

Tactical Innovation in New Zealand Representative Rugby:
A Grounded Theory of Developing

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Attestation of Authorship

I hereby declare that this submission is my own work and that, to the best of my knowledge and belief, it contains no material previously published or written by another person nor material which, to a substantial extent has been accepted for the qualification of any other degree or diploma of a university or institution of higher learning, except where due acknowledgement is made in the acknowledgements

Name

Signature

Date

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Abstract

The purpose of this grounded theory research is to understand the process of tactical innovation in New Zealand rugby. Tactical innovation is an important resource for successful rugby. Understanding how the process occurs offers the potential to better generate, direct, and control tactical innovative efforts. Data were collected by interviewing rugby coaches. Data were analysed using the constant comparative method and the inductive-deductive analytical process. Data collection included theoretical sampling. Findings suggest that the main concern of coaches is winning. This is resolved using the process of developing. Developing is comprised of three sub-processes, innovating, influencing, and implementing. The first sub-process, innovating is the assessing of opportunity that secures potential advantage. Innovating is comprised of two categories, identifying and questioning. Whereas identifying is openness to new possibilities, questioning is the subjecting of those opportunities to critical assessment. The second sub-process influencing is the securing of buy-in from anyone whose cooperative efforts are required in the developing process. Influencing is effected by structuring and persuading. Structuring is an indirect means of influencing, which seeks to control the tacit messages within the team environment. In contrast, persuading involves direct intervention that controls the thinking and actions of others. The third sub-process implementing refers to the developing of resource reliability. Resources include any player or procedure which contributes to winning. The categories of implementing are deciding and applying. Deciding involves the choice of appropriate resources, while applying is the arranging and testing of resources so that they perform under pressure. There are overlaps between the business literature and the theory of developing and how organisations pursue ambidexterity. Ambidexterity, which is an organisation's ability to simultaneously explore new opportunities and exploit existing capabilities, is also required when coaching representative rugby teams. These findings highlight the diversity of mental, organisational, technical, and inter-personal skills coaches utilise in the developing process.

Chapter One: Introduction

How tactical innovation occurs in New Zealand representative rugby is an ideal subject for classic grounded theory research. Rugby union football is a game that potentially richly rewards the successful tactical innovator with on-field victory, prestige, and since 1995, financial reward. Influential rugby writer Terry McLean attributed the (up until then) failure of successive touring All Black teams to win a test series in South Africa, to the Springboks' superior tactical and strategic innovative capacity (McLean, 1976). Innovative tactics have always been critically important in international encounters. Two of the very few victorious teams to tour New Zealand, the 1937 Springboks, and the 1971 British Lions, succeeded in large measure as a result of their respective capacities to implement tactical innovations (James & Reason, 1979). At all levels of New Zealand rugby, the enduring legacy of the 1937 Springboks and 1971 Lions was to influence the tactical conception and play for generations to come. While innovative tactics are well discussed, less is understood of how tactical innovation occurs. Therefore, this grounded theory research is valuable to uncover the hidden patterns of behaviour behind tactical innovation that occur in New Zealand representative rugby.

Background to the Research

The importance of tactical innovation in rugby is succinctly summarised by former All Black coach, Fred Allen: "On the face of things, Rugby is a simple game...All that is required, it would seem, is that one should take hold of the ball and run...but...Rugby [is not] as simple as it seems...the simplicity turns into complexity" (Allen & McLean, 1970, p. 1).

Indeed, rugby has unique complex elements, which become even more apparent when it is compared to other invasive ball sports. For example, in New Zealand, unlike netball, basketball, hockey or association football, rugby union is a full-contact sport, requiring direct and sustained instrumental use of the entire body. Unlike Australian football, it incorporates the element of off-side, and restriction on the forward pass, thus adding a complicating factor to the free movement of participants and the ball on the field of play. Finally, unlike its offspring, rugby league [or American or Canadian football for that matter], rugby union does not effectively guarantee possession of the ball for a set number of plays. Every contact with the opposition, whether the initial staged first-phase confrontation at kick-off, scrum or lineout, or the more fluid second-phase ruck or maul, is a new and genuine contest for possession.

The necessity for possession is balanced against the tactical need to retain and utilise possession. The problem of winning, retaining, and utilising possession is then juxtaposed with the need to defend successfully, so that the team can regain possession when the opportunity arises. Rugby, therefore, includes the tactical necessity of incorporating the unique body shape and skills of the prop, whose only other likely sporting sphere would be the wrestling ring, or the shot put circle. In the same way as the chess board requires a similar interplay, with a symbiotic relationship between pieces of vastly differing shapes and functions, so a rugby union team seeks to incorporate each of its fifteen on-field players to pose or respond to challenges that are essentially tactical in nature. Finally, and continuing the chess/war analogy, if relative equality of technical proficiency exists, it is the tactical innovation which surprises the opponent and renders obsolete existing skills and methods, that maximises the possibility of on-field success to those who initiate it. It is reasonably straightforward to understand the complexities of innovation when situated externally. However, trying to explain the substantive area, in this case tactical innovation, from the point of view of the participants (Glaser, 1998), is more challenging.

Context of the Research

Despite the complexities of rugby, little if any formal research of the tactical innovative process has occurred. Instead, tactical innovation has undoubtedly occurred in New Zealand rugby since the game was introduced in 1870. This is evident by examining accounts of games in the past, which are peppered with descriptions of now-obsolete tactics such as dribbling rushes, goals from a mark, and 2-3-2 scrum formations (McLean, 1959). Therefore, from a diachronic perspective the effects of tactical innovation are seen. However, the process of tactical innovation is less evident. Indeed, it seems likely that the process of tactical innovation is a hidden pattern of behaviour. Surprisingly, there is no research in the area.

Consideration of the make-up of the New Zealand rugby community confirms why the lack of formal research into tactical innovation is possibly so. Social commentator and successful coach, Carwyn James, acknowledged the essentially pragmatic and resourceful capacity of New Zealand rugby to subsequently and successfully address the tactical deficiencies that were exposed by his innovative Lions team in 1971 (James & Reason, 1979). In contrast to most other national Rugby Unions, the New Zealand constituency is essentially pragmatic, rather than intellectual or academic (McLean, 1977). Indeed, it has often eschewed the theoretical approach to addressing tactical [and other] issues (Zavos, 1998). Instead, the

game has relied on the input of a broad base of informally instructed practical people, who represent the traditional national social capital (King, 2003).

Therefore, there has been little discussion of the tactical innovative process during the first 100 years of the New Zealand rugby story. A few esteemed and influential volumes, such as Tommy Ellison's, *The art of rugby football* (1902), and Gallaher and Stead's, *The complete rugby footballer* (1906) detailed the application and effects of tactical innovation. Also, while there has been general discussion of tactics in contemporary published newspapers accounts and tour books, McLean (1977) observes that there was no formal or sanctioned system of tactical innovation training in New Zealand. Instead, tactical maxims, or rules of thumb were disseminated by means of the interlocking club/provincial/international system of fixtures, and the free flow of information and movement of players and coaches within that amateur system. Rather than a formal or scholastic method of transmission and inculcation, tactics were gleaned from common sense, and learnt on-the-job, at practices, semi-formal team meetings, and discussions around the bar at the after-match function. For example, a tactical conception that continues to permeate, influence, and shape New Zealand's tactical consciousness is that, "the whole object of Rugby [is] for fourteen [players] to give the fifteenth a start of half a [metre]" (Allen & McLean, 1970, p. 2). Allen and McLean go on to argue that this object is, "summed up [in]...all that [one] really need[s] to know about tactics: Position, Possession and Pace...the Three Ps (Allen & McLean, 1970, p. 211).

The originator of the three Ps conception was C.K. [Charlie] Saxton, an All Black, coach, administrator, and influential tactical innovator (Allen & McLean, 1970). Saxton was instructed in his formative rugby years by one of the fathers of New Zealand tactical innovation, 1905 All Black coach Jimmy Duncan (Zavos, 1998). Saxton also played against the tactically influential 1937 Springboks. As a result of active service with the 2nd New Zealand Expeditionary Force during World War II, Saxton rose as an enlisted man to the rank of Major with a field command in the Long Range Desert Group in the Western Desert campaign (McLean, 1987). In doing so he no doubt gained and/or enhanced his requisite capacity to understand and implement innovations, and tactical and strategic goals on the field of conflict. This had implications for the development of rugby in New Zealand. Immediately after the war, Saxton was appointed captain of the Kiwis army rugby team, which toured Britain and Europe, playing a distinctly attractive and successful 15-player style of football. Saxton and the other 30 odd members of the squad then returned to New Zealand in 1946, and re-engaged with the rugby network, initially as players, and subsequently as coaches and administrators at all levels in the years ahead. However, it was not until the 1970s that the

New Zealand Rugby [Football] Union [NZR[F]U] started to supplement the informal system of up-skilling, as typified by the Saxton example, by formally investing in film and printed resources, in an attempt to standardise the situation (McLean, 1977). Even then, the resources produced dealt primarily with the understanding and execution of the physical, technical, and mental aspects of rugby. There was less emphasis on tactics, and no formal discussion of how tactical innovation occurred (Vodanovich, 1982).

With the advent of professionalism in 1995, attitudes to innovative tactics have changed. Budgets, and on and off-field personnel that focus on satisfying the financial imperatives of on-field victory, have developed to provide an entertaining product in the game. Professionalisation has had a significant influence. It has formalised many of the processes necessary to ensure rugby players, teams, coaches, and support staffs perform at increasingly higher optimum levels. It is now common and essential for the bio-mechanist to provide technical support, the nutritionists and physical conditioning scientists to guide rest and rotation policies, and the sports psychologist to teach and mentor mental skills (Romanos, 2002). At the same time, there has been a corresponding growth in published research findings that quantify the auxiliary disciplines that supplement modern professional teams (Mellalieu, Trewartha, & Stokes, 2008). Despite this, the tactical innovative process has not been examined at all. Even with the advent of the new and essential resource of video software, used primarily for tactical analytical purposes, the accompanying research has focused on quantitative research (Quarrie & Hopkins, 2007). Tactical change has been described, but there has been no explanation or conceptualisation of the process of tactical innovation.

Choice of Research Methodology

This lack of research, and theoretical understanding, combined with the nature of New Zealand rugby's tactical innovative community, makes Glaserian grounded theory an ideal methodology to develop research knowledge (Glaser, 1978, 1998; Glaser & Strauss, 1967). This is because the grounded theory process emphasises openness and emergence. It is essentially pragmatic with reference to issues of ontology and philosophy. The methodology seeks to uncover and explain what is going on here in regards to the problem-solving nature of participants' concerns and actions in dynamic, multi-faceted, and multi-dimensional psycho-social contexts (Glaser, 1998). This is analogous to the approach adopted by the rugby tactician and innovator. Rugby coaches seek practicable solutions to obstacles on the rugby

field, which is a complex environment peopled by 30 players, all of whom have specific goals and objectives to be achieved (Allen & McLean, 1970).

In addition, grounded theory is useful because it allows the concerns of the participants to guide the research. `Grand theories, professional concerns, or researcher preconceptions are not imposed on the data. Thus, the methodology fits well with the pragmatic approach (Glaser, 1998) that is typical of the New Zealand rugby tactician. For example, understanding the practicalities of what is happening with tactical innovation is complex, if Dr. Danie Craven's contribution is considered. This South African tactical nemesis of All Black rugby in the middle period of the Twentieth Century explained that his creative approach relied on a capacity to steal with the eyes, whatever appears within the tactical rugby innovator's gaze (Dobson, 1994). In the same way, Glaserian grounded theory is a methodology that uncovers the latent patterns of behaviour. It is egalitarian in its utilisation of many forms of data, wherever they may be found, and is not limited to the preconceptions of the experts of the academy (Glaser, 1998).

Also, according to Glaser, the discovery of grounded theory [the constant comparative method, the inductive-deductive analytical process, and theoretical sampling] are essentially the formalising of a universal and informal problem solving method (Glaser, 1998). Not surprisingly then, the results of Glaserian grounded theory - a conceptualisation that explains what is going on in a substantive area - provides an ideal tool for the rugby community (Glaser, 1998). Charlie Saxton's rubric of the "Three Ps", position, possession, and pace, detailed above, has proved effective and enduring because, like a good grounded theory, it has scope, parsimony, and denseness of description and explanation. It also integrates categories around around a core concept - fourteen players giving a fifteenth player a start of half a metre. In addition, like the product proof of good grounded theory (Glaser, 1978), Saxton's conception is grounded in the reality [data] of the participants, and provides a theory that fits, is workable, and is relevant to rugby tacticians. Therefore, Saxton has provided the New Zealand rugby community with a tool that has solved a problem, then the solution has been conceptualised, and is now communicated to others, and reapplied in other contexts.

Assumptions of the Research

To summarise, an opportunity exists to understand an important but hitherto hidden aspect of tactical innovation in rugby. The methodology of grounded theory represents an appropriate and useful means to uncover an explanation of the continued on-field success of New Zealand rugby. An important and indispensable tenet of classic grounded theory is that whilst the

researcher wants to know, he or she must not preconceive. To do otherwise overrules the vital concerns of the participants (Glaser, 1998). At the commencement of this research, therefore, the provisional and tentative assumption is made that it is coaches, rather than players who are primary drivers of the range of tactical choices available to a team. Thus, by implication, coaches are also the primary tactical innovators. Whilst there is evidence that there have been periods when players, rather than coaches have been the masters of tactics, this situation, other than the occasional mutiny or demonstration of player power, no longer prevails (Verdon, 1999). However, this does not preclude the possibility of players shaping and influencing the tactical innovation process as a necessary secondary source.

Another assumption is that tactical innovation occurs in New Zealand rugby primarily within the confines of remunerated representative rugby. It is at this level that the most capable players and coaches are to be found. These people have sufficient time, resources, and financial incentive to tactically innovate as required. Whereas there was once an essentially seamless transition from club to province to international level, with a ready dissemination of tactical knowledge between those levels, it is now acknowledged that a large gulf exists between the amateur and elite levels (Romanos, 2002).

As a result of these two assumptions, this research uses interview data collected from those who have coached rugby in New Zealand at a representative level. For the purposes of this research, representative includes provincial, Super rugby, or international level. For simplicity of expression, New Zealand representative rugby will be summarised as rugby within this thesis.

The Researcher's Position

The original topic of this thesis was tactical innovation, but it was clearly understood that “the researcher’s areas of interest and participant concerns might be different” (Glaser, 1998, p. 119). As will be shown in this thesis, tactical [and other] innovation is in reality about developing.

Aim of the Research

The aim of the research is to use classic grounded theory to discover the main concern of rugby coaches, as they seek to tactically innovate, and to explain and predict how they continually utilise innovation to resolve tactical on-field problems in rugby.

Research Question

How does tactical innovation occur in New Zealand representative rugby?

Purpose of the Research

The purpose of this research is to generate a theoretical explanation of how tactical innovation occurs in New Zealand rugby. As a key aim of Glaserian grounded theory is to discover the participants' concerns, and problem solving strategy, preferably in their own terms, the following definitions of tactical and innovation are provided to define the initial concepts. However, it is also recognised that, to be consistent with the methodology, these definitions will likely change, as they need to earn their way into the grounded theory by appearing within the data.

Nevertheless, the research process has to begin somewhere. Thus, at the commencement of the research, the term tactical refers to an on-field playing method that is utilised by a player or team, often with the input of a coach. "Strategy, says the dictionary, is the 'choice of operations to be attempted'; tactics the 'procedure adopted for carrying out a given policy'" (Allen & McLean, 1970, p. 210). Therefore, tactics are designed to implement an overall strategy or goal maximising the chances of score board success, whilst minimising that same likelihood for the opponents. An innovation is defined as a new, revised, or freshly conceived and/or applied tactical method, designed to take an opponent unawares. This is illustrated well by Terry McLean's (1971) description of the inspiration behind 1971 British Lions coach Carwyn James' tactical innovations: "What New Zealand forgot, James relearned, or remembered, or...discovered for himself" (McLean, 1971, p. 71). Innovations leave opponents in a position of comparative disadvantage, until such time as they have identified, revised, addressed, or successfully countered the reason for their comparative tactical obsolescence and disadvantage.

It is expected that the findings of the research will inform future research. It is also anticipated that the research findings will serve as an explanatory and up-skilling tool for potential and actual tactical innovators within the rugby community, and possibly other invasive ball sports, as well.

Outline of the Research

In this Chapter One, the research topic has been introduced. The research question is stated as are the aim and purpose of the research. The rationale for the research was outlined, and key

concepts defined. Chapter Two explains the methodology and methods of grounded theory, clarifies its utility and suitability as a methodology, and outlines the methods of data collection and analysis. The research process is articulated in detail. Chapter Three presents the findings of the participants' main concern, which is winning, and introduces the process of developing that coaches utilise to manage that main concern. The chapter also encompasses a sub-process of developing, innovating, which is comprised of the categories identifying and questioning. Chapter Four outlines another sub-process of developing, influencing, that consists of the categories of structuring and persuading. Chapter Five details another sub-process of developing, implementing, which is made up of the categories of deciding and applying. Chapter Six introduces a literature review of research findings which have relevance for the theory of developing. The literature review concentrates upon organisational change management and key concepts from the business literature that have relevance for the theory of developing. Chapter Seven concludes with the discussion, recommendations, and reference to the limitations of the research.

Chapter Two: Methodology and Methods

The choice of appropriate methodology and methods is a cardinal imperative for adept researchers. The alignment of methodology and methods is crucial to ensure soundness of research, and confidence in the outcomes (Crotty, 1998). Methodology is best understood as the strategy which guides methods. Methods are the concrete techniques or procedures used to gather and analyse data (Crotty, 1998). Together, both methodology and method must match the theoretical and epistemological issues in the substantive area of research, while also being appropriate to address the research question (Crotty, 1998).

This chapter addresses the concerns of methodology and method as they relate to the research question of tactical innovation in New Zealand rugby, and the grounded theory of developing. The chapter commences with discussion of the philosophy of the grounded theory research methodology, and considers this alongside methodological purpose. The research methods are then explained, laying the foundation for an explanation of methodological and research reliability. Specific issues such as ethics and design are outlined. The second section of the chapter explains and illustrates in detail how the researcher applied grounded theory methodology and method to generate the theory of developing. The generating and organising of the concepts which eventually became incorporated in the theory of developing are explained. The chapter then closes with discussion of the research challenges, and a conclusion.

Philosophy of the Research Methodology

This research is informed by the methodology of grounded theory, particularly that outlined by Barney Glaser (Glaser, 1978, 1998). The purpose of the methodology is to conceptualise the strategies by which participants solve problems in specific social settings. Strategies are summarised under a core variable that usually has several sub-processes (Glaser, 1998). The aim of grounded theory research is to explain group patterns of behaviour. Glaser is content to avoid philosophical discussion about the methodology, suggesting it does not drive theoretical explanations of behaviour (Glaser, 1998). Instead, having parted company with his former collaborator, Anselm Strauss (Glaser & Strauss, 1967) due to what he considered an overly prescriptive and pre-determined development of the methodology, Glaser (1992) argues that grounded theory is an inductive, general, theory-building methodology, to which any data can be subjected (Glaser, 1998). If any epistemological and ontological view informs Glaser's methodology, it has been suggested his training in quantitative science has contributed to an

essentially post-positivist perspective (Patton, 1990). However, Glaser himself refutes the suggestion that any philosophical framework is the foundation for grounded theory [GT]:

The quest for an ontology and epistemology for justifying GT is not necessary. [A grounded theory] will take these on from the type of data it uses for a particular research FOR THAT RESEARCH ONLY. GT is simply an inductive model for research. It is a paradigm for discovery of what is going on in a particular arena...Whether GT takes on the mantle for the moment of prepositivist, positivist, postpositivist, postmodernism, naturalism, realism, etc., will be dependent on its application to the type of data in a specific research. (Glaser, 2005, p. 145)

Therefore, grounded theory is versatile and flexible. Neither is it tied to one particular ontology or epistemology.

Methodological Purpose

This research begins with the aim of understanding how tactical innovation in rugby occurs. While the researcher recognised that this interest was a personal professional interest, all research begins somewhere. In this instance, the viewpoint of understanding sought was that of the coaches, who, as per the assumptions outlined in Chapter One, initiate tactical innovation. Coaches are the ones who seek to resolve the dilemma of introducing something new and surprising into the game of rugby, so that they will have an on-field advantage over their opponents. The way they do this is largely unknown. In other words, it is a hidden pattern of behaviour, one that is worthy of theoretical explanation. Thus, in a grounded theory study, participants provide data that reflects their concerns. It is the role of the researcher to conceptualise that data in ways that are consistent with the content and contours of the data alone (Glaser, 1998). As a result, the grounded theory researcher analyses data collected from specific social contexts, typically by means of participant observation and/or interviews. The analysis consists of an initial inductive construction, which is then deductively confirmed from the data (Patton, 1990).

Methodological Distinction

The distinctive feature of this methodology is to ensure only that which is grounded in the data earns its place in the final theory – hence grounded theory. Data is both grounded and emergent. Emergence comes from the search for what is going on in the substantive area of research, rather than seeking to align the data with logical or existing patterns of thought (Glaser, 1998). This approach places the onus on the researcher, who is required to avoid forcing data to conform with the received view of the world, that is existing research

knowledge. In order to achieve this, the inductive-deductive conceptualising method uses constant comparative analysis. To ensure findings are emergent and grounded, literature is reviewed subsequent to research (Glaser, 1998). In this thesis, the literature review chapter follows the research findings, and is presented in Chapter Six.

The Suitability of the Methodology

The suitability of the methodology is demonstrated by reiterating that the purpose is to develop a theoretical explanation of patterns of behaviour surrounding tactical innovation within New Zealand rugby. As has been stated in Chapter One, the research question is designed to uncover the participants' problem solving processes, and answer the question, "What is happening here?" (Glaser, 1998, p. 123). Tactical innovation occurs in a social psychological setting [the dynamic context of members of rugby teams, interacting with and responding to team mates, coaches, and opponents], where [tactical] problems are resolved, by means of solutions [innovations]. Grounded theory is eminently suitable for this project, as it answers the question, 'How?' (Glaser, 1998).

The Methods

The methods of grounded theory influence data collection. All is [potentially] data (Glaser, 1978). Findings are in some sense provisional, and are modified and developed from continued and concurrent data collection and analysis (Glaser, 1998). Initial data provides a wide range of conceptual possibilities, which are identified by the constant comparative method of analysis (Glaser, 1998). Through this means, data is continually compared with all other data. The purpose of this is to identify similarities and differences that ultimately define the properties and extent of differing categories (Glaser, 1998). "The researcher starts off by comparing incidents...as categories get generated the next incidents are compared to the category which yields the property of the category" (Glaser, 1998, p. 140). Categories are then organised into codes (Glaser, 1998). Initial coding is substantive, consisting of open and then selective codes (Glaser, 1978). Open codes are provisional, and the aim of open coding is to identify the problem which participants seek to resolve. The resolution of this problem functions as the core variable (Glaser, 1978). The core variable is the explanation that inter-relates the various categories and their properties. The core variable accounts for all the behaviour in the substantive area being researched. Therefore the core variable appears right throughout the data (Glaser, 1998). In order to identify the core variable, Glaser recommends the researcher subject all data to the continual questions, "what category does this incident

indicate?”, “what property of what category does this incident indicate”, and “what is the participants’ concern?” (Glaser, 1998, p. 140).

Once the possible core variable is identified, the coding becomes selective. Further data gathering is delimited to theoretical sampling, and selective coding around the core variable (Glaser, 1998). In line with the requirements of grounded theory, theoretical sampling determines the follow up questions in subsequent interviews (Strauss & Corbin, 1990). Theoretical sampling is, “the process of data collection for generating theory whereby the analyst jointly collects, codes, and analyzes his data and decides what data to collect next and where to find them, in order to develop his theory as it emerges” (Glaser, 1978, p. 36).

Selective coding is the conceptualisation of the results of theoretical sampling. Selective codes function as an integrated set of hypotheses around resolution of the problem, which explains the behaviour in the substantive area of study (Glaser, 1978).

Theoretical coding is the next step recommended by Glaser (1978) beyond the substantive open and selective coding processes. Theoretical codes [TCs] “conceptualize how the substantive codes may relate to each other in the hypotheses to be integrated into a theory” (Glaser, 1978, p. 72). Therefore theoretical coding is a full and complete conceptual abstraction which emerges from the data. Theoretical coding must remain grounded in the data gathered in the substantive area of study:

Theoretical codes come from all fields and their theoretical perspectives, whether social psychology, sociology, philosophy, organizational theory, economics, political science, history, bio-chemistry etc...Staying open to TCs from these fields is very enriching of GT...the researcher should study TCs beyond the boundaries of his current discipline and keep studying them (Glaser, 2005, pp. 6,7).

Regardless of whether theoretical coding is used or not, data is organised into concepts. These concepts are also confirmed and defined by means of the constant comparative method, until saturation occurs around the basic core process (Glaser, 1998). An important tool in effecting this emergence is the continued and extensive use of memoing by the researcher (Glaser, 1998). Glaser states that, “memos are the theorizing write-up of ideas about codes and their relationships as they strike the analyst while coding” (1978, p. 83). Therefore, memos are an important tool in the inductive-deductive conceptualising process.

Reliability of the Methodology and Research

Grounded theory has its own in-built assurance of rigour. Two of the primary proponents of grounded theory, Corbin and Strauss make the key point that, “following the procedures with

care gives a project rigour” (Strauss & Corbin, 1990, p. 6). In particular, by following the constant comparative method, rigour is maximised, and researcher biases excluded (Glaser, 1998). Thus, the method IS rigour. Chiovitti and Piran (2003) provide three useful features that should characterise the final research product. The research has credibility - it is the participants, not the researcher, who provide the data and ultimately shape the analysis. The research has auditability - the researcher’s process of subject selection and data analysis can be recognised, confirmed, and replicated by another researcher. Finally, the research has fittingness - transferability of the findings to other similar social contexts. Glaser himself provides four litmus tests for assessing if a true grounded theory has been produced. It is relevant to the participants, fits the data and the participants concerns, is workable in addressing their concerns, and finally, as all grounded theory findings are provisional, and subject to change as subsequent data emerges, it must be modifiable (Glaser, 1978). Also, the grounded theory itself must exhibit scope of its coverage of the data, parsimony in its explanation, and denseness in its understanding and explanation of the problem solving process (Glaser, 1998).

Ethics

Ethical approval was granted by the AUT University Ethics Committee (09/242, see Appendix A). Consideration of the ethical issues for the research concentrated upon the identities and roles of the prospective participants. The key ethical principles which guided the research are outlined by Tolich and Davidson (2003):

The first principle is to do no harm. The highly competitive rugby environment implied that reputations are hard-won, and highly prized. Therefore, it was necessary to conduct the research in such a way that reputations remained intact. In addition, the research was directed towards uncovering patterns of behaviour within a psychosocial sphere of activity. Of necessity, this implied that the researcher would enquire about specific incidents, some potentially contentious in nature. Whilst the participants did not represent an at-risk group, nevertheless there was the potential for harm to reputations and relationships of trust if the safe-guarding, analysing, and reporting of data was not carefully conducted. During two interviews, for example, participants requested that specific information which gave contextual understanding was omitted from reporting, or discussion with others. The researcher has complied with this request and also exercised initiative without participant request with similar data. In addition, all recordings and transcripts remain under the secure direction and control of the researcher.

The second principle is to ensure all participation remains voluntary. Accordingly, both the verbal and written invitation to participants (Appendix B) and consent form (Appendix C) specified initial and continued involvement was freely chosen. There were no personal inducements for potential participants, other than the intrinsic satisfaction of discussing a subject of personal interest, or potentially contributing to the betterment of rugby. Similarly, there were no penalties, real or implied, if those approached chose not to participate. At least five potential participants declined the opportunity, in all cases because of time constraints. In keeping with the need to avoid coercion, those who declined were not subjected to repeated invitation. Voluntary participation also included the option of withdrawing from the research subsequent to the taped and transcribed interviews. This was facilitated by providing full participant-friendly information in the invitation and consent forms. The same forms also gave full contact details of the researcher, supervisor, and AUT University, for ease of communication if the participants subsequently chose to withdraw.

