# Soldiers, Animals and Machines: A Foucauldian Analysis of the Making of the Contemporary Endurance Running Body

by

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A thesis submitted in partial fulfillment of the requirements for the degree of

Doctor of Philosophy

Faculty of Physical Education and Recreation

University of Alberta

## Abstract

There can be little doubt that contemporary sport exists in a culture dominated by the circulation of rational and scientifically based knowledges (Andrews, 2008). It is not surprising, therefore, that to be considered effective, endurance running coaches are expected to design scientifically informed training plans intended to control an ever-increasing number of variables (Denison, 2010). However as Seidman (1994) argued, any practice that has a fixed meaning, such as how endurance running coaches currently understand how to design their athletes' training plans, needs to be understood more as an act of power than an acknowledgement of the truth. Precisely how power works to produce endurance running coaches' understanding of how to design and implement their training plans has yet to be examined by coaching scholars. As one perspective on power, Michel Foucault (1972, 1978, 1995) illustrated how knowledge and practice interacted with power to shape individuals' understanding of their everyday experiences. Through Foucault's theoretical framework, it was my intention to study endurance running coaches' knowledge and understanding of planning in order to examine the effectiveness of their practices. To conduct my study, I purposively selected 15 endurance coaches from the United States and the United Kingdom. All of my participants were male and had coached numerous international athletes as well as made significant contributions to endurance running coach education. To collect my empirical material, I completed a semi-structured interview with each participant followed by a single observation of each participant administering a workout. To remain true to my Foucauldian sensibility and to analyze the inherent complexities surrounding my participants' understanding of planning, I also conducted a follow-up interview with each coach. My findings revealed that the participants' understanding of how to design their training plans was based on a very narrow understanding of the body. More specifically, the participants

employed a number of disciplinary techniques to systematically monitor and control their athletes' development. Further, through my Foucauldian lens I was able to articulate how the workings of power made it difficult for my participants to recognize many of the inherent limitations underpinning their planning practices. I concluded my analysis by illustrating some of the effects that endurance running coaches' restricted understanding of knowledge and practice can have on their effectiveness.

**Acknowledgements**

I would like to thank several people for their contributions to my dissertation.

**Louise Mills**, without whom I quite simply would never have had the ability to complete this dissertation. While making many of your own sacrifices throughout this journey you have provided me with unconditional love. I am forever grateful and hope this document is the start of many more journeys together. I love you.

**Gracie and Elijah Mills**, who continually make me smile and laugh. Thank you for being quiet every time I asked, you can play the drums and dance again.

**My parents and family**, thank you for your continued love and support, and for being 'there' without hesitation whenever I need you. I love you all very much.

**Dr Jim Denison**, who was an unparalleled supervisor, mentor and friend. At some point I was told that I would hate my supervisor, I have never come close to that. For your belief, support and encouragement to guide me into the start of a promising career, I thank you so very much.

**Dr Billy Strean, Dr Pirkko Markula, Dr Bill Foster and Dr Richard Pringle**, all of whom have indulged my wandering mind with keen interest and gently steered me back to completing the dissertation. Thank you for your patience and kind enthusiasm.

**Dr Costas Karageorghis,** who was the first scholar to give me the confidence to develop the inquisitive and challenging mind without which this dissertation would not have been possible. Thank you Costas.

**Desmond English**, my best friend whose overwhelming kindness connected me with Jim at a time of great stress in your own life. None of this would have happened without you. I look up to you every day and will continue to pass it on.

**David and Leslie Leeworthy**, for your great kindness in welcoming and supporting my family to a new country and new experiences. You have become our surrogate family and we are all very grateful. Thank you so much.

**Finally, to my own coaches (in order) my Dad, John Clarke and Ron Allison; to Ken Day who offered me many sessions; to my participants and to coaches everywhere**, all of whom continue to give themselves to others without asking for and rarely receiving gratitude, I thank you. This is for you.

