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The art and science of winning: professional cricket coaching as transdisciplinary practice

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Front Page for DProf by Public Works Final Submission

The Art and Science of Winning

Professional Cricket Coaching as Transdisciplinary Practice

A critical commentary and public works submitted to

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Doctor of Professional Studies by Public Works

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Disclaimer

The views expressed in this research project are those of the author and do not necessarily reflect the views of the supervisory team, Middlesex University, or the examiners of this work.

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Abstract

This context statement examines the thirty-year evolution of my coaching and leadership in professional sport through my work in the public domain. It focuses on how to optimally coach and manage teams to win across multiple formats in professional cricket. Examining and reflecting on the process of how this took place: the campaigns, the engagement with the team and performer, with the ultimate goal of optimizing (designing) team performance to win leagues and championships.

To do this, I began by utilising my training in education. I designed a coaching and performance programme, which I divided into a time phased performance curriculum. Over time I began to see the holistic nature of performance and I evolved this thinking into a coaching system bringing together the mental, technical, physical and strategic aspects of performance, into the overarching design of 'winning' performance for individuals and teams. The system was centred both on the individual performer and the team, coaching them to set clear, precise performance goals, with the aim that they would go on to proactively take responsibility for their own learning process. The coaching and performance system evolved through research and constant testing with different teams and players.

A 'thought architecture' (a term I coined) emerged, which is a design process to attain a goal or objective. The 'thought architecture' evolved into a specific coaching approach focused on performance design to create the neural circuitry of optimal performance. The goal was for the learning process to become unconscious thinking and action, both individually and collectively within the team. This submission examines and summarises the stages of learning, the role of mentors, the championships won and lost, the evolution of the transdisciplinary coaching model and the optimal performance system. This text analyses the professional context in which this work took place with reference to the theoretical frameworks that informed this study. I conclude by looking at both the applications of optimal performance in other professional fields and the implications of this practice.

Introduction

I spent my working life as a professional sports coach, initially in South Africa, when I moved there from the UK in 1991 and then working internationally with professional domestic and international cricket teams.

I currently work as a cricket consultant (and most recently as performance director with Cricket West Indies) for the University of the Western Cape in South Africa and for private clients. This entails a balance of coaching, consulting, performance design and leadership. For example, I design high performance cricket programmes and support staff to operate and manage them, I also coach specific squads and lead high performance staff within key programs.

The Public Works - Context

I have laid out this context statement in a chronological order. This historical ordering is important as the personal and professional contexts within specific periods of time are inextricably linked. In each chapter I will examine the evolution of the coaching and performance system, my professional development as a transdisciplinary practitioner, the developing theoretical framework and the practical results that were the outcome.

The rest of this chapter will give an introductory context and background to the public works. I will introduce the theoretical framework I used for interpreting my work, a description of the personal and professional context of the public works, and position myself in this context.

The first public work I review is my time as head coach of both the Border provincial cricket team and the Pakistan cricket team. Border Cricket is a provincial cricket board in South Africa representing the region within the broader Cricket South Africa structure. I began as head coach of the senior men's team in 1998 after fulfilling the roles of youth cricket coordinator and academy head coach. I coached the Border team over two seasons divided up with my first period with the Pakistan cricket team, who I worked with over four separate periods from 1999 to 2003.

The second public work I am examining is my role as franchise cricket head coach and professional cricket manager of the Titans cricket franchise in South Africa from 2005 to 2009. The franchise cricket system came into being in South Africa in 2004, it merged provincial teams into geographical regions to cut operating costs and increase competition amongst players. I took over the Titans team after the first season when both current captain and coach were not re-employed after a difficult first season. The Titans went on to dominate franchise cricket, winning six titles across multiple formats over this four-year period.

The third public work I am reviewing is my role as Director of Cricket for the West Indies Cricket board from 2013 to 2017, then as interim head coach in 2019. In this period the West Indies achieved an unparalleled feat in the history of cricket, and perhaps in other international federation sports, when they won the U-19, women's and men's World Cups in 2016. Then in 2019, whilst in the role of high performance director I was asked to coach the men's senior team versus England. I review and reflect on the application of the optimal performance system in this time and the remarkable results the team achieved. Beating England for the first time in ten years in Test cricket and tying with them in One Day International cricket as the current world number one side. References for this section are located within the text, including YouTube links to cricket match highlights where they are available, newspaper and website reports of matches and statistical records. Coaching artefacts are listed in the appendix.

Critiquing my public work through a transdisciplinary lens, the context statement is a retrospective analysis of my work and includes performance artefacts as an outcome of this process. As the context statement is a retrospective of the arc of my professional life, I was not wedded to a formal research methodology for this element of my research. However, I used reflective writing and critical analysis in order to better understand the evolution of my 'thought architecture' and the design process in my work. My reflection has been guided by Schön's (1983) 'tacit' knowing in practice, the 'protocols of actual performance' and the construction and testing of models of knowing. This 'tacit' learning is now part of the neural circuitry of my brain and operates at an automatic, subconscious level. I will explore and contextualise this when I investigate the application of

neuroscience to my work on page 31.

Ontology and Epistemology

In my early twenties I suffered a series of sport related injuries that ultimately ended my ambition of becoming a professional cricketer. In my endeavor to understand the cause of these injuries and return to play, I began a study of human performance that would encompass both my professional development and evolution as a transdisciplinary practitioner.

This reflective exercise has surfaced the chronology of my development, motivations and learning, allowing me to contextualise and deepen my understanding of my professional and transdisciplinary development. Nicolescu observes that transdisciplinarity is concerned with creating new, integrative knowledge to address the complex problems of the world (Nicolescu 2002). My work in sport was obviously not focused on solving global problems, it has though evolved to create new integrative knowledge in performance design. I had no conception, as Gibbs speaks to, that this journey would be 'an educative process by which people become a more complex self as they engage in transdisciplinary work using TD methodology' (Gibbs 2015:3). Nor that this complex self would experience "a series of inner changes (paradigmatic, intellectual and philosophical) (Gibbs 2015:3)." Yet Gibbs accurately describes the inner journey of my professional life.

I had a clear goal and a specific plan for my professional development by my mid twenties, as Jasper observes (2006), of acquiring new knowledge and skills to build out my practice, which I address on page 19. My transdisciplinary work began to evolve and through this I developed professionally and grew personally.

My ontology was shaped at home and in growing up in the industrial north of England. An English teacher mother and father who is a poet, my parents came from working and middle classes backgrounds in England. We were not materially well off, yet the family home was rich in culture, frequented by writers, poets and academics, surrounded by conversation of literature, the arts and contemporary social and political topics. My mothers' working class upbringing gave her a pragmatic, feminist outlook on life, ensuring

that my brother and I saw people from all communities equally, any juvenile notions of entitlement were given short shrift. She gave my brother and I independence at a young age, showing us how to use the city bus system as children so we could explore museums, cinema and trips into the city. We were encouraged to explore ideas, find solutions, think independently and be open to help others where we could. This developed into my first coaching experiences, where I coached cricket at the local primary school as a 16 year old and supported the physical education staff at my school, supervising classes for them.

My first degree in Cultural Studies helped develop my critical thinking skills, challenging me to examine, 'the study of relationships between elements in a whole way of life. The analysis of culture is the attempt to discover the nature of the organisation which is the complex of these relationships '(Williams, 1965:63).

On graduation I reflected, gratefully, that cultural studies had taught me to think in an analytical and investigative way, to explore the relationships that Williams speaks to, it was less a 'discipline per se' and more what Hall describes as, ''an area where different disciplines intersect in the study of the cultural aspects of society' (Hall et al, 2006:36)

The degree was important in shaping my ontology and the emerging epistemology of my public works, it certainly prepared me to investigate what Nicolescu calls 'the ancient principle of universal interdependence, in that everything is dependent on everything else, everything is connected, nothing is separate" (Nicolescu, 2004). Following my degree I did a PGCE at Greenwich University and found that I was fascinated by how people learn. This was formative in shaping the development of my approach to epistemology, embarking on personal research, driven by a deep motivation to heal and my passion for the field. I began this journey of professional development initially as an individual, immature practitioner to evolve into a more complex, mature co-creator of performance artefacts. This was very much a subjective, personal mission.

Montuori's articulation resonates with my personal journey,

'this discussion takes me into deeply philosophical fields, it emerges out of questions in my own life, and has found applications and articulations in my own

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teaching. What I am looking for in the process of my inquiry is always returning to its applications and implications for my life, and more broadly, for how we, as human beings, make sense of the world, how we live our lives together. Unless it's grounded in experience, and the possibility of making a difference in my life and that of others, it has little interest to me. (cited Augsburg 2013:243)

Theoretical Lens and Conceptual Themes

I have chosen transdisciplinarity to describe and analyse the theoretical and conceptual framework of my public works, as it is an approach to research that reflects both the spirit and practice of my coaching. I have gone into greater depth in this introduction than would normally be the case for a context statement. This is because in the process of researching, I have discovered a particular relationship with coaching, which I believe impacts practice in both fields. In light of this, I will lay out the chronology of this approach along with its key actors and theoretical context.

From an epistemological perspective, my investigation looked beyond the discipline of physical education to the emerging field of sport coaching and science. There wasn't a disciplinary school or a specific body of knowledge that I either had to respect the boundaries of, or that would uniquely give me the answers I was looking for. It seemed wholly natural then, as it does today, that I would inquire at breadth, following my curiosity, intuition and evolving understanding of human performance. The investigation into my injuries would ultimately lay the theoretical transdisciplinary foundation for my coaching work.

Defining Transdisciplinarity

Transdisciplinarity is a research design and problem-solving approach. It is often confused with multi- and interdisciplinary research and has evolved over the last fifty years. The concept has developed in a constant process of definition and clarification, something which Nicolescu has called, 'the war of definitions' (2010:19). During this time two distinct schools of transdisciplinarity have emerged, which I discuss on page 12.

In defining transdisciplinarity, Klein (2009) pointedly quotes the Oxford English Dictionary,

commenting that at its most fundamental level, 'trans' denotes something that goes across, beyond, or through. Nicolescu, as have others, distinguishes between multidisciplinarity, interdisciplinarity, and transdisciplinarity and I have been guided by the way in which he outlines these terms. He writes:

> *Multidisciplinarity* concerns itself with studying a research topic in not just one discipline but in several simultaneously.

> *Interdisciplinarity* has a different goal than multidisciplinarity. It concerns the transfer of methods from one discipline to another. Like multidisciplinarity, interdisciplinarity overflows the disciplines, but its goal still remains within the framework of disciplinary research.

> *Transdisciplinarity* concerns that which is at once between the disciplines, across the different disciplines, and beyond all disciplines. Its goal is the understanding of the present world, of which one of the imperatives is the unity of knowledge (Nicolescu, 2010:19).

It has been acknowledged that the term 'transdisciplinary' was first introduced in a discussion between Jean Piaget, Erich Jantsch and Andre Lichnerowicz at a seminar in Nice, France in 1970. The meetings focus was to explore interdisciplinary teaching and research problems. Piaget gave this description at the seminar,

> Finally, we hope to see succeeding to the stage of interdisciplinary relations a superior stage, which should be 'transdisciplinary,' i.e. which will not be limited to recognize the interactions and/or reciprocities between the specialised researches, but which will locate these links inside a total system without stable boundaries between the disciplines (Piaget in Nicolescu, 2010:20).

In the typology created for that meeting, 'TD was defined as ''a common system of axioms for a set of disciplines' that transcends the narrow scope of disciplinary world views through an overarching synthesis' (Klein, 2014:69). Shortly afterwards, Edgar Morin uses the term 'Transdisciplinarity' for the first time, he explains its purpose, to act

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'as a kind of messenger of the freedom of thinking, a go-between discipline' (Nicolescu, 2010:20).

The term may have been coined in 1970, but it has had a long evolution as an approach to broaden and open boundaries of knowledge creation, research and solve scientific and human problems. Klein (2014) argues that transdisciplinarity can be traced in the West to the Greek idea of unity of knowledge. In the seventeenth century, German polymath Gottfried Liebniz felt that academia constricted the development of science, 'one of the reasons why he (Liebniz) was so hostile to universities as institutions was because their faculty structure prevented the cross-fertilisation of ideas which he saw as essential to the advance of knowledge and of wisdom' (Macdonald Ross, 1984:113).

In 1948 Norbert Weiner published his work on cybernetics, *Cybernetics or control and communication in the animal and the machine.* The theme of working beyond disciplinary boundaries is addressed by Weiner when he speaks of his collaboration with Dr. Arturo Rosenblueth: 'For many years Dr. Rosenblueth and I had shared the conviction that the most fruitful areas for the growth of sciences were between the various established fields,' he continues, 'it is these boundary regions of science which offer the richest opportunities to the qualified investigator' (Weiner, 1948:8-9). He proposed the creation of a team of scientists, foreshadowing the development of transdisciplinary research teams later in the twentieth and twenty-first century, 'each a specialist in his own field, but each possessing a thoroughly sound and trained acquaintance with the fields of his neighbour; all in the habit of working together ' (Weiner, 1948:8-9).

In the post Second World War period of the twentieth century, global problems began to be identified that were too complex to be addressed with a mono-disciplinary approach. Italian industrialist Aurelio Peccei and Scottish scientist Alexander King established the Club of Rome, an organisation made up of international scientists, politicians and thought leaders to investigate the systemic risks humanity and the planet were facing from globalisation and technological complexity. King asked economist and futurist Hasan Ozbekhan along with Erich Jantsch and Alexander Christakis to conceptualise a prospectus that would address this. Their work, *The Predicament of Mankind* (1970), identified forty-nine continuous critical problems facing humankind: 'We find it virtually

impossible to view them as problems that exist in isolation – or as problems capable of being solved in their own terms' (1970:12)

Ozbekhan's prospectus was deemed too costly and impractical to implement at the time, but the awareness of complex global problems was now being addressed at an international level and teams of transdisciplinary scientists were tasked with researching and creating solutions for them. Christakis would go on to work with John Warfield to develop Liebniz's idea, 'that the principles of reasoning could be reduced to a formal symbolic system, an algebra or calculus of thought, in which controversy would be settled by calculations' (Zalta, 2000:137-183) Warfield created the Interactive Management System, supported by computer software, whose purpose as described in the *Interactive Management Handbook* (2002) was, 'invented explicitly to apply to the management of complexity. It is intended to be applied intermittently in organizations to enable those organizations to cope with issues or situations whose scope is beyond that of the normal type of problem that organizations can readily solve' (Warfield et al., 2002:1).

As the transdisciplinary field evolved, two schools, the Nicolescuian school and Zurich school, emerged. The first, named after quantum physicist Basarab Nicolescu, focused on creating knowledge grounded in the principles of metaphysics, quantum physics and complexity science. He developed a theoretical, transdisciplinary methodology with three axioms, ontology, logic and epistemology, which were disseminated through his books and conferences (McGregor, 2015). His work led to the creation of the 'Charter of Transdisciplinarity' in 1994 and establishment of CIRET, the International Center for Transdisciplinary Research in Paris.

The Zurich school has been aligned to the original work of Erich Jantsch, the German physicist who worked on the Club of Rome prospectus, along with the work of Michael Gibbons and Jana Novotny (1994, 2003) and their concept of knowledge production modes. They understood Mode 1 knowledge as being scientific and created in a traditional, disciplinary process and Mode 2 knowledge as being produced in the context of application in a transdisciplinary approach. The Zurich school's focus has been on a practical approach to transdisciplinarity, problem solving and 'designing and implementing tangible solutions to "real world" problems' (Bernstein, 2015:7).

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The two approaches are different, regardless of the desire to transcend disciplinary boundaries. Nicolescu proposes that his work is theoretical and that of Gibbons et al. is phenomenological, in that it creates, 'models connecting the theoretical principles with the already observed experimental data, in order to predict further results' (2008:12).

Transdisciplinary relevance to my public works

My inquiry to understand the injuries I acquired in the late 1980's began as a sportsman seeking answers to physical problems. The answers I sought came from outside the established cricket system. My initial inquiries within the field of cricket coaching were limited to courses and material created by governing bodies in the UK for the purpose of technical instruction. The field of sports science did not yet exist, sports coaching was in its infancy in the UK and as Lyle (2017) observes, it had yet to develop a cohesive conceptual framework. Research taking place in cricket was happening primarily at one university in Australia. Coach and educator Daryl Foster had established a team of specialists from education, science and medicine at the University of Western Australia to support his research and coaching program with Western Australia cricket. I came across Foster's work in a journal and used his team management template as a blueprint (neither Daryl nor myself have a copy), along with the work of Dick in *Sports Training Principles* (1989), for the development of my own coaching program.

I put together my first team of support staff specialists in 1996 for the youth programs I was overseeing. I had begun as a single coach, working within the defined boundaries of contemporary cricket coaching and evolved over time into the leader of a transdisciplinary high performance team of staff and athletes to deliver world champion winning performance. As my understanding developed over the decades, my work evolved from being monodisciplinary, multidisciplinary, to interdisciplinary and finally it became the transdisciplinary practice that I employ today. This transition in coaching occurred concurrently with the shift in disciplinary thinking in the late twentieth and early twenty-first centuries. To achieve performance goals, I facilitated the team and sub-teams within the team to design both the process and outcome of performance. Delivered as performance in matches, never the same, each unique and in the moment, to win

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leagues and cup competitions. My role as coach encapsulated both lead designer and director, facilitating the corresponding teams to create new knowledge, learning and performance. It meant designing new performance, being bold and leaving behind the known, it meant crossing boundaries and applying more minds with broader perspectives who together could create new insight and knowledge, as I describe further on page 40.

The various fields that have informed my investigation and that have supported the development of the theoretical and practical framework of my public works are as follows:

Sport coaching – a field that I refer to as the professional context of my work.

Sport hypnosis – I qualified as a certified hypnotherapist and draw on this practice utilising language patterns, states of consciousness and trance to work directly with the subconscious mind.

Sport psychology – I have researched extensively and engaged through my practice with this field since it was relatively young in the 1980's when I was looking for an 'edge' in the mental game. In this research I draw on the work of Terry Orlick(1990), Robert Nideffer (2013)and Susan Jackson and Mihaly Csikszentmihalyi (1999).

Neurolinguistic Programming – I qualified as a Master practitioner in NLP and through my engagement with this field, as with sports hypnosis, I have extended my understanding of trance, language patterns and modelling human excellence.

Neuroscience – I have studied sensory integration and the application of neuroscience to coaching, qualifying as a specialist in sensory integration with Dr. Rayma Ditson-Sommer and as an Executive Coach with the Neuroleadership Institute.

Three Principles – I have trained as a facilitator in this emerging field, supporting human wellness and resilience.

 Evolving as a Transdisciplinary Practitioner

 Tanya Augsburg explores the evolution of the transdisciplinary practitioner, identifying 'the traits of individuals involved in transdisciplinary projects' (Ausburg 2014:233) as they become a transdisciplinary individual. She traces the origins of transdisciplinarity from

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1972 to the contemporary themes addressed above in pages 10-14. She begins with the presupposition that transdisciplinarity starts with ethics, the 'desire to improve society and to contribute to the advancement of the common good' (Ausburg 2014:233). Ethics would be a theme that would develop through the course of my work and I explore this on pages 94-96,100.

She uses Nicolescu's (1999) early concept of a transdisciplinary attitude as her point of departure to explore the traits of becoming a transdisciplinary individual. Themes that came from Nicolecu's initial position were the role of creativity, inquisitiveness, adaptability and the ability to build bridges. In the new millennium, Jacobs and Nienaber (2011) highlight the need to understand the role of the individual and politics in the success or failure of a project, this was to be a critical area for me and I address this on pages 94-97,100.

Her literature review combines these themes and identifies seven skills and traits:

    I.   Mutuality, necessity and trust
   II. ability to build networks within realm of unfamiliarity
  III. capacity to engage in meaningful dialogue, suspending one's point of view
  IV. a societal conscience and awareness
   V. able to think in complex, interlinked manner
  VI. able to relate to logic of complexity
 VII. have a modest positionality

What resonates in her work and is relevant for this context statement, is that the traits and characteristics she identifies as the transdisciplinary researcher moves from 'attitude' to 'becoming' is the personal and professional journey that I, and I believe all transdisciplinary practitioners make as they grow into the truth and holism of their work. This movement from learning concepts to embodying them, as I mention above in quoting Gibb on p.8 of these 'inner changes', describes the arc of this inner personal and professional journey. I explicate my professional development as a TD practitioner with these characteristics in mind, beginning on page 40, specifically exploring the concepts of

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transcendence, problem solving, agora and the role of the 'subject'.