The third principle requires that the researcher preserves the anonymity and confidentiality of participants. Anonymity did not apply in this research, as the participants were known to the researcher (Davidson & Tolich, 2003). All participants were advised by verbal and written means (Appendices B and C) that their confidentiality would be protected (described as anonymity and privacy), unless they requested otherwise. All participants indicated on the consent forms that they did not want to retain confidentiality. However, in keeping with the grounded theory emphasis on group patterns of behaviour, participants have been numerically labelled rather than named in this research. Also the anonymity of third parties discussed during data gathering is preserved.

The fourth principle requires the researcher to avoid deceit. All written material to correspondents outlined and detailed the purpose, process and expected outcomes of the research (Appendix B). In addition, at the commencement of each interview, the researcher explained the nature of the project, the intended outcomes, and collected the contact details of the participants, so that they could be informed of the research outcomes in their preferred mode of communication (Appendix C). In addition, contact details were given for supervisors and at the university in case some problem arose for a participant.

The fifth principle requires the researcher to engage in faithful analysis and reporting of the data. At all stages the researcher worked under approved supervision. Supervisors regularly met (weekly to monthly) with the researcher to discuss analysis and drafts of the developing theory. During these sessions, many questions were raised and served as a catalyst for further thinking. Accurate reporting of data will also be confirmed by participants. In

accordance with the option given during the consent process (Appendix C), all participants have requested a copy of the research findings. In all cases they have requested a summarised version, instead of a full copy of the completed thesis. Participants will be provided with a copy of an article the researcher will prepare and submit for journal publication, once the thesis is submitted. Part of the rigour is whether the participants, and the wider rugby community confirm the findings, or not.

Design of the Research

The aim of a grounded theory is to understand the processes utilised by the participants in the substantive area under study (Glaser, 1998). Grounded theory typically analyses data from interviews (Patton, 1990). Therefore, to source suitable material, participants were identified initially through the researcher's contacts within the New Zealand rugby community.

The number of participants required to provide sufficient data for data saturation can be as few as six to eight (Strauss & Corbin, 1990). In this project ten coaches were interviewed. Three were interviewed a second time for theoretical sampling purposes. Accordingly, there were thirteen interviews in total. Participants were limited not just to past or present rugby coaches at New Zealand representative (i.e., provincial, NZ Maori/University/age group, or international) level, but included those who have at some time conceived of a specific on-field tactical innovation, which was subsequently implemented in on-field play. The pool of participants was identified using network sampling. Initial participants recommended recognised tactical innovators, who were acknowledged by various means (e.g., literature, media reports, and common opinion) within the New Zealand rugby community.

The researcher mailed letters to potential participants. The researcher explained in that initial correspondence, in academic jargon-free, rugby friendly language (see Appendix B), the purpose, scope, and time of the research project, as well as ways in which the findings might be disseminated. Due to the emergent nature of grounded theory, it was also explained to participants the likely necessity of follow-up interviews. Once a participant agreed to join the study, a consent form was signed (see Appendix C).

In the first instance the researcher gathered data by means of face to face tape recorded interviews, which were approximately 90 minutes in length. Interviews took place at a venue of the participants' choosing. For ease of analysis, the researcher transcribed interviews for coding. Glaser (1998) discourages both taping and transcription, as it detracts from the time needed to engage in the creative inductive-deductive conceptual generation process. However,

this research utilised used both taping and transcription particularly to aid the data analysis and organisation, which continued into the writing-up process.

Interviews began with open-ended questions. It was important to ensure that leading questions rooted in researcher bias or pre-understanding were eliminated. Examples of the initial questions are “Tell me about the circumstances which led you to consider [tactical innovation] as a possibility.”, “Was it a necessity, and if so, why? If not, why did you consider it?”, “Do you remember when you first thought of [innovation], and how it came about?”, “What things/factors influenced your thinking?”, “What was the process by which you thought [tactical innovation] was a possible option, rather than, say a recognised tactic such as [tactical option]”, and, “What was the process by which you first determined if [tactical innovation] was really a viable option?”

These questions were specific enough to direct the research with the appropriate focus, so that specific data grounded in the experiences and concerns of the participants was elicited. Not surprisingly, it quickly became apparent that the question of tactical innovation was a “professional problem” (Glaser, 1998, p. 116). Tactical innovation therefore became a general focus that served as a beginning talking point. Participants responded by not necessarily answering the question about tactical innovation. Instead they spoke about issues of importance to themselves, for example the importance of winning games and competitions.

In accordance with the requirements of Glaserian grounded theory, the researcher’s existing knowledge and/or data sources (books, historical media accounts, recorded interviews, personal papers, anecdotal accounts) were also incorporated as part of the data and constant comparative analysis process (Glaser, 1998).

The Research Process: Generating the Grounded Theory

Memos (see Appendix D) generated in the days after the first two interviews confirmed the research question, “How does tactical innovation occur in New Zealand rugby?” was a professional concern. Accordingly, there was a realisation that if the research question was to earn its way into the grounded theory, it would have to be as a secondary concern within an integrated whole. As a result, whilst tactical innovation remained a useful starting point for data gathering, subsequent interviews explored the many and diverse open codes generated in the initial data gathering. At the same time, memoing was useful to aid in the self-correcting theoretical development.

Isolation of the main concern, to which the core variable is directed, began to emerge after the ninth interview. Subsequent memos (see Appendix D) in response demonstrate

constant comparison between two aspects that had been highlighted in the data: Coaches wanted and needed their teams to win, and coaches also wanted and needed their teams to perform to their utmost ability. However, at times these two concerns were at variance within the data, as short-term gain in one aspect could compromise the other. Initially in the writing up process, a primary concern was labelled as achieving winning potential, and performance potential. However, late in the process a formulation that combined both aspects, while also giving comparative scope, depth, and parsimony was found: realisation of winning performance, which was eventually refined to winning.

Similar issues were encountered in the isolation of the resolution of the participants' main concern, the core variable. During the seventh interview the phrase "mental engineering" was used to clarify the participant's efforts to interrelate what subsequent analysis identified as key sub-processes. Mental engineering then became the process around which other data was organised from that time onwards, until just before the writing up was completed. The formulation appealed to the researcher, as it seemed to reflect the perceived complex inter-relationship between sub-processes, where one sub-process leveraged off another to create a new team dynamic. Particularly appealing in the team engineering possibility was the notion that no one sub-process acted as a starting point. There was freedom of initiation from any one sub-process to another. Memos made before the final three theoretical sampling interviews reflect attempts to conceptualise this fluid arrangement, and ground those concepts in indicators (see Appendix D). The researcher was particularly influenced by the advice that a grounded theory should include an explanation of the inter-relationship between sub-processes (Glaser, 1998).

Memos made after theoretical sampling, and as an aid to conceptualisation for the writing up process confirm mental engineering was becoming formalised. For example, three sub-processes were identified, which meant, up to six possible team engineering inter-relationships were possible: prospecting [later changed to innovating, as discussed further] to influencing, influencing to prospecting, prospecting to implementing, implementing to prospecting, influencing to implementing, and implementing to influencing. Illustrations of each inter-relationship were also detailed in the memoing (See Appendix D, Memo 26). For example, the setting up of systems [implementing] contributed to the creation of a hidden agenda [influencing]. However, the utilisation of analogies and other illustrations is not within the valid scope of a grounded theory research. The sub-processes already represented a conceptualisation of the data. Therefore, attempts to further conceptualise the interrelationship

between those sub-processes tended to dissolve the distinctive properties and extent of sub-processes, previously identified through constant comparison.

As the constant comparative method of data analysis continued into the writing up, emergence occurred which corrected the initial over-complication of interrelationship. In particular, mental engineering was not a term participants had used, including during theoretical sampling. Yet Glaser (1998) argues that in order for the theory to be grounded, and reflect the concerns of the participants, it is advisable to utilise their terminology where possible. In that respect, the replacing of mental engineering with developing represented an acknowledgement of the vocabulary found in the data. In addition, developing also eliminated the complex engineering conception of the interrelationships between sub-processes. Developing allowed scope to explain the interrelationship that did exist. Also, during theoretical sampling with the tenth interview, the participant had expressed agreement with a similar conception, resource development. However, emergence confirmed this was an inexact conception, as the data confirmed a rugby team is both the recipient of resource development, and also a resource in and of itself. Similarly, the mental engineering conception was a result of an initial failure to properly separate out the concepts in the data, and then inter-relate them again within the developing theoretical framework. This had occurred because there was an over-reliance upon the participants' descriptions. While the breaking up and conceptualising of the data was in accordance with the methodology, the core category integrates the main concepts into a coherent whole (Glaser, 1978).

Similar issues were encountered with the emergence of the innovating sub-process. Due to a desire to avoid forcing the data (Glaser, 1992), and as a result of the acknowledgement that a professional concern was directing the initial data search, innovating was only adopted late in the writing up process. Instead, identifying, which subsequently emerged as a category of the final innovating sub-process was the initial option in a series of memos. The final product of that round of memoing was prospecting, which remained the sub-process until late in the writing up. Prospecting exhibited grab (Glaser, 1992) as the term captured aspects of the search, inquiry, and unexpected find and identification that accompany the sub-process. However, at no stage did any of the participants volunteer prospecting as a suitable descriptor. In other words, the researcher had gone beyond the data and moved into forcing, as opposed to allowing data to emerge from participants (Glaser, 1992). Indeed, during theoretical sampling one participant expressed a concern that prospecting be confused with the gold-mining process. This highlighted the possibility that prospecting was acting as a description or an analogy, rather than fulfilling a conceptual function. Only very late in the

writing up did the term innovating earn its way into the grounded theory, as a result of its continual appearance in the data. However, whereas the initial data gathering utilised the assumption that innovating was, as per Chapter One, “a new, revised, or freshly conceived and/or applied tactical method, designed to take an opponent unawares” (p. 7), innovating was redefined within developing as, “anything that has the possibility to change a team so that team function is different” (p. 27). Specifically, this meant that whereas innovating was initially defined in narrow terms of original tactics, within team developing tactical originality became a much smaller aspect within the entire sub-process.

Aiding in the conceptualisation of the innovating sub-process, its relationship to the core variable, and initial research concern was the memoing process. One significant memo that informed subsequent theoretical sampling the next day was made during a flight between interview destinations (see Appendix D, Memo 7). As no other sources were available, and in order to capture the inductive thought, the memo was hastily written in the end paper of a text book belonging to the researcher’s wife. This illustrates well that, “memoing is a constant process that...continually captures the “frontier of the analyst’s thinking” as he goes through either his data, codes, sorts, or writes” (Glaser, 1978, p. 83). In addition, Glaser’s advice (1978) that memos should be kept as free as possible from the constraints of formal grammatical expression enabled the researcher to capture ideas. These ideas were then utilised by the researcher to abstract concepts from the descriptive level.

A similar wrestle occurred with the second sub-process, influencing. The importance of the team environment, a matter not considered as significant for tactical innovative purposes when the research was first proposed, became a consistent concern of the participants. A field note (see Appendix D) made immediately after the fourth interview reinforced an emerging paradox: coaches sought to exercise control, so that team players had an environment in which to freely utilise their skill and judgement. Subsequent memoing (see Appendix D) reflected the inductive-deductive exploration of the extent of the sub-process, by rearranging ideas such as controlling or creating the environment. Freedom to rethink analysis is central to theory development, and allows the analyst to rework thinking (Glaser, 1978). Analysis of the data showed the recurrence of influencing, which, along with the categories structuring and persuading, captured the nuance, nature, and extent of the sub-process.

Complicating the understanding of influencing was the explanation of the categories of the sub-process. In particular, analysis of the data showed coaches sought to exercise an outward oriented sphere of influencing. The sphere commenced with themselves, and moved on to senior players, co-coaches, and confidants. This group was comparatively easier to

persuade, and, as a result of their expertise and relationships of trust, were a source of mutual influence on coaches. Beyond this group, the sphere widened to the rest of coaches' teams. Influencing was a necessity within and throughout entire teams, but could not be assumed, and was often achieved by more tacit means. Beyond the team, the sphere of influence encompassed, if possible, referees, administrators, opponents, media, and the public. Memos (see Appendix D) and records of the organisation of open codes within influencing immediately prior to writing up demonstrate a centrifugal conceptualisation.

Adding weight to the diffusing conception of influencing was data highlighting the personal and introspective reflection coaches were required to exercise when developing. To be effective influencers, coaches are required to model the openness and flexibility that makes team members amenable to the influencing sub-process. However, analytical difficulties were encountered in the writing up, as outward spheres represent a diminishing capacity to influence. Despite this, the sub-process remains the same for coaches, whether influencing close confidants within the inner team circle, or distant ancillaries. Therefore the centrifugal description was replaced during writing up, as it did not match the explanation of process, which is the aim of grounded theory research. In addition, the exercising of openness, and other requisite mindsets was previously located, as per data analysis, within innovating. Also, aspects of personal introspection and character development by participants were also outside the immediate scope and concern of grounded theory. Instead, the research was directed to understanding the group patterns of behaviour by which participants resolved the problem that occurred within a psychosocial field of interactive activity. Not surprisingly, the final write up of influencing, whilst reflecting that coaches exercise a wide and diverse sphere of potentially mutual influence, concentrated on the content and extent of the sub-process, not the extent of sphere of the sub-process. This illustrated that reworking weeds out theoretical problems such as “needless redundancy, clarifications of confused or mixed analysis, trimming and adding illustrations...unit focus and conceptual style, and other needs of sections and subsections” (Glaser, 1978, p. 136).

Likewise, there were individual differences amongst participants regarding the extent to which they expected and allowed scope for players to exercise influencing over the aspects of innovating options, and implementing methods. Some participants considered the coach the primary team developer, whereas other participants sought as much developing input as possible from as many team members as possible. However, no matter what end of the spectrum, all coaches exercised to some extent the group pattern of empowering. In keeping

with the aims of a grounded theory, it was this conceptualisation that became an indicator of influencing, rather than a description of the diverse examples.

The emergence of the third sub-process, implementing, was relatively more straightforward during analysis. Implementing had emerged through memoing (see Appendix D, Memo 13) before the tenth interview. This time, participants referred directly to implementing. Along the same lines, data also confirmed implementing was a sub-process that focused, applied, and gave concrete expression to the efforts of other sub-processes within developing. For this reason, enabling was considered as a possible descriptor during a round of memoing (See Appendix D). However, constant comparison during writing up clarified the extent of the implementing, and the inter-relationship with the innovating sub-process. In particular, there was fluidity in the locating of the point of decision, which developed a potential innovation into an actual implementation. Initially, deciding was placed within innovating. However, increasingly this was a theoretical difficulty, as the more abstract reflective aspects of innovating emerged. In addition, there was an increasing realisation that much innovative possibility was provisional until inter-related with the team-interactive influencing sub-process. As a result, it became clear that the decision to enact was an aspect of implementing. However, the initial misplacement was useful, as it highlighted that deciding was the point of inter-relationship between the innovating and implementing concepts.

An additional complication in delineating sub-processes was the possibility of a fourth sub-process, balancing. This was reflected in memos, which initially either had balancing as the last of three sub-processes, or as the third before the fourth implementing sub-process (see Appendix D, Memos 12, 15, 17-21). The balancing of options and resolving of paradoxes was found at points within the data. These paradoxes, dichotomies, and dilemmas included the need for coaches to address both physical and mental aspects within team development; institute structure yet maintain fluidity; give expression to individual talents, but fit that within team requirements; on-field vs. off-field needs and abilities; initiating or responding to events; analysis as opposed to task; reinforcing established patterns juxtaposed with the need to innovate; and rugby as an art or a science. However, the balancing possibility was eventually discarded as a fourth sub-process. The primary difficulty with four sub-processes was that it represented a difficulty in the free initiation and direct inter-relationship between any sub-processes (see Figure 1), compared to the simplicity of three sub-processes (see Figure 2). It is possible that if data collection had continued, balancing may have earned a place in the theory of developing.

Figure 1 illustrates the problem that with fourth balancing sub-process there is a difficulty in the free initiation and direct inter-relationship between any two sub-processes.

Figure 1: Developing with four sub-processes

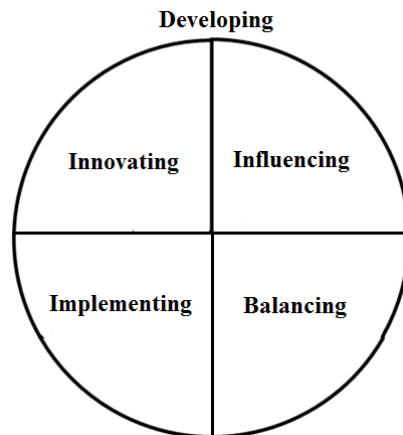
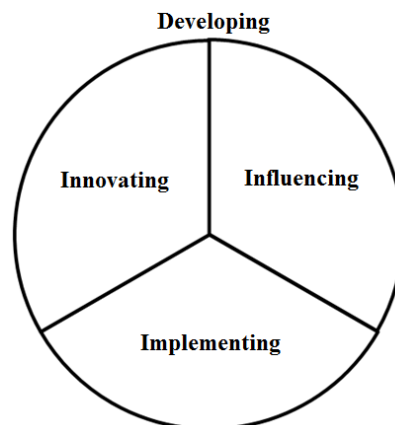


Figure 2 illustrates the comparative benefit that with only three sub-processes there is a free initiation and direct inter-relationship between any two sub-processes.

Figure 2: Developing with three sub-processes



Interestingly, subsequent reflection and reading after the writing-up has raised the possibility that balancing presented theoretical possibilities. Even though the option of theoretical coding was not used in this research due to time constraints, balancing is listed as a theoretical code (Glaser, 2005). Glaser argues that balancing is a step beyond the dichotomy or trichotomy of complex decisions: "Balancing is handling many variables at once in order to start an action, keep an action going or achieve a resolution. One gets an equilibrium between

all the variables” (Glaser, 2005, p. 29). However, even though this research went no further than substantive coding, balancing is not the only theoretical code offering insight into the findings of this thesis. Amplifying causal looping, a derivative of the causal theoretical code family (Glaser, 2005), offers insight into the theory of developing. “As consequences become continually causes and causes continually consequences, one sees either worsening or improving progressions or escalating severity” (Glaser, 2005, p. 9). There seems to be resonance between this theoretical code and the theory of developing. The elements of no set initiating sub-process within the theory of developing, the scope to interrelate sub-process directly one to another, all for the purpose of enhancing the progress of team developing, seem to exhibit an amplifying causal loop.

Research Challenges

Returning to practicalities of process, initially only the first two interviews were transcribed. In keeping with Glaser’s recommendation (1978) to increase the time and effort for the inductive-deductive conceptualisation process, subsequent interviews were recorded. However, the only initial written records were notes made during interviews or immediately after interviews (see Appendix D). These captured initial thoughts, potential participant concerns, and possible conceptions. They were also supplemented by memoing, which was made whenever inductive possibilities occurred to the researcher. These would often be hand written using available sources, and subsequently transcribed and stored using the researcher’s email facility (see Appendix D).

Whilst the decision to avoid time in transcription of interviews was valuable in the conceptualisation phase, it presented difficulties during writing up. Specifically, conceptual saturation, the aim of data gathering in a grounded theory research was never a likely prospect for this thesis. This restriction was due to time constraints, which also limited the participants to ten, and total interviews to thirteen. Also, the purpose of the research was to demonstrate the researcher’s mastery of the grounded theory method, rather than achieving saturation. Whilst sufficient data was gathered to conceptualise a theoretical explanation of the participants’ group pattern of behaviour, there was lack of clarity and full emergence of all conceptual indicators when writing up commenced. This meant that subsequent selected transcription from recordings was necessary to organise data for writing up. Due to the provisional conceptual framework which already existed, subsequent transcription aided the constant comparative process. This resulted in a continual fluid rearrangement of potential

conceptual indicators, and explanations of indicators, until the theoretical writing up contained in Chapters Three, Four, and Five was completed.

Conclusion

This chapter has outlined the methods of grounded theory and explained how the methods were applied in the research process. While much has been achieved in a small study, it is recognised that the size of a study, perhaps time constraints, limit theoretical development. Nonetheless, what is clear is that participants do have a voice, if they are given a chance, and they are usually willing to discuss everyday behaviours that are meaningful to them, if a researcher is prepared to stay open and follow the principles of emergence. In the next three chapters findings are presented.

Chapter Three: Findings – Innovating

This research has found that the main concern of New Zealand rugby team coaches is winning. To manage this concern, coaches utilise a process of developing. Developing enhances team and individual performance, so that the team is more likely to win. There are three sub-processes in developing: innovating, influencing, and implementing (see Table 1). While the sub-processes are presented separately for ease of analysis, in reality they overlap. Table 1 outlines the sub-processes, categories, and category indicators which explain the theory of developing.

Table 1: The Theory of Developing: Sub-processes, Categories and Category Indicators

Sub-processes	Categories	Category Indicators
Innovating	Identifying	Watching, thinking, awareness, anticipating
	Questioning	Goal setting, analysing, comparing, problem solving
Influencing	Structuring	Culture, disciplining, managing, fun, circumventing
	Persuading	Encouraging, motivating, steering, empowering
Implementing	Deciding	Simplifying, selecting, delegating, prioritising
	Applying	Manipulating, systematising, repeating, pressuring, maintaining

The Main Concern

The main concern of New Zealand rugby coaches is winning. The focus on winning includes competitive success, performance issues, and realisation of potential. Winning is a clear, obvious, and measureable task for the coaches of all rugby teams:

To achieve the desired outcome, which is, you know, winning (Participant 2).

Everything you do is about winning...we wanted results, we needed results. The plan is we wanted to win the competition within three years (Participant 6).

Coaches' teams do not always win particular games or competitions, as the game of rugby is full of uncertainty. Uncertainty is linked to the unpredictability of individual and team behaviour. Other peripheral actors, such as referees for example, are just as unpredictable as players.

However, win or lose, coaches develop teams and the players so that performance potential is able to be realised:

That's the sort of thing you judge coaches on. They reached their full potential...I squeezed the absolute maximum out of them (Participant 7).

Winning is maximised by developing. However, by implication, winning against inferior opponents is an unsatisfactory process if a team plays poorly and potential performance progression is slow. Nevertheless, winning is problematic and is resolved using the process of developing.

Winning depends on realising performance potential. Developing that potential is very much a hidden process that is part of the everyday work of the team:

We got success two years before we should have...don't worry, we were working away.....we hung in there, we were gritty, we got a win against a team full of All Blacks (Participant 8).

It is evident that the developing process takes time. Coaches obviously have a picture in their mind of timeline possibilities, although realisation is uncertain. Developing may happen quickly, occasionally, or more slowly than anticipated. Therefore winning and performance are not necessarily simultaneous.

However, readiness for competitive success, performance, and the realisation of potential overlap and certainly improve the likelihood of winning. Not surprisingly, winning is not automatic. Now and again, opponents develop quickly. Sometimes on match day it is possible that an inferior team wins "against a team full of All Blacks". Winning is everything. Thus the coaches in this study seek to manage this concern through the process of developing. Therefore, this is a theory of developing which has three sub-processes: innovating, influencing, and implementing.

Innovating Defined

Innovating which has the categories of identifying, and questioning, refers to the sub-process by which coaches gain awareness of advantageous opportunities. Innovations are any opportunities which, if developed, change teams. The developing of opportunities contributes to competitive advantage, which in turn enhances the likelihood of winning. Innovating is the what in the developing process. Innovating has two major categories, identifying and questioning (see Table 2). The opportunities for innovating come in many forms and include new player selections and new tactics to name but a few. Innovating opportunities also include responses to opposition game plans and patterns, sports science knowledge and technology, and changes in team and wider administrative structures. Innovating is anything

that has the possibility to change a team so that team function is different. Innovation usually appears masked as some sort of change:

We became successful because I think I added some things that defied some of the thinking. There were some little bits and pieces (Participant 4).

Innovating is not only driven by change identification, but by a vision for what might be:

I had this vision if we could...play this new style (Participant 5).

Coaches measure the success of developing by winning, preferably winning well. When innovation occurs, performance improves, and the team wins. Innovating requires coaches to identify changes. The focus of coaches is forward-directed, towards the performance goal. This futuristic perspective questions the traditional established processes:

Trainers do historical things; they do things that have happened before... coaches should be...looking to the future (Participant 4).

Innovating is driven by a search for something better. This is possible by identifying alternatives and questioning the status quo. Failure to innovate relegates the coaching role to something less than coaching. The coach is reduced to a trainer following the existing order. Therefore, innovating is grounded in change and the need to do things differently:

We made some changes in the coaching team...I needed some new thinking (Participant 5).

Rules change, but coaches change things; they change fundamental things (Participant 10).

Coaches' identify future possibilities, which prompt innovating. On the one hand, developing demands coaches act as agents of change. On the other hand, failure to innovate compromises the likelihood of winning. Part of the problem is the everyday competition coaches' teams face from their opposition. Variety is a necessity:

If you end up doing things the same, that's dangerous...so part of today's environment is to have subtle changes...bringing in a variation... (Participant 6).

If subtle change, that is innovation, is absent, a team moves into dangerous ground, where initiative is forfeited. To do things in the same way leads to predictability. Predictability sacrifices the element of surprise. Sacrificing surprise cedes the advantage of the initiative, and renders the team vulnerable to surprise from the opposition. Identifying innovations safeguards against predictability.

Innovating sometimes results in something entirely new. Strategies, tactics, and methods that have been hitherto absent, unknown, or unidentified, are incorporated into developing. As a result, innovating is opportunistic yet it is essential for winning:

And so again, that sort of innovation, as I say it transformed the game...We actually found that...it became a really good opportunity to attack (Participant 2).

Innovation to me can be new theories, new techniques, new technology, or it can be a one-off creation (Participant 5).

It was innovative what we did to prepare. I looked at tactics, what I wanted to do was create more pace...we had to be even fitter, faster, we had to be able to create fast ball and space...we were set up for a fast game (Participant 7).

There must be some way out, of doing things differently, uniquely, in a way that hasn't been done before, and there won't be many, but you only need one or two of those (Participant 10).

However, there are limits to the extent of innovating:

To summarise it all, innovation in rugby is not dramatic, because something that is dramatic can collapse. Innovations are small changes in technique and tactics that create an edge, that create opportunity (Participant 7).

Innovating, whether something entirely new, or as a variation on an established theme, is not an end in itself. Innovating seeks advantage over opponents. Innovating also focuses the developing process to realise winning:

We developed a four year programme at the end of which, we would have something that would give us the edge. Players who had been there previously always spoke about 'the edge'. We looked at ways we could create that edge...that was about developing players and finding the right players to play a creative innovative game...we decided we needed to come up with something new (Participant 7).

Very often the subtleness of innovating lies in the detail. Inherent with identifying is questioning:

At some point you have to say, 'what's our point of difference?' (Participant 9).

Innovating also depends on questioning previous behaviour and being prepared to develop refinements:

We actually want to be better. What are you prepared to do differently this year so that you are better than last year? (Participant 4).

The purpose of developing innovations is to gain advantage contestability, which is fundamental for winning. Coaches' active restlessness and dissatisfaction with the status quo prompts identifying and questioning that is the heart of innovating.

Identifying

Identifying is a category of innovating. Identifying is noticing an innovative resource which may enhance developing. The indicators of identifying are watching, thinking, awareness, and anticipating. Table 2 outlines the categories, and category indicators of the sub-process of innovating within the theory of developing.

Table 2: The Sub-process of Innovating: Categories and Category Indicators

Sub-process	Categories	Category Indicators
Innovating	Identifying	Watching, thinking, awareness, anticipating
	Questioning	Goal setting, analysing, comparing, problem solving

The basis for all innovating is identifying players. Innovating begins with watching. Sometimes coaches watch quietly in the background, or through second hand means. Nevertheless, watching is active:

I was very much dependent upon our clubs, and the effort they put in...and I was very much in touch with all my clubs, and all my club coaches, and knowing who were coming up from the 4th grade...or the 2nd grade, or who was knocking on the door...and knowing all of my union's players (Participant 3).

With selection, I set a whole process in place, which was - identify the positional requirements...when I had people watching I had them watching for positional requirements (Participant 5).

Player identification, while taking place unobtrusively in the background, is highly dependent on what is happening within the existing structures. If coaches are to develop a team they need to know what to look for, where and how to find it, and how best to activate it. Watching also involves looking at external factors that impact winning. Watching is not limited to players:

Oh, I always studied law changes. I definitely did, so that I could exploit them...keep a study of them, yeah, and exploit them to your advantage (Participant 3).

