6). Importantly, Chapter 7 addressed the practical implications of evidence presented. Conclusions and recommendations are now presented in this chapter.

8.2 Summary of findings

The research findings presented in the thesis suggest that centrality of the athlete's perceptions are critical to the process of TD coaching. In essence, the TD risks (the snakes) appear to be driven by maladaptive perceptions of the individual athlete. Whereas, supportive factors (the ladders) were driven by the effective shaping of the athlete's experience. The purpose of study one (Chapter 3) was to understand the risk factors for high potential athletes and to investigate what led those with high potential to fail to realise their potential. Two cohorts of purposefully sampled rugby and football coaches were recruited based on their extensive experience coaching athletes fitting the sampling criteria. The main results suggest that performers without a well-developed set of psychological skills are at risk of failing to realise their potential and dropping out of TD pathways. Additionally, a number of failures of the TD system were identified as reasons why performers fell away.

Based on the findings of study one, the second study (Chapter 4) sought to understand coach perceptions of the factors involved in a less than optimal experience for the developing athlete. A number of focus groups were conducted with 29 academy and international coaching staff. The socio-political features of the wider organisation housing the TDE were identified as barriers to effective practice and increased the risk of inappropriate doses of challenge. Building on the findings of the first study, participants identified the need for the development of a specific psychological skill set and an appropriate dose of challenge prior to transition to the senior transition.

In the second part of the thesis, which focused on the athlete perspective, study three (Chapter 5) aimed to understand the nature of the transitional experience for the individual. Specifically, amongst a purposefully selected group of high potential performers, to establish perception of challenge prior to the senior transition, understand the emotional experience of challenge and what impacted performers to help them negotiate the transition. Findings suggest that, prior to the senior transition, athletes in the sample had experienced a relatively

challenge-less pathway, yet at the start of move to the senior level, they reported an increasing number and intensity of challenges causing significant emotional disturbance. In addition, athletes reported *benefitting* from emotionally laden feedback to navigate these challenges.

Given the reported importance of feedback in supporting the progress of performers, study 4 (Chapter 6) sought to build on the findings of study 3 to understand the experience of feedback in the pathway. Supporting the findings of study 2, participants reported an increasing number of feedback providers as they progressed through a TD system who impacted their trajectory as a result of incoherent feedback. Additionally, in a similar manner to study 3, it is clear that feedback cannot be seen as a one-way process from provider to performer. *What* was said, *how* it was said, *who* said it and *where* it was said had a significant effect on the extent to which it impacted on the athlete (cf. Ajjawi et al., 2019). Clearly, the *why* this was done is an implicit underpinning (cf. PJDM - Martindale & Collins, 2005).

Finally, as stated above, and in line with the pragmatic philosophy that underpinned this thesis and the desire to offer practical knowledge for the practitioner; the purpose of chapter 7 was to locate the findings within the extant literature and offer implications for athlete experience. Chapter 7 argues that the concept of taking advantage of emotional state is well supported in a wide body of existing literature from multiple domains. Emotional disturbance is a critical feature of human development and can be used as a developmental tool, but optimal experience is contingent on the need for the development of SMMs of the intended athlete experience amongst various stakeholders to prevent the blocks identified by Chapters 3-6.

8.3 Implications for research and practice

Given pragmatic underpinning of this thesis and the desire to provide practically meaningful research to the practitioner (Glasgow, 2013) the implications for both research and practice in the field of TD are presented below.

8.3.1 Nested curriculum thinking

The overall aim of this thesis was to understand the blocks to effective TD practice, such as those presented in chapters 3-6, consequently, it is hoped that TD systems will become more aware of the risk factors involved in TD. In doing so TD pathways need to be acutely conscious of how individual performers are interacting with challenge throughout the development pathway. There is also a need for greater focus on the full range of experiences a developing athlete is exposed to (Bjørndal & Ronglan, 2018). Therefore, rather than seeing the progress of an athlete as a series of sessions, it would be appropriate to consider the broader experiences of the performer integrated with long term goals (Abraham & Collins, 2011). As such, it is recommended that the TD system seeks to deliberately approach their curriculum design, offering vertical integration for the performer. This integration should seek to offer the athlete an experience that is both stage appropriate and also appropriately rigorous to develop them for the future (cf. Wiliam, 2013). In taking this approach, performers should be deliberately prepared for the ‘*snakes*’ to maximise the positive impact of negative affect. This may optimally be done through the development of a range of psychological skills (cf. Collins et al., 2016a).