Part One

Chapter One - Personal Context

The performance system that is now central to my practice evolved over a lifetime and in this way, its development is also a personal journey that follows my own circumstances and trajectory. I explore my own history here in order to gain a greater understanding of how my background has influenced the form that my work has taken.

As a child I struggled with learning difficulties at primary school, so much so that I was sent to educational psychologists for an assessment, they didn't find anything wrong other than I had missed key stages of learning in the early primary stage. This period was precipitated by the illness and absence of my mother at an early age and I subsequently suffered from an attachment disorder. I was sent for tutoring to catch up with the other pupils and moved to another school with smaller class sizes, where I began to learn effectively and productively.

My parents moved a great deal with work, which meant that I had to keep on restarting new syllabi. We had emigrated to Australia at the point when, at twelve, I had a skull fracture which necessitated surgery. A brain injury of this nature had a serious impact on my ability to be able to focus and I once again found myself distracted and struggling to learn. Of course my academic performance reflected these changes, which made me disillusioned and unmotivated. I left school at sixteen and in desperation my parents asked the school to take me back. I returned for a final year post 16 plus, which I failed again; I just had no interest. To keep me busy, the school in their wisdom appointed me as an assistant physical education teacher and I was given classes to oversee which was my first experience of teaching. I was captain of the school cricket and rugby teams and was beginning my journey of leadership. Having failed miserably on the academic front, I finally left with two passes in English. After being unemployed for a considerable period

of time I realised that I had to begin school again. With a large mouthful of humble pie and greater motivation I qualified with O and A levels to get into university.

I was in a car accident at the age of 18, which injured my back, after this I suffered from a myriad of injuries. Despite these physical issues, I had made progress in cricket and rugby and played at county level in both. I had been for cricket trials with first class teams and was accepted to join one of the top teams in England. Yet, the injuries persisted and surgeries followed, and I eventually gave up playing competitive sport in my mid-twenties. I studied at postgraduate level to complete a PGCE in Further Education and the upside of this was that I found out that I was fascinated in how people learn. I had found my calling.

I had been living with my parents during this time while I studied and having completed the PGCE realised that they could no longer financially support me. I needed to begin making a living and move on with my life. It was a difficult time and I suffered with depression in this transitional period. I struggled to come to terms with the fact I would not fulfil my dream goal of being a professional sportsman and was therefore unable to step on to the next rung that I had imagined for myself.

Life's sense of humour had taken me to the door of achieving my dream goal and had teased me that this was possible, only to slam it shut once I had a glimpse of reaching this aim. It was a lesson that would be repeated in my pursuit of trophies as a coach and would challenge me, testing my perseverance to the point of breaking until the door to achievement opened and I could begin the process of understanding how 'winning' takes place. In 1991 I completed a goal-setting exercise, that I reference on the next page, which gave me a clear sense of purpose and vision. This was revelatory in that it challenged me to put order to my thinking and to map out a path demonstrating where I wanted to get to and how to achieve this aim.

After experiencing all of my injuries I wanted to understand what had caused them: were they to do with the biomechanics of my fast bowling action, my cricket and rugby training load, or a mix of both? I researched physiology and biomechanics, I bought cricket coaching books, subscribed to journals and travelled to university libraries to source

information. Frank Dick's *Sport Training Principles* (1989) was an excellent introduction to the field that would become known as sport science, covering the fundamental principles of athlete preparation and gave me a holistic perspective. I got my introduction to the mental side of the game through two sports psychology books, one by Terry Orlick *In Pursuit of Excellence* (1990) and *Play Better Cricket* by Steve Bull et al. (1992). I used the cricket team management template by cricket coach and lecturer Daryl Foster. These four works were critical in building my theoretical and practical framework in sports science, cricket team management and sports psychology for my coaching work. The texts also supplemented the theory and practice in education that I was learning in the PGCE at this time. I worked with Orlick and Bulls' exercises and used them personally. Two exercises in particular from this period would shape my working life.

Firstly, the mental rehearsal exercise in Terry Orlick's book, specifically the chapter by his father on sports hypnosis, which I used to design an optimal performance script for fast bowling. I was struggling with an injury and could not train properly for cricket and so instead I did the mental rehearsal of my cricket performance on a daily basis. Without being able to physically train properly that season, I performed better than ever before. I was literally wiring the performance into my brain using mental rehearsal. I was dumbfounded by the results. How was it possible to be able to perform better with no physical practice? It was counterintuitive and generated a question that I would spend the next thirty years seeking to understand and answer.

The goal-setting process from Steve Bull's 1992 publication is the second influential exercise that I have taken forward and I used this activity to construct my ten-year plan to become an international coach. In the preface to *Sports Training Principles* (1989), Dick writes, 'it always fascinated me that athletes whose training plans seem extremely diverse are able to produce almost identical times over their racing distance' (1981:V). In 1991, whilst recovering from yet another surgery, having examined the biomechanical, technical and physiological sources of the injury, it became apparent to me both as a sportsman and as a coach the missing element that Dick alludes to. When all of the physical fields are equal amongst athletes and teams, it is the mind that differentiates those who win from those who lose.

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As Troy Bassham (2018) the former Olympic and World Champion rifle shot states, the five percent who win do so because they think differently from the other ninety-five percent, it is what separates the winners from the competitors. As I was to discover in my work with the Border and Pakistan cricket teams: 'It's thought that creates our destiny. If things go wrong, it's an act of mind' (Parkhill, 2011:135). I would add to this that when things go right, it is an act of mind.

Chapter Two – Coaching: Professional Context

'Coaching is seen as, 'a vital factor for success in sport at all levels'
(Lyle and Cushion, 2017:i)

In the twenty-first century, coaching has evolved into a global industry, with sub-industries under the umbrella term 'coaching'. According to a Price Waterhouse Coopers report in 2018 (IAPC&M, 2019), it is currently the second fastest developing industry in the world, covering fields from sport to business, executive and personal coaching. As an industry it is still a relatively young field and there has been a struggle to define what a coach specifically does and to determine the coaching process. The Cambridge Dictionary defines the term across roles in a general sense as, 'an expert who trains someone learning or improving a skill, especially one related to performing' and in the field of sport coaching, as 'a person who is responsible for managing and training a person or a team' (Cambridge Dictionary, 2019). Neither of these definitions are specific enough, nor do they significantly assist in articulating what a coach actually does in order to understand their role and the process and practice of coaching. Definitions have been challenging and it is really only since the 1980's that coaching as a field started to develop a conceptual framework upon which to attach its developing theory.

John Whitmore, one of the founding fathers of contemporary coaching, defines the practice well when he says that, 'coaching is unlocking people's potential to maximize their own performance' (2017:10). Amy Brann, a specialist in applying neuroscience to coaching, shares neuroscientist Jeffrey Schwartz's definition: 'An expert in facilitating self-directed neuroplasticity.' She goes on to say: 'Coaches are skilled at working with individuals to help them bring out the best in themselves and rewire their brains to make it easy for those changes to become the norm' (Brann, 2014:367).

Schwartz's work leads into the potential and process of coaching first alluded to in Tim Gallwey's *Inner Game* series of books for sport and corporate coaching. Gallwey

challenged the perceived wisdom of 'instruction' based sports coaching by directing the player to their own 'inner' potential to learn. Gallwey's work speaks to the innate ability of the brain to learn, in the same way a child learns to walk without instruction from their parents, nor through an expert driven model of human biomechanics and physiology. Whitmore, as a student of Gallwey's, developed this theme in his work as one of the first executive and business coaches. Which he describes as an, 'evolution from hierarchy to self-responsibility', (Whitmore, 2017:4). This approach foreshadowed the coaching and performance model I would carry out with players and teams in the early 90s, which underpins my work in professional sport: the assumption that the performer's brain is designed to learn and perform and that our role as coaches is to facilitate learning. As Jonathan Passmore states so eloquently, 'coaches believe that coachees have all the knowledge they need; the coach is there to help them tap into it (Passmore, 2016:16).

In my first two cricket coaching certifications taken in the 1980s, we were taught to be instructors of technical skill. This training did not take account of, 'the personal, emotional, cultural and social identity of the athlete' (Jones et al, 2009:11). There was no perception of the coach as an actor and leader in a 'complex social system' (2009:11). I had recently completed my training as a lecturer for further education in the UK and none of this thinking was on the syllabus either. I was hungry to learn, but there was a dearth of cricket coaching material that went beyond technical instruction. There was no information available about the impact of social context, communication or interpersonal dynamics. John Lyle describes this vacuum when speaking of his experience as an educator in coaching science in the early 1980s, stating that there were, 'no undergraduate or postgraduate courses, coach education was rudimentary in scale and sophistication, and the library shelves were devoid of peer reviewed journals and UK text books' (2017:3). The field has evolved exponentially since Lyle's early days, addressing the sociological, pedagogical and conceptual aspects of coaching, beyond the bio-scientific, for coaches to challenge 'the assumptions that inform their practice' (Jones et al., 2009:6)

From a sociological perspective Robyn Jones work has been central to exploring the social dynamic between coach and athlete, 'recognizing coaching as intellectual as

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opposed to technical work, requiring higher-order thinking skills to deal with the humanistic, problematic and dynamic nature of the tasks involved' (Jones et al, 2009:12). I found Jones's work informative and the sociological and pedagogical perspective an important contribution to the field, my concern was that at times it was inaccessible, some of the specialist academic vocabulary in his most recent work, 'Studies in Sports Coaching' (2019), beyond the comprehension of all but other academics and post graduate students. As a student and professional coach, I require material which is practical and accessible, that I can understand in theory and apply in practice.

In researching for the context statement I found Lyle and Cushion's 'Sport Coaching Concepts - Framework for Coaching Practice' (2017) an excellent work for emerging and experienced practitioners. Giving both context and a clear conceptual development of the field. As a practitioner coach the work is particularly insightful in clarifying between teaching and coaching, they reinforce the process focus of coaching and the importance of the pedagogical lens as an excellent tool for demonstrating the interdependence of athlete, coach, context and purpose (Lyle and Cushion 2017:251).

I will raise concerns about what I regard as a critical 'blind spot' in contemporary sport coaching research on P.100.

Because of the research vacuum that I experienced in 1990 I looked beyond the boundaries of cricket coaching and Dick's (1989) seminal work suggested an interdisciplinary coaching approach. This gave me a breadth and depth of understanding in biomechanics, technique acquisition, physiology and athlete development that were not available in cricket literature at that time.

Having completed the goal-setting exercise in 1991, I had a clear aim in mind: to be an international coach. I assessed my current position and resources and laid out strategic targets that I needed to achieve to move along the path of goal achievement. I wanted experience and opportunity and with South Africa coming out of isolation, Mandela released and the African National Congress unbanned, I decided that South Africa would be a fascinating place to do this. I wrote to the CEO of the South African cricket board, Ali Bacher, to ask about coaching opportunities in the country. He wrote back with the

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names of the provincial cricket board presidents. I wrote directly to each one, with a covering letter and an article I had written on fitness for cricket and slowly but surely, I began to receive replies. The Headmaster of Selborne College in the Eastern Cape called me one day with an offer to become the college's professional cricket coach. In 1991, on completion of my PGCE in Media and Communication, I travelled to South Africa to begin work at the college.

Chapter Three - Mental Performance

At Selborne I set goals to achieve as a coach and used the same process with the players and the college first team. As I looked for performance advantages, my early approach to cricket coaching was to acquire a thorough understanding of the key areas of physical performance of the sport, considering technique, strategy, biomechanics and physiology. As I became competent in these fields my primary focus became the mental side of performance. This was informed by my experience as a competitor and the need to manage my thinking and focus as a player and team leader. Firstly in childhood and then later as an adult using sports hypnosis and visualization. As I alluded to earlier, I came to see that where individuals or teams had commensurate levels of technical skill and fitness, it was the mind that determined the performance outcome.

The first time I was consciously aware of managing my thinking was in a swimming gala as a ten year old. In talking with other competitors prior to competition, listening to them discuss their anxieties about the race, I mentally framed the performance in such a way that I removed all expectation of outcome. This allowed me to stay relaxed and focus on the process of performance to win. The second time was playing table tennis as a twelve year old against adults in a university hall of residence where we were staying. I could beat the adults in casual play, yet when I entered an inter-halls competition, I did not think I could or should beat an adult. I was immediately limited by the parameters of thinking I put on the competition experience. I reflected afterwards how I had taken the eventual champion to match point on a regular basis, and then did not get past the first round because my thinking about not beating an adult in a competition scenario had limited me.

When I was given captaincy responsibilities in my mid-teens I became aware and sensitive to the power of the spoken word, how positive and negative thought and strategy communicated in both word and deed created performance realities for the teams and players I led. My goal as a player and captain was to win every match, nothing changed when I began as a full time coach at Selborne.

3.1 Performance Design

At Selborne I applied the long-term view of achieving performance goals from a curriculum design perspective, organizing the cricket, fitness and mental skills into a syllabus to deliver units of learning. I then broke this down into the design, structure and delivery of a cricket performance plan. The mental skills focused on goal setting, which was an extension of the work I had been carrying out in the PGCE.

In defining the concept of goal setting Weinberg states that, 'a goal is that which an individual is trying to accomplish; it is the object or aim of an action' (2013:171). On a personal level, the goal setting exercise challenged me to drill down and clarify my aims, to assess my strengths and weaknesses, enabling me to prioritise my coaching work with greater specificity. This specificity was to prove essential in designing precise team and individual performance plans. I was coming to understand and apply what Dick (1989) referred to as the principles of training: specificity, overload, adaptation, reversibility, individualisation and progression. I would later see that these principles were not only for training technical skills, biomechanics and physiology, but that they also applied to the emerging field of neuroscience in creating the building blocks of optimal mental performance. This activity was complimentary with the sports hypnosis work, which focused on health and performance goals, utilizing relaxation and mental rehearsal. The goal of mental rehearsal focused the individual on positively visualizing the performance process to achieve outcome goals that they had chosen and set for themselves.

In my second season at Selborne I held my first pre-season seminar with a team, the first year I didn't have time on arrival in South Africa. I put the players at the centre of the performance design process, asking them what they wanted to achieve for the coming season, both as a team and as individuals. There were no other staff involved in the seminar, I was the specialist cricket coach, sharing mental skills concepts with the players to support them to play better.

From a transdisciplinary perspective, this would be what Alexander Christakis calls an 'agora', as a context for stakeholder design, developed by him, 'as a reference to the open public context congruent with the Athenian agora, defined by its accessibility to

publics. The agora discloses a democratic, participatory context articulated by its availability to public stakeholders' (Jones and Kijima, 2018:21).

Not that I had heard of agora at this time, my aim with the seminar was for the players to be at the centre of the learning and design process, for it to be as democratic and inclusive as possible.

I used a classroom for the seminar, which wasn't ideal to facilitating an open communication process, but it sufficed to begin my exploration of this concept. I took them through the mental skills programme, working through the goal setting and visualization exercises. The goal setting was beginning the process of the players learning to think strategically of how to achieve their goals. It was implementing Schwartz's observation on the coaching process, of self directed neuroplasticity, they were beginning the process of consciously wiring their brains to think strategically for successful performance. I also applied the sports hypnosis exercise that I had learnt from the broader field of hypnosis.

The impact of the mental skills program was successful, five players from Selborne College would go on to be selected for the provincial u-19 team, a first at the school. I was to be appointed u-19 provincial coach the next year and I ran the same mental skills program, the team were the only unbeaten side at the SA national championships, four of the players were selected for the SA U-19's, three of them would go on to be full internationals.

3.2 Sport Hypnosis

In Straub and Bowman's review of sport hypnosis development they quote the American Psychological Association's Division 30: Society of Psychological Hypnosis for a definition, 'hypnosis is a procedure during which a health professional or researcher suggests while treating someone, that he or she experiences changes in sensations, perceptions, thoughts or behavior' (APA in Straub and Bowman, 2016:1). Lars Eric Unestahl (2018) has been at the forefront of the field for many decades and describes sport hypnosis as:

a form of alert hypnosis defined by mental training procedures based on three techniques in combination: eyes-open hypnosis, traditional eyes-closed hypnosis, and self-hypnosis. The self-hypnotic state is operationally defined as the imagined "inner mental room" (IMR). The main purpose of SH is to produce the sport hypnotic state (SHS), or the flow state, a form of alert hypnosis (2018:159).

From an historical context, it is important here to identify key themes that run through the evolution of hypnosis, not to give a summarised history but to be able to contextualise and relate them to elite performance in the public works. Specifically, these themes will be employed to see how my understanding and application of goal setting, trance and neuroscience evolved and were applied in my coaching.

As Deeley (2016) describes in 'Hypnosis as therapy for functional neurologic disorders' that the precursor to hypnotism was the concept of 'animal magnetism' conceptualised by Anton Mesmer (1734–1815); his technique focused on suggestion, touch and eye contact.

Scottish physician James Braid's (1795–1860) application of hypnosis to medicine made critical observations of how he could achieve an, 'hypnotic state by the subject staring at an object'. He described concentration on, 'a single thought or idea, "monoideism" as the key factor in producing trance' (2016:588).

My initial application of self-hypnosis in cricket was focused on educating the players to understand the relationship between the conscious and subconscious mind, using the conscious mind to set outcome and process goals, to be able to consciously relax and use self-hypnosis to create and rehearse, in what Unestahl calls the 'inner mental room' (2018:159), their creative imagination. I took teams through goal setting, relaxation induction and self-hypnosis "positive visualization" sessions, focusing on suggestions of optimal performance in skills, focus and strategy. Visualization is often, 'referred to as imagery or mental rehearsal. It involves cognitively creating a new experience or recreating a past experience to either practice a specific sport skill or to prepare immediately before competition' (Vealey and Forlenza in Milling and Randazzo, 2015:46).

The players enjoyed this process and it was well received, yet in running organised team sessions they were coach centred, I wanted the focus to be on the players innate learning capability rather than my coaching suggestions. As I continued to research and deepen my understanding, I realised there was no need to use a formal hypnotic induction or positive visualisation exercises. I will clarify how this approach developed when I refer to the timeline of the coaching process with the individual teams I worked with in the public works.

My hypnotherapy studies focused on the work of North Americans, hypnotherapist Dave Elman (1900–1967, psychiatrist Milton Erickson (1901–1980) and French psychologist and pharmacist Emile Coué (1857–1926). Coué, Elman and Erickson had identified that the subconscious mind was always alert and listening, regardless of whether an individual was awake, asleep or anaesthetised! The question was to learn how to communicate with this part of the mind. Coué (1922) stated that, 'the unconscious self presides over the functions of our organism, but also over all our actions whatever they are' (1922:40). He designed a process to relieve neurotic and physical ailments using what he called 'auto-suggestion', which he described as, 'the influence of the imagination upon the moral and physical being of mankind' (1922:111).

Working with individuals and groups, he used a relaxation induction and a script that suggested optimal health. The script was carefully designed and spoke to each aspect of human health. I came to see the idea of scripting performance as a 'thought architecture', a design process, not as a problem to be fixed but as a goal to be achieved through the medium of suggestion and imagination, rehearsal and repetition. This was to be a theme I would return to as my understanding deepened and I came to understand how and why this worked and could be applied with greater impact and effect with each team I worked with.

Elman(1964) designed a two-minute induction for medical professionals so that they could effectively use the benefits of self-hypnosis in the context of their practice and surgery. Elman's induction was based on suggestion, eye fatigue and hand movement, as we saw with Mesmer and Braid (Deeley, 2016:587-88), the focus of attention using

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visual, auditory and kinesthetic input is the key to the induction process. Erickson used language patterns, metaphor, stories and suggestion to create trance to communicate with his patients' unconscious so that they could achieve their therapeutic goals. Erickson, echoing Coué, said in conversation to fellow practitioner Sid Rosen, 'what you don't realise, Sid, is that most of your life is unconsciously determined' (1991:25).