I was looking at [the opponent's] strengths and seeing what we were prepared to concede, so we could eliminate that strength for them. Looking at the opposition, and knowing the laws – you've got to know the laws (Participant 6).

Once laws are understood, coaches consider potential innovations for development. Watching and thinking are intertwined.

Whilst mental flexibility is required to stimulate the identifying process, the source and acquisition of identifying ability is much less certain. However, the discernment quality of identifying, and its necessity for coaches is not:

It requires a certain type of mindset...a certain type of intellectual intelligence...a mentality, and it's a lateral thinking thing...That's what coaching is (Participant 1).

People have to be open to new ideas...the ability to be lateral. I don't know where it comes from. You've either got it or you don't (Participant 6).

So the creative coach has the ability to identify...strengths, and identify how to cut those off...you have to have the ability to think around a problem, to think creatively. And if you don't have that, there is a limit to how good you can be (Participant 7).

Identifying also manifests itself as awareness, the ability to capture developing opportunities which have been hitherto latent:

Awareness...people can become aware by being pointed out, awareness by what you do...you don't say, 'this is...awareness...' but they become aware as it becomes part of their, their....armoury if you like...(Participant 1).

Listen and learn, and learn from the opportunities (Participant 1).

Awareness and opportunity development are enhanced when coaches are prepared to learn from their opponents:

I was astounded at just how good [our opponents] were....and once again, you've got to learn from your opponents...I felt I had been a fairly structured coach, but seeing the degree to which they had carried it, it just astounded me. And I thought, "well, hell we can do better than what we're doing" (Participant 2).

Awareness results in an inquisitiveness that identifies the out-of-place:

It's about the conversations you have...I had done a bit of judo in my day, so I knew about foot positioning...I watched [one particular player]. Every time there was a [maul], he would come out with the ball...he was only a tiny guy...it's bits of basketball, a bit of other things, a composite. So it's showing those things, and the penny either drops...(Participant 4).

Identifying the small details is important for developing. Awareness notes anomalies such as smaller players winning the ball, or unintentional mistakes that lead to success:

When I've come up with an innovation, or something that is new, it's often through watching a team, and they've tried something, and they've cocked it up, and its

actually proved successful, not what happened, but look what that created...(Participant 9)

Awareness is not an automatic or transferable capacity. However, the wider the breadth of coaches' experienced-based knowledge improves the likelihood that awareness will identify the unstructured and occasional opportunities for developing.

As coaches are involved in innovating, it is evident that identifying also has an anticipatory component. Anticipating includes a considered knowledge in advance of what an opponent is likely to attempt, and conversely, what an opponent's anticipation process is likely to produce. Both represent a potent possible source of winning:

We played on the fact that...we knew they would try and play adventurous rugby...and we just got up, and bloody smacked them (Participant 2).

Anticipating is a two-way process. Coaches are well aware the opposition team is doing the same to them:

We are not playing against a team of fools. They are going to check (Participant 3).

With video analysis everybody sees what everybody else is doing, you're analysed...knowing how they [opponents] are going to be reacting, then – right! What's your move if we do this? (Participant 6).

Identifying possibilities using anticipation is so much easier with access to video replays. Despite this, coaches can still be caught out:

We were all asleep at the wheel. We didn't anticipate...we were still winning, and then, Whammo! We came a cropper. We didn't sit down and figure out what it was the opposition represented (Participant 8).

You've got to anticipate. We anticipate from week to week, as well as from month to month (Participant 9).

Identifying is an ongoing process in that coaches are always required to be alert, to anticipate constantly. Identifying and questioning overlap:

Talking about anticipation...what I try and do is look for patterns...there's our 'in'. Say we go for three or four weeks, and we start seeing trends rather than one-offs...so all of a sudden they will say, "what will they find hard to adjust to? Where can we get them on the hop?" (Participant 9).

Part of anticipating includes having the confidence and using evidence to identify innovations. Evidence is the predictability that follows established precedent. However, opponents' future choices of tactics and player selections, and their ability to develop those

choices are uncertain. This is due to the inherent nature of competition, in which coaches are very often surprised by an opponent's initiative, sometimes because an opponent reacts in an unforeseen manner.

Despite the uncertainty, failure to anticipate opponents' innovations jeopardises winning. Conversely, the element of surprise at an opponent's expense dramatically enhances the likelihood of winning. Hence, there is the necessity for continual anticipation to identify innovations.

In summary, the identifying category of innovating represents an integrated combination of watching, thinking, awareness, and anticipating. Together they enable coaches to discover new resources and opportunities, which may work together to enhance developing. Identifying also lays a foundation for the other category of innovating, which is questioning.

Questioning

Questioning is about asking and judging if a particular innovation can enhance winning and developing. Questioning takes the next step after identifying, and also considers whether the potential innovations can contribute to developing. The indicators of questioning are goal setting, analysing, comparing, and problem solving.

Asking overt questions, often of the self, is a key stimulator and fundamental for innovating. Questions, particularly, "Why?" are a means by which coaches test the possibility of winning within the existing team order. An unsatisfactory answer highlights the necessity of developing another innovation:

What are you trying? Why? The Why and the What. What are you trying to do at this? Why are we trying to do it this way? A lot of, "What are we going to do?", "Have we got the skills to do this?" The, "Why do we do it?", and, "What happens if it goes wrong?", and, "Who calls it?" Those are the things that I think are important....I look at something and say, "Why should they be doing that? What are they trying to achieve?" (Participant 1).

Questioning supports innovating as it is useful to analyse situations, to think about what is happening, and why a team plays in a certain way:

So you're wondering, "Why are you doing that?" You know. And then they'll do it again, and then they'll do it again. I just can't see the point in it....I said, "There's got to be a better way" (Participant 2).

I wonder why the ball is fed so regularly from lineouts...Something that intrigues me at the moment...at the kick offs. Why do they kick this way up in the sky? Why not

kick it to their hot-shot first five eighth...then box him? Guarantee he'll kick it back to you (Participant 3).

Questioning challenges the established order. Questioning is a means to deal with the tension between the logic of what should happen, and the unpredictable progress of developing:

If the, 'Why?' question is being asked, it's usually because some, 'What?' questions haven't been asked first. If we ask, 'What?', and, 'How?', and 'When?' that should take the 'Why?' question out of it (Participant 4).

Questioning also serves as a problem-solving strategy, which is important both to innovating and developing:

In terms of understanding, it's the 'Why?' that leads to 'How?', and 'What?'.... If you understand the, 'Why?' you've got a mental framework to work with (Participant 6).

What do you do to stop that happening?... I've always been an inquisitive individual, never just accept anything, always asked questions...(Participant 7).

Questioning is important to test innovative change. Answering such questions about innovations in the affirmative results in developing.

At the same time goal setting is an important aspect of questioning. Goals function as visions, which help to focus innovating. The attainment of goals improves developing. The answers to the question of goal attainability inform coaches whether an attempt at developing an innovation should proceed or not:

You've got to set goals, but they have to be realistic goals, and relevant to the talent you have available, and you have to know how you are going to go about it (Participant 1).

It has to be attainable. But what is unattainable if you set your mind to it? (Participant 2).

If they are way up here, they are unattainable, and players can't aspire to them (Participant 5).

Goal setting, of necessity, requires a change to the existing team. Goal setting is sometimes hidden beneath the overall vision of developing:

I decided I needed to lift the bar. We had a base of accuracy and efficiency, so now we needed to bring in flair as well to supplement it...I had this vision if we could...play this new style, then there was a chance to build it, and then come back and hopefully implement it (Participant 5).

Sources of goal setting are many and varied, and the context in which the questioning takes place is dynamic:

We used to come together and talk about the game, exploring what was possible within the game, wanting to win, thinking about what we could do...experimenting and reacting to your environment. Innovation is like a box, which you put a lot of things into – team profile, opposition, environment, referees, knowing the laws, knowing the history of the game because a lot of innovation is going back to the future. Then you give the box a shake, and see what comes out. It's synthesising the good ideas from the bad (Participant 6).

Analysing is also a means of questioning. Analysing subjects the relevant data to logical thought:

Analysis is done to the nth degree now. I used analysis...quite a lot. We had a warm up game...and I really analysed...to the nth degree, until we just about beat them (Participant 2).

Here's the reason these guys don't work it out – they don't have the logic skills (Participant 7).

Analysing the inherent logical consistency of innovations helps coaches to question the abstract worth of an innovation. Analysis is driven by questions:

Wingers were throwing the ball in, and there were three problems with that. One, wingers are useless at throwing the ball in. Two, every time you try and practice with them, it mucks up training. And third, when they do throw it in, it leaves a hole somewhere....why don't we have someone in the forwards? It doesn't have to be the hooker (Participant 4).

Sometimes questioning is hypothetical or imaginative:

If you could combine [rucking] with the modern game...it would be magnificent. The maul, done well in the current game, is a magnificent tactic...I am absolutely certain if you were to combine the two, you would have the ideal game (Participant 10).

Analysing cause and effect relationships provides a means by which coaches question possibilities for developing and the desirability and practicality of an innovation:

[Teams] don't have a policy if they win a tight head...if you win two tight heads, on average you'll score one try. If you win two tight heads, and you're a good team, you'll score two tries. Figure it out! You've got an overlap, that's what you're all about...if you're not battling for possession...how are you going to get on? (Participant 3).

Comparing focuses questioning. Comparative questioning seeks to bridge the gulf between the abstract choices of innovation and the practicalities of developing:

The ruck is an old-fashioned bitch, only worth about two or three hit-outs a year. Go for this mauling, because it is the playmaker. It deceives the opponent. You have so many deceptions on attack...your opponents are not committed to a ruck – they are to a maul (Participant 3).

I watched coaches, and I think I got a lot of my philosophy, and a lot of my approach to the game by watching what they did well, and what they did badly, and I think you learn from what they do badly, as well as what they do well (Participant 5).

Comparing innovation choices helps coaches to look for the other side of an argument: Defence is easier than attack. There's two ways to win: Score more points than them, or them scoring less. There were two sides to the equation (Participant 6).

Comparing implies questioning the relative worth of innovation possibilities.

Establishing relative worth also implies the fulfilling of the main concern, winning.

Problem solving is the end result of questioning. In fact, problem solving is an imperative, because it is necessary for developing:

[Coaches]introduce these methods...coaches can revert to referees to solve it...we didn't have that luxury, so we had to solve it ourselves...Finding solutions, being a problem solver is a huge part of coaching (Participant 7).

Problem solving builds on the clarification provided through goal setting. Once a goal is set, it is easier to identify how developing might occur, by eliminating the problems hindering attainment:

You look at the goal and you come back from that and [ask] where is the stoppage? So then you find a way around the stoppage...Finding and setting goals in what we do, whether it's a weeks time or months time or five years time you live your life in five year cycles, and you have a broad plan to reach that goal, but be able to work around the obstacles that are there, that are put up in the way, because that's what life is. That's what rugby is. You've got to work your way around the obstacles (Participant 1).

Once a goal is identified, coaches ask questions about obstacles. Questioning retains the goal focus, but raises the problem solving issues about the process of developing. In this instance developing is a hidden pattern of behaviour:

How do we get there? What is the goal? What do we need to achieve the goal? And then let's put all the processes in place to achieve that (Participant 5).

There is no doubt that questioning is problem-oriented and both processes are essential for developing:

We've got a problem. Find the accurate reason why it's happening. If we do that, then we are three quarters of the way there. Then we ask, "What do we do? Here's how I fix it". You give solutions and processes. You don't clone. If you want to vary...give it a go. Here's the basics, but that's only a starting point (Participant 7).

Problem solving represents the developing of innovations that are hidden beneath the surface. Sometimes the problem is especially difficult, but coaches persevere, as the resulting development adds significantly to the likelihood of winning:

We designed a scrum that suited him...a hell of a challenge. I stuck with him because he was such a good forward, a dynamic forward, a wonderful runner, ball handler, skilled kicker. Gave him the right touch penalty kicks because he had such a good foot (Participant 3).

Problems requiring solutions appear in a number of forms. Sometimes problems are identified externally, and questions are raised by those who are outside of the team. Questions are not necessarily asked explicitly, but problems that raise questions are:

[The opponents] did everything to upset us. One of their players was injured...I got a call from their manager on the Monday wanting me to address it. He had already mentioned it to the press...I got hold of the tape...it was their own guy with sprigs flying and he copped it...so I went back to their manager and said, 'You are wrong' (Participant 5).

External problems compromise developing. Similarly, internal team problems interrupt development, as they interfere with opportunity development:

If the ball is in the hand, you are responsible, and whatever you decide, you are leading the game...everybody is a leader to some degree. The problem is we don't give them a chance to show it (Participant 4).

The source of other problems that challenges developing is inherent within the on-field playing structure and laws of rugby:

One of the challenges for short line outs is, if you've only got four guys in there, what are you going to do with the extra guys taking up space in the backline? (Participant 7).

Coaches' success in problem solving, by implication, is indicative of successful developing.

In summary, the questioning category of innovating represents an integrated combination of goal setting, analysing, comparing, and problem solving. Together they enable coaches to determine value and applicability of the new resources and opportunities, which can enhance developing. Together, the identifying and questioning categories of the

innovating sub-process also lay a foundation for another sub-process of developing, which is influencing.

Conclusion

Innovating represents a primarily intellectual challenge within the theory of developing. Mental skills of open-ended speculation and search are juxtaposed with critical and reflective judgement. Innovating is the catalyst for change, which fosters the elements of surprise, and helps coaches in seizing the initiative, which is of critical importance in competitive endeavour. At the same time, innovating provides impetus for change within rugby as a whole. Without innovating, coaches and teams are destined to tread familiar and well-worn paths, running the risk of eventual defeat due to obsolescence. Therefore, innovating remains an integral sub-process of developing.

Chapter Four: Findings – Influencing

In the previous chapter the sub-process of the findings, innovating was presented. Innovating is the what in the developing process. Coaches are required to change their existing teams, by developing innovations. An innovation was anything that had the possibility to change a team so that team function was different. In this chapter the sub-process of influencing is explained. Influencing is a pattern of behaviour that is intrinsic to the theory of developing. Influencing has two major categories, structuring and persuading (see Table 3). As will be seen in influencing coaches seek to convince others of the need to conform to the requirements of developing. Influencing is an acknowledgement that rugby is a cooperative endeavour. Influencing is the who in the developing process.

Influencing Defined

Influencing, comprised of the categories, structuring and persuading, refers to the sub-process by which coaches develop buy-in from others. Influencing is about shaping the thinking of others, in order to control their actions. Coaches are required to influence others, so that the team acts collectively. Influencing is subtle and occurs in a round-about way:

Now what you can't do with rugby players is dictate certain game plans and tactics that they don't have buy-in to ... a good coach will massage the thinking ... [a coach is] a man-manager ... he has to be persuasive and steer [players] down the path he wants to [them] to go (Participant 7).

Influencing acknowledges that people contribute best to developing when their input is willing, rather than coerced. Influencing therefore involves co-opting people, so their actions ultimately align with the coaches' plans for developing. Influencing also extends beyond the immediate team, and involves others whose decisions are significant for developing:

It's also the off-field stuff, involving the families, making them feel special...administrators, taking the club, the union [with you] ...and human nature being what it is ...if you make people feel important, it has a ripple effect (Participant 2).

I decided if I was going to be a success, I had to build a team that was far wider than the football team we were talking about. I won over the club coaches...I involved the people who stood against me (Participant 5).

Influencing the referees is very important for coaches ... long-term coaches' [need] input and influence with the [International Rugby Board] to get law changes and law interpretations (Participant 7).

To win, the scope and duration of influencing extends well beyond playing time on the field and moves to influence peripheral actors. Getting buy in is critical:

Your CEO's got to know your plan, you've got to get his buy in, or your board buy in, or your franchise buy in. They want buy in (Participant 9).

Sometimes influencing is indirect, as occurs in the category of structuring. Part of developing requires coaches to structure environments and messages, thereby influencing the buy in of those who encounter that structure:

[The opponents] orchestrate[d] a campaign to put the subconscious idea into the referees' minds that we cheat (Participant 1).

More often than not structuring is hidden. Those on the receiving end are often unaware that their decisions conform to the prior decisions of coaches.

Influencing however is also direct, particularly when it occurs as the category of persuading. Persuading involves the issuing of directives, with the expectation respondents will consciously conform to a decision that is already made for them:

I said to anyone who is sent off...I will make the decision you will not come back into my team until I decide...the ill-discipline...would have spread through my team, and it wasn't going to. He was warned, 'Any ill-discipline, any contravention of the rules of rugby...– you watch out – you'll cop it!' (Participant 3).

Overall, coaches aim to have a positive influence on players:

As a coach, you have to be a salesman. You get your...players around, and sell them the benefits (Participant 9).

In influencing, coaches seek agreement and involvement from others. Accordingly, influencing necessitates coaches to be adept with people:

A coach [has to]...get the best out of people...you also have to listen to the players...so they feel they are part of it... to get that bit extra, to capture the imagination of the players...If a coach doesn't get on with his team, he's bugged! (Participant 10).

Coaches' adeptness in influencing others requires them to have a good understanding of various personalities, temperaments, learning styles and motivations. Armed with that understanding of human nature, they can then decide how best to co-opt the buy in of those required to aid in developing.

Table 3 outlines the categories, and category indicators of the sub-process of influencing within the theory of developing

Table 3: The Sub-process of Influencing: Categories and Category Indicators

Sub-process	Categories	Category Indicators
Influencing	Structuring	Culture, disciplining, managing, fun, circumventing
	Persuading	Encouraging, motivating, steering, empowering

Structuring

Structuring is a category of influencing. Structuring is the indirect messages coaches use to further developing. Indirect messages are communicated by means of the structures that already exist, or which coaches set in place. The purpose of structuring is to influence those who enter into that sphere of informal and discreet communication. The indicators of structuring are culture, disciplining, managing, fun, and circumventing.

Coaches' often need indirect means to secure the agreement of others, so that they influence resultant developing actions. Structuring is a way of convincing others, often without their formal realisation, so that influencing occurs:

A lot of control is by inference... [it's] how the players perceive you...you don't use it consciously. All coaches have tricks... triggers [for] what you've been trying to achieve in training (Participant 1).

You give space, you are not in control...well, you're in control (Participant 4).

Structuring is very much a hidden process that occurs in different guises. Regardless of presentation, structuring is the hidden process of taking control of the environment so that developing is possible.

The spheres that require structural influencing include teams, media, rugby unions, the public and corporates. In other words, anyone who can affect developing is subject to influencing:

I won over the club coaches,...I won over the media...I was totally in sync with the officials of the rugby union...I was with the 2nd XV and the Colts coach as one...I spent most of my time off the field getting those key things right (Participant 5).

Teams that receive the necessary reinforcement from supporting spheres are more likely to win. Securing a concerted effort across various spheres is a sophisticated coordination of the human psyche and complex group dynamics. For securing of multi-

sphere support to happen, coaches' must expand their influencing repertoire to include indirect structuring.

Developing the team environment is the most important sphere coaches structured. Structuring the environment begins well before teams played in public, but can have a significant effect on winning:

I spent a lot of time getting the off the field things right. I structured things, and we got a real jump on the field and really got a good environment (Participant 5).

Environmental influencing was complex. Professional rugby teams are sophisticated operations that are highly structured. Large squads and support staff numbering dozens represent a host of physical logistical requirements such as travel, accommodation, diet, and fitness. Also subsidiary groups such as the media and the public place demands on team time and attention. Efficiency of movement of large teams must be structured. Agreement, planning, and organising are essential.

Logistical efficiency depends on individual and corporate cooperation. Coaches have a significant influence on how everyone cooperates with each other:

You create an environment, and you make sure that...[everyone] understands their job, what their responsibilities are, including behavioural things (Participant 1).

Structuring has a psychological component that focuses on volition, cognition, and affect. The psychosocial form of influencing assumes that players may need to learn how to respond to structuring:

The culture of that group were not affected by adversity ...we were very clear...the continued success has been due to that growth, and the growing cultures (Participant 9).

Developing culture promotes social interactions that are critical for influencing. Culture must be clear to be effective. Culture includes the shared values, expectations, and informal messages that influence team behaviours. The structuring of a good culture has a powerful effect that benefits developing:

Once you get everyone thinking about the game and contributing...that's how you build a culture...we learn how to win ... the core value and belief and culture has a ripple [effect] (Participant 2).

Structuring culture is an ongoing, continually evolving process:

We need ... team protocols, team values, and a shared purpose, something that is ours for this year – not last year (Participant 9).

The developing of a culture represents a means of influencing that extends in many different directions. Social interaction is dynamic and influences culture. However, there are risks attached:

The culture of a team is just huge. If the culture is rotten, everything else will be (Participant 4).

Structuring culture also means that the resources required for influencing are expanded beyond the efforts of coaches. Continual reminders influence players, who pass on the hidden cultural messages to new comers:

That psyche there is still the same. You put their jersey on...first of all, you're privileged, second, you have to keep on earning it, and thirdly, if you make it, you'll have an experience as rich as anything you can have as a New Zealand rugby player. That was a very simple mantra: 'Front up, boy, and you'll have something special' and they were right (Participant 10).

Clearly, coaches are leaders who drive cultural influencing:

Leadership is absolutely critical in our sport...performance, leadership, culture. Your leader drives your culture, and they develop it (Participant 9).

Influencing culture requires constant vigilance. Players who resist undermine developing, and are removed:

You have to have players who will fit into your culture... in five years I picked two players who weren't up to that...[they] just didn't fit with us (Participant 4).

We might have a player [who is] poisonous to our team. We get rid of him. We bring in someone else. He's not as good technically and tactically, but [he fits the culture] (Participant 9).

Culture, whilst less tangible than on-field performance, is a vital factor in developing. Although on-field performance is more ephemeral, culture sustains individual and collective on-field performance in the longer term. The structuring of culture may entail a temporary reduction in winning. Nevertheless, developing a good culture also brings attrition-prevention rewards.:

The better your culture, the less casualties you have (Participant 9).

The structuring of behaviour is also achieved by disciplining. Disciplining influences the developing of specific behavioural standards:

I was going to be a strict disciplinarian. ... it was about setting standards (Participant 5).

Disciplining is an overt process that works in tandem with culture to influence developing. Discipline creates a structure for action. This disciplinary structure confronts the natural order of life that extends beyond the team:

We're dealing with a young group, and you're trying to change a culture from indiscipline to discipline...(Participant 9).

There is a potential conflict between the physical benefits of players' youth, and the necessity for psychological maturity. Without a disciplinary structure, effort can be dissipated, or misapplied. Disciplining also represents a means of influencing routine, which grounds professional sportspeople in the everyday world:

Discipline and structure is the key in a rugby team. Shaving every day – little things keep them normal. Everyone has to get up at 8am (Participant 10).

Maintaining routine in mundane tasks implies the presence of pressures to discard daily chores as too humble and insignificant. Disciplining mitigates the effects of youthful temptations that are perpetuated by media coverage, public interest, and significant sums of disposable income. If standards are not met, disciplining turns into educating, often by punitive example. It also serves to limit the damage, when the examples set are antithetical to successful influencing:

If the good structures and things are in place, people fit in. If they don't fit in, they fall out. ...The one's who come through are indoctrinated into the culture ... and if you go outside the parameters of behaviour - off the field, or on the field - then they are sitting out or [are] dropped off (Participant 1).

Because coaches are developing teams, individuals who challenge the framework, no matter how valuable, require disciplining. The necessity of disciplining, especially of more senior member, implies team egalitarianism:

You have strong discipline with firm rules that every player, no matter who he is, has to comply with (Participant 7).

Coaches are able to influence because they have explicit rules and structures for standards of behaviour. These present a consistent and united influencing message. Disciplining comes into play as a consequence of failing to adhere to those standards. Disciplining and influencing are intertwined:

I've got to have some standards. ... I pick guys who can meet my standards...I set the standards. They became the fundamental fabric to what we were (Participant 5).

The big thing is having those collective core values that people can grasp hold of. ... when we decide on what this team's all about, and what our behaviours are going to be, it [has] to be quite clear ... [it's about] 'I'll buy into that' (Participant 9).

Setting a few basic disciplines establishes influence. Professional athletes come from diverse, sometimes troubled social settings, and have varying abilities to comprehend complexity, or behave well consistently. Basic standards provide a structure that everyone can aspire to. A residual benefit of discipline is that it makes the team experience more enjoyable:

The happiest team is the best disciplined team...It has been my life guidance (Participant 3).

The discipline of collective effort brings rewards. Professional rugby teams are unusual. There is a potential clash between individuals in close proximity, performing high pressure, and result oriented tasks. Disciplining helps players to be confident that everyone will maintain standards. Team members also draw satisfaction and pride in subsuming personal ambition for the sake of collective effort and achievement:

Some say, 'We're all individuals'. I don't agree with that. In every job – there'll be things we don't like, but it's for the good of the group – buy in. We do it (Participant 9).

Ultimately, discipline influences on-field performance:

It's a direct reflection of how you'll be as a group. How you are off the field is how you'll be on the field (Participant 9).

Disciplining utilises pressure from the team influencing its members. Pressure replicates some of the psychological pressures that will be imposed by on-field opposition. Thus, disciplinary pressure has a subtle influence on winning and needs to be managed.

Some situations require coaches to either engage in, or delegate to others, the task of managing. Managing is fundamental to structuring:

You've got to know what people are, and then man-manage them (Participant 5).

You have an issue with players [outside the immediate playing selection]– how do you manage those guys? The manager was great ... [he had] a strategy for how the guys were managed (Participant 6).

Managing is structured to influence off-field issues. Rugby squads, of necessity, include excess members to cover contingencies such as form, injury, and workload. This results in extended periods of non-selections for some. Continual non-selection has a

detrimental influence within the team. Managing the situation prevents the adverse effects of disappointment and boredom.

Managing structures involves risk minimisation. Despite the best efforts of culture and disciplining, the temperament or social make up of some team members represents risk.

Managing requires coaches to develop the individual and the team:

Did he change off the field? Yeah. Was he still a problem? Yeah. But he was under control (Participant 5).

Managing a player's adverse personal traits is important. It implies an explicit exercise of restraint, and includes a low-key structuring that secures the co-operation of the potentially wayward. Altering the behaviour of a wayward individual so that he fits better into the team environment shows how influencing promotes developing.

Likewise, managing contributes to structuring, by developing real and perceived certainty:

New people come in ... do they understand what the functions are, and who is going to take responsibility?...our management was a huge part...the coach can only operate if the manager is in place (Participant 4).

In this instance managing represents the matching and fulfilling of the expectations inherent in disciplining. Players are reassured by capable managing that their efforts will enhance the possibility of winning.

Coaches also seek to influence fun. Due to the level of expectation, and pressure to perform, rugby teams work in an especially stressful environment. The structuring required for winning is unnatural, and has to be addressed:

You've also got to be looking to do things better as a coach, so you cannot bore them to tears day in, day out with the same bloody thing (Participant 10).

Coaches, who pressure players in influencing, seek to mitigate the adverse effects of pressure by developing fun:

It was always as an enjoyment thing at the end of training until we got into a team run (Participant 1).

Psychological stress, together with repetitive unpleasant physical exertion is the everyday reality for rugby teams. Uninterrupted or unmitigated discomforts threaten team buy-in. The influencing and structuring of fun is an important antidote to some of the unavoidable unpleasantness in the rugby team environment:

Fun. That is one of the great things I got from my assistant. We brought it into our training. Rugby is a winter game, in the cold and the wet. (Participant 4).

Aiding coaches in their fun facilitation is the basic enjoyment inherent in rugby itself:

The ball is what we've got to dot down with. So we'll make our fun out of that. They realised it was fun...I'm sending them out for a ton of fun (Participant 3).

Facilitation of fun also gave coaches scope to defer to the efforts of others. The natural desire for enjoyment, and the varied and dynamic constituency of teams, means that fun is easily accessible:

We were a shocking bunch...we used to get into some terrible mischief...because we had those sort of guys...they were fun guys. Some of it was mischievous, I suppose. It was just a lot of fun, and you've gotta have that (Participant 1).

It's fellas enjoying each other's company, it's enjoying the camaraderie of rugby, which doesn't just last your playing days. It goes on and on forever (Participant 3).

By facilitating fun, coaches set in motion a pleasurable influencing dynamic that sustains teams to in their developing efforts:

I'm totally confident in my ability to produce winning rugby teams...and happy rugby teams, teams that enjoy and work hard, and have fun off the field as well (Participant 2).

As a result, properly directed and utilised, fun is a powerful element in the winning.