8.3.2 Challenge and support.

In line with work in other fields of research (eg. Ajjawi et al., 2019) the findings presented in Chapters 5 and 6 suggest that the TD literature should seek to move beyond presenting the external actions of others (such as feedback provision) or the features of an environment as being categorised into high/low challenge/support (eg. Fletcher & Sarkar, 2016), especially

given the interaction with a complex psycho-emotional individual backdrop. It is clear that an individual's response to external input, is mediated by a range of complex internal and external factors and indeed participants in studies 3 and 4 reported the *supportive* nature of what might otherwise have been considered highly *challenging* feedback. It is therefore critical that future research and practice has a greater focus on the experience of the individual and not *only* on environmental factors, avoiding the suggestion of oversimplified dichotomous features such as being supportive or challenging.

8.3.3 Shaping the SMM

Given the blocks identified throughout this thesis, and as a key function for leaders of TD systems seeking to offer a coherent and integrated experience, significant time should be invested in shaping SMMs across the breadth of stakeholders that can impact on individual trajectories. This should optimally take place from both a top down *and* bottom up perspective. As an example, and given the impact of feedback to the performer identified in this thesis, a TD pathway seeking to optimise the feedback process may, from the bottom up equip the performer by deliberately teaching a range of PCDEs and in turn developing the 'feedback literacy' of developing performers (Carless & Boud, 2018; Collins et al., 2019). From the top down, the TDE deploys coaches and other practitioners to promote the reflection and the autonomy of performers, engaging them in their development process (Richards et al., 2009). Critically, there is a need to do this in a coordinated manner to manage the coherence of inputs and nesting feedback against future aims (Abraham & Collins, 2011; Webb et al., 2016). This recognition of future aims appears critical given the risks of a challenge-less experience that were identified in Chapter 3. Especially if an athlete's experience of the game at an earlier stage is one where they utilise a limited range of skills to overpower junior opponents without developing a broader range of characteristics. It may help them to progress in the short term, but it neglects the wider range of skills that they

will inevitably require in order to progress. As such, for all TDEs, it is critical that they take a long term view (Henriksen & Stambulova, 2017; Martindale et al., 2005) ensuring that what they offer is not just a simple strengths based approach, allowing athletes to deploy what they are already proficient at to dominate junior levels. This process should optimally seek to build coherence across and between the environments that a performer is a part of (club, international, senior) and integrated towards future needs rather than junior performance. Interventions of this type have been reported to be successful on a shorter-term basis (eg. Henriksen, 2018). To be clear, however, what is being suggested here is the ongoing development of skills *throughout* a pathway. Additionally, regardless of eventual end destination, the development of PCDEs (MacNamara et al., 2010a, 2010b) and exposure to progressively higher levels of challenge appear to be a critical factor in what people who do not ‘make it’ learn from the experience of a talent pathway (Williams & MacNamara, 2020).

As such, I would recommend that representative squads, academy pathways (or equivalents) and other stakeholders engage in a process of developing SMMs, helping to build an understanding of the type of experiences young players require. This would see the different stakeholders at different levels around an athlete understand each other’s roles in the development process and helping the performer to understand the needs of what comes next (cf. Stambulova et al., 2020). Taking this approach may mitigate some of the maladaptive impact of stakeholders such as those presented in Chapter 6. Regarding the benefits of the bottom up SMM, it is suggested that future research aims to expand concept of the ‘athlete centred approach’ (Kidman, 2010) by seeking to understand how developing performers can be equipped with the decision making skills necessary to not only *cope* with the challenges presented by the development pathway, but *maximise* learning and development. Data presented in chapter 6 suggests that the complexity of the decisions made by the athlete are analogous to those of the coach (cf. Abraham & Collins, 2011; Cushion et al., 2006). It may

be fruitful for future research and practice to consider ideas presented by Grecic and Collins (2013) in developing the EC of athletes, in addition to coaches through a TD pathway.