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## 1.0 Introduction

It is a common perception within modern sports that athletes cannot achieve their full sporting potential unless they work with qualified and expert coaches. Lamine Diack, the President of the International Association of Athletics Federations (I.A.A.F.) stated in the introduction to his federation's introductory coaching manual, *Run! Jump! Throw! The Official IAAF Guide to Teaching Athletics* (2009) that "the coach plays a key role in the identification, motivation and development of those athletes who go on to become champions" (p. 1). Diack concluded that the education of coaches was the most important goal of the I.A.A.F.'s development programme. In the last 30 years, the academic field of sports coaching and coach education has grown considerably, to the extent that sports coaching education is now considered a bona fide area of scholarly inquiry (Gilbert & Trudel, 2004). Sports coaching education was once an academic field studied mainly from the perspective of sport psychologists and pedagogists, but in the last ten years has come to be increasingly influenced by socio-cultural scholars who have highlighted the social and therefore, inevitably complex nature of coaching (Potrac, Denison, & Gilbert, 2013). The assumption that sports coaching is a social, messy and complex activity now seems to have been generally accepted by all researchers. Nonetheless, the inherently messy nature of coaching is an assumption that is made by researchers without a substantial evidence base of support and as such remains an assertion that despite its dominance, has yet to be significantly developed.

Research in coach education has consistently shown that the primary sources of knowledge for sports coaches are the experiences and observations of other coaches (Cushion, Armour, & Jones, 2003; Jones, Armour, & Potrac, 2004). Inevitably, a host of knowledges and practices are repeated in generational cycles as experienced coaches, and coach educators, tend to

frame issues in ways that privilege their own reasoning. Currently, socio-cultural coach scholars have criticized coaches for imposing a strong degree of coherence around their decisions. This coherence generally means coaches believe that they know how to act around every problem they encounter. Cushion (2006) explained that a coach's knowledge and action is always tied to a specific cultural understanding of what coaching is and how one should behave as a coach. In other words, coaches' knowledge is constructed and generated under very specific conditions (Alvesson & Wilmott, 1996; Cassidy, Jones, & Potrac, 2004; Cushion, et al., 2003; Jones et al., 2004; Gilbert & Trudel, 2006; Lawson, 1984; Lyle, 2002; Potrac, Jones, & Armour, 2002). Therefore, understanding those conditions is as important as understanding the concepts produced through those conditions, because of the consequences for understanding coaches' behaviors (Phillips & Hicks, 2000).

It is beyond the remit of my study to examine the historical formations of sport, nevertheless a number of scholars have shown that a very precise type of sport—modern sport—developed out of very specific historical circumstances (Andrews, 2001, 2008; Struna, 2001). The radical societal changes of the 19$^{th}$ Century were so overwhelming that the iconic historian, E. P. Thompson, called modern society a 'new human nature'. Issues of security, extreme wealth—not just hundreds, but thousands of percent profits—and power were the aims that now motivated the newly defined nation states. All nations were involved in the search for as many effective ways to support their military machine as possible (Hobsbawm, 1975). For the first time sports were seen as activities that were useful for a society to re-organize itself to achieve its grand new aim. The poor were taught how to play, the aggressive male was given a place for his urges and the leaders of tomorrow developed appropriate work-like, capitalist characteristics (Burstyn, 1999; Coakley, 2009; Hobsbawm, 1975; Holt, 1989; Mangan, 1973).

A host of sports historians have documented the development of modern sport yet precisely how that development connects to what we now know about effective coaching has largely been ignored. Indeed, Andrews (2001) illustrated how the contemporary definition of sport evolved out of the *zeitgeist* of the modern era: an outlook on the world that circulated rational scientifically based knowledges, technologies and institutions. Accordingly, the contemporary—objective, rational and scientific—conceptions of sport may have become so entrenched in the thinking that dominates coaching cultures that coaches take those conceptions for granted (Struna, 2001).

As I have already stated, one sport in which the work of qualified coaches is seen as essential for helping athletes achieve their potential is track and field. Within track and field, one category of events that provides a perfect example of both Andrew's (2001) and Struna's (2001) observations is endurance running. For example, successful endurance coaching is generally thought to require scientifically based training where nothing is left to chance (Daniels, 2005; Sunderland, 2011). Thus, contemporary endurance coaching is largely understood as being a rational, objective and largely scientific process. Endurance running is one of the largest global participation sports and experiences a wealth of popular forums for advice—magazines, websites, blogs, training manuals—all of which offer coaching support. It is highly likely that the development of endurance coaching knowledge and practice is based on the same objective value systems that have dominated modern societies' social institutions.