Circumventing is quite a different process but is needed to influence undesirable alternatives. Circumventing is the disarming or avoiding of influencing from another source. Sources of difficulty requiring circumventing may reside in the team:

I never discussed at length the team for the next game with [my captain]. ... he was very stubborn ... not the greatest quickest thinker and so he would argue and argue (Participant 1).

Circumventing is a less risky strategy when compared to protracted and fractious debate, although the potential protagonist is often unaware of the circumvention.

Circumventing is valuable in an environment where clarity of agreement contributes to influencing.

Coaches structure the team environment as much as possible. However, many factors, such as budgets, itineraries, schedules, and staffing appointments are beyond their direct influence and come under the jurisdiction of administrators:

Some of the [wider administrative] restrictions are inhibiting [to] coaches coaching the way they want to.....coaches know what goes on on the rugby field...[many] administrators don't (Participant 7).

If administrators are unaware, unwilling, or incapable of taking into account coaches' developing requirements, their influence must be circumvented:

When I was coaching...some administrators just didn't have a clue...I wasn't going to be put off my direction by idiotic decisions (Participant 2)

Circumventing requires subtle, ingenious, and well-planned structuring to overcome bureaucratic obstacles:

My job was selector-coach. I could ask for an assistant, and that was done on a separate piece of paper, 'I have to have an assistant. What do you want me to tell the backs? I know nothing about side-stepping...' (Participant 4).

The structuring of questions designed to elicit obvious answers implies the circumventing of unwilling or uninformed administrative structures. The confrontation of setting conditions is tempered by the irresistible logic of necessary resources to effect developing. Understanding human nature and bureaucratic structures, combine with effective communication to develop circumventing.

Circumventing ensures that the essential spirit and intent of coaches' structuring remains intact, while the undesirable alternative is seemingly complied with:

I ran into trouble immediately...a key man, a first five eighth, I picked him at fullback. He wasn't the chairman's choice. That's why I only lasted 3 years. The chairman of the union said, "You can't do that!" Next time I got in I bit my tongue (Participant 3).

[In regards to a particular administrator] Don't cross him. It's going to be a pain in the arse, but don't confront him. Go on doing what you do. Work around him. But don't confront him. Let him think he had an influence on you (Participant 7).

Circumventing is required to avoid punitive consequences. As the tenure of coaches depends on the approval of administrators, circumventing entails an element of deception.

In summary, the structuring category of influencing represents an integrated combination of culture, disciplining, managing, fun, and circumventing. Together these indicators enable coaches to indirectly influence team buy-in, which enhances developing. Structuring also lays a foundation for the other category of influencing, which is persuading.

Persuading

Persuading is the other category of influencing. Persuasion supplements the implicit and indirect influencing of structuring, by providing direct instruction to players. Persuading is a

confrontational intervention directed towards the psychological processes of others.

Persuading requires a tangible response if developing is to occur. The indicators of persuading are encouraging, motivating, steering, and empowering:

[It's] managing the group so they understand what we can do in this six-day turnaround...now we've got a persuasion game (Participant 9).

There is a mental toughness that you need to develop in a team. And a lot of it comes from verbal statements from the coach...you can have all the tactics in the world, but if you haven't got it right up here, or in here, then it's a waste of time (Participant 10).

The level of flexibility, ambition, resolve and psychological resilience required in representative and professional rugby teams is of a high intensity. Formal communication, specifically tailored to situations and individuals is needed to alert and instruct players to develop a state of mind that copes with the pressures. Persuading is a useful transaction to send messages of influence:

If I can indoctrinate a team to my way of thinking, and they take on my coaching style, anything is possible (Participant 3).

Undergirding the persuading dynamic is a mutual confidence in coaches' authority and credibility. The understanding of positions and lines of authority contributes to confidence, as it implies simplicity and efficiency that accrue from set and designated roles. Confidence suggests a concerted and united focus, which is necessary for influencing.

However, initial interventions to persuade take account of the circumstances, personalities and psychological needs of the recipients:

[My captain] took a while to be convinced, purely because he was a physical, get-up-and-go player (Participant 1).

Persuading also functions to counteract any undesirable influencing that occurs externally. Persuading promotes confidence and a sense of security. Indeed, persuading is a highly sophisticated process. Persuading is direct, and confrontational, but not necessarily aggressive:

There is the...form of control that is brought about by skill and man-management...Now what you can't do with rugby players is dictate certain game plans and tactics that they don't have buy-in to...What a man-manager does ...is he has to be persuasive with them (Participant 7).

Persuading has boundaries, and these limits depend on team agreement. However, the boundaries need to be flexible for successful persuasion.

Coaches' persuading efforts includes changing others. Persuading others to respond to change is a necessity, as flux is a continual reality in rugby:

Managing the group to understand what we can do...any week is like a living document... the plan changes just like that (Participant 9).

Change challenges the psychological comfort of those with designated roles in the team. Coaches mitigate the cognitive dissonance by signalling change as clearly as possible:

People like to do things in a certain way. So the first time you do something, the brain says, 'That's interesting', and the second time it says, 'That's interesting. There's something going on here. There is a bit of a pattern'. By the third time, 'I know what is going on here'. Our whole lives are driven by experience, and core patterns we have picked up. ...it's about making people aware of what's going on (Participant 6).

The tailoring of personalised messages when persuading others to change is undergirded by an understanding of human nature, and the temperaments of particular individuals. To overcome resistance, the persuading of mental flexibility is key:

Fixed minded people are not very keen on going backwards. Growth minded people - "I can see the benefits of that. It might take a bit of time, and we might have to go backwards, but the benefit of that is after that is going to be this"... You want to create a mindset of paradigm shifts (Participant 9).

The possibility of developing provides an incentive to persuade others to undergo change. However, influencing the buy in of team members is required before change can occur:

If you have coaches who change a few things around you talk it over with your experienced players, and you get buy-in, and then you go out and try a few things (Participant 2).

There's several ways of doing things, and it's a case of choosing a way, and bringing your individuality to it, but it's a case of getting agreement, and getting mindset (Participant 9).

Persuading others to change is not one way. Players influence change too. If coaches ignore significant players, influencing is compromised:

There was almost a revolt...to change tactics...our backs got so frustrated (Participant 10).

However, coaches are the primary influencers of change. There is a risk of loss of credibility, successful developing, and winning if they do not persuade players to follow their directives:

Well, they just wouldn't play with any structure...and I had some pretty animated discussions with some of them about it. But they just wouldn't embrace any sort of structure ...we'd frequently lose to the bottom teams (Participant 2).

Clearly, persuading others to change entails risk. There is also risk in failing to influence team members to relinquish the status quo:

People with a fixed mindset that are successful, but are less inclined to put themselves out to the next level...You can lose the potential to grow...I don't mind being a novice to make a few mistakes, then we've got a real growth team (Participant 9).

Encouraging change is an especially difficult task, due to the holistic interrelationship between cognition, affect, and volition with the comfort of existing team structures.

Motivating is another aspect of persuading. Due to the physical confrontation inherent in rugby, controlled aggression is required to win. Motivating is the influencing of intense and continuous emotional and volitional response, which sustains physical effort:

The motivation side – the consistency of intensity that is required at the top level...you can have all the tactical and technical things in place, but if you haven't got the intensity, the will in place, then you'll still come second [to] a team that is possibly not as technical or tactical as what you are (Participant 2).

Motivating represents a potential initiative gain. Teams that are otherwise inferior in developing can negate their opponents' advantages with sufficient motivating. Coaches are always wary of poor motivation that is seen in complacency:

It was complacency. Before the game I said..., 'If [we] can't pull something out of the hat in the team talk today, we're buggered'. ... (Participant 10).

Complacency is a lack of sufficient affective dissonance, which results in a lack of volitional engagement. Consequently, coaches are mindful of the potential benefit of otherwise counter-productive emotions and influencing methods. Persuasion has an emotional component, utilised by coaches to influence motivation:

There is nothing wrong with having a bit of fear in your team. The fear of this team...if we're below form, they'll dork us. Complacency can creep in (Participant 1).

I think...coaches are, putting it rather crudely, nasty buggers. You cannot be soft and a good coach. You have to be hard, demanding, relentless...there is this relentless nasty streak, and you've got to demand performance from every player every week. There's no out.[Coaches] handle people, roughly sometimes...and 99% of the time [players] come out the next week and really get into it (Participant 10).

The recognition of the value of emotional dissonance implies coaches use negative emotions at times to motivate. As with persuading others to change, motivating is an influencing of complex individual psyche, within a dynamic competitive environment. Therefore, successfully motivating is seldom clear-cut:

The hardest part is to get the carrot and the stick thing...the carrot just out enough in front so they want to get there...too far and they give up (Participant 1).

It's experience that will tell you when you are preparing for a game, that will if your intensity is there...other times you'll think they are a bit flat, but they're relaxed, and they'll go out and play a boomer. But if you've had the experience, more often than not, you'll get it right (Participant 2).

They will play poor games, even the great teams...the great aim is to get them as self-starters (Participant 10).

Despite the uncertainties and vagaries of human nature, experience of motivating provides some measure of predictability. Coaches build up a database, which alerts them to the factors which influence motivation:

There is a process, a build-up, a routine that players go through to motivate themselves (Participant 7).

Ultimately, motivating is not the influencing of a quality hitherto absent from individuals. Professional and representative rugby teams are highly competitive environments. Most players gain and maintain admittance by concerted effort. As a result, motivating is the arousing or enhancing of existing personal values and ambitions.

Steering is another aspect of persuading. Whereas changing and motivating concentrate on diverse psychological processes, steering focuses exclusively on influencing the cognition of others:

If [the coach] is skilful, he will massage the thinking of the...group,...the coach knows the most about what's best for attaining the overall team performance...[the coach] steers them down the path he wants to go down anyway (Participant 7)

Steering others' thinking is a continual process that develops as a result of coaches' seniority and expertise. Coaches' manage developing. Steering aligns the players' divergent opinions with the coaches' thinking to better manage winning. Steering creates awareness in others:

The new chairman was my best supporter...I made sure there was an awareness of what I wanted to achieve (Participant 3).

It's about awareness. If you're doing a drill, and...you're unaware, through my questioning, then I'm going to take responsibility to get you up to speed (Participant 9).

Steering confirms relationship priorities that coaches have with others. Team members are ultimately expected to align their thinking to the persuading of the coach. However, priority does not imply dominance, or a single direction of influencing:

We encouraged the senior players and all the players to participate in the decision making (Participant 2).

There was potential for steering to be a two-way process:

The players I respected most were the players, if they had an issue, they'd front, they'd tell you. Every single player I coached I encouraged them to challenge me for two reasons. I find out what they're thinking, and I might learn something (Participant 7).

Steering, like the other aspects of influencing, is a communication transaction between the coach and others. Although coaches had priority messages to pass on in steering, they were well aware of the impact of that cognitively and psychologically on players:

You've got to watch your players. You give them three pages of stuff they need to look out for – it's too much (Participant 1).

You are required to understand the player's personalities (Participant 3).

You have to be a bit subtle at times...to get the best out of people...bash the best out of them - you can't do that with everybody. You can with some – 'that's what you want' - the coach's assessment of that makes the difference (Participant 10).

Steering is useful to impose and manipulate the change of developing. It is important though, that coaches are perceived as steering with sincerity:

You can't pull out a set of notes when you're addressing a team...it's got to be a dead set honest delivery (Participant 3).

I've always thought New Zealand rugby players like the facts as they are, no bullshit. It's no use saying, 'You played well today – that was ok'. That is crap stuff to a player (Participant 10).

The desired goal of steering is to persuade players to be self-sufficient. This begins with developing awareness:

It's about creating an awareness – the 'why?' A lot of our players know the, 'what to', and the, 'how to', but they don't know the 'why?' (Participant 9).

Coaches also persuade by empowering. Empowering is the developing of leadership in players. This development is challenging and requires a different model of leadership:

I don't think I got the leadership right...that let us down, [we lacked] the ability to control... Shared leadership – Yeah. That is the crucial thing now – shared leadership (Participant 5).

Coming back to control... there is the...form of control that is brought about by skill and man-management...what a good coach will do is have a leadership group...he should listen to them...because players can come up with good ideas (Participant 7).

Controlling implies persuading is occurring. The empowering of players and being subject to their influencing does not diminish the need for coaches to persuade. However, empowering represents a complex challenge in the process of developing:

So...getting the parameters of player empowerment and coach direction right is very hard to do... and you pull it in really tight, and then you just let it...as you see them developing, you let them...you just let it happen (Participant 1).

The empowering of others also adds risk to developing, if their influencing is excessive:

[The coach] couldn't see past those players...[one player] influenced proceedings and the coach for his benefit, to the detriment of the team...too much player influence on the coach and players (Participant 7).

However, the risk of empowering too much influencing is also balanced by the risk of too little player persuasion:

You've got to learn to let go and trust. That's always difficult in a performance team....if there is a big group, and something happens, they will just expect someone will intervene. Around that is really important, around being a bystander. That's the killing of a team (Participant 9).

Empowering is a paradox. Empowering of others implies that coaches give up some persuasion authority and initiative, so that overall influencing and developing can be enhanced. In empowering others, coaches gain valuable allies in the task of persuading:

They're critically important to us if they are one of the senior players, especially if I want to drive some sales pitches through them, because everyone likes them...it's the old story as a coach, you have to be a salesman. You get your senior players around, and sell them the benefits if we manage to do this (Participant 9).

Empowering facilitates persuasion. The utilising of popularity of others to persuade highlights the need for coaches to supplement logic with affect when persuading. Team leaders represent a link between the persuading of coaches, and the tangible on-field

performance required of players. Senior players have greater knowledge and understanding of developing concerns, whilst also sharing in the pressures of attempting to win. Accordingly, empowered senior players are a desirable and necessary resource through whom coaches exercised influencing.

Empowering is an acknowledgement that, despite the priority of coaches, there is potential value for developing by empowering others with influencing responsibility and authority:

You build a hierarchy, and I found you don't need one captain; you can have a group of them. You do have one captain, but lots of leaders, ideally fifteen...I want fifteen. I actually want thirty (Participant 4).

Developing a ranking structure is an acknowledgement of the need for a clear chain of persuasion in a competitive environment. However, the dynamic on-field nature of rugby suggests that a denial of influencing authority to players within their sphere of activity presents a risk of initiative forfeiture. Also, as developing is a continual process, positions and responsibility within the hierarchy vary in the natural course of events. Empowering of leadership is a response to the need for flexibility.

There are though, limits to empowering. The potential, experience, and capacity to assume the responsibility of influencing mark particular members out from the rest of the team.

Like many of the processes in this research, the process of empowering is hidden underneath the everyday communication that takes place in the team:

Every time a team is selected, there is debate...I used to be influenced by senior players. They would give me their opinion (Participant 7).

You also have to listen to the players, or those senior players who are intelligent enough to add, so they feel they are part of it, and there's only a very small group in any team who can do that – most of the are passengers in that sense, they're takers, they're absorbers, and so on (Participant 10).

Individuality and initiative are the responses coaches seek to confirm empowering is taking place. If players reciprocate with buy in, not only do coaches have additional sources of persuading, they also have yet another source of persuading.

Empowering is an especially complex element of the persuading category of influencing. Multiple and changing relationships of authority compete with ideas and motives. These complex factors may have adverse consequences that effect empowering, which might be derailed. Nevertheless, empowering is a potentially rich source of effective developing.

In summary, the persuading category of influencing shows an integrated combination of changing, steering, motivating, and empowering. Together they enable coaches to directly influence team buy-in, which enhances developing. Together, the structuring and persuading categories of the influencing sub-process also provide a foundation for another sub-process of developing, which is implementing.

Conclusion

Influencing represents a primarily social challenge within the theory of developing. Coaches require social skills to understanding how people think and react, and how best to guide them. The ability to properly administer incentives and punitive discouragement is juggled, along with both direct and indirect shaping of the human psyche. Influencing is the catalyst for collective action, which foster the elements of unity of purpose and effort. Without influencing, coaches and teams are destined to remain a divergent, possibly even disparate collection of individuals, unlikely to win. Therefore, influencing is an integral sub-process of developing.

Chapter Five: Findings – Implementing

In the previous chapters the sub-processes of the findings, innovating and influencing, were presented. Innovating is the what in the developing process. Coaches change their teams, by developing innovations. An innovation is any action that has the possibility of changing a team so that the team functions differently. Influencing is the who in the developing process. Coaches shape the thinking of players, in order to control individual actions, so that the team acts collectively for developing. In this chapter the sub-process of implementing is explained. Implementing is a pattern of behaviour that is intrinsic to the theory of developing. It has two major categories, deciding and applying (see Table 4). As will be seen, in implementing coaches seek to exploit the resource requirements of developing. Implementing is the how in the developing process.

Implementing Defined

Implementing, comprised of the categories deciding and applying, refers to the sub-process that assists coaches to develop reliability of resources necessary for winning. The implementing of reliable on-field players and the development of team performance enhances the likelihood of winning. By implementing, coaches seek to determine how teams should play. Failure to implement compromises performance and winning:

We had a bad game...our players hadn't played well, our view was that it was implementation (Participant 6).

In implementing resources enhance winning. Coaches develop the resources that include player selections, tactics, playing techniques and training methods:

I'm talking about physical, mental, tactical, and technical [resources]... you've got to cover all those bases.....they are pretty important to achieve winning (Participant 2).

Implementing requires decisions about arrangements and synchronising resources. In order to implement, coaches need an extensive knowledge of developing and applying playing technique:

To me, the coach, who is deciding on the game plan, who's giving the team talks, selecting the players, he has to be in there technically working with them (Participant 7).

Implementing also relies on application:

It was more about the processes...all the same principles apply... (Participant 7).

Implementing requires variation in decisions, so that resources, such as skills and tactics, are rearranged. Once the appropriate choices are made, coaches look towards application:

You make a decision, and you hold your nerve (Participant 9).

Being ready to apply alternatives is fundamental to implementing:

We always had a 'Plan B'. I'm not sure we ever used it (Participant 4).

Having alternative strategies ready for applying anticipates the challenges inherent in winning. At the same time opponents develop resources in order to wrest back initiative.

These responses stimulate coaches to develop reliability:

We used to get to a stage where we would go for session after session without dropping a ball (Participant 5).

We had players we could rely on in midfield who wouldn't get it wrong...we had ...faith in our backs, and we had some good players wider out...remarkably composed...very solid, never missed a tackle (Participant 8).

Reliable players and teams are more likely to apply decisions in practice.

Reliability assists coaches to implement other resources, secure in the knowledge the reliable resource will always perform as expected. Accordingly, reliability is significant in both deciding and applying.

Table 4 outlines the categories, and category indicators of the sub-process of implementing within the theory of developing.

Table 4: The Sub-process of Implementing: Categories and Category Indicators

Sub-process	Categories	Category Indicators
Implementing	Deciding	Simplifying, selecting, delegating, prioritising
	Applying	Manipulating, systematising, repeating, pressuring, maintaining

Deciding

Deciding is about choosing the best resources for implementing and developing. The indicators of deciding are simplifying, selecting, delegating, and prioritising. Some resources such as game plans, techniques, and tactics are contradictory and incompatible. Accordingly, coaches decide which resources are most likely to enhance winning:

We decided [to] use a fast harrying sort of [game]...utilising our resources (Participant 8)

Deciding activates developing possibilities into actual implementations. Rugby represents a dynamic environment requiring continual decisions to initiate or respond to events. The decisions which best enhance developing are those that integrate possibilities and needs with resources:

I decided I wanted to create a game that was fast, that is played at pace right through...[my trainer]... was the key appointment to help me with that (Participant 5).

Because of the complexity of correctly developing the right resources, implementing decisions rest primarily with coaches:

The coach, who is deciding on the game plan, who gives the team talks, selecting the players - he has to be in there technically working with them (Participant 7).

Decision making authority depends on ability, need, and proximity. However coaches cannot intervene directly on the field of play. Therefore players take over decision making, deciding which part of implementing will occur:

If the ball is in the hand, you are responsible, and whatever you decide, you are leading the game...everybody is a leader to some degree (Participant 4).

Not surprisingly, developing decision-making capacities of players is fundamental for coaching:

As a coach you set up the conditions... then it [is up to] communication between players...and the ball taker has a look and decides (Participant 7)

Failure to manage deciding represents a failure in developing which seriously jeopardises winning:

They were so thick, they didn't realise or decide to drive the ball until they went off the field at half time, and their coaches told them (Participant 6).

Deciding to persevere with an inappropriate game plan until advised otherwise demonstrates the negative side of deciding. This behaviour occurs if coaches implement decisions too forcefully, or if players are not willing to accept their decision making responsibilities.

Simplifying is an aspect of the deciding category. Simplifying is the decision to discard potential resources, which are superfluous to developing:

So all of this is ideas ... and we mix them, and there might be more than two things... [the coach] is all over the show ..but don't worry, when the boys walk in the door, boom! It'll be simplicity (Participant 9).

Due to the complexity of rugby, there is an extensive variety of player and tactical options. Simplifying focuses deciding when there are many options:

Lineouts to me were always very simple...It was a matter of beating your man on the ground, getting your hands into clear air, and then the hooker throwing in right... it should be a simple matter (Participant 7).

Simplifying demonstrates that rugby is a concerted, sustained, and focused physical effort. Dynamic on-field competition demands decisive actions from players. Decisive response is best achieved when unnecessary complexity that distracts from the task at hand is eliminated. Simplifying provides clarity for decision-making:

If it's good for the team - say it, think it, do it...If it's not – Don't!...what we've got to do is make sure we're really clear (Participant 9).

Simplifying ensures implementing promotes developing. Simplifying helps coaches test the clarity of implementing options.

Deciding also encompasses selecting. The primary resource coaches select is players. Selecting either incorporates a player into the team, or picks a player for a position in a particular game. Selecting is driven by the need to implement on-field playing skill:

I was selecting the technical things and getting the things [I] needed, because then you were picking the skills and techniques you needed (Participant 5).

Skill is a player's ability to implement on-field tasks so that developing improves. The dynamic inter-relationship between individual player skill and team pattern means that selecting decisions are carefully considered:

How do you pick a team? Well, start with your backline. The halfback – he's your 'provider'. The first five eighth is the 'distributor'....And your centres...they are your 'players' and 'creators'. That's how I picked them – and they are a link. And my back three are 'finishers' (Participant 3).

Selecting decisions are further complicated by the need to reconcile the individual skill with character:

The players I loved are the guys with no natural talent or ability, but they got in there and they worked so bloody hard, it's fantastic. You go for the guys with a bit more character (Participant 1).

Deciding to select players on the basis of character ahead of skill is significant for implementing. Individuals may have special skills but selecting decisions are guided by the primary need to develop teams:

I guess you are picking on character, and also on innate ability. Good people make good rugby players. Bad people make good rugby players. What it comes down to is good people make good rugby teams...We need a certain amount of character... [if] we've got some rat bags we are not going to win (Participant 6).

The acknowledgement that some players are deficient in character implies a decision to deselect. However, the qualities of character which mark players out for selection match the physically demanding nature of rugby:

Picking the right people is so important. Pick soft cocks and you're wasting your time (Participant 10).

Sufficient qualities of physical aggression are necessary for successful implementing. Physical aggression is seen as a socially negative characteristic. The inability of players to control physical aggression demonstrates character deficiencies that determine selection decisions. However, coaches needed to decide carefully, as some character issues are more complex:

[He was] an unguided missile, but talented, and when you put him on the field, he could do it. Many can't... there are players who struggle to fit in, but when it counts, [there are others that] can do it again, and again. And he was determined to prove it, and he did (Participant 8).

The determination of players to implement the necessary reliability implies a particular quality of character that out-weighs other character selection concerns. The reasons for particular selections decisions are not always apparent to those who are not involved with implementing:

We were criticised for [one selection], who was a real solid player, but he was integral to our plan...(Participant 5).

However, the developing of individual players means skill levels do not remain static. Sometimes, selection decisions eventually result in the implementing of benefits that exceed the initial skill set:

When he was first chosen, he had those skills, but now he's got these skills, and the team's benefitting hugely, and that's good selecting, initially, but then it's really good coaching to...develop all those other skills (Participant 2).

However, even with the best of intentions, the selecting of players to enhance developing cannot be guaranteed. Human fallibility affects deciding as well:

I got swayed by my heart – 'they deserve the opportunity'. I should have spelled them (Participant 5).

I personally underestimated a player who we did eventually pick...he should have been there all the time. ... I got it wrong (Participant 7).

Due to the uncertainties, coaches sometimes take risks in selection decisions:

Some selections are a gamble, which is justified...so they are putting that player very much on trial (Participant 8).

Because improvement and regression cannot be predicted the value of some selection decisions is unknown. Due to the nature of rugby, vagaries such as personal form, injury, inexperience, fatigue, and increased age moves previously merited selections to the margins that are no longer valid. Despite the rigour of the developing process, coaches sometimes fail to implement selecting correctly.

Another aspect of the deciding category is delegating. Because developing is complex coaches need to delegate:

Through experience and proving yourself time, and time, and time again, the coach gives over more and more. And you have to let go, because you haven't got time to run the whole ship. You've got to let go ... (Participant 9).

Delegating presents a dilemma. Coaches' are invested with the ultimate responsibility for developing. However, in order to implement developing, coaches must decide to delegate subsidiary responsibility, thus surrendering ultimate control. Not surprisingly the ability of coaches to make astute delegation decisions developed over time. Coaches learned to judge others, and themselves:

I let someone take the reins, and things were going ok at first, but then it started to fall apart, and I should have jumped in, but I didn't (Participant 9).

Due to the risks, effective delegating decisions centre around those with proven skills:

Within each group there was a leader, he was nominated, or he made himself, his 'show through' that made me decide (Participant 3).

Delegating is especially effective for developing once the right people are given responsibility, and outcomes are incentivised:

We got into collapsed scrums. We sorted that out by saying to the players, 'Right! The scrum goes down on your side – we won't pick you!' Almost overnight – no scrum collapses (Participant 1).

Coaches give authority to others when delegating and also specify the required outcomes. In delegating coaches still retain the ultimate decision-making authority:

I let [my assistant] have a say, but I had to make my issues paramount (Participant 3).

If delegating is to enhance developing, decision-making authority must be genuine:

And you've got these [technical assistants] – you've got to know what they are about, what they are doing. Charge them with the responsibility...don't take over (Participant 3).

Coaches though reconcile delegating tensions by co-opting specialist expertise and additional team developers. If delegating is implemented effectively it benefits developing:

I'm willing take responsibility to get you up to speed. I might have to get someone in. It might be a mental skills specialist, or a skills trainer (Participant 9).

The complexity of the professional rugby environment and the game of rugby itself create a need for specialist skills. However, coaches must ensure specialists implement according to the wider requirements. Tasks are delegated to others as coaches need time for developing. Accordingly, coaches spend time developing the skills of others so they can delegate to them at a later stage. This occurs during training:

Game plans are the options you create at training...the art is getting your shot callers to call the right plans (Participant 1).

Unlike training, on-field play represents a domain over which coaches have no immediate access. Messages are passed to teams during games. Coaches cannot pass on continual instructions to players during a game though. To address the lack of access, coaches delegate tactical deciding to those players who have demonstrated an ability to respond appropriately. This means that players who develop the capacity for tactical judgement became on-field leaders who have a delegated decision making authority.

Prioritising is also a feature of the deciding category. Prioritising relates to the time component of deciding:

So as a head coach...you'll have a practitioner say, 'This is the best way' ...and he'll be right. Well, then we'll have to take out some of the [other] aspects...we'd lose this... if we had twenty day weeks, we'd be sweet. But we don't...so...now we've got a juggling act (Participant 9).

The deciding of timetables is a feature of prioritising:

Trainers want forty minutes – I say, 'You've got twenty – then you finish!' I've got to have [the players] for rugby (Participant 3).

Multiple requirements, implemented by specialist assistants, require ultimate governance by coaches. Failure by coaches to manage prioritising decisions undermines other essential aspects of developing:

Science is very important in our sport ...bio-mechanics might be the best way of getting into that position, but it takes too long...(Participant 9).

Prioritising helps coaches to implement the most desirable decisions. At the same time the demands of prioritising enhance coaches' developing ability. Prioritising results in decisions that integrate implementing tasks:

The time utilisation was valuable ...Every minute you had with your players was valuable... Everything you do should be games or match specific... you have very limited [time] (Participant 1).