Additionally, research may seek to consider the differences between the ECs of more senior performers compared to development athletes.

8.3.4 Using emotional disturbance

In line with this approach and given the findings of this thesis, there appears to be a critical role played by emotion in focusing the attention of developing performers. It would appear prudent that the talent system seeking to make optimal impact should deliberately engender and use fluctuating emotional states to support the learning of athletes. These emotional states offer practitioners the opportunity to engage the performer with feedback during periods of emotional disturbance to maximise impact. These periods may also offer the opportunity for coaches to offer the type of feedback that might have previously been rejected by the performer. For example, rather than seeking to boost the confidence of a performer who has just had a poor performance, a practitioner may seek to take advantage of a poor performance by offering feedback on an element of their performance that had previously lacked appropriate attention. In short, and especially with driven athletes aspiring to high levels, we must not be in too much of a hurry to mitigate the negative affect. Notably, this utilisation must encompass all parts of the athlete's support network, most notably the parents (Pankhurst et al., 2013). In contrast, an athlete who might be characterised as being an average performer, but with underlying potential, may gain significant benefit from a positive emotional experience and the attendant boost in confidence and motivation. This approach sits in stark contrast to emotional abuse. Whilst perhaps lacking clarity in the definitions used in the sports literature, in the child development literature such behaviour is seen as a "sustained, repetitive, inappropriate emotional response to the child's experience of emotion and its accompanying expressive behaviour" (O'Hagan, 1995, p. 456). Indeed, and

often very much the opposite, coaches should be seeking to offer the most appropriate emotional response to the athlete's experience of emotion. As such, it is recommended that future research considers investigating emotional disturbance across multiple populations of developing athletes (and perhaps other performance domains) so that coaches can offer the most appropriate responses and meet athlete's needs.

8.4 Strengths

A key strength of the thesis is the quality of participants and, therefore, the ecological validity of the studies. All studies were conducted with populations of participants who were current performers and practitioners at the highest level of talent development in elite sport in the UK. In addition, the use of a pragmatic approach allowed for the use of multiple methods and the most appropriate data analysis methods for the questions posed. The relatively small sample sizes in studies 3 and 4 allowed for the deep examination of their experience over an extended period of time. Another key strength of both studies 3 and 4 was data collection being conducted at more than one time point; study 4 being conducted longitudinally to ensure a more ecologically valid examination of performer experience. The use of various qualitative methods such as IPA in study 3 also allowed for the deep interrogation of individual narratives (Smith et al., 2009), an important factor given the nature of the research questions. In all cases, time was spent building trust and rapport with participants to support the process and outcomes of interviews (Sparkes & Smith, 2009). Additionally, across the thesis, data was collected from more than one sport and context allowing for improved generalizability.

8.5 Limitations

An important limitation of the work presented in the thesis is the lack of female participants, which is a limitation in the wider body of TD literature (Curran, MacNamara, & Passmore, 2019). The reader should therefore exercise caution in generalising to other populations of

developing performers. In addition, the data presented in studies 1 and 2 were retrospective in nature and, as such, are potentially subject to memory decay and hindsight bias. Importantly however, participants in study 2 were all current practitioners in elite club or in the national academy pathway. As such, the issues that were being discussed were key elements of their current and ongoing professional practice. Although small sample sizes are not necessarily considered limitations of qualitative research as they allow for in depth examination of phenomena, participants of studies 3 and 4 were from a homogenous population and, as such, there may be socio-cultural elements of their context that influence their interpretation of their experience. Additionally, although the risk of self-presentation bias was managed through the building of rapport with participants, there is a risk that my status as an ‘insider’ may have sought to manage the interviewer’s impression of them.

8.6 Future Study

This thesis has offered a range of findings pertaining to the future progression of the field of TD. Based on the ‘via negativa’ approach, it is suggested that it will be fruitful for future research to continue to consider what factors actively interfere with the process of TD and effective coaching in general. Additionally, given the interaction of skills, challenge and emotional state identified by studies in this thesis, it is suggested that future research considers this area in greater depth. Seeking to develop understanding of the relationship between the navigation of challenge and performance trajectory and in doing so, develop greater understanding of the role played by heightened emotional states in the process of learning, rather than simply performance. Finally, rather a continued focus on singular variables, it is hoped that there will be a renewed mechanistic emphasis on the interaction between the performer *and* their support *and* their environment. It is by engaging with the inherent complexity that research has the opportunity to influence practice.