The problems his patients presented with were unconscious, if they could have solved them consciously and logically they would have. Thus, Erickson utilised trance to bypass the conscious mind and help them solve their own problems, using their own inner understanding and resources, he called these 'unconscious learnings' (Rosen and Erickson, 1991:27). As Rosen describes:

> Trance, according to Erickson, is the state in which learning and openness to change are most likely to occur. Trance is a natural state experienced by everyone. Our most familiar experience takes place when we daydream, but other trance states can occur when we meditate, pray, or perform exercises - such as jogging (Rosen and Erickson, 1991:26).

I had several insights from their work. Firstly, from Coué (1922) that thoughts could be consciously chosen and designed into the 'thought architecture' of a performance script and that trance could be used to install optimal mental and physical habits.

Elman's (1964) work allowed me to understand that anything could be linked and conditioned to trigger a trance like 'performance state'. Elman shares hypnotic examples of tie pulling, lifting a glass of water and lighting a cigarette to enter trance. I realised that actions as seemingly innocuous as walking across the boundary rope as a cricketer enters the field of play, the bowler standing next to their bowling mark and a batter remarking their guard could be used as triggers to activate and maintain an optimal performance state.

Thirdly, Erickson (1991) taught me that it is more beneficial to support an individual or team to achieve their goal by using their own experience, insights and knowledge rather than them having to consciously learn new knowledge. Coaching a team or individual to

choose the goals, plan and to design their fulfilment by applying their own principles and moral compass ensures that they stay on track in achieving them. From this I came to understand that players were performing from their unconscious, their skills and strategy were already learnt and performance was determined by the sum of their current level of thought, skill and strategy.

The Cybernetic Mind

Maxwell Maltz, a North American cosmetic surgeon published *Psycho-Cybernetics* in 1960, a book informed by experiences with his patients. He found that with most of his patients, after corrective surgery they would experience 'an almost immediate (usually within 21 days) rise in self-esteem, self-confidence', remarkably, there was an exception though, he found some patients, 'showed no change in personality after surgery,' (Maltz, 2016:vii). He realised that nothing changed for these patients until the thinking that created their self-image changed. It was as if they were hypnotised by the belief that they were ugly and that that belief system continued to operate regardless of surgery.

Maltz, not finding satisfactory answers within medicine or psychology took a transdisciplinary approach and looked at the work of mathematicians and physicists for answers, specifically Norbert Weiner (1896–1964) and his work on cybernetics for the US government in the Second World War. He came to the conclusion that the, 'subconscious mind is not a mind at all, but a mechanism—a goal-striving servo-mechanism consisting of the brain and nervous system, which is used by, and directed by the mind' (Maltz, 2016:14). He concluded that if the 'servo-mechanism' is programmed that it is 'ugly and inferior' (vii), then that belief system will continue to operate until the programming is changed: 'A human being always acts and feels and performs in accordance with what he imagines to be true about himself and his environment' (35).

Maltz is clear to say that psycho-cybernetics is not saying a person is a machine, but that each person's physical brain and nervous system operates like a servo-mechanism, or in other words, it achieves the goal that has been programmed into it. He uses an analogy from Weiner's work in cybernetics, saying that a self-guided interceptor missile is programmed to reach its goal, an enemy plane. Its sensors continuously correct its

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direction toward the goal, so that whenever it starts to go off track, it orientates itself to get back on track moving directly towards the goal. He realised that the patients who viewed themselves as 'ugly and inferior' could not reach their 'goal' of wholeness until their thinking that supported the erroneous belief was replaced with thought programming that constituted a positive self-image. Maltz used hypnosis, educating his patients to engage their creative imagination to create a new self-image. He would suggest that his patients use self-hypnosis in the form of positive visualisation for thirty minutes per day in order to create a new positive self-image goal for the servo-mechanism to orient towards.

I would come to understand and apply Maltz's concept of self-image and the servo-mechanism both to individual players and the wider team. I had observed through thousands of coaching hours that performers and teams, to paraphrase Maltz, 'act and feel and perform in accordance with what they imagine to be true about themselves and their environment' (2016:35). It was clear to me that teams also have a collective subconscious mind that performs to the limit of what it believes to be true. Without clear objectives, a positive self-image and a process map to achieve its goals, the team operates as a collective of individuals rather than a goal-oriented, focused team.

My work with the Border and Pakistan teams from 1998 to 2003 showed me that players and teams with exceptional skill and strategy could not perform beyond the limit of the belief system of what they thought possible. It was to be one of the most important insights for me as a coach, that individual and team performance is limited and effectively has a ceiling determined by the totality of the thought-created belief system that makes up the self-image. To help players and teams learn how to be successful I would need to be able to effect change at the level of thought, through the conscious design process of 'thought architecture' utilising my understanding of strategic performance planning, hypnosis and concepts from the evolving field of neuroscience.

3.3 Applying Neuroscience to Coaching

In 2003, I was introduced to the late Dr. Rayma Ditson-Sommer through my hypnotherapy studies. Her primary field was learning and sensory integration. She worked with the US Olympic swimmers after she was asked to help Olympic champion

Gary Hall Jnr with his attention deficit challenges. She agreed to teach me how to use her protocols on the basis that I researched her work and carried out exams on the brain and sensory integration. I was tasked with studying four of her operational manuals to evidence my understanding and competence, which I duly did and passed. Dr. Ditson-Sommer educated me on the application of her work for human performance focusing on neuroscience, brainwave entrainment and the evolving understanding of neuroplasticity. North American psychiatrist Norman Doidge writes that neuroplasticity, 'is that property of the brain that allows it to change its structure and function in response to mental experience and activity. Neuroplasticity takes place in the brain, not in the mind, but it is triggered by the mind' (2015:149). As Doidge observes, humans have long known they can 'change their minds' (149), yet what is new is the understanding that this can alter the neural tissue of the brain and remarkably that the trance state can enhance this process.

There are key insights that have informed my coaching from Ditson-Sommer's work. Firstly, that the brain is an electrical organ that operates on frequency and cycles through five primary frequencies on a functional basis, relative to sleep or waking states. For instance, focused attention has a frequency, relaxed focus has a frequency, imagery, visualization, daydreaming and sleep etc. all also have their own very specific frequencies. Cheng (2019) observes on neurofeedback training for sport performance:

> 'performing the NFT (neurofeedback training) should be preferably based on the specific EEG index which correlates with the specific task demands (Hung and Cheng, 2018; Mirifar, Beckmann and Ehrlenspiel, 2017; Xiang et al., 2018). The types of waveform are associated with specific brain states, such as attentional resources allocation (Asada, Fukuda, Tsunoda, Yamaguchi & Tonoike, 1999), general state of attention, task-specific attention, cortical relaxation or inhibition (Klimesch, 1999), reduction of sensorimotor information processing' (Mann et al., in Cheng, 2019:7).

I came to understand through Ditson-Sommer's work that what had historically seemed to be a mysterious, magical world of the 'trance state' operated by a hypnotist was actually

a specific frequency in the brain that could be induced and utilised through focus of attention and sensory input. Hypnotists had come to understand through study and observation that the conscious mind could be distracted utilizing suggestion, sensory focus of attention, tonality and touch, through which they could induce the trance state. Furthermore, we can see that trance is a state of learning.

Ditson-Sommer used neurotechnology in the form of a specifically designed light and sound unit called the 'Focus Trainer'. Primary protocols were designed to support the user in developing a parasympathetic relaxation response so that they could develop consistent, stable focus. Without a calm, focused state the brain cannot learn, the focus state is essential to receive information, process and memorise it. The Focus Trainer used the frequency following effect, which leads the user's brain to the desired programmed frequency to address performance goals. This process begins with the relaxation response, then optimal focus for learning, followed by imagery for mental rehearsal etc. What became apparent was that the frequency following effect, communicating directly with the brain via sensory input using light and sound, was similar to the hypnotists use of sensory input in the form of suggestion, tonality, touch and fixation of attention. Ditson-Sommer utilised specific frequencies for relaxation, learning, recovery and regeneration, where mental performance could be practiced, simulated, rehearsed and memorised. Her work in brain frequency evolved from the earlier work of researchers into EEG and neurofeedback, beginning with W. Grey Walter, through Joe Kamiya and Barry Sterman.

Sterman was one of the pioneers in this field. In the 1970's he was contracted to do work for the US Air Force using EEG neurofeedback to identify pilots to fly the B-52 stealth bombers. What came out of this research was an understanding of a key factor that separates elite pilots from the other fighter pilots tested. Sterman discovered that, 'various parts of the pilots brains were constantly cycling between a processing mode and an 'idling' or recharging mode, in which the brain conserved energy and refreshed its store of vital nutrients' (Cowan, 2005:11). He identified that, 'those who performed the task best, and with the least amount of stress, were those whose brain waves were most flexible – that is, those who were able to go into high frequency, desynchronized state of

beta and after task was complete, to move quickly back into synchronous alpha, a relaxed state' (Robbins, 2008:227).

Jonathan Cowan researched Sterman's work for his development of the Peak Achievement Trainer, an EEG brain training instrument. Cowan says of Sterman's work, it demonstrated that the 'better pilots needed a shorter rest period before starting to focus again' (Cowan, 2005:16). This recharging period is called a 'microbreak', the ability to effectively manage focus, to switch on target focus and then return to idling. In the final selection of the six pilots, 'this approach turned out to be more accurate, by itself, than all the other measures the air force used in making this selection' (Cowan, 2005:15). The microbreak is a technique that I introduced at the Titans to support the players in switching their focus on and off to better manage their limited glycogen stores for concentration during extended periods of play. To achieve the micro-break the player switches their focus to look at 'space', the sky above the horizon, between deliveries. I discovered this technique when reading Les Fehmi's book 'The Open Focus Brain', he describes the effect of focusing on space, 'the brain is allowed to take a vacation. This is presumably why cortical rhythms slow quickly into alpha, and later theta, and the same brain that was racing moments before becomes a stress reducing brain and a quiet mind' (Fehmi and Robbins, 2007:39).

Pop-Jordanova and Demerdzieva (2010) describe in their work preparing an athlete for Olympic competition with neurofeedback training (NFT): 'Neurofeedback (NF) i.e. EEG biofeedback refers to a specific operant-conditioning paradigm where an individual learns how to influence the electrical activity (frequency, amplitude or synchronization) of his brain'. It means that we are now literally able to recondition and retrain the brain' (Pop-Jordanova and Demerdzieva, 2010:14). This understanding of the brain and mind, applying neuroplasticity and functional frequency to improve learning and performance through repetition of physical and mental rehearsal, became essential learning to improve my coaching of the individual and the team. Specifically with regard to directing and managing attentional focus on the thoughts, strategy and actions that make up the neural circuitry of optimal performance.

Schwartz and Rock define the central role of attention density in the process of applying self-directed neuroplasticity to creating the neural circuitry of new performance: 'The term attention density is increasingly used to define the amount of attention paid to a particular mental experience over a specific time. The greater the concentration on a specific idea or mental experience, the higher the attention density' (2006:8). This causes, 'new brain circuitry to be stabilized and thus developed. With enough attention density, individual thoughts and acts of the mind can become an intrinsic part of an individual's identity: who one is, how one perceives the world, and how one's brain works' (2006:8). Neuroscience could now explain the process of consciously creating the neural architecture (not to be confused with 'neural architecture search' from the field of machine learning) of brain maps for performance.

3.4 Sports Psychology - The Zone, Flow and Trance

After my initial experience with goal setting and hypnosis, I read across the breadth of sports psychology to look for ideas that would continue to inform my coaching practice. I found the work of Robert Nideffer, Susan Jackson and Mihaly Csikszentmihalyi made for intellectually interesting reading in the search for competitive advantage. Nideffer in his paper 'Optimal Performance States' (2013) clarifies what he describes as optimal performance, differentiating between the 'zone' and 'flow': 'Athletes often talk about "being in the zone," and some psychologists have talked about "the zone of optimal functioning' (Nideffer, 2013:1). The reference here, is to some optimal level of arousal that leads to better integration of mental and physical processes and superior performance' (Prapavesis and Grove, 1991; Hanin, 2000 in Nideffer, 2013:1). Nideffer differentiates between 'zone' performance and Csikszentmihalyi's concept of 'flow'. Jackson and Csikszentmihalyi (1999: 20) write that athletes refer to it as "being in the zone". To muddy the water further, they state that, 'there are few activities - such as performing music or drama, or playing chess-that are as apt to make flow happen' (Jackson and Csikszentmihalyi, 1999:6), which contradicts the concept of superior athletic performance. From Nideffer's perspective, ''zone' performance has to do with the

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level of performance', he goes on to say, 'when athlete's 'enter the zone,' they tend to have their very best performances' (Ravizza, 1977; Garfield and Bennett, 1984 in Nideffer, 2013:1). That they are two distinctly different states, and the terms 'flow' and 'zone', he says, 'seem to me to be useful ways of describing these different ways of concentrating' (Nideffer, 2013:1).

I gleaned two insights for my coaching practice from the intersection of Nideffer and Jackson and Csikszentmihalyi's work. Firstly, Nideffer identifying the distinction and clarification between an optimal 'zone' performance and the sub-optimal yet more frequent state of 'flow'. Secondly, Jackson and Csikszentmihalyi's idea of the intersection of the goal challenge and the participant's skill level, what they call CS for 'Challenge and Skill' and how that has an impact on the level of engagement and focus. It was something I had observed when coaching, that if the challenge in training or a match, of attaining an objective or target goal were too difficult relative to the participant's current skill level, they could become anxious, lose focus and become demotivated or frustrated. This tied in with the need for individualised player goal plans and assessments, so that the strategy and skills work did not take the performer beyond current learning capability and that those goals fitted within the team and sub-team plans.

Although conceptually interesting and insightful, the defining of and distinction between 'flow' and 'the zone' were not practical for me as a coach. I came to see that what Nideffer, Jackson and Czickcentmihalyi were separately investigating were actually brain frequencies that Erickson had summed up with his definition of trance, 'our most familiar experience takes place when we daydream, but other trance states can occur when we meditate, pray, or perform exercises such as jogging' (Rosen, 1991:27). I came to understand that the defined states of 'zone' and 'flow' are the outcome, not the process. In a team sport, where we play and train twelve months of the year, it is not about seeking a state of 'zone performance'. It is about systemically designing optimal performance then rehearsing and performing with a consistency of excellence and attentional density to create the neural circuitry of unconscious, automated excellence. My challenge and journey was to understand how to coach that process so the players and the team knew what to do, how to do it and when to do it in order to win.

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3.5 The Three Principles of Mind, Consciousness and Thought

In 2017, I signed up to train as a Three Principles Facilitator. The training consisted of a year-long course of four individual retreats and twelve monthly calls. The course was based on the insights of the late Sydney Banks, a Scottish theosopher, on how 'people psychologically create and experience their reality' (Pybus, 2017: 241-2). Bank's had an insight experience of how the mind works and how we (humans) create our reality through what he describes as the three principles of mind, consciousness and thought. Banks saw that, 'people experience and feel their reality via their thinking in the present moment, rather than by the innocent illusion that life happens to them and they experience this via their feelings, as if thought was not part of this process' (Pybus, 2017: 243-5). This, 'creates a space to be able to see that we are the creators of our own reality, metaphorically it's like our brain (the thought factory) is a movie projector and the screen is our life, the brain is projecting the movie of our thinking onto the screen of our life. It's a self created and generated reality' (Pybus, 2017: 251-3). I came to see that, 'the Three Principles are the fundamental operating system for mental and physical life. They are not an application, they are the operating system that the software of our learnt knowledge, memory and skills runs on' (Pybus, 2017:300-1).

This insight allows an individual to become conscious of their 'unconsciously' conditioned and habituated thinking and what it is creating for them in their lives. It allows them the space to see this and see 'thought' for what it is and what it produces in their lives, positively and negatively. As Coué, Erickson and Maltz had observed in their patient's unconscious thinking and the realities that they created for them, Bank's insight now made the invisible visible, the unconscious conscious. This was to be revelatory for me in understanding the unconscious, innate intelligence of the brain and nervous system. 'Thought' both as principle akin to a human operating system and neural circuits as 'learnt' knowledge and skills functioning on the operating system. I was deepening my understanding of how 'thought architecture' could be designed to constructively improve performance. In other words, that sports performance and the way that we conduct our lives could be consciously designed and created through coaching.

I used this with great effect in my work with the West Indies Team in 2019, which I will refer to in the description of that particular public work on page 93. There is currently no research literature for the 'Three Principles Sydney Banks' related to sport coaching and sport psychology on Google scholar at the time of writing (26th May 2020). There were, however, 36,000 results returned for 'Three Principles Sydney Banks' related to psychology. The Three Principles is an area that will be rich in investigation for sports scholars as its efficacy is explored beyond mental health.

Part Two - The Public Works

The public works are focused on my career as a professional coach in first class 'franchise' and international cricket working for sports organisations who are either affiliate bodies (as in first class cricket) or the central body themselves. The professional goals for senior first class and international teams are typically measured in championships won. The organisations have subsidiary goals, with oversight responsibilities for recreational cricket, with extensive structures to identify and develop talent through schools, universities and clubs. The businesses are the geographical administrative bodies representing the central, national organisation.

The three primary bodies I worked for in this period were Cricket South Africa as a franchise head coach and professional cricket manager, Pakistan cricket as head coach of the national side and West Indies Cricket as director of cricket and interim men's head coach.

Chapter Four - Public Work One: Border and Pakistan

The first period of public work covers Border Cricket 1998 to 2001 and Pakistan from 1998 to 2003. I worked for both organisations in this period, as I dovetailed between contracts. This was a testing period for my coaching work in which I could learn and lay the foundation for what would come in the mid 2000s beginning with the Titans franchise.

Professional Cricket Coaching in 1998: Context

Cricket in South Africa in 1998 was semi-professional. Players would hold down jobs, which would allow them to devote time, with their employers' approval, to training and playing in the summer months. Professional coaches in South Africa had been part of professional cricket for some time, with Eddie Barlow and Bob Woolmer leading examples of this. Both were former elite players with a deep understanding of players' technical and strategic needs.

Border Cricket Overview 1996-2001

I began the head coach role at Border Cricket in 1998, which was the next step in becoming an international head coach. As I wrote above, I had drafted my original goal-setting plan in 1991 and had given myself ten years to achieve it. I was on track with the plans that I had set out, having established myself as a successful professional cricket coach at Selborne College in East London (South Africa). I was then approached by Border Cricket to be full time youth cricket coordinator, running youth cricket in the established schools in the province. I was U-19 provincial coach during this time and was then promoted to establish and run the Mercedes Benz Border Cricket Academy in 1996.

Working at Border Cricket was a remarkable environment to be in, with an inclusive and visionary President in Robbie Muzzell, supported by passionate committed staff. CEO Reunert Bauser, head coach Stephen Jones, development manager Greg Hayes and captain Pieter Strydom were instrumental in creating a wonderful environment for the staff and players. I was very much a learner in this environment, I certainly didn't have an ego to protect or defend. I was open minded and keen to build out my knowledge, not only as a coach, but in sports administration. It was a great learning experience to be involved in planning and strategy meetings; I was a sponge absorbing as much information as I could from experienced coaches and administrators.

Greg Hayes and I worked on identifying, coaching and managing youth cricketers for the province in both formal and informal cricket. This was to be essential learning for the development of the coaching and performance system I subsequently developed. I had listed all our junior provincial players, across age groups, so they could be tracked and supported in age group coaching programs. I appointed qualified, former provincial players to coach them following a developmental syllabus.

During these early years at Border Cricket I was exposed to the thinking of some of the best cricket minds in South Africa. Head coach Stephen Jones was aware of my desire to learn and interact with coaches and thought leaders and introduced me to colleagues and coaches who could build out my professional network and assist in my development. He set up a meeting with one of his former mentors, Eddie Barlow, a former South African

international player and renowned coach. He shared his thinking about performance metrics and their relationship to strategy in cricket. This was eye opening and I continued to explore this theme as my work progressed. I was invited to a South African Cricket seminar and was introduced to the then current South African coach Bob Woolmer, who was highly regarded as an innovative coach and thinker on the game. He shared his insights and planning on game strategy for different formats, and these would later become instrumental in how I would coach players to participate and generate the design of team performance. Bob went on to invite me to work with him, a role I chose not to accept as I went on to be Pakistan head coach, and he kindly made a point of looking out for me in periods when I was unemployed and between coaching jobs.