Although the decision to simplify removes superfluous resources, the decision to prioritise removes superfluous time. However, the end result of both simplifying and prioritising is clarity of implementation:

We can achieve all we need to in an hour...we might put down three scrums, whereas our opponents might have put down 50. Why carry on if they are excellent? (Participant 4).

The freeing up of time by prioritising also benefits both players and coaches as they work together in developing:

We made the training sessions shorter, more concentrated. And that was something the players really grabbed....the short training sessions gave us more energy, so it made the coach's job easier. So I could concentrate on more motivational things (Participant 5).

Prioritising also alerts coaches to keep some commitments to a minimum, lest they distract from the needs of team development:

If you get involved with the media, you become part of their system, and they want you to say something all the time...your job is with the rugby team (Participant 10).

The plethora of activities required for developing often complicates the right decisions. Concentrating upon the priority of developing rugby teams aids coaches in assigning some tasks of secondary importance.

In summary, the deciding category of implementing represents an integrated combination of simplifying, selecting, delegating, and prioritising. Together they enable coaches to decide which resources will be implemented to enhance developing. Deciding also lays a foundation for the other category of implementing, which is applying.

Applying

Applying is about deploying resources required for developing. Applying follows on from deciding, as resources are implemented in practice sessions and on-field play. Application focuses activity on integrating the individual player roles with overall team tactics. The indicators of applying are manipulating, systematising, repeating, pressuring, and maintaining.

Applying is important as resource deployment helps teams win. A win confirms resources have been correctly applied, and developing has been successful:

That's where the resources come right – you put them all together, and it comes right (Participant 10).

Physical techniques and methods are among the resources required to enhance developing:

There's a lot of things that don't change – body position is one, binding is another, how you go into a tackle. But what does change is how you apply them. Slightly different skills and slightly different tactics (Participant 7).

Application requires the correct and appropriate methods to achieve the desired developing outcomes. Application is the ability to draw upon on a database of theory and experience, and then implement that knowledge to specific game situations.

Sometimes the lessons coaches learned as players are universal in their scope of application:

That was an incredibly insightful piece of advice...when I was coaching I always told [the players]...because it applied to me perfectly (Participant 10).

As applying culminates in developing, coaches are especially aware of their application responsibilities:

My role is to coach...and bring whatever I have to bear...which I will apply. I will have the final say (Participant 10).

Reserving of the right to apply resources reflects the superior developing expertise of coaches.

Applying includes manipulating on-field play. Manipulating is the application of particular on-field techniques and tactics that enhance initiative gain at the opponent's expense:

If I'm standing in a lineout, I can guarantee I can manipulate you...because I'm throwing in, and so do my lifters (Participant 7).

Manipulating requires coaches to apply tactics which correspond with the relative strengths of the competing teams. In order to negate the opponents' relative strength, counter-intuitive and unorthodox techniques are implemented:

Never tackle a first five eighth. No! First loose forward - outside him. Second loose forward – cover him. And he's got to kick. We had to do that because we weren't dominant up front. (Participant 3).

A potential contest in an unfavourable phase of play evidences initiative forfeiture. Eschewing the basic defensive skill of tackling in favour of a more indirect method of defence demonstrates complex application of implementing options. The successful application of manipulating transforms initiative forfeiture to initiative gain.

Another important feature of manipulating is reversal expectation that occurs by the application of tactical variations:

If you are prepared to take your time you can manipulate the defence. Everything you do in the game, tactically, you set up templates...and then you do a variation (Participant 1).

Setting up of templates implies a two-fold manipulation of the opposition. Firstly, thought patterns are manipulated by the reinforcement of a consistent template. Secondly, counter actions to the template manipulate those opponents who are vulnerable to variation. The applying of restrictions over time and space suggests manipulating:

What...concerned me was to get a greater concentration of their players in a smaller part of the field, and going backwards...so what we have to do as coaches is locking up the opposition defence to create space (Participant 7).

The essential nature of rugby implies that higher risk manoeuvres are more likely successful when applied with greater time and space:

[He] believed implicitly in passing the ball, and creating space, and it was right from a principle point of view. But you've got to get it right, because if you don't, and it breaks down [you] get yourself [into] trouble (Participant 8).

Failure to manipulate time and space properly jeopardises the likelihood of winning.

Coaches also utilise systematising in applying. Systematising is the implementing of patterns of play so teams perform to a pre-set plan:

Everything you do in the game...you set up templates...we're talking technical/tactical, I'm very big on systems...so systems are absolutely critical (Participant 9).

Systematising is necessary in developing, as it applies the skills and efforts of all team members to a common end. By systematising techniques and tactical options, team members play with a level of predictability that enhances one another's efforts. Indeed, coaches depend on the systems they apply:

Those key systems...I can rely on them (Participant 3).

Adhering to systems of play that support winning implies systems are a means of withstanding the manipulating attempts of opposition teams. Systematising guides players in skill application. When application is predictable systematising develops additional resources beyond an individual's innate talent and ability. Not surprisingly, coaches expect players to apply systems in action:

I picked [players] for their natural skills, but focused them on particular issues...[players] de-select themselves by trying to run the show themselves (Participant 3).

Systematising represents the application of conditioning on players' thinking:

Once [players] are under my charge...[they've] got to think this way. Think, think, think all the time to create, to establish the team play...it's indoctrinated until they know it, and they love it...learning the system (Participant 3).

However, systematising thinking is not designed to inhibit players' initiative and creativity:

Now we all understand our system, you bring your flair to it...maintain the system, but within that you are very good to do...your speciality...that's your individuality (Participant 9).

The application of originality to established systems demonstrates an understanding of the dynamic-structural inter-relationship in rugby. Whilst systematising is useful for implementing reliability within automatic response, it also seeks to avoid the extreme of impairing player skills and judgement.

Systematising also assists coaches to properly assess application requirements:

So once I've got the system, now we can analyse whole parts of the system...bits of a system have failed, but because we have a system, we can fix that (Participant 9).

Systematising provides a framework of reference and understanding.

Another aspect applying is repetition. Coaches utilise repetition of training drills to reinforce systems implementation:

The team thing was repeated every training. Your support play-attack, your support play-defence...at one point of training every time...your team function, you've got to get to grips with that (Participant 3).

Repetition ensures players reliably implement team systems. By applying the plans of systematising into repeated drills, coaches seek the inculcation of automatic response:

There is something I'm a firm believer in... 'Training is committing conscious acts to the subconscious'. That's what training is about. You don't do it just once. You do it repetitively until it becomes part of your makeup (Participant 1).

Repetition is coaches' overt behavioural conditioning of players that supplements the prior assent and understanding gained through systematising. Coaches also apply repetition of key verbal messages to develop player motivation, and performance intensity:

You've got to demand performance from every player every week. There's no out. [We] just hammer those things constantly... your best will be bloody good – provided you do it every day (Participant 10).

Together, both repeating and systematising represent an interrelated guiding of the cognitive, volitional, and physical processes. Repeating of systems is a particularly effective means of implementing developing. Not surprisingly, the application of repetition is a defining feature of the competitive rugby environment:

These guys had done about three or four thousand of these particular ...moves...repeating the process...we would do this in lots of sixties, seventies, eighties, hundreds (Participant 7).

Effective practices that consistently enhance the likelihood of winning are standard throughout entire structures. Accordingly, some of the resources of implementing are exempt

from significant modification. Hence the same resources, techniques and methods are applied repeatedly at all levels, until they are automatic throughout the entire structure. So as to gain maximum developing benefit, coaches seek to apply repetition which relates closely to on-field play:

I had just trained them religiously, because I had a theory, if we can play as we train, and train as we play...I was hammering them all the time on...basic things (Participant 5).

The application of repetition training to specific playing requirements is more likely to produce automatic reliability during games. Sometimes though, repetition is required to reverse the application efforts of other coaches:

I want to hear [them] ‘Talk, talk, talk’, and they wouldn’t because they had three months of club coaches telling them not to talk (Participant 4).

The initial inability of players to apply new systems shows the effectiveness of prior repetition. However, as repetition can apply one system of team play, repetition will also implement another. As coaches have confidence in the effects of repetition, they eventually scale down the frequency and intensity:

When you hit the big games at the end of the season, Tuesday (training) would be half an hour – it was usually an hour and a half. Thursday, we’d tell them to go home...you’re at the end of the season (Participant 4).

Repetition reverses the familiar forms of thinking and acting, not just for players who perform repetitions, but also for coaches who prescribe it. However, astute coaches temper their instinct for more repetition, by developing other benefits. Reducing training time prior to championship deciding games implies coaches’ desire for players to conserve physical energy, and prepare mentally in ways that repetition can not facilitate.

Pressuring is another method coaches use to support applying and implementation reliability. Pressuring is the increasing of the practice requirements:

A coach’s job is to make sure they train under pressure. You create pressure. Pressure, pressure, pressure, and they learn how to react. You’ve been in this situation before, now just go out and do it (Participant 4).

Coaches apply pressure on players by implementing training drills when physical and mental fatigue is most likely:

But I, very often at training, would do a lineout training drill when they were exhausted at the end of training. Why do it when everyone is fresh? Because the

muscles aren't tired, and their minds, they're [not] oxygen deprived to the brain [like] when they get exhausted or tired (Participant 1).

Coaches also apply pressure by restricting the time and space of training drills, or increasing the rate of repetition:

We tried to train at 120%. Play the same speed in a smaller area. If you're not switched on and focused, you've got no chance (Participant 4).

Pressuring is also applied by increasing the quality requirement:

Training was full on...It was really saying, 'we don't drop the ball. There is no reason to drop the ball in practice'...We had a focus on excellence (Participant 5).

Reducing the conditions under which playing tasks are performed, or increasing output expectations implements stress. In order to cope with increased stress, players are forced to utilise psychological and physical abilities to the utmost capacity. Coaches applied pressuring to implement on-field behaviour:

It's training so that it becomes second nature under pressure. You can say, "It's what we do under pressure that's important in life". Anyone can do that when there is that [little] pressure on, and it's the same with a rugby team. It's what we do when the pressure is on (Participant 1).

As with systematising and repeating, the aim of pressuring is to implement behavioural processes. The combination of systematising, repeating, and pressuring develops players and teams so they perform automatically in a reliable manner. In order to apply sufficient beneficial pressure, coaches integrate their pressuring with match conditions:

Always train for the key components of the game under duress...the lineout throwing and the catching, because that is what the game is going to be like (Participant 2).

The competitive nature of rugby implies the exerting and withstanding of pressure. By interrelating pressure and playing requirements, teams are more likely to exert pressure on opponents. Withstanding or exerting pressure is an effective means of developing initiative gain over opponents:

At the end of the day you do this to win the critical games... so whatever you come up with has to stand up to the pressures of the next best team (Participant 7).

Coaches utilise pressure in training, in order to develop their teams' ability to exert and withstand pressure during games. Failure by coaches to implement the capacity for pressuring represents a failure in developing:

I get frustrated when I see teams play and they seem to dawdle...that's where the pressure comes, by closing down the time between breaks (Participant 6).

Applying physical pressure on teams also places pressure on the integrated psychological processes of cognition, affect, and volition. Failure by players or teams to apply pressure implies insufficient implementing of reliability.

Coaches can never be certain of the exact nature and extent of pressure needed to determine winning. But, to develop teams sufficiently, coaches apply pressure that exceeds what their teams are likely to encounter from any opponent:

Run them until they give in...and they do it in sand hills...it shows the coach, and more importantly, it shows the player that I've gone to a depth of exhaustion that I'll never go to in a game of rugby (Participant 1).

Physically pressuring players applies stress on their psychological ability to cope. Accordingly, the ability to retain psychological composure whilst under extreme physical duress develops confidence:

After it was all over I said, 'well done guys, that's sixty', and immediately [a player] said, 'No – that's sixty six'...it shows me that under extreme physical duress, this thing is still working, and they are the signs I love in a player (Participant 7).

Confidence in the reliability of performance under pressure implies both player and coach are free to concentrate energy and attention on other developing needs.

Maintaining is another means use to apply implementation. Maintaining is an intervention to correct any resources that are malfunctioning according to set systems and standards:

I ripped into the players once at halftime at a critical situation... It's about standards. Great teams prepare the same every week. Inconsistent teams say, 'We should beat them...' (Participant 9).

Maintaining is recognition by coaches that despite the best of developing efforts, human fallibility means mistakes occasionally occur. By intervening, coaches seek to ensure mistakes are not repeated:

And the other thing is that at training, you can't allow mistakes to go uncorrected...don't allow bad technique to go unchecked, because then it will happen in a game (Participant 2).

Maintaining is an application task that reflects both the authority and function of the coaching role:

Tell them what they're doing wrong...that's what a coach is there for. That's what I've found about coaching...constant maintenance (Participant 2).

Coaches are charged with overall responsibility for developing, so they ultimately apply the maintenance standards. Also, as coaches possess greater skills and a wider perspective compared to players and onlookers, they are uniquely placed to implement maintenance:

How...do you decide if a player has the technique or not? Not all [is] what you see on the field – you learn a lot in practice (Participant 7).

Due to the integrated nature of rugby, individual player performance affects teams, just as team performance affects individual players. Accordingly, the complexity of rugby means malfunction is always a possibility. Reliable implementation requires the application of intricate and interrelated techniques and methods.

As coaches are the primary engineers of development, they are usually the first to apply maintenance:

That's what good coaching is, you've got to be able to analyse what's going on and correct it (Participant 2).

The task of maintaining acts as a quality control mechanism over all the other applications of implementing:

Bits of a system have failed, but because we have a system, we can fix that (Participant 9).

Failure to implement maintenance sometimes results in a loss of player confidence:

I was coached on one tour, and the coach never spoke to me about how I was playing, how I was doing...it was crazy...he never indicated what I'd done wrong, what I'd done well, how I could improve (Participant 10).

By implication, the giving of feedback to players is a form of maintaining. Failure to give feedback inhibits player awareness of developing requirements and progress.

However, the application of maintenance has to match the varied requirements of different contexts. The potential for interventions to dominate schedules, or inhibit player initiative, ensured coaches carefully planned and applied their maintenance:

You can't go out and fix forty things in a week. So, set-play, skills, options, game plan, contact. And everything you've got to do fits into one of those categories (Participant 7).

However, on other occasions, maintenance is applied by coaches as an immediate requirement. Failure to do so jeopardises winning:

They didn't kick a point. You stupid coach! Why didn't you say, 'Listen lad, you're hooking it...Follow through, keep your line...'. And he did it all day and the coach did nothing. They deserved to lose (Participant 3).

As malfunctioning represents a failure by teams to implement systems, emotional frustration on the part of coaches is always a possibility:

Have I ripped into players before as a group?...Not often...When was it done? On Monday, after the game. The feeling was to [immediately after the game], but that feeling would have been to satisfy me. I sit down and analyse it, and talk (Participant 9).

To mitigate the negative possibilities of punitive intervention, coaches sometimes delay the application of maintenance.

In summary, the applying category of implementing represented an integrated combination of manipulating, systematising, repeating, pressuring, and maintaining. Utilised in unison, they enable coaches to implement reliability, which enhances developing. Together, the deciding and applying categories of the implementing sub-process also supplements the other sub-processes by actualising the opportunities of innovating, and the buy-in of influencing.

Conclusion

Implementing represents a primarily managerial challenge within the theory of developing. Coaches require organisational skills to correctly select and administer the resources at their disposal. The ability to exercise direct control is matched by the necessity to co-opt and direct specialists and subordinates. Implementing is the distillation and focus of plans and efforts so that they are manifested in measureable outcomes. Without implementing, the full talents and abilities of teams remain both latent and unrealised, and they are unlikely to win. Therefore implementing is an integral sub-process of developing.

Chapter Six: Literature Review

This literature review places the findings of the thesis within context of wider scholarship. Whereas the theory of developing, comprised of the sub-processes innovating, influencing, and implementing is grounded in the research data, a review of wider literature adds depth of understanding. Where coaches seek to develop the competing concerns of innovating and implementing, business organisations reconcile the processes of exploration and exploitation by ambidexterity. Also, studies of context highlight many of the concerns of the influencing sub-process. As developing is the combining of inputs and processes to effect outcomes, this literature review also considers team developing research.

Literature and Methodology

In keeping with the requirements of classic grounded theory, a review of literature relevant to this research was not undertaken prior to the generation of the grounded theory. This review was conducted after the data were analysed, and the theory of developing had been confirmed. As explained in Chapter Two Methodology and Methods, “These dicta have the purpose of keeping the grounded theory researcher as free and open as possible to discovery and the emergence of concepts, problems and interpretations from the data” (Glaser, 1998, p. 67). This approach supports the discovery process that is fundamental to the ethos of grounded theory. It also ensures there is continuity with the data gathering, and conceptual generation chronology. In other words, the researcher remains open to the participants’ main concern and is not side-tracked by concepts that are not relevant, or are related to professional interests or speculations. This strategy prevents the researcher being influenced by the received view of the world (Glaser, 1998). Glaser argues that, when this process is followed, literature becomes a source of data for constant comparative analysis in the sorting and writing up stage of theory development.

As noted in Chapter One, this research began as a study about tactical innovation in rugby. However, it has become evident that the main concern of coaches in tactical innovation is winning that is resolved using the process of developing. Interestingly, innovation has earned a place in this theory, albeit a smaller place than was anticipated in the beginning. As indicated in Chapter Three, the sub-processes of developing are innovating, influencing, and implementing. Therefore, in keeping with the methodology, in order to situate the research findings in the wider body of knowledge, literature relevant to the concepts and contexts of developing is reviewed. The review focuses on ambidexterity, the influence of contexts, and

team development. While these areas are organisationally located, there are many similarities between the findings of the theory of developing and what happens in corporate contexts. Ambidexterity, which is made up of exploration and exploitation, has been chosen because exploration and exploitation are fundamental to innovation and team development, as is context.

Although the chapter is divided into discrete sections, in many instances there is overlap between the concepts that seldom stand alone. As stated earlier in the Chapter One introduction, there is limited research literature about innovation and team development in the field of sport performance. There is little published research regarding the role of the coach as the conceiver and implementer of tactical innovation. In contrast, the business literature abounds with organisational change management research that has resonance with the findings of this thesis.

Exploration, Exploitation and Ambidexterity

Literature about the relationship between exploration and exploitation as adaptive processes within organisations (Holland, 1975; Kuran, 1988; Schumpeter, 1934) has much to offer when the theory of developing is considered. There are implied similarities between what happens in organisations and the coaching of representative rugby teams. For example, organisational exploration is likened to sports performance innovation, as both demand the development of entirely new possibilities. Organisationally, exploration is characterised by terms such as search, variation, risk taking, experimentation, play, flexibility, discovery, and innovation. By contrast, exploitation is about refinement, choice, production, efficiency, selection, implementation, and execution (March, 1991). The overlaps between the business concepts and the concepts of the theory of developing are evident.

The parallels between coaching representative rugby teams and managing organisational teams stand out. For instance, organisations must manage the trade off that takes place when exploration and exploitation are considered. A similar trade-off occurs between innovating and implementing in rugby. Yet, in the business context, exploration of new alternatives may compromise the organisation's capacity for development. Not surprisingly, developing existing methods makes the search for innovation less attractive (Levitt & March, 1988). Reasons for this include the antithetical differences inherent in organisational structures, time frames, processes, culture, and expected outcomes, all of which compromise exploration and exploitation (Taylor & Greve, 2006). However, failure by organisations to engage in exploration renders them vulnerable to stable, but ultimately sub-

optimal practices. Also, exploitation failure diffuses and frustrates effort, undermining potential benefits (March, 1991). Gupta, Smith and Shalley (2006) conclude that exploration often leads to failure in the continued search for innovative solutions. More often than not it results in a failure trap. However, exploration can be beneficial. An obstacle free pathway for exploitation may create a success trap (Gupta et al., 2006). Managing this dilemma in terms of overall development in any organisation, whether it is in the business or the sports environment, is not straightforward.

March (1991) provides a useful entry point in the comparison between business and the New Zealand professional rugby context by noting:

Organizations often compete with each other under conditions in which relative position matters. The mixed contribution of knowledge to competitive advantage in cases involving competition for primacy creates difficulties for defining and arranging an appropriate balance between exploration and exploitation in an organizational setting. (March, 1991, p. 74)

One solution for organisations and rugby coaches lies in the introduction of ambidexterity. Tushman and O'Reilly (1996) define ambidexterity as an organisation's ability to simultaneously explore and exploit. Although exploration and exploitation look to be in conflict, the key to success lies with organisational structuring (Tushman & O'Reilly, 1996). Raisch, Birkinshaw, Probst, and Tushman (2009) summarise various structuring possibilities, including differentiation or integration of exploration and exploitation activities within organisations. In other words ambidexterity is promoted if specific tasks are designated to specific groups, or dispersed throughout the whole organisation. A static or dynamic temporal approach helps as well. This occurs when organisations alternate between exploration and exploitation, or simultaneously engage in both. Yet another structuring possibility is the internal incorporation or external out-sourcing of the exploration and exploitation activities (Raisch et al., 2009).

As is evident in the theory of developing, there is a tension between the wider organisation and the individual who is the catalyst for ambidexterity (Raisch et al., 2009). Individuals are critical to develop organisational ambidexterity (Gibson & Birkinshaw, 2004; Mom, Van Den Bosch, & Volberda, 2007). Individuals are more likely to think paradoxically (Gibson & Birkinshaw, 2004), to manage contradictory and conflicting outcomes (Smith & Tushman, 2005), or to engage in multiple roles and tasks (Floyd & Lane, 2000). Ambidexterity is also effected by personality traits (Amabile, 1996), the adoption of both a short or long term focus (O'Reilly & Tushman, 2004; Probst & Raisch, 2005), prior

knowledge (W. Cohen & Levinthal, 1990), or top-down, bottom-up, or horizontal knowledge flows (Mom et al., 2007). Raisch et al. (2009) conclude that managers can exhibit varying degrees of personal ambidexterity, while organisational ambidexterity is influenced but not limited to its members cumulative individual ambidexterity.

The similarities to coaching rugby teams are clear and have been well illustrated in the previous chapters. Coaches are central to developing. Inevitably, their personalities direct preferences. This is seen in the highly personalised influencing sub-process. Also, the main concern of winning in the theory of developing has both short and long term requirements. Coaches' teams are expected to win immediately. In reality though the process often requires longer periods of time than the week-to-week playing cycle. Consequently, coaches must exploit, as is evident in implementing. They also explore new possibilities through innovating. It is argued here therefore that the reconciliation of these two contradictory sub-processes is a form of ambidexterity. Within all the sub-processes, coaches seek, reconcile, and apply information. This is supported by the literature, which confirms the importance of leadership in sharing information for innovating. "Bottom-up knowledge inflows may trigger knowledge recipient managers to revise current beliefs, to search for, develop, and experiment with various novel solutions to emerging problems, and to redefine strategic decisions" (Mom et al., 2007, p. 915).

This view contrasts with top-down information flows, which increase the depth, rather than the breadth of knowledge (Mom et al., 2007). This suggests that horizontal knowledge is important for exploration, rather than exploitation. Horizontal knowledge is valuable for managers developing exploration activities. Applied to the New Zealand rugby coaching context, this point suggests that the assorted technical support necessary for the implementation of tactics is externally directed from higher levels within the rugby union structure. Despite this, player feedback is important to supply coaches with specific knowledge necessary for innovation. Thus peer feedback stimulates exploration and exploitation.

Raisch et al. conclude their examination of the tension between individual and organisation that is applicable to the rugby team environment, suggesting that, "Ambidexterity is thus likely to be a function of closely interrelated individual and organizational effects – but in most cases [it is] more than the sum of the individual activities" (Raisch et al., 2009, p. 688). These authors believe that managers have a central role in ambidexterity development, due to their decision-making authority, and their capacity to manage the exploration/exploitation tension. These skills are important to manage cross-

functional interfaces, and ensure connectedness with others across the organization. The similarities between organisational managers and rugby team coaches are clear.

In ambidexterity leadership influences exploration and exploitation (O'Reilly & Tushman, 2008). Ambidexterity seems to be significant for capability development within the organisation. However, it cannot stand alone and requires strategic leadership to adapt, integrate, and reconfigure an organisation's skills and resources to match changing circumstances (Eisenhardt & Martin, 2000; Helfat, 1997; Lavie, 2006; Teece, Pisano, & Shuen, 1997). Once again the parallels with professional rugby are apparent. While O'Reilly and Tushman are grounded in the organisational context, their arguments have application on the rugby field. For example, "the ability of senior leaders to reconfigure assets to compete in emerging and mature businesses, to be ambidextrous, is a critical element in sustainable competitive advantage" (O'Reilly & Tushman, 2008, p. 188), has been clearly illustrated in the theory of developing. Although the organisational context is very different, the similarities in the business environment are striking

Clearly, ambidexterity is a key concept in exploration and exploitation. In the theory of developing it becomes important to reconcile innovating and implementing within team development. According to the organisational literature, there are several innovations that reflect ambidexterity. Firstly, incremental innovation is important to make existing outcomes more efficient. Secondly, discontinuous changes support ambidexterity as long as significant advances are seen. Thirdly, ambidexterity is fostered where there are minor improvements in which existing components are integrated in new ways to dramatically enhance performance (O'Reilly & Tushman, 2008). As per March's (1991) original conception, incremental innovation is equated with exploitation, while discontinuity and reconfiguring for dramatic enhancement are aspects of exploration. However, whereas for March (1991) this presents a potentially irresolvable dilemma, for O'Reilly and Tushman, the emphasis is on the capacity of the leader to manage the dynamic capacity to fulfil both:

Organisational capabilities are embedded in existing organisational routines, structures and processes. More specifically, these routines are found in the way the organization operates, its structures, cultures, and the mindset of senior leadership. Existing capabilities reflect the firm's ability to compete in the current environment. The challenge for senior leaders is to both nurture and refine these and to be prepared to reconfigure those assets as contexts shift. (O'Reilly & Tushman, 2008, p. 188)

This is echoed in the theory of developing, where coaches are engaged in mutual influencing, which bridges the innovating and implementing sub-processes.

Evidently ambidexterity is complex. It is more likely achieved when organisational leaders, like coaches, sense, seize and reconfigure opportunities for development (O'Reilly & Tushman, 2008). Organisationally, sensing is manifested as scanning, searching, and exploration. O'Reilly and Tushman (2008) argue that sensing focuses on identifying opportunities and threats in changing competitive environments. Sensing requires a culture of open debate, and commitment to long-term thinking and planning (Burgelman, 2002; Edmondson, 1999; Rotemberg & Saloner, 2000). Sensing though depends once again on leadership. Senior leaders may face difficulties in regards to sensing, as they are more likely to assess present and immediate threats, as opposed to longer term opportunities (Bazerman & Watkins, 2004; Gilbert, 2005; Jackson & Dutton, 1988; Tripsas & Gavetti, 2000).

Along the same lines, if ambidexterity is to be fostered, seizing is necessary. Seizing refers to the leader's decision making and implementation skills to realise opportunities (O'Reilly & Tushman, 2008). This requires strategic insight and strategic execution (Harrell, O'Reilly, & Tushman, 2007). When developing organisational ambidexterity, leaders must conceive goals and strategies, assemble, allocate, and inter-relate appropriate assets, and develop consensus around strategy (O'Reilly & Tushman, 2008). O'Reilly and Tushman go on to argue that decision traps, which rely on existing knowledge, mindset, and procedures, cause problems aligning models with strategy. As well as compromising development. The theory of developing anticipates these potential problems, by suggesting that developing requires an integration of the processes of innovating, influencing, and implementing.

Ambidexterity also relies on reconfiguring if assets are to be shifted and recombined of for competitive advantage (O'Reilly & Tushman, 2008). In the case of incremental changes, realigning of structures, processes, people, and culture can be shifted gradually, or in a graduated fashion (Duncan, 1976; Eisenhardt & Brown, 1998; Nickerson & Zenger, 2002; Rindova & Kotha, 2001; Zollo & Winter, 2002). Yet more rapid change requires parallel realignment of the same elements (Govindarajan & Trimble, 2005; Markides & Charitou, 2004; Tushman & Anderson, 1986).

Not surprisingly, ambidexterity is not an end in itself. Like tactical innovation in rugby, "Unless there is a clear, intellectually compelling rationale for the importance of both exploration and exploitation, the short-term pressures will almost always move attention and resources away from the higher variance, less certain world of exploration" (O'Reilly & Tushman, 2008, p. 197).