The problem with the general coherency and reasoning of experienced coaches, that does much to frame coach education and subsequently coaches' behaviors, is that this coherency and reasoning fails to consider how coaches' practices have been shaped and informed by a range of socio-cultural-historical constructions. Therefore, it is important to question whether modern

culture has created a steadfast coherence to a rigid set of objective and rational beliefs or knowledges, and whether there are any problems with such a rigid construction. Hence, for coach education to be effective there is a critical need to understand how coaches' strategies and reasoning have been shaped by broader structural conditions and forces (North, 2013). A number of scholars have noted that there is a general absence of research that explores how coaches come to do what they do (Erickson & Côté, 2013; Horn, 2008; Myers, Vargas-Tonsing, & Feltz, 2005). In spite of this observation, it is not unusual for researchers to acknowledge the presence of a set of complicated factors that are likely to significantly influence coach behavior, without ever expanding on the meaning of those factors (e.g., Horn, 2008). Some time ago, Myers et al (2005) stated that much work needed to be done in order to clarify the specific ways in which a host of antecedent factors, such as the socio-cultural context, impacted on coach behavior. My dissertation is an attempt to do some of this work. More specifically, gaining a better understanding of what effective endurance coaches currently know, and how they know what they know, is the central aim of my study.

It is likely that how society currently prepares endurance coaches is a result of the socio-cultural-historical-political-economic developments in modern society. It is this complex understanding that creates endurance coaches' everyday realities rather than any truthful, intrinsic features or qualities of coaches' practices. An analysis that connects the historical formations of sport to contemporary coaching, in order to better understand coaches' behaviors, could therefore make a significant impact on the field of coach education. One type of analysis that attempts to reveal the social, political, economic, technological and philosophical contexts that fashion behavior is a post-structural analysis (Andrews, 2001). A post-structural analysis endeavors to generate understandings of a phenomena based on a more complex interaction of socio-cultural

forces and power relations. In these complex ways, a post-structural analysis has the potential to develop an understanding of contemporary endurance coaching that has yet to be accessed in coach education. It is worth noting that in spite of Cushion et al's (2003) call to conduct research into coaches' knowledge and language that can lead to an awareness of how coaches' subjectivities have been constructed, such research has yet to be undertaken. Furthermore, research that has attempted to connect the socio-cultural formations of coaches' knowledge to contemporary coaching practices has also failed to materialize.

It is critical that an analysis in sports coach education research is conducted that considers how coaches' dominant ways of knowing, talking, thinking and being have impacted on their practices. A post-structural analysis has the potential to highlight problems associated with an objective value system's constructed truths because of the inherently complex understanding of power, knowledge and socio-cultural forces. Therefore, a post-structural analysis has the potential to develop a deeper understanding of the ways coaches currently operate. Such an analysis, according to post-structuralists, is more likely to make coaches aware of any potential problems in the practices they commonly take-for-granted. In so doing, any problematic features of the everyday realities for coaches in modern sport can be exposed and questioned, so that ultimately alternatives may be considered. Accordingly, a post-structural analysis of modern coaching would be an essential addition to the burgeoning field of coach education. It is my aim, therefore, in this dissertation to conduct a detailed post-structural analysis of endurance coaches' knowledge and practices. In what follows I outline the specific social-cultural-historical developments that led to the subsequent naturalization of contemporary endurance coaching theories and concepts.