The time setting up and running the Border academy afforded me the opportunity to appoint a support staff to deliver the academy programme. It was wonderful to have the budget to bring in specialists to deliver the academy syllabus. I'd enjoyed my time coaching Selborne and the Border U-19's, it had given me the space and time to begin the process of developing my 'trandisciplinary attitude' to performance, exploring the relationships of the mental, technical, physical and strategic in designing the winning process. I was immature in my development as a practitioner and working as an individual, yet the lessons of investigating and testing the ideas from these disparate fields was to prove invaluable in my evolution as a TD practitioner.

The academy was my first experience composing and managing a multidisciplinary staff, working as a multidisciplinary team, an experience I particularly enjoyed. At the beginning of the programme I met with the staff and we clarified our roles, responsibilities and the objectives of the programme, which was to prepare the players to be professional cricketers, whilst they completed their tertiary studies. I discriminate that this was a multidisciplinary staff in that they worked as a team, toward a common aim, delivering their specialism. It was exciting in that the staff created specialist material for the program, yet we didn't co-ordinate, blend or share material (Nicolescu, 2010:19).

For the Border Academy program I designed and generated the content for the cricket

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and conditioning sections (see *Appendix A – Academy Program*). This was the first time I had done this work in such detail, I utilised concepts from *Sports Training Principles* (Dick,1989) and my research into conditioning for athletics. This work was later incorporated into the overall performance design process that was to go hand-in-hand with goal setting and team planning.

I was academy head coach when the provincial head coach role became available in 1998, which I was offered and accepted. In taking the head coach role I introduced a fully professional set up for the first time in the history of South African cricket. It was a deliberate decision; looking at the group of players we had and their mindset, I knew for us to be able to compete and beat teams who were historically the strongest in the country, we were going to need a squad of full time professionals.

My assessment of the Border squad was that we needed a higher level of general and cricket specific fitness and we needed to improve the team's mental skill sets to be the dominant side in South Africa. To address the fitness aspect I brought on board a former cricketer from the academy program, Greg King, who was a recent graduate in human movement studies from Rhodes University. His role overseeing the players fitness on a full time basis was a first in South African first class cricket. He was very professional and great fun to work with. I covered the mental side of the game, focusing on strategy, personal goal setting and positive visualization sessions with the team.

Border Cricket had historically been a second division team, in the two first class divisions. The team did not have a large population base to draw from and there was no university or major financial or business centre to keep young men in the town. They would typically leave East London to go to one of the big cities to study or to do conscription and then stay there to work. I made it clear to players that I was only going to contract players who were available to work as full time employees, rather than as part-time seasonal workers. At the time, Mercedes Benz, who have a car manufacturing plant in the city, sponsored Border Cricket. Their sponsorship afforded the organisation the latitude to be able to support player contracts to compete with the big teams such as Western Province, Natal and Gauteng.

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The first season I was in the post, the majority of players returned from playing in leagues overseas in England and Scotland. I reference this because it became apparent to me that players were returning from their overseas stints with the same technical problems they had left with five months earlier. The players didn't have training programs that covered their overall development, ensuring that they continued to develop mentally, technically and physically.

4.1 - Border Cricket 1998-99

I was clear in my mind that the team's goal was to be the number one side in South Africa. To achieve this we would need to win both first class competitions: the four and one day competitions. I implemented the 'agora' process I had been refining with Selborne and the Border U-19 teams, I wanted the players to create and own this goal without me explicitly telling them 'this is the goal and this is how we are going to do it'. I wanted them to think through the vision of what they wanted to achieve as a team, to clarify their vision goal and the process goals of how we were going to achieve this.

I had been reading Steven Covey's *The Seven Habits of Highly Effective People* (1989) and I wanted to incorporate the concept of bringing purpose to our work – to go to the heart of 'why' we do what we do and what is important about this. I designed the framework for the team document, this would be our team blueprint for the 'what, how and why' of what we did. It was, on reflection, the first iteration of designing the 'thought architecture' of team performance, with process and outcome goals designed into it. There is currently no research literature on 'thought architecture', it is a concept that I will elaborate on as I examine the public works and how the concept evolved.

Team Vision and Mission

To achieve this I held a two day seminar with the players and support staff. Prior to the seminar, I met with the subcontracted support staff, I wanted to create a specialist staff to support the players. I shared with them my vision for the team: to be the number one side in South Africa. We clarified our individual roles and goals and planned the way forward for pre-season. This was my first experience of putting together an interdisciplinary team to

support the players, we worked collectively and shared ideas to work toward out goals, although it was not yet transdisciplinary, in the sense that the staff still worked within their specialist disciplinary fields (Nicolescu, 2010:19).

I was well versed in communication models from my training as a FE lecturer and set up the room in a horseshoe to facilitate an open communication space, not wanting to repeat the mistakes of Selborne. Then I divided the players into small groups to workshop the material, I elicited feedback and asked the players to identify the key themes and concepts for the 'thought architecture' of the blueprint. The players created the content for the blueprint, generating the thinking that became the 'thought design' of what we wanted to achieve in the season: the outcome goals, the processes of our training standards and most importantly, the values that were to be the moral compass of the team. It was an exhilarating experience, there was an energy and excitement as we clarified inspiring and exciting goals. These goals challenged players to grow and excel, and to work together as a team to achieve a vision and mission for a greater good, for the Border fans and our sponsors who made it possible through their support.

On the second day, having completed the team document, I took the players through a personal goal setting exercise I had created (see *Appendix B – Optimal Performance Goal Setting System*). This whole exercise, combined with the technical skills and physical conditioning program, would be the precursor to the Optimal Performance System, which aligned the player's personal vision, mission and goals with the team goals. It went into greater detail than the goal setting exercise I had done previously with the youth and academy programs. In the new personal goal setting exercise, I laid out a series of steps in the form of questions that created a specific 'thought architecture' to the process. Each stage opened up and set the context for the next question. It challenged the player to think holistically and analytically about the totality of their performance, on and off the field. They were asked to self assess levels of performance across mental, physical and technical so they could see the gap between perceptual levels of performance and actual. I facilitated the session to help them understand the process, clarify questions and deepen their understanding of strategic goal oriented thinking. This process allowed the players to use their own insights, desires and motivation to populate their personal development program.

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I then met with each player and discussed their self assessment and the gap between where they wanted to be, their actual performance and their goal. They could then prioritise areas to focus on to improve performance. They were accountable, yet I was there to support them and help clarify next steps. The feedback from the players on the exercise was positive, they hadn't thought about performance like this before, it gave them the opportunity to take a step back, look at the totality of their game and specifically prioritise areas that needed attention.

Border Team Performance and Results 1998-99

The Border team went on to have the best season in the province's history, they made the final of both the four day (1.) and one day competitions (2.). The side dominated both competitions until it came to finals day, where they lost both matches. This was the beginning of not only my fascination with the stages of winning, but in how to win the one moment that really mattered: the gold medal day, when the team had to perform to win the championship.

I was deeply disappointed at the time: we had come so close in both competitions only to lose our focus and composure when we needed it most. I was aware in the final of the four day competition that I had lost my concentration during the first day and missed critical information. I needed to be present and focused on the challenge the opposition presented at each stage of the game. I obviously was not on the field playing, but I had an excellent relationship with the captain Pieter Strydom, and we would share ideas during breaks in play to ensure we were clear on our strategy and how we delivered it.

On the first day of the competition, we had the opposition 7 wickets down for 70 runs. This was beyond my wildest dreams for the first day of the match, my mind was flying back and forth, thinking that we could win the game in a couple of days. I was not focused and neither was the team. We missed critical decisions on the field because we did not know how to manage the situation. The players were as distracted by the match context as I was. We had the wrong players in the wrong positions at key times and failed to read the match situation or adapt our strategy. We ultimately lost the match because the side never

recovered from a collective loss of focus and strategic game management over the first and second days of the match.

In the one day competition final we underperformed on the night of the final. In some ways this was more disappointing than the four day competition, as the region had galvanised in support of the team during the competition and we were playing to a full stadium at the home ground in East London. The players did not rise to the occasion for the final and gave an underwhelming performance. To win on the night, we needed to produce a collective team performance that was significantly better than the opposition across all aspects of our game: batting, bowling, fielding and strategy. If we had a poor team performance then we needed several individuals to produce match winning performances that could transcend a poor team performance. Neither situation happened. It was a bitter pill to swallow; we individually and collectively did not know how to deliver on the big stage, on TV and in front of the nation's sport lovers on finals day.

Reflection and Learning

It was a tough period at the end of the season, we had achieved so much and walked away with nothing. As Lanny Bassham said on losing the gold medal at the Munich Olympics, 'the silver is the closest thing you can get to the gold medal and still lose. You are the world's best…loser' (2018:130).

I was depressed and the days after both finals were dark. It seemed that so little had been achieved from so much effort and there was nothing tangible to show for it. In the days following both matches, I did not want to go out in public. I was embarrassed and felt like we had let our public and the region down. The organisation was proud of us and made a fuss, giving us plaques to acknowledge our 'achievement', which was bittersweet. It was time to reflect and capture the learning, review the team and my performance, our planning and see where we were off track.

Professional Development

I was constantly focused on how I could improve my coaching and had developed the practice of planning each training session. I'd speak to the captain, senior players and staff

on their thoughts relative to the goals for the week and incorporate these into the plan. I broke the session down like a lesson plan, using a template I had designed with aims, objectives and timing, to ensure practice was precise and focused. I had a section at the bottom of the sheet where I would review training, what went well, what did not work, injuries, illness, etc. I kept these and reviewed them to ensure that I captured my learning. To clarify my thinking I would do this on every training day, and over time this became habitual, sitting down each morning to plan training, to review where we were and where we wanted to be. I currently have over twenty years of session planning records.

I also kept a small black book in a moon bag that I carried around my waist during the day and kept next to my bed at night. The players teased me remorselessly about the moon bag and my lack of fashion consciousness in wearing it. However, I did not know when or where the next insight might come and I did not want to miss it when it arrived! I would often wake in the middle of the night having gone to sleep on an idea only for a solution to arrive during the night, my subconscious having been busy working on it. I read extensively and broadly on the brain and mind, from Tony Buzan on mind mapping to Steven Pinker and Antonio Damasio on thought and the mind, to Leonardo Da Vinci on creativity and design. I began to mind map books that I found interesting and wanted to learn from, originally these were drawn by hand and later with software, developing an extensive library of mind maps that I personally created. I was curious and inquisitive, an obsessive reader, fascinated by human excellence and how it could be coached.

4.2 - Pakistan - 1999 Cricket World Cup in England

At the end of the South African season I was approached to work with the Pakistan national team at the 1999 cricket world cup. The context to working with Pakistan was an introduction to the then captain Amir Sohail in 1997, when the side were on tour in South Africa. A friend from university, Raja Khan, set up a meeting with me and Amir when the team arrived in East London. Amir was having trouble with his batting technique and wanted help. I spent some time with him working on his technique, and he subsequently approached me to work with the team as their coach. I was flattered but politely declined, not believing that I was ready to work at an international level at that time. I was

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approached again by Pakistan in 1999 to work as a consultant coach to support head coach Javed Miandad, facilitated by Raja once again, this time I jumped at the opportunity. I asked permission from Border Cricket to join Pakistan for the tournament, which they approved, and I travelled to England to join up with the Pakistan team.

It was a dream come true, to be working in international cricket with a side of superstars, and not just some of the greatest players of their generation but some of the greatest players who would ever play cricket: Wasim Akram, Waqar Younis, Saeed Anwar, Inzimam ul Haq and Saqlain Mushtaq.

I arrived in Birmingham to meet up with the team, where it transpired that the head coach had resigned, and I was to temporarily run the team with the captain Wasim Akram. I ran practice and designed training with the captain, we got on well and immediately had a rapport. Most of the players had good English language skills and language was not a problem. Where certain of the younger players had limited English, Saeed Anwar and Mushtaq Ahmed would translate and summarise my thoughts for the player. This approach seemed to work well, I got on well with the team, I had deep confidence in my coaching ability and communicated this to the players.

As with the Border team I continued to use the agora, I ensured that team planning and meetings were inclusive of the players' ideas and insights. Many of them were world leaders in their specific disciplines and it was an incredible learning opportunity for me to facilitate the team meetings. I used the same planning format I had used with Border, we would meet in the team room at the hotel, pool ideas and plan game strategy. I would then summarise the new team strategy using a white board. We then had a documented record of our strategy and could continually review and amend it. I was not instructing, I was facilitating the strategic thinking process, stimulating insight and shaping their ideas into the architecture of match strategy. The team had not planned like this before and they communicated their appreciation of the structure and direction I gave. The democratic planning process was not something they had experienced under local coaches who were typically former test players who referenced their own playing careers and methods to coach the team.

The Pakistan Cricket Board (PCB) announced that former captain and coach Mushtaq Mohammed was to join the team as coach. Wasim Akram took me to one side and told me that the PCB did not want to be seen to appoint a foreigner. Wasim said he wanted me to continue as coach of the team and that Mushtaq was there as a figure head. I took him at his word and continued the work I was doing. I did not discuss this with Mushtaq and see that on reflection, with a mixture of naivety and hubris, I did not want to have that conversation. I wanted to run with the programme I had in place and it was obvious from the captain's lead that he was respectful of Mushtaq, but he and I were now working as a team.

I had established a training routine based on tapering before each match so that we could peak on match day. The players communicated to me how much they appreciated this approach. Previously, they had typically trained at the intensity the coach required and would frequently drive up training intensity the day before a match, which was illogical to me. I wanted the players to taper down, ensuring they were well rested, mentally and physically and could peak for match performance. I particularly wanted the players to trust the work they did in training, and not to feel anxious that they needed to do extra work. Planning with the team ensured the players had a calm, focused mental state coming into games, it meant that all the players were clear on their roles and were well briefed on their responsibilities. If a player was asked to fulfil a role for the team that was not his normal position, he was consulted to ensure he was comfortable with the role and happy to fulfil it.

The team played outstanding cricket throughout the tournament and qualified for the semi-finals versus New Zealand at the Oval cricket ground. The side played brilliantly on the day and New Zealand were comprehensively beaten.

We followed the same routine throughout the competition, tapering and peaking, inclusively running practice and team meetings with clear goals, roles and responsibilities until we came to the final.

The 1999 World Cup final was played at the home of cricket at Lords Cricket Ground in London, England. Once we had qualified for the final the expectation that had been building throughout the tournament came to a head, and we found ourselves in a

maelstrom of attention without a script to work from. I spoke to the captain and suggested we move out of London so that we could control our performance environment and retain our practicing and tapering schedule. His reply was that he could understand why I made the suggestion, but what if we did that and we lost. I was taken aback, not with regard to moving out of London, which would be difficult at short notice, but about the possibility of losing! Where had that thought come from? We had been so positive and focused all the way through the competition and now before the most important game of these players' lives, the captain was weighing up decisions based on what might happen if the team lost.

Loss of Focus

The Border finals had received national media attention, but this, of course, was on another scale. In the heady days of the 1990's, the team did not have such a thing as a media manager to handle the press attention or field media requests. Not only that, but the amount of distraction for the players had multiplied exponentially. This should have been a controllable at this stage of the tournament, but the team manager was not experienced in managing in World Cup conditions.

In the days leading up to the final we lost control of the performance environment around the players. This culminated on the day and night before the final and on morning of the final. The practice day before the final had to be called off due to the lack of security at Lords. We were swamped by fans interfering in the practice, and this continued into the evening at the hotel. The hotel was under siege with fans knocking on doors seeking tickets and autographs. Eventually I spoke to the hotel manager to have the floor cordoned off with security.

On the morning of the match, we arrived at the dressing room to find PCB board members in the dressing room, sitting in the players' spaces. They had been granted access to the pavilion but had no seating arranged, so they were in the dressing room. The players focus and mindset was completely distracted, and all of the planning, preparation and pre-match routines we had put in place were thrown out, which was reflected in the team's performance.

The team imploded, they made 132 batting first, which was never remotely going to be enough and Australia got the score with 2 wickets down (3.) It was the biggest loss in the history of cricket World Cup finals.

Reflection and Learning

When I reflected on the three finals, there were themes that ran through them. Firstly, for myself, there was the ability to manage my thinking processes on finals day. Once again, at Lords I found myself in 'what if' territory, unable to ground myself in the present moment. My thinking was distracted, flip flopping between 'what if we win' to 'what will I do when we win'? If there was an upside for me, it was that the thought of losing did not enter my mind. It was about me being present and staying on track with our performance process, the 'what we needed to do' and the action steps to keep us on track to perform with excellence.

Managing My Mental Space

Now, was I responsible for losing? Was I on the field? I could not ignore the obvious: no, I was not on the field, but three teams I had coached had lost three finals in the space of a couple of months. There was one common denominator: me. Without being overly self-critical, the teams had played outstanding cricket and made it to the finals.

I realised it did not matter how good my player management was or how good I was technically and strategically, or at managing the players' physical preparation. I knew that for me to become the winning coach I wanted to be, I had to understand how to manage my thought process and focus on finals day. I had to master the mental game. This was not only a lesson for me, I saw that the players needed to learn this too and to be able to deliver optimal performance when it mattered. I needed to understand exactly how this worked, how to design this process and then coach a program to deliver it.

As Lanny Bassham says, 'No one is more motivated to win the gold than the one who goes home with the silver' (2018:131).

4.3 - Pakistan to Australia 1999

After the World Cup, the Pakistan team players returned home to continue an on-going match fixing inquiry. There were new allegations of matches at the World Cup being fixed. The players were out of the proverbial frying pan and into the fire as the side went through the inquiry process. During this period, I was approached by Pakistan to be head coach. I felt torn between my uncompleted journey with the Border team and my ambitions to be an international head coach. Thinking that I may not get the opportunity again, I accepted the offer from Pakistan.

From Monty Python to the Black Hole

I left South Africa and travelled to Pakistan without a contract, with the commitment from the PCB that we would sort out the detail of the contract when I arrived. Prior to departing on the Australia tour, one of the players said to me in confidence that I should not leave the country without a contract. I listened to him and in my negotiations with the board, made this clear to them. I signed a two year contract to be head coach at the airport waiting for the flight to Dubai, on the way to Australia, via a one day tournament in Sharjah in the United Arab Emirates.

I was told I would not be allowed to take charge of the side until we arrived in Australia, as the Sharjah leg of the trip was to be coached by a former player. Only later did I realise what a mistake this was on the boards part.

I got on the plane in Lahore, which was headed for Dubai, and by the time the plane landed there had been a military coup in Pakistan.

It was the first of the national and global tectonic shifts that would impact on my journey, not only as coach but personally too. I asked the players how they thought this would affect us, knowing full well that the Pakistan Cricket Board was appointed by the government. Now there was a new government, which in theory meant a new board would be appointed. The team did not seem to think it would impact us, but how wrong they were.

We were trounced in the test series by Australia (4.). The side had not had any proper preparation for a test series. They were not fit, mentally or physically, after the match fixing inquiry had sucked up their time and energy in the off season. Furthermore, my inability to work with the side in Sharjah meant we wasted the one window of opportunity prior to the series where we could have done some strategic test match preparation.

During the second test in Hobart, an article appeared in a Pakistan national newspaper publishing the details of my contract. I was both shocked and angry; the article targeted the captain Wasim Akram, myself and the team manager, all of whom had been appointed by the previous board. We were unceremoniously sacked at the end of the series and I was given a separation payment, which did not reflect my contract. As I could not see the PCB honouring the contract, or a mechanism to get justice from them, I decided not to pursue legal recourse

It was the darkest of times, I had been in the job less than a month and I returned home feeling humiliated by the whole experience. It felt as if I had finally achieved my goal to be an international coach only to have it ripped away, with public humiliation, at the first instance. I could not handle this period emotionally. To complete the picture, our family home had been robbed while I was away, and my partner had left the house as she did not feel safe there. Upon my return, we were in rented accommodation with none of our home comforts. I slipped on the back porch of the property and cracked my pelvis. As a result, I was bed bound for several weeks. I was so depressed and felt so humiliated that I did not leave the house. Our relationship broke down and we separated.

During this period the Border players came to see me, I think they realised I was in a bad way. They were not just colleagues, they had become friends, and they went out of their way to come past the house and see how I was. The players motivated me to come back to coach Border.

4.4 - Border Cricket 2000-01

Border Cricket gave me the head coach job for the 2000-01 season. On my return, it became apparent that although the side had played excellent cricket, they had not grown

and evolved as a team. They had once again lost the final in the season I was away. I had not observed their play but I could tell on picking up with the team in 2000 that they had plateaued. The player's games had not developed, they were committing the same errors in matches and they had not deepened their understanding of match strategy.