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Appendices

A.1. Participant Consent Form

A.2. Appendix A.2. Interview Guide

B.1. Interview Guide

B.2. Interview Guide

C.1. Interview Guide

C.2. Interview Guide

C.3 Interview Guide

Appendix A.1. Participant Consent Form

Investigators: Jamie Taylor (Student), Dave Collins (Investigator/Supervisor)

Participant Name: _____

Please read and initial each statement:

1. I have read and understand the subject information sheet. I have had an opportunity to ask questions and these have been answered to my satisfaction. _____
2. I understand that my participation is voluntary and that I can withdraw from the project at any stage without giving any reason. _____
3. I agree to detailed notes being taken during the interview. _____
4. I agree to the recording and transcription of my interview. _____
5. I understand that if I withdraw within a week period post-completion, all associated data will not be used and will be destroyed. _____
6. I understand that I will be offered an opportunity to review and amend the data collected to ensure its accurate interpretation, to return it within the agreed timeframe, and that failure to return the data will result in it being used as read, within the study. _____
7. I understand that the data [*field notes, interviews*] will be stored for a period of five years from the end of the project and then destroyed. _____
8. I agree to anonymised quotes being used within any publications or presentations resulting from this work. _____
9. I agree to take part in this study. _____

Signature of Participant:

I certify that I have explained to the above individual the nature, purpose and possible risks associated with participation in this research study, have answered any questions that have been raised, and have witnessed the above signature

Signature of Investigator:

Date:

P.T.O.

If you wish to receive a copy of the results of this study, please state how you would like to receive these and provide the appropriate contact details.

Would you like a copy of the results from this study?

(YES / NO) *

If so, how would you like to receive these results?

(POST / EMAIL)*

** Please delete as appropriate*

Please provide the appropriate contact details in the space provided below:

Appendix A.2. Interview Guide

As per the briefing you received in advance of this interview, I will ask you about three players who you have been involved with or observed during your time as a talent development coach. I will ask you a series of questions, and would like you to provide answers on all three players at each stage.

Just to remind you, these three players should have the following profile:

- On early observation, each stood out as possessing high potential; so much that you may have thought them a ‘cert’ for later achievement at the highest level.
- This potential continued to be apparent for some time, during their development
- However, the player eventually did not make the grade.

	Question <i>What ‘open’ question do you need to ask to achieve this purpose?</i>	Probes <i>What ‘open’ question can I ask to get info on the things I want to know if they don’t seem to understand the main question? Or if they don’t provide enough detail in their answer?</i>	Stimuli <i>If they still don’t give me the information that I’m most interested in then what can I ask them to directly comment on?</i>	Purpose <i>What do you want to know or find out?</i>
5 mins	1. To begin, I would like to know more about you and your work in a sporting pathway. Could you briefly introduce yourself?	<ul style="list-style-type: none"> • Give me a brief run through your career, with an emphasis on your TD roles 	<ul style="list-style-type: none"> • What sport or sports do you/have you coached? • What is your age? • What are your qualifications? • How many years’ experience do you have? • With what age/level of player have you worked? 	Demographic + background info
5 mins	2. Now can you give me details about your three exemplar players?	<ul style="list-style-type: none"> • Age at start and finish of contact • Background 	<ul style="list-style-type: none"> • How old were each of them when you first encountered 	Player profiles