Nonetheless, ambidexterity is challenging, and despite the objective rational assessment of possibilities, it is evident that a common team identity is a pre-requisite

(Larwood, Falbe, Kriger, & Miesing, 1995; Podolny, Khurana, & Popper, 2005; Sidhu, Volberda, & Commandeur, 2004; Voss, Gable, & Voss, 2006). Similarly, a common team purpose reinforced and supplemented by a clear consensus and communication, promotes a common-fate incentive system (Lubatkin, Simsek, Ling, & Veiga, 2006; Sidhu et al., 2004). Although diversity of experience in a team increases the likelihood of ambidexterity, unity of outlook is required to ensure diversity has an ambidextrous effect. As occurred on the rugby field, the culling of dissenting team members may be required to ensure influencing can be developed (O'Reilly & Tushman, 2008). The competitive environment of both organisations and sports teams emphasises the necessity for timely and sometimes drastic responses managing staff [and players] in what are dynamic contexts.

In summary, resolving the exploration vs. exploitation dilemma using the notion of ambidexterity brings together two diverging and very different processes. Exploration seeks new possibilities, opportunities, and methods in order to gain competitive advantage, or avoid obsolescence. However, exploration is always uncertain, as it risks dissipation of effort. In contrast, exploitation focuses on extracting increased efficiency from known resources, methods, and procedures in order to provide reliability of result. Exploitation is risky in that familiar pathways may become obsolete, and new reconfigurations into new paradigms delayed. Nonetheless, ambidexterity, whether it is managed organisationally, temporally or individually, is a managerial means to solve a paradox. Similar challenges are faced by rugby coaches, when they relate innovating, and implementing, within developing.

Contextual Effects

Whereas March (1991), and Duncan (1976) proposed an unavoidable trade-off between exploration and exploitation, subsequent literature emphasises the possibility of balancing contradictions with paradoxical thinking (Bouchikhi, 1998; Earley & Gibson, 2002; Gresov & Drazin, 1997; Koot, Sabelis, & Ybena, 1996; Lewis, 2000; Morgeson & Hofmann, 1999). Gibson and Birkinshaw (2004) argue the possibility that if leaders manage paradox, organisational contextual ambidexterity increases. This is a different interpretation of ambidexterity. Previously, ambidexterity was seen to be influenced by structures, alignment or adaption. Contextual ambidexterity however emphasises individuals who assess and judge the allocation of time, resources, and effort between exploration and exploitation. This view suggests that organisationally at least, competitive pressures influence the creative response required to achieve ambidexterity. The benefit supposedly lies in the hypothesis that the higher the level of ambidexterity, the higher the level of performance (Gibson & Birkinshaw, 2004).

Building upon Ghoshal and Bartlett's (1994) research, Gibson and Birkinshaw examine performance more closely arguing that:

Superior ... unit performance is not achieved primarily through charismatic leadership, nor through a formal organizational structure, nor even through a "strong culture." Rather it is achieved by building a carefully selected set of systems and processes that collectively define a context that allows the meta-capabilities of alignment and adaptability to simultaneously flourish. (Gibson & Birkinshaw, 2004, p. 210)

For Gibson and Birkinshaw, adaptability is necessary to reconfigure team activities so that they meet changing demands in the task environment. In this instance reconfiguration is context dependent.

In the rugby context, the theory of developing suggests that reconfiguration is common with coaches structuring tacit and explicit structures in order to retain a measure of control. However, given the dynamic nature of the game of rugby, coaches must balance control with reconfiguration, all the while encouraging players to develop creative and adaptive initiative. This is in keeping with Hedlund and Ridderstrale's (1997) discussion of the renaissance company men. Gibson and Birkinshaw (2004) pick up this concept by suggesting that it is leaders who create team environments that enhance the ambidextrous capacity development. This ambidextrous capacity is complex and context dependent.

Interestingly, the factors which facilitate the dynamic flexibility characteristic of contextual ambidexterity include worker training, and trusting relationships with management (Adler, Goldoftas, & Levine, 1999). Tushman and O'Reilly (1996) believe decentralised structure, common culture and vision, supportive leaders, and flexible managers are equally important. Bartlett and Ghoshal (1989) note that a shared vision, recruitment and selection, training, and career path management of executives influence the process. Many of these factors, and their inter-relationship were discussed in the theory of developing, and are similar to Gibson and Birkinshaw's (2004) discussion of influential factors in the organisation context. What stands out here is that it is the systems, processes and beliefs that shape individual behaviours within an organisation (Burgelman, 1983a, 1983b; Denison, 1990; Ghoshal & Bartlett, 1994). This was echoed in the influencing sub-process of developing where players, irrespective of talent and ability, were subject to de-selection if they did not abide by non-playing criteria. Maintaining the team structures of culture, disciplining, and managing reinforce the team context, and enable winning.

Organisational context, according to Gibson and Birkinshaw (2004), is also closely related to the concepts of structural context, organisation culture, and organisation climate.

Structural context is defined as the tangible mechanisms, especially incentive and career management systems, which foster particular behaviours (Bower, 1986; Bower & Doz, 1979; Burgelman, 1983a, 1983b). At the same time, context is affected by organisational culture that includes the belief systems and values of the individuals within an organisation, as distinct from the formal systems and processes of organisational context (Denison, 1990; Ouchi, 1981; Pettigrew, 1979; Schein, 1985). Organisational climate is slightly different again as it involves the “organizational stimuli or environmental characteristics presumed to affect individual behaviour and attitudes (Gibson & Birkinshaw, 2004, p. 213).

Ghoshal and Bartlett (1994) add depth to the concept of organisational context by defining the four behaviours which frame behaviour. These are discipline, stretch, support, and trust. Firstly, discipline fosters an individual team member’s desire to strive to meet the expectations of implicit or explicit commitments. Discipline is also characterised by clear standards of performance and behaviour, open and decisive feedback, and consistent application of punishment (Ghoshal & Bartlett, 1994). Secondly, stretch is the quality of organisation context that encourages individuals to voluntarily strive for increasingly ambitious objectives. Stretch develops when individuals identify personal meaning in their contributions, and see that they have a place in the development of collective identity and shared ambition (Ghoshal & Bartlett, 1994). Thirdly, support encourages individuals to proffer assistance to others. Ideally, to properly integrate support with the requirements of stretch, support systems should allow initiative of action at lower levels. This enables individuals to lend and access resources as required. In these situations leaders offer guidance rather than issuing directives (Ghoshal & Bartlett, 1994). Trust is the final significant behaviour. Trust is essential for inducing reliance on the commitments and performance of other team members. Trust develops when there is equity within systems, processes, and decisions. Trust develops when individuals have input regarding matters that affect them, and when there are competent actors to fulfil their allocated roles (Ghoshal & Bartlett, 1994).

The problem with the discipline, stretch, support, and trust behaviours is that they are interdependent, and non-substitutable (Gibson & Birkinshaw, 2004). They all influence organisational context though. Together they create, “a context [that] does not dictate specific types of actions; rather it creates a supportive environment that inspires individuals to do “whatever it takes” to deliver results” (Gibson & Birkinshaw, 2004, p. 213).

In particular, discipline and stretch influence exploitation. However, unless they are ameliorated by support and trust, team members may become burned out or disillusioned. Likewise, support and trust influence the familiarity and repetition characteristic found in

exploitation. Overall though, support and trust, without the counter-balance of discipline and stretch result in a relaxed approach unsuitable for a competitive environment (Gibson & Birkinshaw, 2004). Gibson and Birkinshaw offer caution by advising:

It would be wrong to suggest that [an organisation] should simply institute the four attributes of organization context, and expect them to deliver superior performance. Rather, the four attributes shape individual and collective behaviours that in turn shape ...unit capacity for contextual ambidexterity, and it is the ambidexterity that leads to superior performance. (Gibson & Birkinshaw, 2004, p. 214)

While context clearly influences team development, it depends on management as well.

The ability to manage paradox is also the solution to the ambidexterity dilemma. For example, according to (W. Smith & Tushman, 2005), “Competitive pressures make even more salient [the] admonitions to take contradiction and paradox seriously...we argue that sustained performance occurs through attending to and dealing with strategic contradictions – short-term performance and long-term adaptability, exploration and exploitation, focus and flexibility” (W. Smith & Tushman, 2005, p. 533).

Nonetheless, whereas Gibson and Birkinshaw (2004) emphasise the resolution of the tension as the interplay between individual initiative and organisational structural requirements, Smith and Tushman (2005) stress the capacity of cognition to reconcile conflicting contexts. They go on to suggest that: “a paradox is created when (1) tensions in a situation (explore/exploit) and are (2) juxtaposed through actor’s cognition” (W. Smith & Tushman, 2005, p. 526). However, the ability to manage context is more complicated than it initially appears. Latent structural and social inertia has some influence too. Drawing upon the research of Bazerman and Watkins (2004), Van de Ven, Poley, Garud, and Venkataraman (1999) and Virany, Tushman, and Romanelli (1992), they note that structural, psychological, and social impediments mitigate against the balancing of conflicting organisational requirements. While managers emphasise certainty in the presence of risk and the requirement for immediate gain, they can reinforce structural and social inertia at the same time (Henderson & Clark, 1991; Kaplan, Murray, & Henderson, 2003; Tripsas & Gavetti, 2000). For rugby coaches, the complex factors which can enhance or inhibit ambidexterity reinforce the importance of incorporating the influencing sub-process into developing. Reconciling innovating and implementing is best effected by also gaining psychological and social buy-in from the team members who perform ambidexterity.

Undoubtedly, the complexity of context overlaps with the processes of exploration and exploitation. The desire to establish the consistency that results in enhancement of exploitation at the expense of exploration, is traced by Smith and Tushman (2005) to an epistemological commitment to a unity of truth (Ford & Backoff, 1988; Voorhees, 1986). In contrast, those who possess, or are encouraged to adopt a paradoxical frame of reference are better able to appreciate opportunities, dualities and synergies, reduce anxiety and stress, and enhance overall performance (Dutton & Jackson, 1987; Murnighan & Conlon, 1991; K. Smith & Berg, 1987). As a result of adopting a paradoxical frame, managers are better able to manage the two distinct cognitive processes of differentiating and integrating (W. Smith & Tushman, 2005). This balance of organisational needs is also reflected in the complimentary, often also conflicting sub-processes of innovating and implementing within the theory of developing.

Perhaps the underlying conflict indicates the paradox inherent within context that is multidimensional. For example, the two organisational options for integrating the paradoxes of differentiating and integrating are either a leadercentric, or teamcentric model. In this instance team context is important:

Nature, cognitive frames, and processes are similar at the individual and the group level of analysis. Where these cognitions occur primarily in the leader in leadercentric teams, they occur through social interaction within team centric teams. The locus of integration may be contingent on the team's context. (W. Smith & Tushman, 2005, p. 529)

Team context seldom stands alone, although in a logical extrapolation from the divergent descriptions, leadercentric teams exhibit a more authoritative style of management, whereas teamcentric teams are more consultative. This suggests that group patterns of behaviour are context dependent. Within the theory of developing, the group patterns of behaviour of both leadercentricity, and teamcentricity were summarised in the influencing sub-process. While the coach in the rugby context draws on competence and experience to maintain authority, innovative input is still encouraged in the broad process of developing.

Temporal context is also significant for both organisations and in the sports team arena. For instance, punctuated equilibrium offers an alternative to ambidexterity when there is a tension between exploration and exploration (Burgelman, 2002; Levinthal & March, 1993; Siggelkow & Levinthal, 2003; Tushman & Romanelli, 1985; Vermeulen & Barkema, 2001). Punctuated equilibrium involves the chronological sequencing of allocating focus and resources to conflicting outcomes (Gupta et al., 2006). Whereas ambidexterity is more

profitable between highly specialised but loosely integrated sub-units within an organisation, the temporal cycling of short efforts of exploration and longer periods of exploitation may be more appropriate in some contexts (Burgelman, 2002). For Gupta, Smith, and Shalley (2006), the key determinant for adopting either possibility is whether exploration and exploitation are mutually exclusive ends of a continuum (March, 1991), or as an orthogonal integration of search scope and search depth (Katila & Ahuja, 2002). Where an organisation is of a single architectural level, with limitation of resources and timeframes, punctuated equilibrium offers a more viable option (Gupta et al., 2006).

In summary, consideration of the effects of context acknowledges the human element within organisations. The extent to which individuals and organisations can form a successful nexus is dependent in part upon context. Personal cognition, affect, and volition function within, and interact with particular contexts. Similarly, individuals both shape, and are shaped by organisations. Similarly, the sub-process of influencing reflects the need for individuals to participate in developing. Coaches' attempts to influence the team context, and use it to promote winning highlight the affinity with the contextual effects literature.

Team Development

Another area of resonance between the findings of this thesis and published research within the business studies literature relates to team development. The theory of developing, explained in Chapters Three, Four and Five, is the process rugby coaches utilise to resolve their concern for winning. Not surprisingly, the discussion of team development to meet competitive business concerns, throws further light on this thesis' findings. Of value is McGrath's proposed input-process-outcome [IPO] in assessing team effectiveness (McGrath, 1964). Mathieu, Maynard, Rapp, and Gilson (2008) summarise McGrath's findings, and the framework of subsequent discussion, by describing, "Inputs [as] antecedent factors that enable and constrain team member's interactions,...processes...describe how inputs are transformed into outcomes,...[and] outcomes are results and by products of team activity that are valued by one or more constituency" (Mathieu et al., 2008, p. 411).

Inputs are further differentiated between the individual team competencies, personalities, team structures, external leader influences, organisational and environment structures, and complexity (Mathieu et al., 2008). The process of coaching and developing representative rugby teams exhibits a similar flow. As has been seen, innovating and influencing rely on contributions from individual players and coaches, team protocols,

practices, and disciplines, and the wider administrative structures of the game's governance. The outcome of the process is important to realise the winning performance.

Subsequent research utilising McGrath's model reinforces the essential IPO model, with modifications that reflect certain subtleties in understanding. In particular, the inter-relationship between the three inputs of individual, team, and greater organisational context has received greater attention (S. G. Cohen & Bailey, 1997). Klein and Kozlowski (2000) characterise the multi-level embedding of individuals, within teams, within environmental and organisational contexts as nesting. Mutual influencing between levels occurs, but greater sway is effected by the environment and organisation, inwards to the team, and on to the individual, rather than from the individual outward (Klein & Kozlowski, 2000). Also, the IPO model's assessment of processes has been critiqued for failing to take into account member's actions and include the mediating effects of various emergent psychological states such as collective affect and psychological safety (Marks, Mathieu, & Zaccaro, 2001).

As a result, an alternative input-mediator-outcome [IMO] model is proposed (Ilgen, Hollenbeck, Johnson, & Jundt, 2005). In further work these authors highlight the effect of feedback from outcomes, and propose input-mediator-output-input [IMOI] as a better model (Ilgen et al., 2005). Along the same lines the simple linear model of McGrath's chronology has been revised to reflect the episodic approach, as teams implement changing processes over time (Marks et al., 2001). Alternatively, internal qualitative changes cause teams to mature in response to various factors, reflecting a developmental research concern (Kozlowski, Gully, Nason, & Smith, 1999). The developing of positive team culture was a means by which rugby coaches sought to continually influence qualitative change.

In reality though, as has been illustrated in the theory of developing, team development is much more complex. In addition to changes and variations to the structure of the McGrath model, Mathieu et al., (2008) catalogue complexities that impact team development. These are member input, team input, organisation input, processes, and outcomes. The first, team member input, has been researched from the approach of mean values, diversity indices, and complex combinations. Mean values refer to the averaging of member attributes, and the attributes include personality, competencies, and other attributes (Barrick, Neubert, Mount, & Stewart, 1998; Chen, Mathieu, & Bliese, 2004; Stewart, 2006). Personality extends beyond the 'Big Five' [openness, conscientiousness, extraversion, agreeableness, and neuroticism], and also includes, "achievement orientation, dependability... assertiveness..., and locus of control" (Mathieu et al., 2008, p. 434).

Needless to say team development depends on personalities. In addition, complex combinations between the various personality attribute influence effectiveness. Higher levels of both conscientiousness and agreeableness results in higher performance (Halfhill, Sundstrom, Lahner, Calderone, & Nielsen, 2005). This is reflected in the indispensable importance of influencing within the theory of developing. However, teams composed with higher levels of agreeableness were also not successful at learning, as teams with higher cognitive ability (Ellis et al., 2003). This finding reinforces that various sub-process of developing inter-react and compliment one another, to produce a winning performance.

It comes as no surprise that team development and competencies are interrelated. The second attribute of mean values, competencies, relates specifically to the knowledge, skills, and abilities [KSAs] required in a team context (Morgeson, Reider, & Campion, 2005). Morgeson et al., (2005) note that the team task competencies differ when individuals work alone. Also, whilst cognitive ability, as noted with personality attributes, is important, teams with high levels of task related knowledge perform better by comparison (Mathieu & Schulze, 2006). Devine and Philips (2001) also note that cognitive ability has a more pronounced affect on team effectiveness, if the tasks are intellectual or decision-based, rather than physical. This reinforces the importance of the physical repetition characteristic of the implementing sub-process of developing.

The third attribute of mean values includes individual members' transient dispositions, such as morale, that elicits situation-determined responses (Button, Mathieu, & Zajac, 1996), individual goal orientations (Dweck, 1986), and teamwork orientation (Driskell & Salas, 1992). Within developing, innovating includes a preliminary assessment of potential team members' adaptive, competitive, and team-work capacities, whilst the influencing sub-process moulds these. Bunderson and Sutcliffe (2003), in common with the exploitation vs. exploration dilemma, and the balancing and trade-offs necessary for team developing, conclude that a short-term focus on learning and competence development may impair performance in the short term. Not surprisingly, work satisfaction is identified as a positive attribute for individual member effectiveness (Harrison, Price, & Bell, 1998).

There is some emphasis in the literature on diversity and team development. Diversity consists of demographic, functional, personality, and attitudes/values aspects. In contrast to mean values, diversity seeks to measure the heterogeneity of team member characteristics that influence effectiveness (Mathieu et al., 2008). Meta-analysis of the studies do not support a relationship between demographic diversity and cohesion or performance (Webber & Donahue, 2001). However, some studies report that diversity of age and tenure within teams

may benefit effectiveness (Jehn & Bezrukova, 2004; Kilduff, Angelmar, & Mehra, 2000). The explanation for the different findings may be due to the positive effects of time neutralising the relationship conflict effects of diversity (Harrison et al., 1998). Within influencing, it will be recalled that coaches continually seek to effect team development by means of additional new personnel, while also deferring to the advice and input of senior team members.

The functional aspect of team member diversity refers to the breadth of perspectives, skills, and expertise (Hoffman & Maier, 1961). Differing functions potentially reduce team effectiveness, as conflict is more likely (Knight et al., 1999). At the same time information sharing declines (Ancona & Caldwell, 1992), and the competitive response slows (Hambrick, Cho, & Chen, 1996). Personality diversity within teams causes personality conflicts, especially in respect to time urgency (Landy, Rastegary, Thayer, & Colvin, 1991). Oddly enough research into the effect of diversity of attitudes and values on the team is sparse (Mathieu et al., 2008).

In contrast to the means and variances method of indexing individual team member characteristics, the complex combinations approach examines the dynamic features of faultlines, position and status issues, and network features. Faultlines are defined by Lau and Murnighan (2005) as lines that divided a group into subgroups on the basis of one or more attributes. Results vary, as faultlines can adversely effect processes (Li & Hambrick, 2005; Polzer, Crisp, Jarvenpaa, & Kim, 2006; Thatcher, Jehn, & Zanutto, 2003), cohesion (Molleman, 2005), and social and behavioural integration (Li & Hambrick, 2005; Rico, Molleman, Sánchez-Manzanares, & Van der Vegt, 2007). However, faultline strength lessens conflict, and increases group learning, psychological safety, and team satisfaction (Lau & Murnighan, 2005). Application to the rugby context suggests the most likely faultline is the functionality between team sub units.

With respect to the complex team member combination issues of position and status:

Researcher's often rely on Steiner's (1972) task classification...Steiner argued that in disjunctive tasks (e.g., problem solving), team performance is influenced by the smartest member, whereas in conjunctive tasks (e.g., assembly line), the capabilities of the weakest member tends to limit overall performance. (Mathieu et al., 2008, p. 440)

This finding is reflected within the theory of developing, where innovating is confined to a few, particularly the coach, whereas reliability of player performance drives implementing. There are parallels here between position and status issues and the concerns of influencing, "Barrick et al., (1998) argued that a single disagreeable member could hamper a

team's ability to work together cooperatively, and that a single emotionally unstable member can impair a team's functioning" (Mathieu et al., 2008, p. 440).

Team developing and networking are interrelated. Networking refers to the social connections that link members of teams (Borgatti & Foster, 2003). A key concern within this field of research is criticality - the effect upon workflow if and when a particular functional position is removed (Ellis, Bell, Ployhart, Hollenbeck, & Ilgen, 2005; Pearsall & Ellis, 2006). Needless to say critical team members play an important part in team effectiveness, and demographic factors such as high levels of education, and low levels of neuroticism likely increase members' criticality (Klein, Lim, Saltz, & Mayer, 2004). Mathieu et al., (2008) summarise the key issues of individual input by concluding that researchers need to understand better the balance between team composition requirements, and the need to develop individuals. The concerns balanced by rugby coaches in the theory of developing reinforce the paradox.

If teams are to develop they require team input. Input depends on interdependence, team training, and team leadership (Mathieu et al., 2008). Interdependence is the extent to which members interact and cooperate to achieve tasks (Stewart & Barrick, 2000). Kozlowski and Bell (2003) consider interdependence to be an indispensable element in understanding organisational teams. Wageman (1995) differentiates between input and process interdependence. Input interdependence is shaped by members' skills and their need to share resources, whereas process interdependence is an effect of team structures. The relationship between team interdependence and manager rated performance varies depending on tasks performed. For conceptual functions, both low and high levels of interdependence produced strong performance. However, behavioural/manual tasks more applicable to the rugby context, require moderate levels of interdependence (Saavedra, Earley, & Van Dyne, 1993; Stewart & Barrick, 2000; Wageman, 1995).

Not surprisingly, team training effects team development. Meta-analysis confirms the small to moderate correlation of .29 for the overall influence of team training in both actual, and manager rated effectiveness (Salas, Nichols, & Driskell, 2007). This statistic highlights the importance of the need for repetition found within implementing in the theory of developing. Also of significance for the inter-relationship between the innovating and implementing sub-processes is the recommendation that training interventions promoting adaptive team mechanisms exert a stronger effect on performance, compared with guided team self-correction, and cross-training interventions (Salas et al., 2007). The need for a competitive or winning performance outcome within rugby reinforces the finding that direct

and focused training interventions are generally more effective compared to wider alternatives.

Team leadership has implications for the theory of developing. Zaccaro, Rittman, and Marks (2001) observe, “we know surprisingly little about how leaders create and manage effective teams” (Zaccaro et al., 2001, p. 452). Research into the features of team input research focuses on external leadership, coaching, and shared leadership. External leadership is the traditional model, concentrates on the influence of a leader who has authority and responsibility for team performance (Mathieu et al., 2008). It is argued that such a leader is indispensable for achieving both affective and behavioural outcomes (Burke et al., 2006; Druskat & Kayes, 2000; Foels, Driskell, Mullen, & Salas, 2000). External leadership is significant, as it influences coordination, creativity processes, knowledge sharing, problem management and action strategies, team learning, affective tone, efficacy, empowerment, potency, team and individual commitment and satisfaction, plus performance (Ahearn, Ferris, Hockwarter, Douglas, & Ammeter, 2006; Chen, Kirkman, Kanfer, Allen, & Rosen, 2007; Kirkman & Rosen, 1999; Lim & Ployhart, 2004; Srivastava, Bartol, & Locke, 2006; Sy, Côté, & Saavedra, 2005; Tesluk & Mathieu, 1999). All of the afore-mentioned resonate with coaches’ team development concerns, as does the summarising of leadership functions into either person-focused, or task-focused roles (Burke et al., 2006). Analysis also shows that person-focused leadership positively effects transformational and consideration behaviours by .34 and .25 respectively, whereas task focused behaviours such as structure initiation and spanning boundaries are perceived as .31 and .49 respectively (Burke et al., 2006).

An alternative to leadership is coaching. In contrast to external leadership, coaching in the business organisational and team development literature refers to direct interactions intended to assist team members to make coordinated and task-appropriate use of collective resources in achieving team tasks (Hackman & Wageman, 2005). The actions of coaches include identifying problems, process consultation, cueing and rewarding self-management, and problem solving consulting (Wageman, 2001). Research also indicates that coaching effectiveness depends on antecedents such as team design, and stability of the task environment (Morgeson, 2005; Wageman, 2001). Of particular significance for rugby coaches reconciling the differences between external leading and coaching is the observation that, “Implicit in the approach of Hackman and Wageman (2005) is that the same people can effectively operate as external leaders and coaches. This assumption, however, warrants closer examination” (Mathieu et al., 2008, p. 453). The team leadership paradoxes requiring reconciling are highlighted by the alternative to external leadership, and coaching.

Unsurprisingly, the third area of team leadership focuses on, emergent, distributed, and lateral forms of shared leadership (Day, Gronn, & Salas, 2004). Antecedents to shared leadership include a team's internal environment, external leadership coaching, and the corporate orientation of team members (Carson, Tesluk, & Marrone, 2007; Hiller, Day, & Vance, 2006). Some researchers report that shared leadership does not necessarily benefit team effectiveness, unless certain structures such as a distributed-coordinated model are adopted (Mehra, Smith, Dixon, & Robertson, 2006). Within the influencing sub-process of developing the same dynamic is noted. Influencing represents a group pattern of behaviour, with external leadership aspects as one extent of the possible application, and team leadership characteristics as the other extend. Within those parameters, mutual influencing between the coaches as primary initiators, and other team members as both objects and subjects of influencing is evident.

The third area for consideration of team effectiveness utilising McGrath's IPO model is organisational and contextual/environmental inputs. Organisational influence is external to teams, yet still resides within the organisational structure teams operate within. In contrast, environmental inputs are external to both teams and the wider organisation, yet nevertheless influence teams (Mathieu et al., 2008). For rugby teams, refereeing, competition and national and international union structures correspond to organisational inputs, whereas media, commercial, and public concerns equate to contextual/environmental inputs. As grounded theory concentrates upon the group patterns of behaviour utilised by actors to resolve concerns within substantive psychosocial contexts (Glaser, 1998), the influence of macro-effects did not figure strongly in the theory of developing. The exceptions are influencing of referees, administrators, and the press, as and when teams' winning performance are dependent upon those outside factors.

Processes are the second element in the IPO framework of team effectiveness. Subsequent discussion has redefined McGrath's original conception as, "mediating processes that explain why certain inputs affect team effectiveness and viability" (Ilgen et al., 2005, p. 519). Processes are categorised as team processes, or emergent states (Mathieu et al., 2008). Team processes are further categorised as either taskwork, which is the functions individuals perform to accomplish the team's task, or teamwork, which is the interactions between team members (McIntyre & Salas, 1995; Stout, Cannon-Bowers, Salas, & Milanovich, 1999). Marks, Mathieu, and Zaccaro (2001) built upon the taskwork and teamwork model, and conceptualise the three team processes as transition, interpersonal, and action.

Transition processes focus upon functions such as mission analysis, planning, goal specification, and formulating strategy (Marks et al., 2001). Transition processes have received the least amount of empirical attention when compared to action and interpersonal processes (Mathieu et al., 2008). Possibly this is due to the difficulty in measuring the effects of the abstract strategising which characterises transition processes. However, Mathieu and Schulze (2006) suggest that dynamic planning for contingencies and reactive planning positively relate to performance. Also, Mathieu and Rapp (2009) illustrate how planning activities such as team charters relate to diachronic team performance. Similarities are observed with innovating, where indicators such as intuition, opportunity awareness, anticipation, goal setting, and analysing inform coaches of the options available and required for winning team performance.

The next category of Marks et al.'s (2001) conception, interpersonal processes also echoes the influencing sub-process. The interpersonal category includes conflict management, motivation, confidence building, and affect management. De Dreu and Weingart (2003) report that both relationship and task conflict have strong negative correlations with team performance and member satisfaction. Also Geister, Konradt, and Hertel (2006) note that feedback has a positive effect on motivation, interpersonal trust, and performance. In addition, Bradley, White, and Mennecke (2003) argue that there is abundant evidence for the view that interpersonal processes relate positively to team performance when teams engage in longer term tasks. Similarly, influencing in the theory of development is an on-going process that continually shapes players attitudes, behaviours, and interactions with other team members.