During the pre-season period, I began to look at cricket statistics on the cricket website cricinfo.com to see if there were any key metrics that would inform our strategic approach to one day cricket. I compared our performance statistics against our opposition and began to see clearly, for the first time, where we were superior and inferior to them. The numbers indicated key metrics that we would need to produce to perform optimally and win competitions. It was the first time I became consciously aware of the relationship between what I coached and the numerical architecture of performance.

I was not in a great mental space during the first part of the season, my confidence was low and I was unconsciously going through the motions, although I did not realise it at the time. Our overseas professional, Vasbert Drakes asked to speak to me. He pointed out that I was not coaching, I was managing the team, not leading them, and made it clear they needed me back leading from the front. I heard what he was saying and knew he was right; it was the jolt I needed. My working relationship with the captain Pieter Strydom was that I ran the program off the field and he on it. We would discuss strategy and selection on a daily basis, but I was in charge of team preparation.

Deja Vu

I saw where I had been standing back and allowing players to go through the motions, neither challenging them, nor leading. I was like a team manager, making sure that everything ran smoothly. I was facilitating without getting into the detail of what the team and individuals needed to do to improve performance. I began challenging the players again, spending time having coaching conversations where I helped the players to clarify their goals, break them down into actions and ensure that we made enough time to work on them during the season. We had one day per week where players would address their game maintenance and development. This meant that players could work on correcting technical flaws that crept into their game and work on game plans for upcoming matches.

We had an exceptional four day campaign, and again made the final of the four day competition. Once again, the final was against Western Province, but this time playing away in Cape Town at Newlands, their home ground. It was a fascinating match, and I saw the emergence of one of the world's great players, Graeme Smith, on the first day. Western Province batted first and the Border seam attack, which was the best in South Africa at the time, was batted out of the game by the young opener. Western Province set up the game in the first innings and Borders fragile batting could not respond. We had lost again. (5.).

The one day competition was to turn out like the four day competition. We played excellent cricket through the round robin stage and made the semi-finals, finishing second top of the log. I had established a routine for the players where we would meet at a hotel before the game to get together pre-lunch, watch a movie (typically a comedy) to get our minds into a calm, happy space, and then begin our build up. The build-up entailed a relaxation – positive visualisation exercise with positive affirmations – followed by a dynamic physical warm up by our fitness coach Greg King. The players enjoyed the routine, it worked well, and the side would enter games calm, focused and ready.

We played a best of three semi-final. The matches were played every other night over five days, unless either side won the first two matches.

We split the first two games with our opposition – Northerns from Pretoria. It was to come down to the last match, again at our home ground in East London. We had to play the last match on a Sunday morning and our pre-match preparation routine was thrown out by the morning start. The players arrived in the morning and they were emotionally flat and unfocused, we were poor in basic disciplines with bat and ball. We collapsed to 84 all out (6.).

Reflection and Learning

Team Development

On reflection, it became clear to me that the team had not developed and grown in my year away. I realised that the year away had been critical to move the team forward – reviewing,

reflecting, and developing the players skills and mental game. It was the first time I saw that a team has a life cycle; it evolves and develops. The team's life cycle is not just its chronological age, it is also defined by its ability to be able to learn and evolve to fulfil its primary mission to win. I came to see that the Border team was in the early stages of team development and that it had been delayed in my year away.

Team Composition

I also saw that the batting unit was not strong enough, it did not have either the depth or competition in the top six batters. To address this, the question then becomes whether you have time to develop an emerging batter or do you need to go to the market place and buy one? If you do not have time, it is quicker to buy a stellar performer than it is to develop one. The primary focus of the organisation is to win, hence you only have so much contract time as a coach to deliver winning outcomes. The organisation's ability to operate in profit comes from hosting home semi-finals, finals and prize money. Your ability to keep your job is dependent on making these decisions, about developing talent or buying a stellar performer. I was seeing this for the first time and it was a critical lesson in understanding team design, of player development and identification.

Mental Game

Although I had introduced some new concepts in team preparation for the players, it was clear to me I needed to improve my coaching of match strategy and the mental game. I did more mental preparation with the players than any other cricket coach in the country. We had developed from being one of South African cricket's weaker teams to being a side that won more matches across the two formats than any other, yet we could not win a final, and I had to accept responsibility for this.

From a strategic perspective I was spoilt having such a great fast bowling attack at Border, yet we were one dimensional because of that. We operated with the same game plan: pace, control and hostility, interspersed with spin bowling. Sides with batting depth and experience could wait us out, as Graeme Smith had done, then counter by batting deep into the game. I did not have a clear strategy for that as a coach. It was the mid 2000's

before I learnt to decode the structure of opposition game plans and set strategy to control each stage of the game.

With the one day semi-finals, I learnt that pre-match routines and rituals were great when they worked, but the routine had to have flexibility. It could not fail simply because we played in the morning and did not have time to do the routine. I realised that the pre-match routine we established at the hotel had become a subconscious trigger for the team to enter their match readiness state, and when we played the match in the morning there was nothing to trigger that state. I saw it was an issue but did not yet know how to design an alternative that would give us flexibility with regards to timing and place of warm up.

Professional Context

The 2000-01 season was historic in South African cricket and sport. The President of the Border cricket board, Robbie Muzzell had stood down to let Ray Mali become the first black cricket board president in the unity era. As we got to the end of the season, it became clear that Ray did not see me in his plans, although I had been Borders most successful coach. I was asked to reapply for my job, I declined, which was the end of an immensely satisfying period in my coaching life at Border Cricket. Within eighteen months the senior management that had been central to the province's success had been removed – this was my first introduction to the politics of patronage. I had mixed emotions about leaving. I loved working at Border. The board, players and staff were great and I was heart sore, but I wanted to be in charge of my own destiny and not wait for a board president to decide that I was surplus to requirements.

4.5 - Pakistan to England 2001

I had left Border and was wondering where to from here as a coach? Within a couple of days I received a call from Waqar Younis, the Pakistan fast bowler. He had just been appointed captain and wanted to know if I would work with the team on the upcoming tour of England. I jumped at the opportunity and packed to leave for the UK. Once again it was a whirlwind, I had barely left Border Cricket and I was on the road again internationally. It was also an opportunity to work with Daryl Foster during the test series. Daryl had been

brought in by the PCB to carry out a biomechanical analysis of fast bowler Shoaib Akthars' bowling action. It was a wonderful opportunity to work with and learn from one of the pre-eminent cricket coaches in the world.

We began the two test series at Lords cricket ground. The side were dismantled by the English seamers in the early spring conditions, the Pakistani's struggled to play the swing and seam of Darren Gough and Andy Caddick. However, the side bounced back to win the second test match at Old Trafford in Manchester and tie the series (7.). I made use of the match scorers and had wagon wheels drawn, from this analysis I had a clear idea of how the England batters strategically structured their innings. I worked with the Pakistan bowlers to set pressure fields and close down the batters scoring areas. The plan worked superbly, the side suffocated England with pressure and won the test.

We went into the one day series triangular with England and Australia buoyed by the test result and played fantastic cricket. We beat England 3-0 and split games with Australia on the way to the final (7). The match was once again at Lords, the ground for the 1999 final, against the same opposition. The preparation had been fine going into the match and I did not foresee the lame performance that Pakistan would deliver. Once again the side failed to deliver in the context when it mattered most: the final. It was a repeat of the 1999 performance: lack of focus, no adherence to game plan, no big match temperament. As Shane Warne said to me after the match, deja vu!

I was later to learn from my hypnotherapy studies that the previous final at Lords potentially acted as a post-hypnotic suggestion. Whereby a previous experience, either positive or negative, can become a goal for the subconscious mind to produce the same outcome – however illogical that may sound. As Job said in the Bible, 'What I feared has come upon me; what I dreaded has happened to me', (Job 3:25-26).

It really was deja vu going into the match: the same ground, the same dressing room, the same opposition and the same outcome. I could see all the signs; I just did not know how to make sense of it at the time. We were brilliant in the qualifying matches, matching the Australian side who were deemed the best in the world, until we got on the big stage.

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This was now the fourth final in a row that I had lost, and I was beginning to think that I was the problem. We had a great run through the tournament: we had good routines, we did not over train, we kept it light and fun for the players.

Reflection and Learning

It became clear to me that the players could not manage their mental processes going into perceptually 'big' games. There was the issue of the post-hypnotic suggestion, which I was yet to understand, and I questioned whether they believed they could win in finals. We had a clear, successful strategy that was proven in the round robin games, yet when it mattered most, our focus and execution were poor.

I knew from my previous experience with Pakistan that the expectation coming from the country to perform well in these games was massive and created a great deal of expectation and anxiety. There were serious repercussions for poor performance: the players' houses could be stoned and their effigies burnt on the streets. For the Pakistani players this was much bigger perceptually than 'just' another cricket match.

There was also the issue of the match fixing allegations against the team emanating from the 1999 World Cup. A host of senior International players from different countries were being banned from the game. I had to ask myself, did these players underperform on purpose in these matches? I had no way of knowing; I had not seen anything that I could specifically identify as untoward.

On a personal note, I was happy with my focus on the day of the final. Having experience of the previous finals, I knew what to expect – I was calm, well prepared and looking forward to the match. We also ensured that we had control of the performance environment at the ground and hotel this time; that lesson had been learnt.

In this period in international cricket, the team support staff was typically just one person, usually a physiotherapist to work alongside the coach. In Pakistan's case, it was a local doctor working alongside me. On tour, I found having no colleagues from a similar cultural background on tour a lonely experience, and I came to value the friendship of Saeed Anwar, the Pakistan opening batsman. We had a natural rapport, and I could trust him in

conversation, knowing that what we discussed would not compromise our cricket relationship. We both had young daughters that we missed when we were on the road touring and we often spoke of them.

While we were in England, I had been asked by the Chairman of the cricket board, General Tauqir Zia, to take the coaching job full time. However, after being sacked previously, I was not interested. I did not trust the board after my previous experience and I was not about to begin now. I told General Zia that I was happy to continue on a tour by tour basis if that worked for the board.

After the series, I returned home to South Africa to see my daughter. I had been away from her for two months and missed her terribly. After the break, I packed my bag to fly out to Pakistan for the Asian Test championship in August 2001 and for the following series against New Zealand, both in Pakistan.

4.6 - Pakistan 2001

The time in Pakistan prior to the series was the first time I had had an opportunity to prepare the players properly rather than just meeting them at the airport on arrival, as had previously been the case. To do this, I took the players away for a camp at the Mangla Dam to design the team blueprint. I used the agora to facilitate content generation with the players. We had clear outcome and process goals of what we wanted to achieve as a team, with a set of values the players chose that would be the moral compass for the team.

After the camp, we played Bangladesh in a single test in Multan and beat them in three days (8). It was an incredible performance, the Pakistan team equalled the world record of five batters scoring hundreds in an innings, bowling Bangladesh out twice for under 150 in both innings. After the test, we returned to Lahore to prepare for the test series versus New Zealand.

Bisma, Jessica and 9/11

I woke up on the 10 September 2001 looking forward to spending the day with Saeed Anwar, who had promised to show me Lahore.

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Saeed was late calling, and when eventually the phone rang I was ready to pull his leg about his tardiness. There was silence, then sobbing, when he managed to speak, he told me his daughter Bisma had died the previous night. He and his wife were devastated.

In the Islamic faith the mourning process begins immediately and the body is to be buried in 24 hours. When Saeed called me, the preparations were already under way. Team mates flew in overnight and we met at his house the next day. We were all bereft for him. We were sat talking when one of the players walked over from the TV room and said a plane had just flown into the world trade centre. I got up and walked to the TV to see the second plane hit.

The New Zealand tour was cancelled and I returned to South Africa, I was shaken to my core. A close friend had lost his daughter, the West had come under attack, and I was trying to make sense of what had just happened. The cricket board did not want me to leave, but my contract was just for the tour and western governments were advising foreign nationals to leave Pakistan, so I returned home to South Africa.

On my return I spent time reflecting on what was important to me: as a father, my relationship with my daughter and more broadly, what did I want my life to stand for? How did I want to define the time that I had been gifted, which so many people had suddenly lost.

Reflections and Learning

It was a difficult time when I returned, I would not go back to Pakistan until it was safe, and I was unemployed once again. I became clear in my mind that I wanted to be totally committed to being the best Dad I could, while making a living doing what I loved: coaching cricket.

4.7 - Pakistan 2002-03

General Zia contacted me in 2002 and asked me to come back and work with the Pakistan team. The previous head coach had been dismissed and he wanted me to take over the team until the end of the cricket World Cup in South Africa in 2003.

I travelled to Sri Lanka to join the side in the first of a three match test series versus Australia. Sri Lanka was the venue because after 9/11 touring sides were not going to Pakistan due to concerns over security.

The selected Pakistan side was callow and inexperienced, devoid of senior players who had been left out at the instruction of the General, who wanted to build a new team. They played well in the first test, but narrowly lost a match that they could have won with greater understanding of match strategy and self-belief.

The second and third tests were played in Sharjah in the United Arab Emirates. Bereft of experience, the side were outplayed by the powerful Australian side (9.). The Australian side were the number one Test side in the world, with balance in their squad and great depth in their experience. I returned to Pakistan after the series and flew to Islamabad to speak with the General about it. I explained the side was not going to perform well in the World Cup with such a young team, and that he needed to be clear in his overarching goals for the team.

In the build-up to the World Cup, we travelled to southern Africa for a series against Zimbabwe and then on to South Africa. Inzamam Ul-Haq and Yousuf Youhana returned to the side and gave the team depth and experience in the batting. However, we were still missing Saeed Anwar as opener, and this would continue to destabilise the batting unit throughout the southern African tour. The side whitewashed a strong Zimbabwe side, winning the One Day Internationals and the Test match series (10.). Moving on to South Africa, the team were comprehensively beaten by the South African side (11.). Pakistan and subcontinent teams in general find it difficult to play on the hard, bouncy wickets in South Africa, and the team could not manage the pace and bounce of the wickets against a strong South African side. It was a disappointing way to build up to the World Cup.

Reflections and Learning

Reflecting on the series against Australia, I deepened my understanding of match strategy by watching the Australian side play, and in particular, Shane Warne. I observed the way that he preyed on the batters with game plans and strategy, setting precise fields, and

bowling with incredible skill and accuracy to create pressure. He forced the batter to score in particular areas, setting fields that closed down the batters' ability to rotate strike, and cut off their boundary scoring options. This sounds obvious to any professional cricket coach, yet I had not seen these strategies used with such precision and adroitness. I was learning as I went along, but it was retrospective learning. I knew that I was playing catch up in key sections of matches; I was not seeing the patterns of play early enough.

Ironically, I would not see the patterns when the side was playing well, as they were playing from the front. It was when the team were under pressure that the errors in skill and thinking become apparent. The Pakistan team were so vulnerable mentally, they just seemed fragile. They were great when they had the opposition under pressure, but weak when they had to patiently work through pressurised situations in the game. They seemed to lack belief when it mattered, against top sides like Australia and South Africa.

I needed to understand what created that belief and how it could be coached to create a collective mindset in the team, squad and cricket system, that understood how to perform optimally, how to create and play under perceived pressure, to win. I also needed to keep in perspective that in playing Australia and South Africa, we were playing the top two sides in the world. Their team and squad composition was better balanced, their batting in particular was stronger. Again the question arose in my mind about players having the requisite skills, fitness and game plans to not only compete, but dominate the opposition.

It was during the series against Australia that I spent time talking to the Australian match analyst, who recorded each live match with a software program. He logged every ball bowled as an individual file and this was stored in an ever-growing library of data intelligence on their opponents. This gave Australian head coach John Buchanan data analytics that allowed the Australians to have a clear picture of the strengths and weaknesses of each Pakistani player. Buchanan used this video and statistical record to enable the Australians to construct exact game plans in order to dismiss the Pakistani batters. The video analytics meant that they could see explicitly where the Pakistan players were vulnerable and how to exploit that vulnerability. I knew that if Pakistan was going to compete with sides like Australia, they were going to need to have the data analytics to

understand how Australia constructed their game plans and develop the ability to exploit them.

4.8 - Cricket World Cup 2003 in South Africa

The World Cup side was selected, and Saeed Anwar finally made his return to the side. However, this was to prove to be too little, too late with regard to ensuring the side had received enough time playing together as a unit, and to make sure the players were settled in their roles and clear on the work they had to do. In my, I was positive and looking forward to the competition, but I had not been fully aware of behind-the-scenes machinations around the captaincy. I discovered that General Zia wanted Wasim Akram as captain, disregarding the fact that all of my planning had been done with the incumbent, Waqar Younis. To add to that dilemma, Wasim Akram had been banned from being Pakistan captain after the Qayyum match fixing inquiry in 1999. It transpired that the General was seeking to get this ban revoked, and had already had discussions with both players about his plan. As a result, we entered the tournament with a fractured team, with a group of players not aligned with Waqar and his leadership. It was only after the tournament that I fully comprehended these issues and realised the dysfunctionality of the team.

The side opened the tournament against Australia, Pakistan's nemesis, at the Wanderer's stadium in Johannesburg. The team gave a poor performance; the match strategy and execution of skills were below par and this culminated in the side trying to play catch-up cricket with Australia. It was a losing cause, the pressure built up on the captain and he had an on field incident with an Australian player. This ended up in a disciplinary action, and was a precursor to the lack of harmony and integration within the team.

The side bumbled through the tournament, and their failure to qualify for the next round of the competition was metaphorically summed up in a rained out match in the broken state of Zimbabwe, who went through in Pakistan's place on points difference (11).

By this stage I was worn out, I was consciously working to make the team perform, coaching as best I could and yet making no difference. In my reflection post World Cup, I

do not think I had ever worked so hard as a coach and yet made so little difference, it felt futile. I was struggling to sleep and felt perpetually tired. My conscious mind was worn out from seeking solutions to a situation that I could seemingly make no impact on.

Reflections and Learning

At the end of the World Cup I was mentally and physically drained, and I chose not to seek renewal of my contract, which had come to an end. I returned home with a chronic eye complaint and was informed I was on the verge of stress related diabetes. I manifested the mental stress of the work, the expectation and failure. I rested and reflected on the work with Pakistan from 2002 to 2003. I had no immediate employment to go to and I wanted to get my health back on track after the scare with diabetes. I decided to use this time to study hypnosis with the South African Institute of Hypnotherapy in order to explore and gain a better understanding of its potential as a coaching tool.

This period of reflection gave me real insight to how teams worked. I always felt that I could positively influence the team, not only through the design and operationalising the team blueprint, but also in bringing what I thought were my best coaching attributes, strategic and technical planning, confidence, accountability and a moral centre to the work that I did. I needed to be clear on my contribution to our collective failure as a team.

I reflect now on the lack of clarity in team selection from match to match. In not committing to our best team formation and allowing them to settle in the tournament. We may have been late in getting the squad that myself and the captain wanted, but that does not excuse the changes in team formation from match to match. I was culpable here, along with the captain, and it was a tough lesson to learn. Sides need time to settle into tournaments and get used to playing together, with the best players on the field in their correct positions. We were still in the testing phase of getting our combinations right for the World Cup, yet it was too late in competition. The understanding and necessity of having long range strategic succession planning, with player and team development, was becoming clear to me.

Lessons in Leadership

Sun Tzu's timeless observation in *The Art of War* (2009) about administrative interference proved prescient. I was a passenger on the General's journey with the team. I was in a position of leadership yet had no real authority, nor apparent means to influence proceedings. This experience would lead me to take an increasingly pragmatic approach to my dealings with administrators in the future.

I could not lead without a clear mandate from the chairman. The captain and I needed to set direction for the team, to lead and manage the players. Yet we were working in an environment where the leadership that we needed to deliver was undermined by interference at an administrative level: by our boss. I came to see and understand this as a lack of clarity around the role and responsibility of the chairman of the board, and ourselves as operational staff. There was a blurring of executive and operational function. The work that I had achieved with the team in 2001 designing and operationalising the team blueprint was lost in the aftermath of 9/11. Returning in 2002 with the senior core of the team left out, and their re-introduction taking place prior to the World Cup, effectively undermined the process of implementing the team blueprint again. On a macro level, what stood out was a lack of clarity on the overarching vision for the Pakistan cricket team.