	No names, just an overview	<ul style="list-style-type: none"> Brief playing profile 	<p>them? When they left the academy??</p> <ul style="list-style-type: none"> What were their home backgrounds? Intelligence? Position, Fitness, physicality, birth quartile, technical prowess, etc. 	
10 mins	3. What was it about each of your selected players that made them stand out?	<ul style="list-style-type: none"> Could you give me some examples of their good characteristics? Are these things that you would usually look for? How 'exceptional' was this player? Place in the top X% 	<ul style="list-style-type: none"> What was the player's level of skill? Of fitness? Of confidence? Of commitment? Any other factor? 	Establish participants' perceptions and understanding of 'giftedness'.
10 mins	4. As their time on the pathway progressed, what changed your perception? For what reasons?	<ul style="list-style-type: none"> At what age was the player then? When did doubts about your initial assessment of the player start to creep in? What exactly changed in your perception? What did you see that changed your mind? What did you hear about them? 	<ul style="list-style-type: none"> Did you see changes in work rate/effort? Was there a particular incident, such as an injury? Had these been apparent from the first but overlooked? 	Starting to examine the reasons for underachievement.
10 mins	5. Were any efforts made to remedy these shortcomings?	<ul style="list-style-type: none"> What sorts of things did you consider? What sorts of things were attempted? Was the player involved? 	<ul style="list-style-type: none"> Was the player told about the plans? Did you involve his/her parents? Did you monitor behaviour? Set rules? 	Offers further insight on the nature of shortcomings and what was considered/ attempted/available to recover the player

		<ul style="list-style-type: none"> • Was some recovery/positive change apparent? 	<ul style="list-style-type: none"> • Prescribe extra training? 	
10 mins	6. What key characteristics would you say are necessary for a successful career as a player in your sport?	<ul style="list-style-type: none"> • What else is necessary other than technical competency? • Can you give me some examples of how these 'key characteristics can help a player to progress? 	<ul style="list-style-type: none"> • Capacity to cope positively • Ability to plan and organise • Network, communicate effectively • PCDE's • Grit, growth, self-control • Lifestyle habits 	<p>Establish an understanding of what characteristics are vital to successful performance.</p> <p>Offers a contrast to the failed players under consideration</p>
10 mins	7. So in simple terms, what prevented each of your exemplar players from making it? What COULD have been done?	<ul style="list-style-type: none"> • Are good performers 'born' or do people just have 'talent' to cope better and be successful? • What role or responsibility do you think learning environments (eg. academies) have in equipping students with these skills? 	<ul style="list-style-type: none"> • Do you believe someone who has poor psychological skills can improve if given the right support and personal application to that support? 	<p>Establish an understanding of participants' underlying beliefs regarding psychological skill acquisition and possible support structures.</p>
5 mins	8. How common do you think that this situation is?	<ul style="list-style-type: none"> • What percentage of young players that you see suffer from these deficiencies? • What percentage recover/come good? 	<ul style="list-style-type: none"> • For instance, common problems might include, performance anxiety, isolation, maladaptive perfectionism, dealing with injury, lack of mental skills 	<p>Establish an understanding of the perception of commonness of psychological challenges as well as the 'openness' of the environment towards discussing them.</p>

Appendix B.1. Interview Guide

As per the briefing you received in advance of this interview, I will ask you about your journey so far as an academy player. I will ask you a series of questions and would like you to provide answers on

Just to remind you, I would like to discuss:

- Your journey as a rugby player
- The challenges you have faced as a player
- The people who have supported you throughout the journey and how they have done this

	Question	Probes	Stimuli	Purpose
10 mins	To begin, I would like to know more about you and your sporting pathway. Could you briefly introduce yourself?	<ul style="list-style-type: none"> • What has your journey as a player looked like so far? 	<ul style="list-style-type: none"> • How old are you? • What kind of school did you attend? • What position do you play? • At what age did you start playing? 	Demographic + background info
15 mins	Tell me about your journey as an academy player?	<ul style="list-style-type: none"> • When did you join your club? • What are the key moments that you have found challenging as a player? • Where else have you played rugby? 	<ul style="list-style-type: none"> • What have you found difficult in the last 3 years? • Do you know peers who have experienced similar issues? 	Examine level of perceived challenge through the pathway
15 mins	Through this period, who or what has supported you??	<ul style="list-style-type: none"> • What did they tell you? • Why was this? • What did you change as a result? • How did they tell you? 	<ul style="list-style-type: none"> • Events beforehand • Style of feedback 	Establish what they perceive was impactful support on their development pathway

		<ul style="list-style-type: none"> • How did you know it was worthwhile? 		
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Appendix B.2. Interview Guide