There are also connections between action processes, and the sub-process of implementing. Action processes refer to team members concentrating upon task accomplishments, monitoring progress and systems, coordinating team members, and monitoring and supporting team members (Marks et al., 2001). Perhaps not surprisingly, research confirms the critical importance of communication and coordination in team performance (LePine, Piccolo, Jackson, Mathieu, & Saul, 2008). De Dreu & West (2001) also demonstrate the importance of team member participation. They suggest that participation interacts with minority dissent to increase team innovation. This is very much the same as occurs in the theory of developing. Within developing, influencing benefits coaches and players who are leaders, as the number of individuals involved increases resource identification needed for innovating.

More recently Mathieu et al. (2008) suggest that creative processes may facilitate development in the transition, action, and interpersonal processes model. Gilson and Shalley

(2004) define creative processes as members working together so that they link ideas from multiple sources, and search into unknown areas to find improved or innovative approaches to problems, or new ways to perform tasks. Many authors argue that creativity is a vital source of team effectiveness (Hackman & Morris, 1975; Stein, 1974; Taggar, 2002; Tesluk, Farr, & Klein, 1997). Within the theory of developing, creativity is seen in the interrelationship between the innovating, and implementing sub-processes.

Emergent states are important in the reconceptualising of McGrath's processing in the IPO framework. In contrast to the more tangible team processes, emergent states are the "cognitive, motivational, and affective states of teams [that are] ...dynamic in nature and vary as a function of team context, inputs, and outcomes" (Marks et al., 2001, p. 357). Whereas the interpersonal aspect of team processes address the interrelationship of individuals to functions as a team, emergent states concentrate on the sum total of the parts. As a result, factors such team confidence and team empowerment become processes (Mathieu et al., 2008).

The emergent state of team confidence includes team efficacy and team potency. Efficacy is a shared belief in the team's ability to organise and implement activities that will realise goal attainment (Kozlowski & Ilgen, 2006). In contrast, potency is the team belief in the team's ability to be successful (Shea & Guzzo, 1987). The assumption of both team efficacy and potency is that they are shared by all team members (Gully, Incalcaterra, Joshi, & Beaubien, 2002). This means they are more than a simple aggregation of individual beliefs (Kozlowski & Ilgen, 2006). There is evidence of a positive relationship between team efficacy and performance (Jung & Sosik, 1999). Furthermore, Lester, Meglino, and Korsgaard (2002) observe that team potency is positively related to team satisfaction, effort, and performance. In addition, team efficacy has a positive relationship with the team's level of strategic risk (Knight, Durham, & Locke, 2001). A meta-analytic review found that the mean corrected correlation between efficacy and potency with performance was .41 and .37 respectively, and the relationship was higher when teams had greater levels of interdependence (Gully et al., 2002). These results reflect the processes inherent in influencing and implementing.

The emergent state of team empowerment is categorised as either structural or psychological (Mathieu et al., 2008). Structural team empowerment, which is more properly a team process, rather than an emergent state, refers to the impact of the actual delegation of authority and responsibility (Arnold, Arad, Rhoades, & Drasgow, 2000). Psychological team empowerment is the collective belief that the team has the authority to control the work environment and processes (Mathieu, Gilson, & Ruddy, 2006). Empirical evidence

demonstrates that team psychological empowerment is distinct from individual empowerment. Also, and in common with the influencing of the theory of developing, psychological empowerment, through interaction with individual empowerment, has the capacity to positively influence individual performance and satisfaction (Seibert, Silver, & Randolph, 2004).

The final category of the IPO model is outcomes. Cohen and Bailey (1997) delineate outcomes as performance, attitudes, and behaviours. However, up to twenty different categories of outcome are proposed (Sundstrom, McIntyre, Halfhill, & Richards, 2000). Difficulty arises in that whereas there is consistency in the categorisation of inputs and processes, “Criterion measures, and in particular performance indices, are often idiosyncratic and organizationally specific...the notion of spending a great deal of time delineating and describing predictor variables as opposed to outcomes is not new to the applied social science literature” (Mathieu et al., 2008, p. 415).

The ambivalence in goals is evident in the theory of developing. The main concern rugby coaches seek to address through developing is winning. Therefore multi-faceted and complex goals are possible for teams. As a result, Mathieu et al. simplify their review of team outcomes as either team performance, or member's affect and viability.

A team has been defined as an organisation that produces something useful (Argote & McGrath, 1993; Goodman, 1986). Of particular relevance to rugby is the research of team performance behaviours. Beal, Cohen, Burke, and McLendon (2003) describe performance behaviours as actions that are relevant to achieving goals. Examples of performance behaviours include behavioural learning (Edmondson, 1999), cognitive task performance (Jehn & Shah, 1997), and improvements in team processes (Kirkman, Rosen, Tesluk, & Gibson, 2004). Measuring feedback taking, error discussion, and experimentation are the means Kirkman et al., used to assess improvement in team process. Similar activities are present in the sub-processes of influencing, implementing, and innovating.

In summary, the team development literature highlights the essential aspect of cause and effect that is intrinsic to the existence of competitive organisations. Inputs are the attempt to marshal the chosen and available resources deemed necessary for a competitive enterprise. Processes are the refining, engineering, and application of those resources. Also there is the possibility, due to the corporate nature of organisations, that the resources will combine to produce a result greater than the sum total of the parts. However, as organisations are in some sense unnatural and arbitrary constructions, they impose pressure on members to perform and conform to corporate requirements. The purpose of the effort is a successful outcome.

Similarly, the theory of developing reflects a similar utilisation, and processing of inputs, by means of innovating, influencing, and implementing, all of which are necessary to further winning.

Conclusion

In conclusion, as with any grounded theory, the theory of developing, contains elements that are potentially generalisable. The organisational literature reviewed highlights aspects of similarity, and clarifies themes that are grounded in the theory of developing. The business environment shares many similarities with the representative rugby context: pressure to perform, the selection and training of skilled personnel, the utilisation of specialist expertise and processes, the enhancement of existing methods, and the possible abandonment of the status quo for uncertain but potential benefits. Most significantly of all, the endeavours of business and rugby share the component of people attempting to achieve competitive success. As real as these points of contact are, however, the New Zealand rugby context has elements of discontinuity with business. Success and failure in commercial activity is seldom a zero-sum game, as is the case with rugby. Also, the benefit of financial reward, is not, in the first instance, the obvious and primary goal of the efforts of coaches, players, or teams. Instead, the main concern is attaining winning performance on the playing field. Financial inducement comes as a by-product of playing results. The disjunctions between business and rugby highlight that any grounded theory, the theory of developing included, are also linked to specific substantive areas of concern.

Chapter Seven: Discussion

This research commenced with the research question: How does tactical innovation occur in New Zealand representative rugby? At the beginning of the project the researcher assumed that the main concern of coaches managing elite rugby teams in New Zealand would be tactical innovations. However, as is typical of grounded theory, and as anticipated, a different main concern was identified. Research findings suggest that the main concern is not about tactical innovations per se. Rather, coaches focus on winning. To manage winning, coaches utilise the process of developing, which is comprised of the sub-processes innovating, influencing, and implementing. This therefore is a grounded theory of developing.

This final chapter commences with a preliminary explanation of the initial research question of how tactical innovations in rugby occur. The explanation of tactical innovations will restate the terms which initially guided the research data gathering, as well as reiterating the definitions of the vocabulary surrounding the theory of developing. The comparison between the initial research question and the findings transitions to an overview of the grounded theory of developing. Findings are considered in relation to the concept of ambidexterity. The inter-relating of the innovating and implementing sub-processes are presented as analogous with ambidexterity. The discussion then considers the issues in incorporating influencing, which is effectively a third divergent process to the already divergent ambidexterity. Consideration is given throughout of how coaches reconcile the three sub-processes, and manage the process of developing in actual practice.

The Research Question within the Theory of Developing

In Chapter One, it was explained that this research commenced with the aim of using classic grounded theory to discover the main concern of rugby coaches, as they seek to tactically innovate. By generating a grounded theory, the research also aimed to explain and predict how coaches continually utilise innovation to resolve tactical on field problems in New Zealand representative rugby. Tactical innovation was provisionally explained. At the commencement of the research, the term tactical referred to an on-field playing method that is utilised by a player or team, often with the input of a coach. It was explained that tactics are designed to implement an overall strategy or goal maximising the chances of score board success, whilst minimising that same likelihood for the opponents. An innovation was defined as a new, revised, or freshly conceived and/or applied tactical method, designed to take an opponent unawares (p. 7). Innovations leave opponents in a position of comparative

disadvantage, until such time as they have identified, revised, addressed, or successfully countered the reason for their comparative tactical obsolescence and disadvantage.

The research findings were summarised in the theory of developing. Chapter Three introduced the theory of developing, which explains how coaches manage the main concern of winning, and the patterns of behaviour that are required to win. Coaches manage the process of developing by innovating, influencing, and implementing. Innovating, introduced in Chapter Three is defined as anything that has the possibility to change a team so that team function is different. Innovating is the what in developing. Influencing, explained in Chapter Four, is about shaping the thinking of others, in order to control their actions. The purpose of influencing is to gain buy-in from others. Influencing is the who in developing. Implementing, outlined in Chapter Five, is the process that assists coaches to develop reliability. Implementing is the how in developing.

Comparison between the definition of tactical innovating as anticipated in the original research question, and the sub-process of innovating within the final theory of developing confirm redefinition has occurred. Whereas innovating at the commencement of the research was solely tactical in scope, restricted to the narrow confines of on-field play, innovating within developing is a much broader process that covers anything, off-field or on-field that represents change. Innovating itself is also less defined, perhaps more abstract, as is consistent with theoretical development. Whereas the initial research commenced with the categorical differentiation of new, revised, or freshly conceived and/or applied [methods], in the theory of developing innovating is much simpler and refers to change.

Despite the variance between the original research question and the findings, it is possible to explain the broad patterns of behaviour underpinning tactical innovations and how they occur within the process of developing. It is evident that while the tactical innovations are desirable for coaching winning teams, they are not the primary focus of coaching but function as a tertiary concern. To explain further, tactical innovations are a subset of innovating, which in turn is a secondary concern of the primary concern that is developing. Stated another way, coaches do not directly introduce tactical innovations as an end in itself. Instead, tactical innovations are an aspect of innovating. Tactical innovations are desirable to develop change to enhance the likelihood of winning.

In addition, like all innovating, tactical innovating requires the ability to identify prospective change. As illustrated in Chapter Three, identifying is manifested as the mentally receptive qualities of watching, thinking, awareness, and anticipating. Hence tactical innovations are a by-product of the capacity to identify opportunity which is undeveloped,

and possibly latent. Tactical innovations are developed by those who know what, where, how, and when to identify opportunity for change. Nevertheless, identifying is insufficient to explain how innovating occurs. Coaches are also required to subject prospective tactical change to the critical process of questioning. Questioning is evidenced by goal setting, analysing, comparing, and problem solving. Tactical innovation is developed by those who know how to subject prospective change to rigorous tests of viability and worth. Whereas identifying opens up innovating possibilities, questioning subsequently closes off some of those tactical opportunities.

Explaining the occurrence of tactical innovations is not exhausted by the innovating sub-process. Tactical innovations represent the developing of change that enhances winning. All developing though does not stand in isolation. It is a process that is subject to the concerns of other sub-processes. Coaches are also required to influence teams, so that players are amenable to change. However, prospective tactical innovation may founder due to lack of sufficient structuring and persuading. Tactical innovation may be directly concerned with securing on-field advantage over opponents. Clearly, unless the buy-in of team members is secured, tactical innovation may never occur.

Tactical innovation is similarly challenged by the developing requirements of the implementing sub-process. Unless tactical innovations are implemented to a reliable standard, it is unlikely coaches will ever utilise them in the competitive match environment. Tactical innovations are an attempt to manipulate the time and space concerns characteristic of implementing. As with all implementing, coaches are required to make appropriate decisions and apply intricate technical knowledge. Without proper implementing, no innovation, be it tactical or otherwise, will ever develop.

As has been stated the occurrence of tactical innovations is prompted by the concern for winning. In particular, it is coaches who are proficient in all the requirements of developing who are more likely to tactically innovate successfully. Proficiency of developing includes knowledge and experience of the requirements of each of the sub-processes. Proficiency of developing also includes skill relating the competing sub-process requirements one to another. Proficiency of developing also includes relating the divergent sub-process concerns of securing advantage over opponents, gaining buy-in for plans and procedures from team members, and gaining reliability of performance.

Developing and Ambidexterity

The diversity of skill and concerns required to enact tactical innovations throws into relief the difficulties of developing. Diversity of skills and concerns were also encountered in another competitive context, the business environment. In order to succeed, organisations are required to manage the competing concerns of exploration and exploitation, by means of ambidexterity. Exploration, it will be recalled, is characterised by terms such as search, variation, risk taking, experimentation, play, flexibility, discovery, and innovation. The similarity or synonymy with the categories, indicators, and ethos of the innovating sub-process – identifying, watching, thinking, awareness, anticipating, questioning, goal setting, analysing, comparing, and problem solving – is evident. In contrast, exploitation is characterised by terms such as refinement, choice, production, efficiency, selection, implementation, and execution. Likewise the affinity with the conceptualisation surrounding implementing – deciding, simplifying, selecting, delegating, prioritising, applying, systematising, repeating, pressuring, maintaining - is clear. As a result, it is possible to consider the proposed solutions to the explorations vs. exploitation dilemma as a backdrop to reconciling innovating and implementing within the theory of developing.

The possible solutions to the exploration vs. exploitation problem outlined in Chapter Six underline the issue for coaches, that reconciling innovating and implementing is the developing of two divergent processes. The solutions canvassed in Chapter Six can be categorised as one of two general options for developing. Coaches can either structure teams and procedures to achieve ambidexterity (Tushman & O'Reilly, 1996) or coaches can exercise the skill of a rugby renaissance man by taking the ambidexterity locus upon themselves, and continually balancing the paradox (Gibson & Birkinshaw, 2004). The findings of the theory of developing suggest proficient coaches are able to do both.

Elements of structuring that enhance team ambidexterity are present as a matter of course. The presence of ambidextrous rugby team structures is confirmed by comparing the structures of rugby teams with the organisational structuring options. Differentiating or integration of exploration and exploitation activities can be designated to specific groups, especially management, or dispersed throughout the whole team in the form of brain-storming team problem-solving sessions. Similarly, teams also have automatic structures that reflect the dynamic temporal approach. For example, coaches confirmed that the off-season is a time to engage in the reflective thought processes which foster innovating, This time out for thinking is important when it is considered in relation to the immediacy of the task-driven

implementing cognition typical of the playing season. However, elements of implementing are present in the off-season, such as delegating tasks to fitness specialists, just as innovating is present during the season, such as changing game plans in response to unforeseen opposition superiority. In addition, team structures reflect the internal incorporation of ambidexterity, such as fitness trainers who both design and implemented physical training regimens throughout a season, or externally outsourced experts, such as bio-mechanists who were consulted to innovate one-off scrummaging changes.

The other option summarised by Raisch et al. (2009) was the option of either organisations or individuals to develop ambidexterity. Within the context of rugby, the clear affinity is between either the team or the coach as the source of resolution of the divergent innovating and implementing sub-processes. The findings of developing suggest that teams can be a source of ambidexterity. This is possible if coaches are prepared to delegate implementing tasks to others, and allow varying degrees of mutual influencing by means of empowering. The delegating and empowering of others necessitates coaches ceding power and initiative. Therefore, teams can function as a source of ambidexterity. More than that, once teams have taken the field, coaches are no longer free to direct players. The players individually and collectively are faced with multiple dynamic situations, necessitating ambidextrous response to opponents. Teams win if they have developed sufficiently the capacity for the resolving the innovating and implementing concerns.

Despite the possibility that teams are a source of ambidexterity, the findings of this research and the literature review confirm individuals are a potent source of ambidexterity. Within the rugby context the individuals most likely to consistently act as a catalyst for ambidexterity are the coaches. Even when delegating or empowering, coaches still retain some degree of ultimate decision-making authority. Also, as coaches are charged with managing the developing process, they are more likely than any other to possess knowledge of all the constituent parts, and the expertise to inter-relate them. Accordingly, coaches will often exercise a better capacity to think paradoxically (Gibson & Birkinshaw, 2004), to manage contradictory and conflicting outcomes (W. Smith & Tushman, 2005), or to engage in multiple roles and tasks (Floyd & Lane, 2000), compared to teams.

As the findings of this research suggest coaches are the agents of ambidexterity, it is worth considering again the factors which make for ambidextrous coaches. These include personality traits (Amabile, 1996), the adoption of both a short or long term focus (O'Reilly & Tushman, 2008; Probst & Raisch, 2005), prior knowledge (W. Cohen & Levinthal, 1990), or top-down, bottom-up, or horizontal knowledge flows (Mom et al., 2007). It is noteworthy the

majority of the aforementioned factors centre upon cognition. Also, even personality traits imply elements of cognitive function. The adopting of a short or long term focus in regards to the winning concern was found within the research data of this thesis. Winning, realising potential, and performance are not always simultaneous. Similarly, coaches' prior experienced-based knowledge improves the likelihood that awareness will identify the unstructured and occasional opportunities for developing. Also, extensive prior knowledge of technical detail is required to develop implementation. Also, bottom-up, as opposed to top-down, or horizontal knowledge flows best fits coaches' developing responsibilities. However, for coaches there are elements of top-down knowledge, in the form of centrally imposed technical support, such as specialised scrummaging information. Similarly, horizontal knowledge flows in the form of peer discussion or mentoring and feedback also occur.

There is therefore a multiplicity of factors which contribute to the ripening of ambidextrous capability. There are various options within factors which enhance coaches' ambidexterity. The multiplicity and variety of factors and options highlights that certainty of ambidextrous achievement and proficiency is unlikely. Raisch et al. (2009) concluded, unsurprisingly that managers can exhibit varying degrees of personal ambidexterity, that ambidexterity varies according to specific personalities and contexts, and organisational ambidexterity is influenced but not limited to its members cumulative individual ambidexterity. The variance suggests that ambidexterity in coaching is multi-dimensional. It is reasonable to presume similar diversity of proficiency among coaches in reconciling the divergent innovating and implementing concerns. However, whatever else differentiates the success or otherwise of developing, the cognitive ability of coaches to match innovating with implementing concerns is an inescapable requirement. Whether it is by natural innate ability, or by an accumulation of personal experience, or the skill to design developing-friendly structures, coaches are required to think. The thought required for developing is multi-faceted, from the open-ended qualities of identifying, the critical analysis of questioning, the refining of deciding, and the resolve of applying. Also, the various facets must be utilised at the correct junctures, and in the appropriate contexts. In addition, the results of divergent thought processes must be related together in order to effect developing.

Incorporating Influencing

Beyond the challenge of reconciling the two divergent sub-processes of innovating and implementing, developing includes a third divergent process, in the form of influencing. No matter how proficient coaches' thinking ability, unless buy-in of team members is effected,

developing is unlikely to result in winning. Accordingly, coaches are not only skilful managers of ambidexterity, they are adept managers of people. At the same time ambidexterity presents concentrated cognitive difficulties for the coaches. For team members the stresses of resolving the innovating vs. implementing dilemma are broader, and may include affective, volitional, and most obviously, physical discomfort. Ambidexterity is an expression of flexibility, and it is worth recalling the factors which facilitate dynamic flexibility within teams. The factors include training, and trusting relationships with management (Adler et al., 1999), decentralised structure, common culture and vision, supportive leaders, and flexible managers (Tushman & O'Reilly, 1996). Even training, which has affinities with implementing, is designed to instil personal and collective confidence. Therefore, these factors promote the development of people as people, rather than as utilitarian objects. Accordingly, despite the grim and inexorable verdict of scoreboards that determine if developing has been successful, fun appears as an indicator in this research.

Similar emphases are found when considering the interpersonal processes within the Inputs-Processes-Outcomes [IPO] model. Marks et al. (2001) argued that the understanding of process was deficient by failing to include emergent psychological states such as collective affect and psychological safety. The interpersonal categories which facilitate collective affect and psychological safety include motivation, confidence building, and affect management (Marks et al., 2001). Whether by means of indirect structuring of team environments, or direct persuading, coaches are required to move beyond the manipulation of time and space that is characteristic of innovating and implementing, and add influencing of people to their developing repertoire. Developing is not a naive assessment of human social processes. The structuring of indirect messages, and the need to circumvent the structuring of others reflects the reality of personal politics within the rugby environment. Nevertheless, this research has confirmed the findings of Bradley et al. (2003) that there is abundant evidence for the view that interpersonal processes relate positively to team performance when teams engage in longer term tasks.

The complexity of the theory of developing therefore raises the question how best to facilitate coaches who are proficient in developing. The breadth of skill and expertise discussed would appear to transcend the innate ability of the ordinary individual. Ambidexterity alone, the reconciling of innovating and implementing concerns, is exceedingly difficult. Even more doubtful is possession of natural ambidexterity capability along with an inherent ability to influence others. Instead, and more likely is that representative coaches generally rise to their positions as a result of natural strengths in one or

more of the three developing sub-processes. However, natural ability is insufficient. To complete the repertoire of developing, coaches of necessity undergo an apprenticeship over time, by which they supplement intrinsic capacity and temperament with hard-won experience. In addition, they not only learn to augment areas of comparative weakness, they also learn to co-opt specialists who can compensate, and develop structures that transcend the limited immediacy of direct intervention. Despite empowering others for mutual influencing, or delegating tasks to trusted specialists, coaches learn to retain overall and sufficient control. Coaches learn to remain the primary and ultimate agent of developing.

Recommendations for Practice

The findings of this research explain how coaches resolve the main concern of winning, by means of the hitherto latent process of developing. The theory of developing is a conceptualisation of the activity of coaches. Accordingly, the findings are of interest and value to coaches, and they need to be made aware of the findings. By way of explanation, people who know precisely what it is they are trying to do are more likely to do it effectively. Knowledge of concepts also enables practitioners to better transcend the limitations of personal experience and description (Glaser, 1978). Knowledge of the sub-processes innovating, influencing, and implementing, along with the categories identifying, questioning, structuring, persuading, deciding, and applying clarify the tasks coaches must undertake. Clarity of conceptual understanding also points the way to additional resources which can add value, or address deficiencies as coaches undertake the task of developing.

Similarly, those who select representative coaches need to understand the theory of developing, and incorporate it into their practice. The theory represents a complex, often divergent set of concepts, requiring a diversity of skill. It is doubtful that any one individual possesses, at the outset of a coaching career, possesses the requisite mastery of all aspects of developing. The coach education programmes conducted by rugby unions are an acknowledgement that no one person can know it all, and certainly not in the formative stages of their careers. Knowledge of the theory of developing clarifies the real and potential skill sets that potential candidates for highly competitive coaching positions will need. Where candidates demonstrate deficiencies, knowledge of the theory of developing will clarify if those deficiencies are likely to be addressed by further resourcing and education.

Also those who educate and train coaches will do well to understand the theory of developing. Currently the New Zealand Rugby Union and its constituent provincial unions invest significant time, effort and resources in identifying and educating coaches at the

elementary stages, through to the elite representative level. Knowledge of the theory of developing points the way to the content of the programmes that coaches require. Currently coaches receive a variety of information and up-skilling, covering the findings of sciences as diverse as psychology, sports medicine, bio-mechanics, managerial practice and more. The theory of developing provides a framework for educators to incorporate the plethora of information within an integrated programme.

Recommendations for Future Research

The findings of this research have uncovered the latent patterns of behaviour within a substantive psychosocial field of interactive activity. The theory of developing gives particular scope to psychosocial interaction through all the sub-processes, but particularly the sub-process of influencing. This research clarified that coaches' sphere of real and attempted influencing included players, additional team practitioners, administrators, referees, and rugby law makers. From the perspective of the grounded theory methodology all of the aforementioned represent actors with their own main concerns, which are resolved by shared group patterns of behaviour. Therefore, each are worthwhile for further research, as their activities intersect, interact, and impact, and possibly contradict the developing task of coaches.

Beyond the methodology of grounded theory, but maintaining the focus on the other non-coach participants in the sphere of influence, the findings of this research pose questions worthy of further study. In particular, the perspectives, understandings, concerns, and responses of players warrant further inquiry. Players are most subject to coaches' developing strategies. Without successful influencing of players, coaching endeavours are likely to be unsuccessful. The importance of the affective, cognitive, volitional psychological aspects of players, both personally, and collectively, as they relate to the theory of developing are worth researching further. Players, like coaches, represent valuable resources. However, the coach/player relationship represents a social transaction, with the potential for both success and failure. Attrition of both players and coaches may be significantly reduced if further research can address the pressure points which arise from the psychosocial interaction between coaches and players.

Further research is also worthwhile to investigate the interaction between coaches and their team managers. Participants expressed the importance of their managers, and other practitioners in effecting developing. The categories, and category indicators of structuring, empowering, and delegating highlight the reality that coaches cannot conduct developing without the input of others. Conceptualisation of coaches' concerns also uncovered the

existence of paradox. Coaches are required to give over aspects of control, by empowering and delegating, in order that they can exercise a more powerful and effective form of control. In doing so, coaches maximise the time and resources available for developing. However, the utilisation of specialist skills and perspectives beyond the ordinary function of coaches highlights the possibility of conflict. Research to discover the optimal management structures, strategies and practices for implementing is of value.

The role of Chief Executives and franchise and union boards was also identified in relationship to the theory of developing. In particular, the category indicator of circumventing explained that when required, coaches utilise a variety of methods to undermine administrative directives. Upper management presumably has a distinct but not separate focus from coaches. Whereas coaches endeavour to achieve winning results for their teams, rugby executives are charged with achieving financial success. Bottom-line profitability is no doubt related to on-field success, but whereas for the coach winning is an end in itself, for executives winning is an aspect of the overall product. Also, at a national level, the success of one team may represent a diminishing of the overall brand if the style and manner of victory does not meet with overall consumer approval, or the competitive strength of other teams is significantly reduced. Aspects of entertainment, both on and off the field require reconciliation if coaches are to engage in successful developing. How that is best achieved, rather than coaches resorting to the tactic of circumventing, is worthy of further consideration.

The theory of developing also highlighted the importance coaches attached to influencing referees. Coaches and referees are bound in an inextricable relationship, with obvious tensions and pressure points. Whereas coaches are concerned with winning, referees seek to administer rugby law and interpretation in an even-handed manner, whilst also ensuring the entertainment spectacle is enhanced for public consumption. As the imperatives of developing require coaches to be particularly adept at influencing others, referees are an especially likely object of buy-in strategies. How referees can best co-operate or with-stand the influencing of coaches is now a useful field of inquiry. So too are the programmes of referee recruitment, training, and mentoring, which are currently administered by referee associations and coaches at provincial, national, and international levels.

The administration of rugby law also highlights the relationship between the theory of developing, and law makers. The category indicator of manipulating confirmed that coaches work within frameworks to secure on-field time and space for their teams. Rugby law makers set that framework. The interest of law makers is presumably the overall betterment of the rugby as both a game to be enjoyed by the participants, and also as a product. Law makers are

engaged in a dynamic process to discourage certain practices and emphases which have emerged through developing, whilst encouraging hitherto undeveloped possibilities. The regulation of activity throws up the possibility of the law of intended/unintended consequences. Participants in this research confirmed they studied the law book, and law changes, in order that they could exploit them. Law makers deal in the realm of the general and anticipated, whereas coaches operate within the specific and known. The innovations of coaches no doubt sometimes undermine the intentions of rugby law makers. Therefore law makers are locked in both a competitive and cooperative endeavour with coaches. How both parties can best resolve that continual process, both for the personal betterment of particular teams, or the overall good of rugby, merits further research.

Limitations of the Study

A total of ten participants were interviewed for data gathering purposes. This number proved sufficient for generating the theory of developing. Despite the generating of a theory with scope, density, and parsimony, data saturation is not achieved. Whilst the extent of the three sub-processes of innovating, influencing, and implementing have been delineated sufficiently one from another, there is not a detailed explanation of the inter-relationship between the sub-processes. The incorporation of the concept of ambidexterity from the literature review into the discussion confirms there are gaps in both data gathering and analysis. There is a need for further theoretical sampling amongst the representative rugby coaches of New Zealand to fully explain the theory of developing. Further theoretical sampling also opens the possibility of discovering more indicators of categories, and categories of sub-processes.