It became apparent over time that regardless of whether it was a Pakistani army general as chairman of the cricket board, or, as in instances with other boards, an accountant or professor as franchise CEO's, there was little understanding of leadership as it pertained to professional sport organisations. In the case of the CEO's I worked with, none were explicitly educated in sport management or leadership. The common denominator for the majority of CEO's was a financial or legal background. Interestingly, there is negligible academic research into the field, although the subject is covered extensively in book format. Packianathan Chelladurai contributed two chapters on leadership in sport management to *The SAGE handbook of sport management* (Hoye and Parent, 2017) and David Scott's book *Contemporary Leadership in Sport Organisations* (2014). Chelladurai and Miller propose that the lack of research may be due to research interest in sport marketing and sport economics (2017:98). They suggest future research could focus on 'the insights derived from the study of leadership exhibited by coaches of sport teams to effective leadership in sport organisations' (2017:98).

There was certainly a strategic disconnect between operational staff and executive and this was to prove to be a recurring theme over my twenty years of coaching in international and first class cricket.

Transdisciplinarity

The period working with the Border and Pakistan teams between 1998 and 2003 allowed me to transition from facilitating the multidisciplinary team to putting together an interdisciplinary team of players and staff. We didn't transition to transdisciplinarity in this period, as the players and staff, although operating as teams, still worked within their professional and specialist disciplinary fields (Nicolescu, 2010:19). Central to the function of these interdisciplinary teams was the role of the agora.

In designing performance, I utilised the agora in all aspects of planning and testing with the Border and Pakistan teams, continuing to develop and understand how to facilitate this approach. It combines the two transdisciplinary approaches from both schools. The agora reflects Nowotny, Scott and Gibbon's call for an inclusive, democratic approach (2003) and Nicolescu's concepts of the subject and the 'included middle' (2010). Nicolescu applies quantum physics to transdisciplinary theory to make a critical point about an open space, which is neither subject nor object, but is in fact a new level of reality:

'In other words, the action of the logic of the included middle on the different levels of Reality induces an open structure of the unity of levels of Reality. This structure has considerable consequences for the theory of knowledge because it implies the impossibility of a self-enclosed complete theory. Knowledge is forever open' (Nicolescu, 2010:30).

This concept of the 'included middle' encapsulated what I came to call the 'Extra-Ordinary Mind' that is created when a group comes together to design and create new performance. This 'Extra-Ordinary Mind' is a new mind created by the focused intention and attention of the group or team on a goal. It is a new level of reality, utilising the unique knowledge, wisdom and insight of the group to create new knowledge and performance to achieve that intention.

Using the agora as a democratic, and subject centred approach, the players and staff are placed at the centre of the performance design process. Both in the macro, in the overarching design of a season or competition, and also in the micro, with the work done prior to each match. Each week we used the agora to create new knowledge prior to each match, not to solve the 'problematique', but to design the process of goal attainment, to win each unique match, to be able to win the championship. Each match is only ever created in that moment, it is not a rehearsed and repeated stage play, it is a living, dynamic performance as two opposing teams compete to attain a goal.

It became apparent during this period that the integrity of the coach was central to the agora process and function of the system, with the need to be consistent in ensuring an ethical, inclusive and democratic process of performance design. The 'extra-ordinary mind' created in the process was dependent on a calm environment, conducive to a confident, trusting open network of information that could generate insight and optimal performance. Anxiety, distrust and fear created by administrative interference meant distracted focus, which in turn meant it was nigh impossible to facilitate the 'extra-ordinary mind'.

It is common for new and incumbent coaches and captains to meet resistance when they seek to implement a change of strategic direction or culture change. I had found with Border and Pakistan that I could facilitate a clear vision and mission for teams, I didn't have to 'on board' or get 'buy in' from players because they were co-creators in the design process. The agora process circumvents resistance, with the players being central to every stage of the design and implementation process. The resistance I experienced was more from administration. I was beginning to see that the integrity that my position as a coach demanded, in the design process, of facilitating players to share ideas openly and honestly and to hold them accountable for their performance and development was a double edged sword. It meant that players, staff and board officers could potentially use this as a point of leverage to challenge my authority and personal integrity. If I didn't receive the support of the CEO and/or board in holding players accountable for performance and their development, then the system wouldn't work and my position would become untenable. By the end of this period, any idealized assumptions I had about the sincerity of administrators

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acting in the best interests of the game and the romance of cricket were long gone. I'd developed a jaundiced perspective of cricket administration, one of self interest and interference.

Chapter Five: Public Work Two - Titans Cricket

External Context - South African Franchise Cricket

In 2003, Cricket South Africa decided to change the structure of first class cricket to a six team competition. Provincial teams that had originally represented their defined geographical boundaries were now incorporated with their neighbouring provinces to make a single team, representing a region. The goal was to strengthen the quality of the cricket being played through concentrating the competition between teams and players.

Professional Cricket Coaching in South Africa 2005: Overview

Cricket South Africa hold an annual one day meeting for the first class coaches, where they come together with the national coach and chairman of selectors and discuss relevant matters. It was not a coaching seminar, professional development was a part of coaching education. Most of the franchise coaches were Level 4 coaches, which is the highest qualification a cricket coach can attain internationally, so from a system perspective, they had graduated. The South African system is well designed and has good structures and support. However, there is a deficit because the coaching material is created by coaches who have neither the experience of or understanding of winning. These coaches write and create coaching material on theory rather than practice. As Schon points out, they adhere 'for the most part, to a particular epistemology, a view of knowledge that fosters selective inattention to practical competence and professional artistry' (Schön, 1991: vii).

5.1 - Titans 2005-06

In 2005, I successfully applied for the role of head coach of the new Titans franchise in South African Cricket. I was incredibly excited; it had been a long break since Pakistan and I was eager to begin work and incorporate the learning from my time with Border and Pakistan. This period would see the next stage in the evolution of what was to become the Optimal Performance System, including game analysis, improved alignment of the team design process with team and player goals, a designed off season program to develop performance capacity, dedicated mental skills program to support the team design

process. This would lead to the emergence of a transdisciplinary team of players and support staff working inclusively and ethically.

My new partner and I moved to Centurion, on the outskirts of Pretoria, with our family: a new born son and her two children. My daughter Jessica continued to live with her mother in East London.

The administration at the Titans franchise was excellent, led by board president Jesse Chellan and the late Elise Lombard as CEO. My title was different to the role I had applied for, I was called Head Coach and Professional Cricket Manager. I now had the responsibility of looking after the strategic planning for professional cricket as well as oversight of the development of the two provincial feeder structures. It was a far greater workload than my role at Border Cricket, where Stephen Jones the professional cricket manager looked after the management of the programs so that I could focus on coaching and preparing the team. The added workload of being franchise manager as well as coach would take its toll on me over the course of my tenure at the Titans.

Game Analysis and Strategy Planning

On appointment to the role, I asked the CEO if we could purchase game analysis software so we could get a competitive advantage on the opposition. We would be the first franchise in South Africa to use the software, we also set up the first dedicated high performance analysis room. Elise kindly supported the initiative and furnished it with a state of the art electronic whiteboard that we could review matches on. When the competitive season began, we started the process of data capture, videoing each match, recording and logging each ball, and built up a database of the opposition and their strengths and weaknesses. It was a great tool to help us study and understand our oppositions' game strategy. Our players utilised it to understand their games and the coaches used it to support them in making technical and strategic adjustments. It gave us an incredible depth of data on the opposition players, their technique, strategy, and how their captains and coaches formulated team strategy.

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It was the beginning of a journey that would lead me to understand that the video analysis and data we had on our opposition, of their players and collectively of a team, was the unconscious 'thought architecture' of their performance. It would inform my developing understanding of designing the 'thought architecture' of optimal performance, of the intention, attention and performance management skills to produce optimal performance.

The first season at the Titans went well, my initial goal was to understand the culture of the players and develop relationships with them. The players came from all over South Africa and the dressing room was a melting pot of ethnic and cultural backgrounds. The main cultural group was Afrikaans, with the remainder of the squad being from the South African Indian, Xhosa, Shangaan and English communities. My aim was to learn how they thought and related to each other, it was a fascinating experience seeking to bring this group of players to a common vision and purpose.

To achieve this, I ran the pre-season agora seminar with the players and staff. In reflecting on my experiences with Border and Pakistan, I decided to make some adjustments to ensure a more focused learning approach for the players. In particular, we spent more time on the detail of the performance blueprint, specifically focussing on the processes to achieve the team goals. The players and staff populated the blueprint with their ideas for the process actions and the standards needed to achieve the outcome goals, which simply put, were to win all three competitions.

The players and staff selected the values that would be our moral compass and the team blueprint document was signed by all players and staff (see *Appendix C – Titans Team Blueprint*). The signed document represented our commitment to each other to achieve our goals and hold each other accountable to our vision, mission and values. The blueprint was framed and hung in the dressing room so that it stayed in our consciousness. This was the reference point that we used to ensure that we worked inclusively and democratically. We spent time at the agora talking through how this worked in practice, clarifying that although there is a natural hierarchy of seniority amongst players with age and experience, that the team operated democratically.

The players then completed their own goal setting plans, to align their work with the team vision and mission. Each player was given a printout of their career and seasonal statistics so they could assess where they were starting the process from. I explained that their personal goals was the plan for their career and how in mapping these goals they could consciously choose what they wanted to achieve, and the support staff would support them to attain them. In setting goals and performance metrics they could now plan and monitor their performance, consciously and actively participating in the learning process.

I gave each player a blue file for their copy of the team blueprint and a shorter version of the 'Optimal Performance Goal Setting Plan' as the Border version was too long (see *Appendix D – Titans Goal Setting Plan*). We then met on a regular basis during the season to have a 'blue file day' to check in on personal and team progress. This allowed the team to reflect on their results and learning, and adjust their goals. With the junior players, I began the process of educating them about the personal responsibility of being a professional athlete and businessman, a 'one person' business as I called it. This was time well spent, with a group of committed and focused players who were clear on their roles, goals and responsibilities.

To achieve our seasonal goals and objectives, I facilitated the evolving transdisciplinary practice to plan our preparation for each competition. The staff, incorporating the players, coaches, game analyst, physiotherapist and conditioning coach became a transdiciplinary team, distinct from Nicolescu's (2010:19) definition of an inter-disciplinary team operating within the framework of disciplinary research. We worked as a unified team, transcending disciplinary boundaries, to produce new performance. A typical weeks preparation was an agora conversation, flowing from day to day. Every training session was planned with support staff and players designing training, working through the game analysis to draw out strategic themes, to understand opposition leadership and team strengths and weaknesses that could be exploited. Mini-agoras flowed through the day, a chat before training to hear emerging ideas, 5 minutes collective review after training to reflect on how a session went, were we happy with game design and rehearsal? It sounds arduous but in reality was no more than checking in and seeing if players and staff were satisfied with the progression of our work. We talked though energy management at the pre-season agora,

for players to understand there is a time to switch on and off. It allowed the players to stay fresh and keep a balance between work and family life.

Performance and Results

In the 2005-06 season, the side were joint winners of the four day championship (12.) and lost the one day title (13.). From my perspective, it was a successful first year and an excellent platform to build the team from.

However, the loss of yet another one day competition was harrowing. Leading up to the final, the side had played outstanding cricket, they were log leaders and by default got a home final to play at the franchise's stadium, Supersport Park. The week prior to the match there had been torrential rain and the cricket square was covered by a tent, something I had never experienced before. If the final was washed out the log leaders would be champions, and lo and behold, on the day of the final there were storms circling the stadium before the match. We did not know if the match was going to take place, and my focus and that of the team was on the weather instead of our pre-match preparation. We were 'double minded' as my Pakistan colleague Saeed Anwar used to say.

The match did take place, and the side's performance reflected exactly where the focus had been, distracted! The team lost on the night, having fought valiantly to get back into the game, but it was too little, too late.

We also lost the semi-final of the T20 competition in a rain shortened game (14.). I did not pay too much attention to the failure at that stage because T20 was seen as a minor competition and the team focus had been on the four and one day competitions. I did, however, assimilate learning from the match and recognised the need for greater T20 skills from our players when playing under pressure.

5.2 - Titans 2006-07

I continued to develop the Optimal Performance System to improve team performance, combining player identification with individual and team development.

At the end of the previous season, I persuaded certain players not to travel to the UK to play in the leagues, having learnt that lesson from my time at Border. Instead I asked them to stay and train in Centurion for the winter. This was to ensure their game developed during the off season and that they followed a comprehensive performance program to accomplish this.

To make certain we had enough depth and competition in our player pathways, I continued the method of player identification and development that I had begun in the junior program at Border. I had Excel spreadsheets drawn up of all players from the provincial structures, across age groups, through to the Titans and South Africa level so that I could follow and track player development.

I then set up what I called the 'winter school' where I invited the best of the emerging players from the two feeder provinces, Northerns and Easterns provincial teams, to train with the professionals. The purpose of this training was to create an inclusive learning environment where the senior players would share their expertise and wisdom, and the young players would create competition for places within the team. This worked better than I could have imagined and established a focused learning and performance environment.

A central theme for the winter school was to support the players with a mental skills syllabus, so they could learn how to manage their minds for optimal performance. I put together a syllabus of mental skills from my studies with Dr. Ditson-Sommer and hypnotherapy, for players to understand how the conscious and subconscious minds worked and how they could apply these mental skills to improve performance. The players were given homework to complete on a weekly basis to ensure they consolidated and embedded the learning. The aim was for players to consciously design their performance and then go to work on it, week after week, building the skills, game plans and focus to manage their performance. I personally loved doing this with the players, and it gave me feedback on the quality and delivery of the program. I was able to see how the players would develop, review and then amend their programs where necessary.

Parallel to this training, the players went through a three month technical skills and physical conditioning program where they trained five days a week. I took my original

Border Academy training program and asked the conditioning coach Kobus de Wet to create his own version utilising the same outcome goals. This enabled Kobus to bring his own knowledge and practice to his specialist area. The totality of this program had a significant impact on the skill development of the players, giving them a mastery of their fundamental skills and allowing them to perform at a higher level of technical proficiency than they had previously. Each player had to pass a pre-season base line fitness test to be available for selection.

I realised that we needed to meet specific performance benchmarks to win competitions, so I asked a cricket statistician to produce comparative data sets of teams across the three formats of the game, four day, one day and T20. I then analysed the key statistical indicators and presented the players with the performance metrics we would need to attain in order to win championships and cups. We began the process of designing team strategy and performance with these metrics in mind (see *Appendix E – Team Metrics*).

The season was a challenging one to begin with, the captain Martin van Jaarsfeld had to have an operation and missed the first competition. The side did not perform well, there was a serious disciplinary issue with a group of players, and my leadership and the moral compass of the team blueprint was challenged significantly. The disciplinary process ran its course, and one player refused to take responsibility for his actions and left the organisation. Following this episode, two senior players in the squad were threatened by the emergence of the group of exciting young players. These senior players could see their positions were under threat and by extension their contracts. The manifestation of their anxiety was undermining team focus, so during the Christmas break I spoke to the President and recommended that we release the two players from their contracts so the team could get its focus back and return to winning. He agreed and we released the players to much media attention from the press and criticism from the players association.

The action was vindicated when we went on to win the four day competition with the second best record in the history of South African cricket, the team was unbeaten, winning eight out of ten matches outright (15). It was an incredible achievement and personal

confirmation for me, from a leadership perspective, in taking the principled decision to release the players in mid-season to get the team back on track.

I was grateful for the support of board president Jesse Chellan at this challenging time. I made the right call for the right reasons, to look after the performance of the team.

The season was a success from my perspective, the four day competition win was clear evidence of the program's capacity, along with the emergence of an exciting group of young players.

Since pre-season in 2006, I had asked the Titans franchise to let me know about renewing my contract, which was due to run out at the end of the 2006-07 season. After repeated requests, I had still not heard from the board by Christmas 2007. This meant that I could be unemployed in three months, with a young family of four children to support and a mortgage to pay. I spoke with my wife and we decided that we could not face the financial risk of being unemployed with a mortgage we could not afford. I sought alternative employment and applied for a job with Middlesex, a county side in England, and was appointed in the new year. It was a bitter pill to swallow, to leave the team that I had built and were now beginning to show the incredible levels of performance they could produce.

5.3 - Titans 2007-09

My stint with Middlesex did not go well. The Middlesex captain and I had very different ideas about my role with the team. Rather than proceed with a captain who fundamentally disagreed with my approach to coaching, I decided to resign. Having moved my family to England, it was a sharp painful lesson in not trusting my intuition. When I first met the captain, I had felt that we saw our roles in very different ways and told my wife that I should not take the job. However, I spoke to the captain about this and he assured me that we would make it work. In the precarious employment position I was in, I felt that I had no other option than to take the role. Having resigned from Middlesex, it transpired that the Titans had not been able to find a replacement for me, and I returned and signed a new two year contract.

Once again, we ran the pre-season agora seminar and players and staff reviewed the

team blueprint to see where we could improve it – we were beginning the process of continuous learning. In running the agora I was moving conceptually from values to principles, I felt that values were too nebulous and open to interpretation. This was more than semantics on my part, working multi-culturally I was becoming aware of how different cultures perceived the concept of values differently. Principles were universal and less culturally specific, we spent time discussing what this looked like in action.

Allied to this was my experience with certain players and board members, that they believed there were rules for some and not others. Not that I could make demands of board members, but I fully realised that the success of the system was dependent on its integrity and the 'truth' of performance. If I compromised on this, it wouldn't work. It was critical in the learning, design and performance process to have accurate feedback, both human, data and metrics. From a human perspective, the fairness, transparency and equity of the system were central to its success. In a cybernetic performance system, accurate feedback is the correcting mechanism that allows adjustment to orient to the goal.

I repeated the winter school, picking up from where I left off. In addition, I took the learning from the previous year's winter school and refined the material for the young players. I continued to pay attention to the mental side of preparation and took the next group of young players through the mental skills syllabus.

I had also begun to see the importance of looking at patterns in players' decision making. An upside of the relationship with the captain at Middlesex was the introduction to a book called *Moneyball* by Michael Lewis (2003), which focused on a field of statistics in baseball called sabermetrics. This book continued to deepen my understanding of the unconscious thinking processes and skills of players, which were reflected in their statistics. I connected this knowledge to the game analysis we did with the Cricstat system, and saw how a player's performance and the statistics they produced, was the sum of the brain map of their unconscious thought, skill and strategy.

It was a window into the reverse side of the learning process, I could clearly see how the players structured their game plan, their strategy and whether their skills could support and deliver that strategy. I spent hundreds of hours studying the opposition teams to

understand player and team game plans, decoding their games at a forensic level to give us a competitive advantage.

Now that the performance system was really coming into focus, I could see the unconscious structure of a team and player's game. I could see how their strategy and skills were linked and that this was, by and large, the product of an informal learning program. I now saw how this process could be consciously designed with even greater precision to build the relevant level of excellence into the team blueprint and the players individualised program. To create a player, and by extension a team, who was equipped mentally, technically and physically to perform and win.

This learning and insight tied in with the work of Émile Coué about scripting optimal performance, mentally and physically. This gave me the idea to progress from relaxation and positive visualisation exercises to consciously design performance with the players and teams in a relaxed learning environment to ensure they were in the parasympathetic nervous system, with a calm, confident mindset. The idea was to create the thought architecture by designing thought, focus, feeling and action into the performance rather than using an induction to create trance for performance and practice. To have a calm, relaxed practice environment with no distractions or causes of anxiety to flip a player into the sympathetic nervous system. In addition, all communication and verbal feedback to players was to be performance focused and constructive. This was the learning environment I designed for the players, with all the information recorded by the player's brain carefully designed, practiced and wired in with what I called an optimal performance mindset. The scripting of game plans was carried out with the players, and then rehearsed and simulated in training to create the neural circuitry of performance excellence. This exercise focussed on their process and outcome goals, and why they wanted to achieve them, to overcome conscious resistance and invest players in the process. The individual goal setting, motivated by their desire to achieve their goals, became the engine that drove the sub-team units, which drove the team performance.

I was reading voraciously at this time, beyond *Moneyball*, I had gone back to Sun Tzu's *The Art of War* (2009). I had begun reading it in the early 2000's and found it vague and

esoteric. On my return to it, I came to see what Tzu was teasing the reader with, revealing the principles of 'how to win' in war and specifically, how to win through strategic planning before battle. Success was created first in thought and understanding, and through applying strategy, clear goals, ethical management, metrics and assessment.