## 2.0 Review of Literature

The circulation of rational scientifically based knowledges, technologies and social institutions dominated the modern era. By the 20th Century there were new beliefs in (wo)man's expanding biological limits. Science was able to provide legitimate, reliable and subsequently truthful explanations about the world, and therefore provide a knowledge that was able to produce performance (Pronger, 1995). Out of quantification, organization and the standardization of competitive spaces, athletes and their trainers were encouraged to explore the limits of their potential and the pursuit of sheer performance intensified (Bale, 2003). Modern society adopted a general wonder at just how far (wo)man could progress, as evidenced by attempts to climb Everest, walk on the Moon, explore the Poles and even run one mile—four laps of a running track—in under four minutes. By the latter half of the 20th Century, the increased competitiveness, commercialism and global appeal of sport was driven by the heightened tensions of a rising nationalism and an inhospitable Cold War climate. Governments the world over acknowledged the feel-good benefits if their nation's athletes performed well at global sporting festivals such as the Olympic Games.

According to Andrews (2008), the realization that sport had a global appeal saw a governmental oversight and accountability that led to an over emphasis of scientific values and sub-disciplinarity in sport science. Consequently, as I noted in my introduction, it is now a commonly held assumption in contemporary coaching cultures that the application of science in sport makes coaches, and more pertinent to this study, endurance coaches more effective (Daniels, 2005; Noakes, 2005; Sunderland, 2011). Science gives endurance coaches the ability to make more objective assessments and utilize evidence-based practices to develop their athletes. In contemporary endurance training theory, the application of scientific knowledge has also been

used to explain why traditional endurance coaching methods have become successful. For example, in a historical analysis of the iconic success of the largely self-coached Roger Bannister, the first athlete to break four minutes for the mile, Kruger (2006) made the observation that while scientists coached all the leading athletes in the world at the time, Bannister *was* a scientist. It was this scientific skill set that enabled Bannister to adopt, what Kruger argued, were actually contemporary training methods. Bannister was successful because, in contrast to his peers, he was able to use his greater scientific knowledge to carefully organize and plan his training in a rationally structured manner. It was specifically Bannister's ability to *plan* his training, according to Kruger, that led to Bannister's success.

Subsequently, the influence of planning in endurance training grew ever stronger. Thus, when aspiring coaches analyze endurance coaching, their debates tend to be only focused on the training plans that coaches devise. In other words, endurance coaches devise a series of running workouts in specific ways, and it is these training plans that are understood to be responsible for the success of endurance coaches' athletes. It is through the design of training plans that coaches come to be judged as successful or not. It was in this way, Kruger (2006) argued, that Bannister engaged in precisely planned cause-and-effect interval training and time-trials that enabled him to ensure effective progress in order to be in the best physical condition when it mattered. The point to make here is the assumption that if endurance coaches want their athletes to be successful, those coaches could copy Bannister's carefully measured scientifically-informed training *plans*.

**2.1 Effective Coaching as Planning**

When endurance coach education conferences are held, such as the European Endurance Conference, in London, UK in October 2011 or the Canadian National Endurance Conference in Vancouver in December 2011, almost by default the most common type of presentation is a

description about a successful coach's training methods, or his or her planning. Thus, when effective endurance coaches are analyzed, it is not their behaviors or personalities, their leadership or motivational qualities that are important, but their training methods. In short, ensuring that endurance athletes complete the right balance of different types of running is seen as essential to the development of endurance athletes. The ways in which an endurance coach organizes, or 'puts together' a training program represents that coach's training theory. It follows that an endurance coach's design of his or her athletes' training plans is the frame around which effective endurance coaching has come to be assessed, and so, how coach education is structured. Each successful endurance coach is thought to have conceived his or her own theories about the best combination of workouts that develop his or her athletes. As the understanding of effective endurance coaching evolved, each new endurance training system or planning method was felt to be superior to the previous system because athletes using that new system beat athletes using the old system. Consequently, endurance training methods have been seen to evolve in their sophistication from primitive and unsystematic, to increasingly complex structured scientific methods (Bourne, 2009; Kruger, 2006; McNab, 2005; Radford & Ward-Smith, 2003; Wilt, 1959). From this perspective, endurance training theory has been aided by the encroaching development of science into sport, a development that is generally seen as both unproblematic and inevitable (Andrews, 2008).