	Question	Probes	Stimuli	Purpose
10 mins	Last time we discussed.... Can you expand on that?	<ul style="list-style-type: none"> • Individual probes on separate sheet 	<ul style="list-style-type: none"> • Individual stimuli on separate sheet 	Follow up of previous interview
25 mins	Using this timeline, can you draw out how you felt at different times through the season?	<ul style="list-style-type: none"> • What were the most memorable events throughout the season? • What were the most positive times for you? • What were the hardest? • 	<ul style="list-style-type: none"> • Tell me about (specific event) • how did it make you feel? 	Understand the events that have shaped their first season as a professional and the emotional valence they experienced
20 mins	Who or what has supported you?	<ul style="list-style-type: none"> • What did they tell you? • Why was this? • What did you change as a result? • How did they tell you? • How did you know it was worthwhile? 	<ul style="list-style-type: none"> • Events beforehand • Style of feedback 	Establish what they perceive was impactful support

Appendix C.1. Interview Guide

As per the briefing you received in advance of this interview, I will ask you about your journey so far as an academy player. I will ask you a series of questions and would like you to provide answers on

Just to remind you, I would like to discuss:

- Your journey as a rugby player
- The challenges you have faced as a player
- The people who have supported you throughout the journey and how they have done this
- How you have taken their advise and used it

	Question	Probes	Stimuli	Purpose
5 mins	To begin, I would like to know more about you and your sporting pathway. Could you briefly introduce yourself?	<ul style="list-style-type: none"> • What has your journey as a player looked like so far? 	<ul style="list-style-type: none"> • How old are you? • What kind of school did you attend? • What position do you play? • At what age did you start playing? 	Demographic + background info
10 mins	Tell me about your journey as an academy player?	<ul style="list-style-type: none"> • When did you join your club? • What are the key moments that you have found challenging as a player? • Where else have you played rugby? 	<ul style="list-style-type: none"> • What have you found difficult in the last 3 years? • Do you know peers who have experienced similar issues? 	Examine level of perceived challenge through the pathway

10 mins	Who or what has supported you in your journey?	<ul style="list-style-type: none"> • Who has helped you with the moments that you have found challenging? • Have you actively sought advice? • How strong is your relationship with the key people around you? • To what extent has the environment supported? • What role models have you had? • Is talking about it ok? • Of the support figures that you mention, who would you describe as being the most supportive and why? 	<ul style="list-style-type: none"> • Help from parents? • Help from friends? • Help from teachers? • Help from coaches? • Help from senior players? • Help from agent? 	Starting to examine level of support offered along the pathway
10 mins	What are the messages that support figures have been giving you and how helpful was it?	<ul style="list-style-type: none"> • How do you know what advice to listen to? • Whose advice has helped? • What has been unhelpful? • What did you change after the advice? 	<ul style="list-style-type: none"> • Do you believe that the support you have had has been significantly helpful? 	Establish how the athlete has utilised social support and what they have changed as a result
10 mins	Is there anything that has 'got in the way'?	<ul style="list-style-type: none"> • Have there been any differences between support figures? • Contradictory advice 	<ul style="list-style-type: none"> • Personality clashes (you to coach/coach to coach/you to players) • Were YOU confused at all as to what was expected? 	Establish any contradictions between different support figures

		<ul style="list-style-type: none"> • Contradictory demands or expectations? What?? 	<ul style="list-style-type: none"> • For instance, have you had advice from two different people that was contradictory? • In what way was the advice helpful? 	
5 mins	In beginning your transition to the first team squad, what challenges are you beginning to now face?	<ul style="list-style-type: none"> • What do you think the key challenges are for academy players moving into a first team environment? • What help do you think you will need? 	<ul style="list-style-type: none"> • Senior players? • Competition level? • Time management? 	Establish an understanding of the player's perceptions of what challenges lie ahead
5 mins	What key characteristics would you say are necessary for you to successfully navigate the transition to first team performance?	<ul style="list-style-type: none"> • Where have you learned about these skills? • If you were a coach, how would you seek to help young players make this transition? • Looking around the club – who does this really well? • How far away are you? And is it ok to take time? • Changing support network? 	<ul style="list-style-type: none"> • PCDEs • Impression management? • Network, communicate effectively 	Understand perceptions of the player regarding what they will need support with