Tennis player Brad Gilbert's book *Winning Ugly* (Gilbert and Jamison, 1993) was not dissimilar to *The Art of War*. The book clarified his approach as a tennis player: to analyse his opponent's strategy, to understand how to construct his game, his strategy and shot selection. With the help of the game analysis system, this was another insight to reverse engineer an opponents' game. I was beginning to understand how the team and its sub-units could be analysed as a whole, and then reverse engineer this to break down the opponents' game and ensure they were not in a position to play their dominant strategy, their 'A game' as Gilbert called it. I knew I had found the master key to winning, it was now a case of using it to win our competitions and to help produce more complete players for the Titans and South Africa.

The 2007-08 season was a revelation, we won both short form competitions: the One Day (16.) and T20 Championships (17.). We lost a lot of players to South African selection in this period, including fast bowlers Dale Steyn and Morne Morkel who were graduates of the winter school, and I had to build the bowling attack around spin. With the availability of our Test spinner Paul Harris and the signing of Imran Tahir, our Pakistani born leg spinner, supplemented by the emergence of Roelof van Der Merwe, we dominated in the field. No opposition batting side could manage our spin attack. I had finally won a cup competition as coach, not just one competition but two in one season. All of the learning and reflection was designed to produce this success. Every detail of preparation was covered – the technical, strategic and logistical – to ensure that not only was the cricket side looked after, but the performance environment was focused, and the players understood how to manage themselves for finals day and deliver.

I came to call this preparation program 'Gold Medal Day' – the understanding of what needs to be delivered on finals day in order to win. To get beyond the round robin stage of

competition, to transition through the semi-finals and win on the one day that matters, the day when you need to manage your focus, and deliver your skills and strategy.

In contrast, the four day competition was a damp squib. We were hugely affected by South African selection in this period, and effectively could not compete. Our bowling unit had now become the South African bowling unit, and for four day cricket we needed a cutting edge to our attack. This experience formed a critical part of my learning: as the side developed, the players were selected for South Africa in ever increasing numbers and it was not possible to replace them like for like. Player development typically takes years. With the contracting system in South Africa, it was not possible to go to the marketplace and just buy immediate replacements at the speed the players were being called up. This deepened my understanding of team life cycles: I had to understand how I could strategise around this and create greater depth in our player pool.

The 2008-09 season would build on this success now that I understood how to bring the disparate parts of the system together and manage them. We continued with the winter school, ensuring we exposed our best young talent to a professional performance environment. One of the pleasing parts of the program was that the senior players fully bought into their mentoring role and genuinely supported the young players in their development. The team blueprint document was central to this, with the moral centre of the document allowing us all to relate to each other in a respectful and generous manner. Winning the T20 competition meant that we were due to travel to India to compete in the Champions League, and all the planning for this trip had been completed. I mind mapped *The Art of War* and reduced the text to a series of checklists for planning purposes, and we applied that logic to ensure we covered all details of competing overseas. On the eve of the tournament, the Mumbai terror attack took place in the same hotel we were due to stay in a couple of days later. It was a sombre reminder of the time we lived in. The tournament was cancelled for the year and we had to reset our focus.

2008-09 was another outstanding season, again we did the 'double', this time winning the four day competition (18.) and the one day cup (19.). I was confident that I had distilled the elements of team preparation down to the absolute key priority areas. What had become

clear now in my fourth season was that the team had learnt how to win, they knew what to do and when to do it.

The design of winning had finally become unconscious, and the players and the team were unconsciously excellent at what they did. The hours of skills work, strategy analysis, physical conditioning and, most importantly, the mental skills work, had now become part of the wiring of their brains: it was how they thought and functioned. As I had learnt with my neuroscience studies, the players had developed brain maps, a consciously designed neural architecture (p.36) with circuitry that supported elite performance. They had collectively entered a stage of unconscious mastery of performance.

The success of the season was completed with my winning the South African Cricket Coach of the year for the first time. I had been a runner up in the previous two years, and losing had particularly hurt, given that the team had dominated franchise short form cricket and achieved the 'double'.

I left the Titans at the end of this season. I had turned down an approach to coach an Indian Premier League (IPL) side in 2007 and remained faithful to the Titans. The IPL contract would have been financially very lucrative, but I did not want to compromise my relationship with the team and the Titans board. The President of the Titans recommended a salary increase to acknowledge and reward me for the team's success, and to retain my services for the organisation. His proposal was rejected at an acrimonious shareholders meeting and I was offered a new contract with no financial increase. I decided that if this was how the shareholders regarded me after delivering six titles in four years and designing a system that produced multiple national players, then it was time to move on.

Mentoring

At this time, I did not have a local mentor and was reliant on telephone conversations with Trevor Goddard. He was an excellent sounding board to discuss professional challenges and the work-life balance of raising a family with my partner whilst meeting professional expectations.

In 2006, I began the process of mentoring another coach, a former player from my Border days. I approached Malibongwe Maketa to come to the Titans and do a coaching apprenticeship with the team. He became game analyst and assistant coach, and after successfully graduating in these roles he became Northerns provincial coach. This served as an opportunity to build his experience and deepen his knowledge. He currently works as high performance coach with Cricket South Africa. I found it deeply rewarding to be able to share my coaching knowledge and support Malibongwe in his own coaching journey.

Reflection and Learning

The four years at the Titans were exciting, rewarding and demanding. I was totally driven to succeed and proud of what we achieved, yet it took its toll. I suffered from stress and burnout, and developed Irritable Bowel Syndrome. Working as both professional cricket manager and head coach at the same time meant that I was effectively doing two people's jobs. I was also a husband and parent of four children, and the weight of expectation to succeed and deliver winning outcomes was not sustainable. I used my hypnotherapy training to reset my nervous system and spent an off season recuperating.

What was most interesting and stimulating in these four years was the clear emergence of the 'Optimal Performance System'. This comprised understanding how 'thinking' could be consciously designed into a 'thought architecture' of strategy, focus and skill to become a human performance system. This could be coached and learnt to become the unconscious neural architecture of human excellence.

This understanding became the centre of a book I authored called *Optimal Performance* (Pybus, 2017) (see *Appendix F – Optimal Performance Book*), which examined the science and understanding that underpins human excellence. The book was the precursor to this doctorate and the research for it has influenced much of the content of this context statement.

Transdisciplinarity

From a transdisciplinary perspective, my work continued to evolve. I was transcending, synthesising and creating new knowledge through the integration of emerging

technological fields with my understanding of neuroscience, trance and the subconscious mind.

The staff, players and myself became a solutions focused, transdisciplinary design team during this period, we worked inclusively and collaboratively to create, modify and adapt performance.

In facilitating the agora, I made a move during this time from values to principles, this was less semantic and more to do with creating a firmer ethical position to orchestrate and co-ordinate our transdisciplinary work. As the trust and respect in the team grew, I slowly let go of the need to be the leader, my role became facilitating learning with the players and staff, working collectively to achieve our aims and objectives. There was no rigid hierarchy, just a culture of respect grounded in our team principles.

As a team we were not reactively solving the 'problematique', the focus was on the goal oriented design challenge of creating new knowledge and performance. I continued to refine the learning process with the team and sub-teams, reviewing what worked and amending our systemic performance blueprint with the players and staff each year. The team now had an 'extra-ordinary' cybernetic mind of its own, the neural architecture was in place, they had learnt how to win and this now operated subconsciously. The human relationship with each player was at the centre of this work, supporting each of them to grow and evolve to meet their own performance goals and challenges, whilst they built the performance capacity of the team.

What was remarkable was that the team had learnt to win, it didn't matter who became captain or coach over the ten years after I left, the team's cybernetic mind had automated the process of winning. They have now dominated South African cricket for fifteen years, I substantiate and juxtapose this with the fact that prior to 2005 when I began the process of installing the optimal performance system, the two provinces that made up the Titan's franchise had won two trophies in a combined 140 years of trying.

On researching the context statement, what became apparent was that the core group of players who had come through the winter school program had learnt to think strategically,

manage themselves on and off the field and developed the mental, physical and technical skill sets to win. This group of players came through in their early twenties and stayed together as the core unit in the dressing room during this period. Their mindset became the default mindset of the team, many of these players are currently coming to the end of their careers now in 2020, amongst these, Faf du Plessis and A.B. de Villiers have both captained South Africa, Dale Steyn and Morne Morkel became two of the world's premier fast bowlers.

During this period, I continued my studies in hypnosis and human excellence, and completed Neurolinguistic Programming at practitioner and master levels. Later, I studied executive coaching with the Neuroleadership Institute, led by David Rock, who's work continues to inform my understanding of applying neuroscience to coaching practice.

Chapter Six: Public Work Three - West Indies Cricket

Context and Professional Background

In October 2013, I began the role of Director of Cricket for the West Indies Cricket Board. This was my first experience of being a full time administrator rather than a head coach. As a family we moved to Antigua in the West Indies with all the excitement and challenges that such a move brings.

At the job interview, I laid out my vision goal of taking West Indies cricket back to number one in the world and the process of how to achieve it. Board president Dave Cameron took part in the interview process and we would go on to develop a good working relationship. Dave was ambitious, strategic and wanted a system in place that could produce consistent results and accountability.

My first task was to assess the current status of the West Indies cricket system, evaluating its overall performance, both at international level and throughout the territorial structures of the sixteen countries that make up West Indies cricket.

I took agora on the road and spent five months travelling the first class territories interviewing former players, senior journalists and significant figures in cricket. This was to get their perspective on the state of the game and what they thought were the essential pillars and principles of successful cricket in the region. I also tasked the officers in the cricket department to present an assessment of their specific work areas such as youth cricket and high performance. I compiled the results and data into a report for the West Indies cricket board and presented it with a set of recommendations to take West Indies back to number one in world cricket.

In the report, I laid out the vision and mission goals, with the focus on developing and streamlining the recreational and development structures in schools and clubs, and to professionalise the first class game in the region. The recreational cricket goal was to re-

invigorate the overall system by meeting the next generation of players in schools and getting them into clubs. The professionalisation of the game would allow the players, both male and female, to train as professional athletes, supported to world class standards by their territorial teams, with the overarching goal of producing world best players for West Indies teams. This would see West Indies cricket expanding from fifteen to one hundred and twenty full time contracted players, with six sets of fully contracted support staff and administration to support them.

The report was approved, and my next task was to implement it. To do this, I broke the report down into priorities and time phased goals. Shortly after the approval of the report, the senior men's team went on strike over financial remuneration during a tour of India. It was the first strike in the history of international cricket. Up until that point, I had not realised how long and deep industrial action between the West Indies board and players had been, with tension going back decades. It was an exceptionally tough period with internal and external reviews, and parties looking for individuals to blame and scapegoat. The ramifications would take years to resolve, and in 2020, the after-effects are still being felt in West Indies cricket.

Over the next 18 months, it became apparent that there was a lack of understanding in the region about how professional franchise sports teams and organisations operated. There was a shortage of knowledge, skills and commitment to the process of administrating franchise cricket at a territorial level. Myself and senior board officials had repeated meetings with representatives of the regional cricket boards, where it was apparent that there was no clear communication between the executive and operational staff. I realised there were real challenges in strategic alignment and accountability, not only internally at the territorial level, but between territorial boards and the West Indies executive.

6.1 - The Treble - Designing World Cup Success 2016

Through the research undertaken for the report, it became apparent that there was no overarching system of preparation for international competition and tournaments.

Everything was ad hoc, with each team doing their own thing with no clear strategic process. I saw that we needed a purpose-built system with clear goals, roles and responsibilities, with agreed timelines and metrics to deliver on the goal of winning competition series and World Cups. After my coaching experience with the franchises in South Africa, I knew this was achievable.

Setting up a High Performance Program to prepare for 2016 Cricket World Cups.

In early 2015, I put together a group of specialists to work as a transdisciplinary high performance program team with the goal of preparing for the 2016 cricket World Cups.

One of the issues that was prevalent in the West Indies system was the appointment of former players who were neither qualified nor had a track record of success as coaches or support staff. There was a false assumption that an ability to play cricket at the highest level was a qualification for coaching and management roles, however, the long term evidence proved otherwise. To ensure we got the right people in the right roles, I looked at four key selection criteria:

1. Local people (to ensure we utilised the cricket knowledge currently within the system and to build regional capacity).
2. Qualified.
3. Experienced.
4. A track record of success in their previous roles.

To begin the process of planning the 2016 World Cup campaigns, I put together a High Performance program management team. Comprising a chair of selectors, former West Indies cricketer and current selector Courtney Brown, who had a dedicated responsibility for youth and women's cricket. Courtney and I worked well together, and he was joined by the program managers covering women's and youth cricket, player support, and mental skills. My former colleague Vasbert Drakes, who was now the specialist technical coach, also joined the program management team.

I took the group through the agora planning process I had used to build the winning systems at the Titans and Cobras (the Cobras was the franchise team I coached after the Titans), showing them the architecture of the system (see *Appendix G – Optimal Performance Matrix*), the metrics and the key steps in the design and testing process. We used the three-step process I had developed – player identification, coaching and management system (see *Appendix H – Player Management System*). A colleague from Bangladesh Cricket, Richard McInnes, had given me a selection document that fleshed out some of my ideas on this system and I incorporated this into the design. We used the planning document I had designed from *The Art of War* (see *Appendix I – Competition Planning Document*) to allocate specific roles and goals. We also carried out assessments to understand what needed to be included in the design process to ensure each team was totally prepared to deliver winning performance.

We ran the program online using a performance management app called Trello, which allowed us to plan and coordinate our work as a team. We also used web conferencing software Zoom to hold our online meetings, as the team were spread across the Caribbean region. I facilitated the team meetings, clarifying how we would work with the cricket teams and what everyone's role would be. We began with our High Performance program goals: to win the three World Cups. We used statistical models that gave us the metrics to achieve this goal. Each member of the team had specific roles and it was requested that they map out their responsibilities and prioritised goals. These responsibilities and goals were then loaded onto the Trello work boards so we could follow and track our progress in real time. It was a new and ambitious exercise in running project teams internationally, using technology to facilitate the process.

We implemented a dedicated mental skills program headed up by Ayana Cooper, our head of player support. We subcontracted IMG (a sports management company) to train a group of regional specialists to support this program across the region. I knew this would be the key area for us to focus on. Just like the franchise teams I had previously run, if we had individual players with clear personal goals, who were motivated and supported by

excellent technical staff, and working within the team goals, I knew we would have a head start on most of our opposition.

Setting up the high performance team management

We then held separate meetings online with the women's and U-19 team management staff. I walked them through the roles of the High Performance management team so they knew who to work with on different aspects of the preparation and planning. We clarified goals and looked at the statistical models to understand and interpret the performance metrics the teams needed to produce in performance. I also showed them an example of program planning (see *Appendix A – Periodised Program*) and asked the management teams to do their own design meeting following the process steps we had laid out: to create their performance plan using their unique knowledge of their players and team. The management staff would then include the cricket skills, fitness, strategy, simulation and testing timelines into the system design. This would ensure they were clear on the performance benchmarks they would need to achieve to win their World Cup. We met online on a regular basis to check in and track progress.

It was fascinating as we worked through this learning process, with the team support staff returning with their plans and working together with the High Performance management team to refine them, month after month. Their plans were excellent; my role was coaching the process and ensuring we were accurate with timelines and priorities. The only time I needed to step in and help was when we needed to break down the performance targets in the statistical model into process actions, and then simulate and perform the actions to test them. I gave the coaching staff two performance matrices I had designed with the skills, strategy and match context built into them (see *Appendix J – One Day* and *T20 Matrix*). These matrices worked well and the coaches could operationalise them in training.

The men's side worked independently to the High Performance program team. As the organisation's flagship team, they were fully supported with extensive coaching and support staff, and my role with them was more hands off. Instead, it was a case of

systemic long-term planning, oversight and ensuring operational planning was carried out.

I had begun the long-term planning for the men's T20 team in 2015 in order to get them to the subcontinent early so they could acclimatise to the time zone and get match practice beforehand. We had originally aimed to play New Zealand, however, as we got closer to the tournament, they could not play in this window so we arranged to play some English county sides who were in the region for pre-season.

The men's head coach was tasked with planning his preparation process with his staff. However, he fell out with the board and operational staff over a breach of confidentiality, and there was a subsequent breakdown in the relationship. The head coach's planning and operations were his responsibility, submitting to me for oversight. Before the tournament, the players threatened to go on strike again for more pay. This interestingly had a catalytic effect on the men's squad, bonding the players into an 'us' versus 'them' group, with 'them' being the board. The team were focused, motivated and had the core players who had previously won the T20 World Cup.

For the U-19 and women's programs, for months leading up to the competitions, the team managements and High Performance staff delivered their programs across the region. This encompassed visiting countries to see coaches and players, and onboarding local coaches to ensure that the players were supported to program requirements. The focus was on having both a generic overall program for the teams along with individual player programs structured within the overarching program. This was to ensure that all players, particularly the ones who lived on the more remote islands away from first class cricket centres, were on track with their preparation.

We did the same logistical planning for the U-19 and women's teams as we had for the men's team – this was to get them into their time zones early to acclimatise. The goal was to ensure they had enough practice and playing time in the host country without being rushed or under prepared.

Once the teams began the tournaments, I acted as a mentor coach for the U-19 and women's team coaches, helping them to review the games, acting as a sounding board, and to clarify plans and strategy.

It turned out to be a remarkable sequence of events, the U-19 (20.), then the women's team (21.) and finally the men's team proceeded to win their World Cups, one after another (22.). It was an incredible accomplishment: a first in the history of cricket. Unfortunately, the men's team captain verbally attacked the cricket board on the podium after receiving the trophy, and his outburst became an international story that detracted from the team's achievements and that of the organisation.

6.2 - Beating England

At the end of 2016, I finished my three year contract as Director of Cricket and we made a family decision to move our children back into schools in South Africa. I did a handover process in January 2017 and returned to South Africa to do coaching consultancy work. In early 2018, I was approached to come back to work for West Indies cricket to direct the High Performance program. I began that process and worked throughout that year to continue to develop and deliver the program and work with the franchises. In late 2018, the board asked me to be interim head coach of the men's side. The incumbent had resigned and they wanted an experienced head coach to take the side through for the next nine months, including the cricket World Cup.

Our first series was against England, a side that had dominated the West Indies team for the better part of twenty years. The team had only beaten England once in the Caribbean in the preceding eighteen years, so it was set up to be a great challenge, albeit at short notice.

I selected my coaching and support staff, and we began the planning process for the series. I was in South Africa at the time, so we held meetings on Zoom as we had limited preparation time. My first task was to turn the support staff into a transdisciplinary team to

work with the players, to do this I explained the agora, the OPS process, the performance blueprint and my Art of War operational planning document. We clarified roles, responsibilities and goals to begin our planning processes.

The interesting scenario was going to be how the players received me. I had been cast as a 'bad' guy by a group of players and a section of the cricket media in relation to the player's strike. There had been current and former players who had spoken out in a xenophobic way about my role in West Indies cricket. Prior to the series starting, I flew to the Caribbean to meet with the support staff before the players arrived. We hit the ground running: we had a very short window of preparation time and we needed to maximise it. I made it clear to the staff that we were to use the players brains to design the strategy to beat England. A technical coach's first response is typically to offer solutions when a player or sub-unit of the team has a problem. I wanted the coaches to facilitate but not to instruct or give the answers to the players. This was not a top-down model of hierarchical authority, with the coaches having the answers and the players to listen. This was a transdisciplinary team with the coaches and staff collaborating and working with the players to design the performance.

The Optimal Performance Design Process

When the players arrived we immediately held an agora to draft the performance blueprint. It took a day for the players to buy into the process, and there were a few players who would take a little while to warm to me, but the core of the team engaged and were focused on the upcoming series.

I walked the players through the design process: to clarify their overarching goal and their sub-goals themselves. I explained that we would choose a set of ethics we would use to guide our work, govern our decision making and actions. By this stage of working with the agora and the evolution of the system, I had moved from values, to principles, to ethics, I address this on p.96.