**2.1.1 The development of the most effective coaching plans.** The main theories or methods about effective training for endurance runners that developed in the latter half of the 20th Century, were based on two types of training workouts, *fartlek* (speed play) and interval training. *Fartlek* was developed in Sweden, where the naturally rugged running terrain lent itself to workouts that consisted of a variety of spontaneous—play—running paces. The best runners in the world during the Second World War, Gunder Hagg and Arne Anderson from Sweden,

popularized this type of training. As I noted at the start of my review of literature, a dominant theme in the 20th Century was the circulation of rational scientifically based knowledges. *Fartlek* training did not fit the scientific and quantifiable theme in society. The pre-war scientists/endurance coaches Dr. Woldemar Gerschler (a physiologist) and Dr. Herbert Reindell (a cardiologist), hypothesized that workouts should be based on a prescribed number of runs, at a specific intensity of effort, over a specific distance. In running a set distance and time, the athlete's heart rate was expected to rise to 170-180 beats per minute (bpm). The athlete could resume the next repetition when his or her heart rate had dropped to 120-125 bpm. By manipulating the distance, the interval of recovery, the number of repetitions, the speed of the run, and the actions during the recovery, the athlete could make significant physiological gains. Importantly, the fitness gains occurred as a result of the recovery (the interval between repetitions), not the repetition. This manipulation of workouts was termed interval training.

I described previously that the development of effective endurance coaching was largely focused on borrowing, or copying, successful endurance coaches' and athletes' training methods. It is noteworthy, therefore, how Dr. Gerschler's interval training significantly influenced Franz Stampfl who then became an adviser to Bannister. Stampfl believed the training plan should be based on a measured progression of intense running. Recording the times run by the athletes with a stopwatch enabled a distinct quasi-scientific emphasis on cause-and-effect progressions throughout the training plan (Stampfl, 1955). The great contrast and coaching rival to Stampfl was Percy Cerruty, who most notably coached Herb Elliot, the world record-holder for both 1500m and the Mile, and the 1960 Olympic 1500m champion. Cerruty's training plans were based on his philosophy of toughening the body in a natural environment—stotanism (Cerruty, 1959). Cerruty, in direct contrast to Stampfl, believed that training should be spontaneous, uninhibited, unfixed,

unregimented and without the use of a stopwatch. In spite of the apparent dichotomy in the two coaches' training approaches, Phillips and Hick's (2000) historical analysis of Stampfl and Cerruty revealed that both coaches' training methods were equally controlling. The monotony incurred by Stampfl's athletes who regularly conducted their main workouts on the track, was mirrored by Cerruty's athletes who regularly ran on the sand dunes at Portsea in Australia. At the same time, another iconic endurance coach who devised a distinct approach to his athletes' training plans was Arthur Lydiard, who coached the world dominating New Zealand athletes in the 1960's and 1970's, such as Peter Snell the three time Olympic Champion. The first phase of a Lydiard training year involved a large volume of easy and steady pace runs, sometimes in the form of running marathons. The progression of intensity in Lydiard's athletes' training incorporated faster hill runs and finally, there was a phase of very high intensity, low volume track repetition training (Lydiard, 1962).

The nations that were emerging as having the most global success in track and field by the 1970's were the Eastern bloc countries. Much of this success has been retrospectively attributed to extensive doping—anabolic steroids—regimes. Nonetheless, the perception that dominated Western thought was that the Eastern bloc nations were experts at planning their athletes' training via a process that was called 'periodization' (Matveyev, 1981). Bourne (2009) p rovided an excellent overview of Matveyev's theory, first published in the Soviet Union in 1965 under the title, *The Fundamentals of Training*. To develop his ideas, Matveyev analyzed the performances and training of several thousand top athletes from a range of sports, such as track and field, swimming and weight lifting. From this data, Matveyev developed a general theory of training to facilitate athletic progress, so that athletes could peak—perform at their best—at the right time. In an interview for Bourne's (2009, p. 378) doctoral dissertation on the history of contemporary

endurance training methods, Matveyev explained that his research had specific and holistic aims.

> [The research] examined the influences acting upon athletes during sports training and competition. Also, I looked at the reactions of the body of the athlete, taking into account as many systems of the body as possible. The research involved the laws and relationships between the stimuli which are organized in the process of sports training and how they are related. This was the mainstream of the research.