Appendix C.2. Interview Guide

	Question	Probes	Stimuli	Purpose
5 mins	Last time we discussed... Can you expand on that?	<ul style="list-style-type: none"> • See separate sheet 		Follow up of previous interview
5 mins	We spoke last time about feedback. How important do you think it is to receive feedback?	<ul style="list-style-type: none"> • Why is this? • Who do you typically get it from? • What do you need feedback on? • Who should lead this? 	<ul style="list-style-type: none"> • Mental • Technical/Tactical • Career • Lifestyle 	Establish perceptions of feedback as a process
10 mins	Half way through the season, what challenges are you beginning to now face?	<ul style="list-style-type: none"> • What do you think the key challenges are for academy players moving into a first team environment? • What help do you think you will need? • 	<ul style="list-style-type: none"> • Senior players? • Competition level? • Time management? 	Establish an understanding of the player's perceptions of previous challenge and compare to previous
15 mins	During the season, what are the messages that support figures have been giving you and how helpful was it?	<ul style="list-style-type: none"> • How do you know what advice to listen to? • Whose advice has helped? • What has been unhelpful? • What did you change after the advice? 	<ul style="list-style-type: none"> • Do you believe that the support you have had has been significantly helpful? 	Establish how the athlete has utilised social support and how this has changed over time
15 mins	How do you know what feedback is worthwhile and what to do about it?	<ul style="list-style-type: none"> • Who tells you? • How do they tell you? • Has anyone ever taught you about using feedback? 	<ul style="list-style-type: none"> • Relationship • Coaches • Impression management • Power 	Establish decision making process

		<ul style="list-style-type: none"> • Are you encouraged to question feedback? • What would get in the way? 		
10 mins	If you had some advice from a teacher that you disagreed with how would you have dealt with it?	<ul style="list-style-type: none"> • What is the difference with a coach? • What about a family member? 	<ul style="list-style-type: none"> • 	Establish decision making process

Appendix C.3 Interview Guide

	Question	Probes	Stimuli	Purpose
5 mins	Last time we discussed... Can you expand on that?	See separate sheet		Follow up of previous interview
10 mins	Reflecting on the season gone what were the key challenges?	<ul style="list-style-type: none"> • How did x go? • What help do you think you will need? 	<ul style="list-style-type: none"> • Senior players? • Competition level? • Performance pressure? • Second/third season? 	Establish an understanding of the player's perceptions of previous challenge and compare to previous
10 mins	Did you feel prepared for these challenges?	<ul style="list-style-type: none"> • Who spoke to you beforehand? • Who spoke to you afterwards? • What did you learn from it? 	<ul style="list-style-type: none"> • Tell me about (specific event) what happened? 	Understand how players were prepared to cope with the challenges that they faced and how challenges were debriefed
10 mins	In the last season, what is the most impactful support that you have received?	<ul style="list-style-type: none"> • What did they tell you? • Why was this? • What did you change as a result? • How did they tell you? • Was worthwhile? 	<ul style="list-style-type: none"> • Events beforehand • Style of feedback 	Understand what feedback was impactful and how it influenced them over time – compare to previous interview
10 mins	Who are the main people that are advising you?	<ul style="list-style-type: none"> • Who do you typically get it from? • What do you now need feedback on? • Who should lead this? 	<ul style="list-style-type: none"> • Mental • Technical/Tactical • Career • Lifestyle 	Understand main sources of feedback and change over time

5 mins	How do you know what feedback is worthwhile and what to do about it?	<ul style="list-style-type: none"> • Who tells you? • How do they tell you? • Has anyone ever taught you about using feedback? • Are you encouraged to question feedback? • What would get in the way? 	<ul style="list-style-type: none"> • Relationship • Coaches • Impression management • Power 	Establish changes in perspective over the season
10 mins	If you had some advice that you disagreed with what would do about it?	<ul style="list-style-type: none"> • Has this happened? • From a coach? • What about a family member? 	<ul style="list-style-type: none"> • Tell me about (specific event) what happened? 	Establish changes in perspective over the course of study