I showed the team the statistical model of what we needed to produce to beat England, which is always revelatory for the players when they see for the first time what a 'winning' performance actually looks like. Following this, I gave the players a template of the roles, goals and responsibilities of each of the sub-units of the team and they the populated the template (see *Appendix K – One Day Example Performance Blueprint*). Then they sat with their respective technical coaches and began the process of drawing up their strategy and action plan.

We did not do the usual team exercise of spending hours studying the England players, looking at their strategy and game plans. The statistical model informs us of their outcome goals. Instead, session by session, the West Indies players focused on their plan to deliver a specific level of performance that would beat England, with actions, targets and strategy designed into the plan. We knew what England did and how they did it. We could see their game plans and strategy, and knew how to put our strengths against their weaknesses.

We prioritised the time we had before the first test with planning and practice, with the focus being on the match and game plans the players had designed in our planning meetings.

The culmination of the work undertaken by the players and support staff was the most substantial West Indies series victory against a top tier nation in this millennium (23.). The West Indies team then went on to tie the one day series against an England side who were soon to be crowned world champions (24.).

Shortly after the series, there was a board election and the incumbent president lost. The new president sacked me and all but one of the support staff as the men's team staff. I was kept on in my High Performance role, but I was effectively put on gardening leave and I negotiated a termination of my contract shortly afterwards. It was a quite remarkable turn of events, bearing in mind the turnaround in the team's performance, but I knew once the new president was elected that it was effectively the end of my tenure. He was

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diametrically opposed to the previous president and was politically aligned with a set of politicians who opposed the previous president's board.

Transdisciplinarity

I knew that the Optimal Performance System could win, I had proven that in South Africa. It had also demonstrated that once the system was installed and embedded over a consolidated period of time, that the team could continue to perform successfully beyond changes of coach, with the proviso that the core group of players that had developed into a cybernetic team were kept together. It was a new test to deliver the system internationally and transculturally in the Caribbean, working not only with the men's team, but coaching other professionals to create and deliver the same results. Creating new knowledge and performance using the agora, with multiple 'extra-ordinary team minds' working collaboratively and remotely, was hugely exciting and rewarding.

This period has been a critical stage in the transdisciplinary approach of my work, not just in transcending disciplinary boundaries of knowledge, but also cultural and geographical boundaries. I continued to introduce and utilise emerging technologies to facilitate and adapt the delivery of the work – a new learning experience for myself and the support staff.

The person, staff member and player, Nicolescu's 'subject', was firmly at the centre of all individual and team performance design. Working in an ethical, democratic relationship in which the players and staff proactively participated in their own learning process and the creative design of performance.

During the systems' 30 years of evolution I had moved from values, to principles, to ethics in facilitating the system, as it became clear to me that its success operated from an ethical position of trust and integrity. This transition was premised originally in my personal beliefs about what I believed the responsibilities of a coach were, that my work was more than just 'simply to organize sporting activities for children and athletes' (Cassidy, Jones and Potrac, 2016:44).

The Oxford English Dictionary defines values as 'principles or standards of behaviour', in a sport coaching context Cassidy et al (2016) defines ethics in a narrower professional sense, as a 'series of rules provided to an individual by an external source (e.g. society). In this sense, ethics address questions about morality.' (2016:43).

Coach education in the 1980's and 1990's when I studied did not include content on ethics, nor do I recollect that it was taught on my PGCE in 1990. I was guided at that time by my ontology and the tacit assumptions of what I believed was the moral responsibility that went with the role, of duty of care, educational development and building the self esteem of the individual. Without a grounding in ethics I found myself having to navigate the shades of grey between these two definitions, as my work intersected with players, operational staff and cricket boards. Through trial and error I developed what McNamee (1998, 2011) calls a 'virtues' based approach to working within these professional stratifications, so that I would be better able to foster a better moral environment for my coaching practice.

The experience of working in foreign countries demanded an evolving sensitivity to communities, faiths and cultures that see and make sense of their world differently to me. This influenced me in my professional practice to move beyond what de Jonge (cited in Passmore et al: 2010) calls my own personal 'values system'. To understand the importance of placing the community of team and staff at the centre of this design process, to incorporate their own 'moral principles' (Passmore et al: 2010:206) of ethical conduct into the design of the OPS.

This is an important and central part of the agora and of operationalizing the system, it stops the coach/facilitator from consciously or unconsciously projecting their own values system as the moral code for the team and staff. It allows and challenges the team and staff to bring these ethics to life in their work, to uphold and apply them in conduct, decision making and teamwork.

Iordanou, Hawley and Iordanou, (2017:43) describe this ethical learning journey as developing ethical maturity, referencing Kohlberg's (1981) earlier work on moral development, 'ethical behaviour is congruent with the development of one's personal

maturity'. This reflects Augsburg's (2014:233) work, where she maps the journey of the transdisciplinary individual from 'attitude' to 'becoming', with an 'individual ethics' being the presupposition for TD work. This educative process of moving through mono, multi, inter to transdisciplinary practice and the 'series of inner changes' that Gibbs (2015:3) so accurately identifies are premised in this evolving ethical maturity. Maguire's observation about the role of the researcher, accurately summed up my understanding of the role of the coach in operationalizing the system (Maguire, cited in Costley and Fulton, 2019) .

'the strongest thread of coherence is the personal and professional integrity of the researcher. Without this honesty, trustworthiness and wholeness the work is neither valid nor reliable. The responsibility of any actions taken based on this work is the responsibility of the person who produced it. There are ethical codes in books, in guidelines, in regulations and in professional body requirements. These in a sense are in vitro codes. Ethics in action cannot be separated from the being of the person in that enactment. Personal and professional integrity is ethics in vivo.'

From an organisational perspective, it became apparent how important the integrity and stability of the executive are in ensuring the ethics of good governance to deliver the OPS. Not withstanding the geo-political considerations which impact the ability of organisations to administrate themselves effectively, appropriately qualified and experienced staff and directors are critical to avoid political interference which impacts on delivering optimal results for sport organisations. One of the insights that occurred during the research for the context statement was to include the agora process with the executive to ensure a clear line of alignment throughout the organisation. The optimal performance system provides the systemic architecture for board and executive to see, perhaps for the first time, how the organisation can produce exponential performance, as long as each section of the organisation is working with the same level of ethical and inclusive conduct.

Chapter Seven: Conclusion - Themes, Results and Looking Forward

This coaching journey began not in seeking unity of knowledge but in the pursuit of winning in professional sport. This evolved over decades of researching performance, motivated by a compelling drive to understand the fundamental principles of performance, how learning is central to this process and how coaching facilitates it. This research investigated how performers and teams learn how to win, and how to support them to do this consistently. From a research perspective, it defines a specific role for coaching in the facilitation of the transdisciplinary research and design process.

This context statement is the culmination of this inquiry. My work evolved into an Optimal Performance System utilising a transdisciplinary coaching methodology that developed new conceptual frameworks and methodology of sport coaching. This incorporates and applies contemporary understanding of neuroscience to the coaching process, transcending boundaries of knowledge and disciplinarity. It has focused on understanding how coaching facilitates the relationship between the conscious and subconscious minds as functions of the brain in generating new learning and performance, and how neuroplasticity facilitates this. I have come to understand how coaching is a process consciously utilising intention and attention to direct neuroplasticity.

In the 1990's, I utilised new modes of information as it became available through advances in information technology in the form of computer, video and biomechanical analysis and advanced data analytics. A transdisciplinary approach was essential in exploring and synthesising how this information could be used for individual, team and organisational competitive advantage.

I designed the first iteration of this performance program at Selborne College and then continued to explore it at Border Cricket with the youth and academy programs. It was holistic in design and transcended contemporary boundaries of technical learning for cricket to encompass the mental, technical and physical, incorporating nutrition, cooking and visual skills training.

I developed this further from 1998 to 2003 with the Border and Pakistan teams. This period focused on what would become a central theme throughout my coaching work: utilising the agora as a central function of the transdisciplinary process to include the totality of accumulated wisdom and knowledge of the group in designing the process of goal attainment. My aim was to bring players and staff together to design the team performance blueprint, making the team and individual coaching plans the vehicle to achieve this.

At the Titans between 2005-09 and Cobras 2010-12, I refined the coaching of players and team in designing unconscious excellence using my evolving understanding of neuroscience. The outcome of this was these two teams won nine championships over six seasons, achieving the 'double' of winning two titles in a season three years in a row, and with the Cobras winning all three domestic championships in a row. These accomplishments are a first in the history of South African professional cricket.

My time with the West Indies between 2013-19 evidenced how the system could be applied internationally to produce replicable and repeatable results. Transcending cultural and geographical boundaries to create teams that could produce unique world cup winning performance. The time with the men's team in 2019 demonstrated that the system can be applied and work in an incredibly short period of time, developing and operationalising a co-created plan to produce exceptional performance, I address this on pages 104-5.

Researching the context statement highlighted key themes which are both similar and dissimilar in the development of the OPS and contemporary sport coaching, I address these below.

Firstly, I believe it surfaces a critical 'blind spot' in academic research and coach education, namely that coaches are being educated in the theory and practice of coaching without understanding what is being coached and how it works. The brain.

If the athlete and/or team has to learn how to perform better, the obvious questions are 'what is doing the learning? How does it learn? How can we communicate with it more effectively to support this learning process? How can we accelerate this learning process? In researching the section on sport coaching I did a content analysis of the most recent

and important texts, by Jones, Lyle and Cushion from the last 3 years, including 'Studies in Sport Coaching' (Jones:2019) and 'Sports Coaching Concepts' (Lyle and Cushion:2017) and found the brain, remarkably, wasn't mentioned at all. The advances in sociological, pedagogical and psychological aspects of sport coaching have developed the contextual and conceptual framework, yet there is nothing that speaks to what is doing the learning, how it learns and how to communicate with it more effectively. I argue that the Optimal Performance System answers these questions, operationalizing the latest research from neuroscience and effectively applying it to sport coaching.

Optimal Performance is designed, planned and measured as both outcome and process. 'Winning' is the ultimate outcome goal in professional sport for each match and competition, from a systemic perspective the learning and journey to winning is measured as incremental performance and process goals. 'Winning' performance is generated by the operation of the system, it is the expertise of the team and staff that delivers it.

This process begins with facilitating the team blueprint (Appendix C) with staff and players to clarify and define the vision goal of what the outcome, 'winning' looks like. As the blueprint identifies, this begins with the agora facilitation of the team vision. It is important that the facilitator allows a great deal of autonomy in this process without actively trying to 'orchestrate' or filter the responses. Jones and Wallace's (2005) original concept of 'orchestration' in sport coaching is defined as, 'a coordinated activity within set parameters expressed by coaches to instigate, plan, organise, monitor and respond to evolving circumstances in order to bring about improvement in the individual and collective performance of those being coached (Jones and Wallace, 2005:128). The purpose of the agora exercise is to create an open space to generate new insight and begin the process of creating the teams' cybernetic mind. This can only happen when the individual minds present are relaxed, trusting and not coerced, they then blend and explore different ideas as they emerge.

Vallee and Bloom (2005)(Din et al, 2015) in their research into the success of expert coaches identify the importance and role of a clearly defined vision for championship and medal winning performance. The 'vision involved both the long-term goal of program

growth and development, as well as the shorter-term goal of what the coach believed each athlete or the entire team could achieve in any given season' (Vallée and Bloom, 2005:181).

This exercise sets the context for designing the 'mission' phase of planning and organisation to break down the process of goal attainment into its constituent parts and timeline. Desjardin (cited in Salmela, 1996) identifies that expert coaches turned the vision into a written mission statement of team processes of technical, mental, physical and strategic preparation. The mission to attain the team's vision becomes the core purpose and function of the team.

Cote ́ et al, (1995) highlight the critical role that this organization of knowledge plays in the planning process, 'applying one's knowledge towards establishing optimal conditions for training and competition by structuring and coordinating the tasks involved in reaching the goal" (Côté et al, 1995:9).

The main structure of the performance design, the Vision, Mission, Ethics and specific work areas of performance are made explicit, the role of the team and staff is creating their own design of the interior of the performance blueprint. The content of this is always unique to each group of players and staff, evolving over time and relative to the stage of development of the team.

This blueprint becomes the over arching 'thought architecture' to attain the Vision goal, with the process and outcome designed into it. It is actively operationalized by players and staff with periodised individual, sub team and team training programs to develop the requisite level of skill, strategy and focus to deliver 'winning' performance (See Appendices A&D). Through the intention and attention of work in the individual, sub-team and team goal plans this 'thought architecture' of 'winning' performance is created and moved from the conscious mind of the players and staff at the beginning of this learning process, to their subconscious minds through extensive training and repetition. As the individual brains learn and adapt to these new stressors and workloads, these new adapted brain maps become the neural architecture of 'winning' performance for the players, staff and the team.

To ensure orientation to the 'winning' outcome goal, continuous assessments and analysis are done of the performance and process goals, monitoring player and team development. Benchmarking of the teams current performance capacity versus opposition performance levels (see Appendix E) allows team management to understand where the players and team are in their development and the comparative gaps between them, their opposition and the vision goal. It is then possible to project the team's development and identify gaps in skills and strategy utilising performance metrics and statistical analysis.

Din et al (2015) identify the role of the coach in establishing a 'structured learning culture' for players and teams where 'problems were solved, challenges were faced squarely, and issues were resolved' (2015:597).

Team preparation and organisation is then designed to the stage of development and evolution of the team. This planning incorporates testing performance capacity against weaker, equal and stronger competition during pre-season competition (see Appendix H Slide 9). Not only does this benchmark performance and give accurate feedback on player and team development in match specific context, it also allows players to understand that on any given match day, they can perform sub-optimally and win when the opposition are weak or play poorly, and that they can perform optimally and still lose against stronger opposition. This allows players and staff to objectively assess and reflect on match performance. As one coach in Din et al's (2015) research said, "When you make mistakes you have an opportunity to get better...if you don't learn from adversity and face it, when it comes you're not going to deliver" (2015:597).

Without being consciously aware of it, this constant facilitation, design and review process over the course of the evolution of the system became an ongoing process of Action Research (Lewin.K:1946) and reflective practice (Schon.D:1983). Action Research was introduced by Kurt Lewin (1946) and utilizes "a spiral of steps, each of which is composed of a circle of planning, action and fact-finding about the result of the action" (1944). There is neither a great deal of literature or application of Action Research in the sport coaching context (Chapron & Morgan: 2020).

I proceeded to test the evolving performance system season after season, refining and

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enhancing it as we got results from actual performance. With the players and staff at the centre of the design and performance process, as Chapron and Morgan (2020) state, "action research is reliant upon the practitioners engaging in a cyclical process of planning, data collection, analysis, reflection and change' (Chapron and Morgan, 2020:297). The democratic process of facilitating the agora to generate knowledge and insight for performance design achieves what Bradbury (2015) calls a, "democratic and participative orientation to knowledge creation that brings together action and reflection, theory and practice, in the pursuit of practical solutions to issues of pressing concern" (Bradbury, 2015:1). This essential aspect of designing performance and training practice with staff and players collectively addresses a perceived weakness (Richards, Mascarenhas & Collins, 2009) in the application of reflective practice in a sport coaching environment, namely, that it has primarily focused on the coach and not the performer. The ongoing learning process of operationalising the OPS affords players and staff the opportunity for a "prolonged engagement with the research question"(Clements & Morgan, 2015:14). In our case, the research question was how to win the different formats the teams competed in. We were collectively challenged to review and reflect on each match and competition, the performance design has metrics to inform it, the learning feedback and feedforward loops are designed into the system. As a head coach, I was forced 'to reflect not only on the question at hand' but also on my 'own performance and role within the task, a skill that is said to be essential to developing expert coaching practice' (Chapron and Morgan, 2020:297).

The context statement clarifies and demonstrates the difference between the short and long term results the Optimal Performance System can produce. That although improved performance can be achieved in a short period of time, this is more to do with the performance design and the management process of coaching, rather than developing the latent potential of the players and team. To effect short term change, the focus is on clarification of aims, objectives, roles, goals and responsibilities to release the current potential of players and teams.

It is important here to note, that this approach only creates long term change if the OPS is utilised for a long enough period of time. For this to take place, the learning by players and

staff has to be consolidated as new brain maps over time and become the default neural architecture of the team and /or individual. Research with first class professional cricket teams, the Titans and Cobras in South Africa, suggests that 24 months of in and out of season training and performance is optimal for this to take effect.

The success of coaching and facilitating the West Indies high performance staff and U-19 and Women's team managements in operationalizing the system motivated me to share it and educate other coaches and professionals in how to apply it. In 2020 I designed an online course with a modular syllabus, incorporating the theoretical and practical framework to operationalize the Optimal Performance System. This included resources A-K in the appendix, online classes and a digital cricket coaching academy. I ran the course over 3 months to a group of emerging and professional coaches in South Africa, it was well received and will be followed up to see how the participants progress.

 To deepen the learning process of participants they were tasked with understanding the theoretical framework of the OPS (Appendices A-K). I created content to contextualise the development of the sport coaching field and how neuroscience underpins the coaching and learning process. I then focused on coaching practice, explaining how this knowledge is applied experientially in performance design, through the process of skills and strategy development, simulation and performance. I incorporated the same neuroscience principles in the design of the modular course that underpin the OPS performance design process. The coaches then begin their own coaching and facilitation journey with the system, the goal is for them to build their own brain maps of optimal performance coaching. In effect, they become Action Researchers in this process, they actively operationalize the system, record results, reflect, adapt and orient to the goals and targets set, creating thelr own personal brain maps of coaching practice. Their role as coaches gives them a unique ethnographic perspective, they are at the centre of the performance and learning process. 'Ethnography has its roots in the social anthropologies of the early 20th century' (Champ et al, 2019:519), it has been used in sport research (Cushion, 2001)(Cushion and Jones 2006) and 'aims to place specific encounters, events, and understandings into a fuller and more meaningful context'(Champ et al, 2019:514), As coaches they don't face the typical ethnographic research/er challenges of trying to

develop trust or legitimacy(Cushion, 2001)(Townsend and Cushion, 2020), they aren't academics, they are coaches in their own domain working with a coaching system, actively participating in their own learning. The learning through design, action and reflexivity is central to operating the system.

Looking Forward

During this research and writing of the context statement, it became clear to me that coaching should be at the centre of a trandisciplinary process; that its democratic and inclusive design process is the essence of what transdisciplinarity is. I propose that coaching as a methodology has a critical and central role to play in the continued development of transdisciplinarity, that it is the process to move the field beyond science's 'object' focused 'problematique', to an inclusive, goal-oriented design process.

Audiences for the Optimal Performance System

I believe the Optimal Performance System has audiences and markets beyond sport, namely in the fields of business, education, the military and human wellness. Every sector of society that is dependent on learning to improve performance becomes a potential audience and customer. The system utilises a three-step process of performer identification, development and management, the critical development stage for the individual and the team is premised on 'learning' to be able to improve performance. The system clarifies the process of how learning takes place at a neural level and how this understanding can be designed and coached to optimise performance both individually and collectively in teams and organisations. The Optimal Performance System explains how and why coaching works, how coaching communicates between the conscious and subconscious mind at a neural level, how coaching fits into the performance system and how the system can apply the design process to meet the goals of a client.

There is nothing unique in the concept of a human performance system, many organisations, sporting and corporate, have iterations on the same theme. What is unique about the Optimal Performance System is that it clarifies the principle of ' thought architecture' to consciously design the neural architecture of human performance. It

identifies and utilises the cybernetic property and neuroplastic potential of the brain, clarifying how the neural circuitry of learning is created and consolidated over time, thus becoming unconscious performance. It explains how this can be coached, individually, in teams and organisationally to become unconscious performance excellence.

The researching of the context statement has been an exercise in clarifying and understanding the principles that support optimal human performance. When I began this research, I knew how to coach optimal performance and I knew how to support others to deliver it, but I did not fully understand the principles and science that explain and clarify the process. This, I believe, is the critical next step in sharing not only the understanding, but the development of the theoretical framework it stands on. Writing the context statement has given me clarity on this process, and explains Schon's idea of 'tacit' knowing for professional practice, a body of knowledge that can be questioned, examined, tested and built upon.

Following in the footsteps of Liebniz, the professional practice that I reviewed and critiqued through this context statement shows that the principles of human performance can be constructed into a formal system, an architecture of thought, to attain the completion of a goal.

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Appendix – Richard Pybus DProf by Public Works

Google Drive - Folder Link: Email richard@richardpybus.com for link