In addition, the utilisation of the grounded theory methodology meant much of value in the collected data fell outside the scope of the research findings. The participants provided rich insights and anecdotes, which, subject to other methodologies and methods would no doubt have generated findings of value to others. In particular, descriptions, illustrations, paradigms, and examples have been pruned from the reported findings, in order to satisfy the conceptualisation maxim of grounded theory (Glaser, 1978). Whilst the concerns and processes of the participants has been identified, much that they considered of value has been omitted.

Conclusion

The grounded theory of developing represents a complex process utilised in a highly competitive environment. The sub-processes of innovating, influencing, and implementing

entail a wide variety of skills. It is doubtful if any coach possesses all the gifts of temperament and personality to immediately master the requirements of developing. Nevertheless, as the process has now been uncovered and explained, there is now the potential for clarity of understanding in how best to resource coaches. This research commenced with a quest for the source of tactical innovation, and found something larger, and of greater potential significance and application. On-field success in rugby union is an important financial, social, and cultural concern for a significant proportion of New Zealanders. The theory of developing represents a potential resource to further the New Zealand national game.

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Appendix A
AUTEC Ethical Approval



M E M O R A N D U M

Auckland University of Technology Ethics Committee (AUTEC)

To: Geoff Dickson
From: **Madeline Banda** Executive Secretary, AUTEC
Date: 15 October 2009
Subject: Ethics Application Number 09/242 Tactical innovation in New Zealand representative rugby.

Dear Geoff

I am pleased to advise that a subcommittee of the Auckland University of Technology Ethics Committee (AUTEC) has approved your ethics application at their meeting on 8 October 2009, subject to the following conditions:

1. Provision of an authorising signature in section A.9 of the EA8 application;
2. Provision of revised final storage arrangements which meet AUTEC's requirements that, after analysis, data is stored securely on AUT premises for a period of six years and separately to Consent Forms. AUTEC recommends transferring the electronic data to an appropriate storage device such as a CD, DVD or USB;
3. Inclusion of advice, in the Information Sheet section titled 'How will my privacy ...', that participants' identities will be kept confidential unless they choose to be named in the report.

I request that you provide the Ethics Coordinator with a written response to the points raised in these conditions at your earliest convenience, indicating either how you have satisfied these points or proposing an alternative approach. AUTEC also requires written evidence of any altered documents, such as Information Sheets, surveys etc. Once this response and its

supporting written evidence has been received and confirmed as satisfying the Committee's points, you will be notified of the full approval of your ethics application.

When approval has been given subject to conditions, full approval is not effective until *all* the concerns expressed in the conditions have been met to the satisfaction of the Committee.

Until full approval has been confirmed, data collection may not commence. Should these conditions not be satisfactorily met within six months, your application may be closed and you will need to submit a new application should you wish to continue with this research project.

When communicating with us about this application, we ask that you use the application number and study title to enable us to provide you with prompt service. Should you have any further enquiries regarding this matter, you are welcome to contact Charles Grinter, Ethics Coordinator, by email at ethics@aut.ac.nz or by telephone on 921 9999 at extension 8860.

Yours sincerely



Madeline Banda

Executive Secretary

Auckland University of Technology Ethics Committee

Cc: Kim Kwok kkimbo1@gmail.com, Antoinette McCallin, AUTECH Faculty Representative, Health and Environmental Sciences

Appendix B

Participant Information Sheet

Participant Information Sheet



Date Information Sheet Produced:

XXXXXX

Project Title

Tactical innovation in New Zealand representative rugby

An Invitation

My name is Kim Kwok, and I am a post graduate student at AUT University. I am doing the above research project, which will result in me being awarded a Master of Philosophy degree. In this project my research supervisors are Dr Geoff Dickson and Dr Antoinette McCallin. I have also been involved with the Ponsonby Rugby Club for 25 years.

I want to talk to someone like yourself who has been involved in tactical innovations in rugby. I trust this research topic will interest you, and it is my hope that you would enjoy being involved. However, your agreement to join the research is voluntary, and you are free to withdraw at any time, without any adverse consequences to you.

What is the purpose of this research?

The purpose of the research is to understand and explain the process by which tactical innovations occur in New Zealand representative rugby. I am interested the role of coaches and players such as yourself that are involved in taking on field playing of the game in a new direction. I want to know why and how this happens, and the particular circumstances which result is something new occurring on the field.

How was I chosen for this invitation?

You were chosen as you are well known as a tactical innovator. You have been identified in discussion with a wide variety of authorities and experts who make up the New Zealand rugby community.

What will happen in this research?

If you agree to talk with me I would interview you for approximately 90 minutes, and take notes and tape record while doing so. I prefer to interview you face to face, but I can also do it by phone if that becomes necessary. At the interview, I will commence with a question such as "Tell me about trying something new on the rugby field", and then ask more questions based on your answers. I may also seek clarification about your answers at a later date.

What are the discomforts and risks?

It is unlikely that our discussion would cause any discomfort. However, if at any stage you want to stop the interview that is not a problem. There is some potential risk in this research in that you might choose to share knowledge that is not already in the public domain.

How will these discomforts and risks be alleviated?

Your response to questions is always optional and you have the choice to stop talking or simply “pass” on any question. If you discuss material that moves from the public domain into the personal domain this will not be used at all in the research. Any information passed on in interview is kept confidential.

What are the benefits?

The potential benefit of the research is providing knowledge for the rugby community. Once processes for tactical innovations are clarified this may help to improve planning and training.

How will my privacy be protected?

To protect your privacy, data from interviews will be kept confidential, unless you exercise the option to be named if you wish.

What are the costs of participating in this research?

There is no cost, other than the time specified above.

What opportunity do I have to consider this invitation?

Once you hear about the research you will have a week to consider the invitation to talk with me.

How do I agree to participate in this research?

If you agree to participate in this research, please phone me (Ph: (09) 940-3734, Mob: 021 043 9092) or email me (kkimbo1@gmail.com) and we can organise a time to meet.

Will I receive feedback on the results of this research?

My goal is to write a journal article for publication in an academic journal. I will gladly provide you with a copy of this or a summary of the research findings if you wish.

What do I do if I have concerns about this research?

Any concerns regarding the nature of this project should be notified in the first instance to the Project Supervisor, Dr Geoff Dickson, geoff.dickson@aut.ac.nz, Ph: (09) 921 9999 ext 7851.

Concerns regarding the conduct of the research should be notified to the Executive Secretary, AUTEK, Madeline Banda, madeline.banda@aut.ac.nz, Ph: (09) 921 9999 ext 8044.

Whom do I contact for further information about this research?

Researcher Contact Details:

Kim Kwok

Mob: 021 043 9092

Email: kkimbo1@gmail.com

Project Supervisor Contact Details:

**Dr Geoff Dickson, Associate Dean Research, Faculty of Health and Environmental
Sciences, AUT University, Private Bag 92006, Auckland, 1142**


Tel: (+649) 921 9999 ext 7851

Email: geoff.dickson@aut.ac.nz

**Approved by the Auckland University of Technology Ethics Committee on 2 November 2009,
AUTEK Reference number 09/242.**

Appendix C

Consent Form

<p>Consent Form</p>	 <p>AUT UNIVERSITY <small>TE WĀNANGA ARONUI O TAMAKI MAKAU RAU</small></p>
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Project title: Tactical innovation in New Zealand representative rugby

Researcher: Dr Geoff Dickson

- ☐ I have read and understood the information provided about this research project in the Information Sheet dated XX/XX/20XX.
- ☐ I have had an opportunity to ask questions and to have them answered.
- ☐ I give permission for the interview to be audio-taped and transcribed.
- ☐ I understand that I may withdraw myself or any information that I have provided for this project at any time prior to completion of data collection, without being disadvantaged in any way.
- ☐ If I withdraw, I understand that all relevant information including tapes and transcripts, or parts thereof, will be destroyed.
- ☐ I agree to take part in this research.
- ☐ I am happy to be contacted by email if there are any further questions that need clarification after the interview.

☐ I wish to receive a copy of the report from the research (please tick one):

Yes ☐ No ☐

☐ I wish to retain my anonymity and privacy (please tick one):

Yes ☐ No ☐

Participant's signature:.....

Participant's name:

Participant's Contact Details (if appropriate):

.....

Appendix D

Record of Memos and Field Notes

Interview 1, 6/11/09, Participant 1

Memo 1 – 16/11/09

Overcoming adversity posed by opposition. Is tactical innovation a response to a problem?

Overcoming a problem? It is not dreaming or conceiving, or moving pawns in a vacuum. The greater the concrete adversity, the greater the opportunity to innovate, as you have more problems to overcome, and it has to be done. Not a hypothetical problem. A real problem.

Also tactics and innovation is not floating in free fall, separate from concrete issues like fitness, player personnel, level of skill, etc. Is intimately connected to technical issues – but is a step beyond.

Interview 2, 18/11/09, Participant 2

Memo 2 – 20/11/09

Question of tactics and tactical innovation is seen in the light of interviews, to be an artificial construct of sorts, due to the seamless nature of the requirements of coaching – fitness, mental skills, playing skill, nutrition, technical aspects, etc., so there is considerable overlap/interconnectedness. To isolate tactics and tactical innovation is tearing the seamless cloth, and coaches are continually assessing and integrating the whole.

Interview 3, 3/6/10, Participant 3

Field Note - 3/6/10, audio recorded after interviewing Participant 3:

Interesting about law changes: Participant 3, while he's prepared to exploit them, doesn't seem to be beholden to them. He's in charge of his coaching process, and it seems his philosophy and conception of the game has so much depth, it is impervious to law-makers attempts to negate what he does, or hinder what he does, or what his teams do on the field.

Also, fascinating, that he never felt he ever met his equal as a coach conceptually, and he definitely has a robust philosophy and style, and obviously a thinker - and yet, like all the other participants so far, you ask them how it happened, how the innovation happened, and he

can't he tell you. He's a doer, they don't think about it (the process), they do (the process), and it happens.

Also, Participant 3 seems a lot like Barney Glaser, he created quite a firm structure, and yet within that, it frees things up for creativity. So it is a sort of paradox. And in regards to the paradox, I'm wondering if the research question here is "How do you...", something like, "How does creative rugby occur?"

Memo 3 – 6/6/10

Being innovative is being an opportunist. The potential maybe always existed, but no one else saw it, until the innovator saw which way the (invisible) breeze was blowing, and stuck up his/her sail

Memo 4 – 6/6/10

Thinking about creativity:

Bob Howitt's 1975 book "New Zealand Rugby Greats" (1975) has a chapter on JB (Johnny) Smith, which includes an account that goes something like this:

In the 1944 Inter-Island game, Smith had a clear run to the line. However, he was pursued by a much faster opponent (and All Black), Johnny Dick. Rather than engaging in a futile effort to out-pace his quicker pursuer, Smith let Dick get closer and closer. Then, just as Dick launched himself into the tackle, Smith stopped, and braced himself for the impact. Dick, arriving at the point of impact earlier than he had expected, mis-timed his tackle, and slid off the back of Smith, who promptly resumed his run to the line, and the try.

This is creative, innovative, counter-intuitive genius (and Smith was a master poker player on the field, continually fooling opponents who were lulled into a false sense of security)! When people say "intuitive", or "instinctive" they seem to contrast it with "logical". and "reason". I personally don't think that is the case. I find it difficult to believe, in the heat of a game, with an opponent gaining on you, that Smith thought of this *de novo*. At some point, surely, he had seen, (sub-consciously or informally?) thought, or practiced something similar, or drawn upon something from an existing data base of knowledge.

Or was it just sheer "luck"?

I think not!

Interview 4 – 15/6/10, Participant 4

Field Note – 15/6/10, audio recorded after interviewing Participant 4

Like Participant 3:

To achieve control, you have to ultimately let go. You must empower the players. Create the environment. There is a complex paradox at work here.

Memo 5 – 29/6/10

Innovation means change, and people are naturally resistant to change. For the innovator to be successful, does he need to "cover his back" and ensure he has all the political bases (and NZ rugby is a very political game!) covered?

Interview 5 – 6/7/11, Participant 5

Field Note – 6/7/10 (after interviewing Participant 5)

Again, tactics are not divorced from other aspects of the game.

Flair, and innovation, and "taking risks", for Participant 5, are most emphatically off a basic core of solid accuracy and efficiency. Doesn't work without it!

Also, for Participant 5 (and all others?), you see what you want to happen/solve the problem, then you work backwards, and put the bits in place to achieve it. Same with innovation, it would appear.

Also, as with Participant 4 (and Participant 2 and all others!) setting the environment off the field is equally important. Team culture defined by 3 things - time-keeping, dress, and fair play. Set something players can aspire to - but not unattainable. As is identifying leaders (Participant 4 differed in this respect). The ability to plan ahead, prepare - he stressed this! As little as possible left to chance. Why - thinking about it, because chance/the unexpected takes

you unawares, and therefore you are vulnerable. Turn that around - do it to the opposition, and you have a tremendous advantage!

Also, Participant 5 made a quick transition, and bracketed innovation with creativity - like Participant 3, and also added the phrase, "thinking outside the square". Creativity may well be closer to the core issue, or, perhaps the relevant research question.

Also - change can be quick (maybe it needs to be at times!!), especially when dealing with style of play/selections. Off field barriers - know where you are going, get the ducks in a row, get the people in place, co-opt potential barriers and get them inside the tent ("involve and communicate"). The political has to be recognised and addressed!

Participant 5 acknowledged he was good at stealing with his eyes, borrowing from others - learning from their mistakes also. Was never a great technical coach, didn't aspire to be - located good people around him - used their strengths, but needed trust in them.

What did I get from this interview? See the vision/solution, and work backwards! Is this how tactical innovation functions?

Memo 6 – 9/7/10

Innovation is stretching the existing order.

It is stretching oneself first, so you can then stretch your opponent.

In stretching oneself first there are risks - losing confidence of the team/upsetting established patterns/giving up valuable time to learn to execute a new idea/political opposition, However, you are still in control of the process, compared to an opponent who is on the receiving end.

Also, to stay in the status quo keeps one in the realm of technical proficiency, and, ultimately, diminishing returns, or reliance on specific personal athletic or psychological attributes of particular individuals. It has within itself, the seeds of its own destruction, because time and chance and deliberate plans of opponents will conspire to eventually render the status quo obsolete.

Interview 6 – 10/7/10, Participant 6

Field Note – 12/7/10 (after interviewing Participant 6)

Yet again, environment is the key. Coaches create the environment. Participant 6 spent a lot of time dealing with his efforts to overhaul the off field admin of the (local) Union in order to lay a frame work for success. For Participant 6, controlling the environment includes on the field, controlling the referee, controlling the opposition, within the team, in the admin framework.

(When Participant 6 was an All Black, his first coach) had an attitude of seeking out opinions, and (key word) synthesising, and drawing it all together. (His second coach) was more prescriptive.

Also, thinks that innovation today is in shorter increments due to the large amount of analysis - will be quickly countered, so needs slight variations and tweaking (e.g. changing channel of running, etc.). Also try and get players to think in terms of deeper principles, rather than prescriptive do-this, do-that. Also drawing on fund of knowledge, rule interpretations, and including history of the game (hooray!!). Teach a man to fish, and he'll never work again!

Heresy: best teams could be those that discard their coach! Sees coach as a mentor/educator/facilitator. Innovation/thinking/receptivity is an attitude (decision?), motivated by response to situations/opportunities available, DESIRE TO WIN!

Interview 7 – 14/7/10, Participant 7

Field Note - 14/7/10 (after interviewing Participant 7)

For Participant 7, mastery of technique, and a data base of in depth knowledge is the key to successful tactical incremental change. It is grounded (!) in what is feasible and possible, and do-able.

There is a high level of integration with this, and the ability to be able to innovate – but knowledge of technique alone will not achieve it. A coach is a problem solver. Knowledge of technique, and a deeper understanding of the game's tactical possibilities/essential patterns is vital. Acknowledges he is a problem solving sort of person, with a logical systematic

approach. Welcomes being challenged , as it gives him a cue of players' position and abilities (e.g., one player forced to do a repeated strenuous exercise – “we did 66”), and a better chance of buy in. NO CLONES!

Also – “coaches know more than players”. Problem with coaches coming through now is they will be former pro rugby players with very little other experience.

Participant 7 has a strong capacity for “mental engineering” (my term, he liked it!).

Participant 5 spoke in broad strokes, Participant 7 elaborated in detail.

Memo 7 – 15/7/10, (Scrawled on text book end paper while on a plane)

Key Components of innovation?

Defiance – of convention, of orthodoxy, of management/administration (so management can hinder it? Clutch too tight?)

Good coaches negotiate the shoals. Rejection of standardisation and the generic.

Anticipating – A key to innovation? What will the opposition do in response to us – being a step ahead (or even more than 1!). Is a mindset, which lifts beyond the technical - technical aspects become building blocks.

Interview 8 – 16/7/10, Participant 8

Field Note – 16/7/10 (after interviewing Participant 8)

Tactical innovation is a response to adversity. Easy victories and low opposition/resistance dull the edge and produce standardization/reliance on formula. Is it only if you hone the skill of anticipation that one escapes the prison of the present and then enter a world of new possibilities (also involving risk)? Rugby requires adherence to a team ethic and spirit and individuals learn how to cope, adapt to be successful. BUT squeeze them too tight, and do you risk the very essence of tactical innovation evaporating? But there is hope? Kiwis have a can-do attitude. Ability to adapt in a crisis.

Interview 9, 18/7/10 Participant 9

Field Note – 18/7/10 (After interviewing Participant 9)

Besides the common issues (control of the environment, team culture) participant 9 stressed the importance of mindset – be prepared to fail, be courageous. Success is important, and what you aim for, but to attain it you must be prepared to fail. To stand still leads to going out of date, so you must be prepared to change – but as rugby is a team game, you must take people with you/create the environment where change, including tactical can and will occur positively. MINDSET!! Anticipation plays a part, and giving aside time for creative thinking of the whole team package (mental, physical, technical, nutritional incl. tactical). Also know yourself. Know others! Have courage and honesty for self assessment.

Memo 8 – 26/7/10 (Entitled: Primary concern of participants?)

A coach resolved paradoxes/contradictions. He balances, like a human gyroscope (go to thesaurus), or a movie director - much is out of his control. Like a glider, searching for the wind. Orchestrating is maybe not dynamic enough.

Examples of contradictions/paradoxes to be resolved: -

physical vs mental

structure vs fluidity

past vs present vs future

talents of individuals vs team requirements and needs

off field vs on field

initiating vs responding

self (individual and my team) vs others (in the team, and the other team)

established patterns vs need for innovation

Memo 9 – 27/7/10 (Entitled: Proposed main concern for a rugby coach)

How can I make maximum use of all real and potential resources at my disposal to influence the play to my team's utmost advantage?

Memo 10 – 27/7/10

A mechanical gyroscope is essentially a spinning wheel or disk whose axle is free to take any orientation.

for the stabilization of flying vehicles

Gyroscope used in navigation. Is coach a navigator?

Memo 11 – 28/7/10

A coach is a marshall. Had the military analogy in mind before, but just as an army must be prepared for battle, so too a coach must exercise influence/control of off-field matters, so that his "army" performs on the field of battle.

He has certain skills (or seconds them), but must make the decisions to balance the many different requirements. Balance of science and art

Memo 12 – 29/7/10 (update of memo 8, 26/7/10, Entitled: Primary concern of participants?)

A coach's primary concern is to balance all potential resources, with the aim that they are realised to his team's utmost advantage. He does this by marshalling.

examples of balancing: -

physical vs mental

structure vs fluidity

past vs present vs future

talents of individuals vs team requirements and needs

off field vs on field

initiating vs responding

self (individual and my team) vs others (in the team, and the other team)

established patterns vs need for innovation

task vs analysis

science vs art

Memo 13 – 30/7/10

A rugby coach marshals conflicting (?) potential resources so that he can realise maximum advantage for his team

He does this by

assessing

developing
implementing

Interview 10, 5/8/10, Participant 10

Field Note – 5/8/10 (after interviewing Participant 10)

Two factors are key for Participant 10 - tactical/strategic knowledge (positional technique can be delegated out), and empathy/people/leadership skills. Felt Participant 5's big-picture approach, and stress on media relations was a mistake.

same dichotomies - structure needed to provide a dynamic fluid framework. Also good contrast between himself, and his playing rival, when he was a player. His rival was a natural instinctive player, who, as a result, never progressed beyond a particular ceiling. Participant 10 had to work much harder, and think more, as he had fewer natural gifts.

Also flexibility of mind is a key to innovation.

He rejected idea of coach as general, or director. Liked idea of resource developer. Also the team idea that it can be greater than the sum total of the parts. Stressed coach must be ruthless.

Idea

Develop Resources by resolving the dichotomies

Self

Team

Opponents

Memo 14 – 8/8/10

Coach's Problem: To ensure his team has the maximum opportunity to reach their potential

Solution: Developing the Resources

Identifying the opportunity
Controlling the environment
Balancing the requirements

Memo 15 – 8/8/10 (update of memo 14, 8/8/10)

Coach's Problem: To ensure his team has the maximum opportunity to reach their potential

Solution: Developing the Resources

Identifying the opportunities
Controlling the environment
Balancing the requirements

and the growing ripple: -
self
team
opponents

Memo 16 – 8/8/10 (Update of memo 15, 8/8/10)

Coach's Problem: The team playing to its potential

Resolution of the problem: Developing the Resources

Identifying the opportunities
Controlling the environment
Balancing the requirements

within a 3-fold horizon: -
self
team
opponents

Memo 17 – 8/8/10 (Update of memo 16, 8/8/10)

Coach's Problem: The team playing to its potential

Resolution of the problem: Developing the Resources

Identifying the opportunities/possibilities/options

Creating/Controlling the environment

Balancing/Implementing the requirements

within a 3-fold horizon: -

self

team

opponents

Memo 18 – 8/8/10 (Update of memo 17, 8/8/10)

Coach's Problem: The team playing to its potential

Resolution of the problem: Developing the Resources

Identifying the opportunities

Creating the environment

Balancing the options

Implementing the requirements

within a 3-fold horizon: -

self

team

opponents

Memo 19 – 8/8/10 (Update of memo 18, 8/8/10)

Coach's Problem: The team playing to its potential

Resolution of the problem: Developing the Resources

Identifying the opportunities

Creating the environment

Balancing the requirements

Implementing the options

within a 3-fold horizon: -

self

team

opponents

Memo 20, 8/8/10 (Update of memo 19, 8/8/10)

Coach's Problem: The team playing to its potential

Resolution of the problem: Developing the Resources

Identifying the opportunities

Creating the environment

Balancing the requirements

Implementing the options

within a 3-fold horizon: -

self

team

opponents

Memo 21 – 8/8/10 (Update of memo 20, 8/8/10)

Coach's Problem: The team playing to its potential

Resolution of the problem: Developing the Resources

Prospecting

Creating the environment

Balancing the requirements

Implementing the options

within a 3-fold horizon: -

self

team

opponents

also upward spiral?

Interview 11 - 21/8/10, Theoretical sampling of Participant 3

Field Note for interview 11 – 23/8/10 (made after theoretical sampling interview with Participant 3)

Confirmed in spades that creating (Participant 3's word) the environment is key. Players are selected on their ability to consistently display skills. They can de-select themselves later due to an inability to maintain discipline/adhere to game plan/fulfill assigned roles/act contrary to team ethos and requirements. To maintain team environment, encouragement, discipline, clear role descriptions are the properties.

Also crucial - COACH IS THE STARTING POINT!!. Build inter-relationships from here.
Also coach sets the bar.

Participant 3 also used the term "assessing" where I had balancing. Is this the bridge between each of the concepts?

Thought: Back to mental engineering with the aim of gaining the initiative. Coach is continually seeking to unite two worlds - the world of what is, with the world of possibilities (setting the bar). His fund of knowledge/philosophy of the game/technical knowledge/man management skills are the way he does so.

Coach - mental engineering - selecting his team - mental engineering -building team environment - mental engineering - implementing a general all-purpose game planning - mental engineering - responding to/gaining initiative over opponents - mental engineering - implementing specific game plan.

Also Participant 3 described his aim was to "showcase" his team, and players for advancement.

Interview 12 – 26/8/10 Theoretical sampling of Participant 1

Field Note – 29/8/10 (after theoretical sampling interview with Participant 1)

Generally Participant 1 concurred with sub-processes.

Saw what I meant by "controlling". Agrees it is not ideal. Also not sure about gold mining connotations of prospecting.

However, highlighted the point that without a lateral capacity/goal to aim at, then inexperienced coaches especially can just go through the motions (e.g., training drills) for the sake of it/because that is what they were taught, rather than integrating them into wider approach.

Also said prospecting was more of a starting point for rep coaches, because of the wider variety and availability of playing talent. Also players with good skills (confirming Participant 3) stand out.

Having listened to Participant 7 interview, possible revision: -

A NZ rep rugby coach's main concern is to have his/her team and players **PERFORM** to their potential.

He does this by mental engineering.

This is comprised of 3 mutually interlinking sub-processes: -

Prospecting (seeing the possibilities)

INFLUENCING (creating the environment)

ENABLING (implementing the requirements)

Memo 22 – 31/8/10

Check the textbook last!

Interview 13 – 31/8/10 Theoretical sampling of Participant 2

Field note – 31/8/10 (after theoretical sampling interview with Participant 2)

Influencing is a ripple effect - confirmed by Participant 2

Memo 23 – 1/9/10

Possible idea:

Coach as starting point is within prospecting, not outside.

It is coach's potential to learn, prospect of improving himself, and therefore his team that places it within mental engineering framework. Starts with capacity for self-appraisal/understanding self/one's own philosophy of the game

Also engineering of 3 sub-processes - specific connection points?
Influencing (of environment) in the centre, as the prospect, and the implementation (the potential, the actual) requires a disciplined, unified, involved, flexible group to do so? But wait! If you create/influence the right environment, others can see and contribute prospects too!

Memo 24 – 8/9/10 (After reviewing Participant 6 interview)

Alternative to mental engineering: Synthesising

Memo 25 – 9/9/10

The main concern/problem for a New Zealand representative rugby coach is for his/her team and players to perform to their potential.

He does this by mental engineering, which is made up of three sub processes: -

Prospecting - with the purpose of achieving an advantage

Influencing, with the purpose of achieving buy-in

Implementing, with the purpose of achieving efficiency.

Memo 26 – 18/9/10

Inter-relationships between sub processes

Implementing to Prospecting

e.g., Gain efficiency, and the potential of what a team can achieve increases

Prospecting to Implementing

Vision of how the team can play, so design training moves accordingly

Implementing to Influencing

Set the structures up, and it contributes to a culture (hidden curriculum)

Influencing to implementing

Players buy in to the methods and game plan

Prospecting to Influencing

Pick a player with particular skills, but indoctrinate him into the culture

Influencing to Prospecting

Players are confident enough to take the initiative to suggest improvements

Memo 27 – 19/9/10

Prospecting

(Identifying, and Assessing)

Influencing

(Framing and Persuading)

Implementing

(Deciding, Delegating, Systematising)

To work on next/locate in data: -

Implementing-Prospecting-Influencing

Implementing-Influencing-Prospecting

Prospecting-Influencing-Implementing

Prospecting-Implementing-Influencing

Influencing-Prospecting-Implementing

Influencing-Implementing-Prospecting

Memo 28- 19/9/10 (Update of memo 27, 19/9/10)

Prospecting

(Identifying and Assessing)

Influencing

(Framing, Persuading)

Implementing

(Deciding, Planning, Organising, Systematising)

Memo 29- 19/9/10 (Update of memo 28, 19/9/10)

Prospecting

(Identifying, Assessing, Deciding)

Influencing

(Framing, Persuading, Systematising)

Implementing

(Planning, Organising, Practising)

Memo 30- 19/9/10 (Update of memo 29, 19/9/10)

Prospecting

(Identifying, Assessing, Deciding)

Influencing

(Framing, Persuading, Delegating)

Implementing

(Planning, Organising, Systematising)

Memo 31- 19/9/10 (Update of memo 30, 19/9/10)

Prospecting

(Identifying, Assessing)

Influencing

(Framing, Persuading)

Implementing

(Planning, Organising, Systematising)

Memo 32, 26/11/10

Participant 9 - all over the place, this time of year I can be -
example of curiosity/creativity required for prospecting