According to Bourne (2009), Matveyev's (1981) intent was to produce a holistic theory of training that could culminate in the ultimate training plan, and so produce the best possible athletic performance. As a result of such a broad theory of training, Matveyev's text was organized into three parts that included a comprehensive list of different aspects of sports training: philosophy, sports theory, sociology, psychology, history, aesthetics, ethics, anthropometry, morphology, biophysics, biochemistry, physiology, sports medicine, technical and tactical training, and finally, the attainment of the physical attributes that included speed, strength, endurance, flexibility and coordination.

**2.1.2 Periodization.** In spite of the all-encompassing nature of Matveyev's (1981) book, it was the third part of Matveyev's text, organizing the fundamental structure of training that was to become the most popular. In 1975, the Great Britain athletics team manager, Frank Dick, took one aspect of Matveyev's overall theory—planning training—and published an English-translated overview titled, *Periodization: An Approach to the Training Year*. It was Dick's conceptualization of Matveyev's training theory that was to become popular in the West. The key concept within the theory of periodization was that specific types of training should be divided and organized into specific periods of time, or cycles. In the Soviet Union, many aspects of the state socialist government's organization such as industrial production, occurred through this cyclical concept.

Thus, when Matveyev developed his theory on periodization, he co-opted the way the Soviet State conceived its industrial production plan and applied the same principles to human physical adaption. In 1956, Hans Selye had published *The Stress of Life*, a groundbreaking text in which life was conceived as a process of adaptation to the specific circumstances of one's environment. Matveyev extended Selye's adaptive principle to argue that with clever *planning*—organizing athletes' cycles of training—athletes could be prepared to the extent that they were able to produce their maximal effort on a particular day.

According to Matveyev's (1981) theory, specific training concepts had to occur within each cycle of training. For example, volume referred to the quantity of training work performed and intensity to the level of difficulty of the training. Both volume and intensity could be increased, but there was a point at which there would be an inverse relationship between the two. Increases in volume therefore necessitated decreases in intensity. Consequently, the optimal load—volume and intensity—of training needed to be calculated precisely. This precision meant balancing the stress incurred by the athlete in the training with appropriate rest in order to enable future training to continue. Inevitably, all the training cycles could be of different duration and so, each training cycle could have a different aim. The yearly (macro) cycle was divided into three smaller (meso) cycles. The first of these cycles was broken into two smaller phases, the first phase of which was called the general preparation phase and was characterized by a gradual increase in volume and intensity. The second phase of the first cycle, was called the special preparatory period and this phase incorporated specialized training designed to match the specific needs of competition. Overall, the first training cycle was to last between five and seven months, and the second cycle was simply the competitive period and lasted approximately four months. Alongside the main competitions, the second training cycle included the specific exercises related to

competition. The final cycle, that lasted between three and six weeks, was one of active rest in order that athletes could be ready for the start of a new macro-cycle.

The smaller cycles of training were called micro and meso-cycles. According to Matveyev's (1981) theory, one meso-cycle consisted of three to six micro-cycles. There were two different types of meso-cycles, called 'base preparation' and 'competitive period'. While the four different meso-cycles were called 'preparatory', 'control', 'pre-competition' and 'rehabilitation'. The smallest meso-cycle was typically one week in length and contained at least one stimulating phase, one cumulative phase (that included the main training effects) and a rehabilitating phase, or rest. The different types of micro-cycles were called 'general', 'special preparatory', 'competition', 'shock' and 'introductory'. Shock micro-cycles usually contained the greatest intensity in training.

Consequently, periodization came to be seen as a logically structured, phasic method of manipulating training variables that could increase the body's potential to achieve specific performance goals. In other words, with very careful planning by the coach, an athlete could achieve his or her sporting goals. Thus, planning training came to be arguably the most important endurance coaching skill. Illustrating the importance of planning training, Matveyev (1981) believed that, in the Cold War-era, American athletes were more talented but Soviet athletes more likely to win because their training was *planned* more efficiently than their American counterparts (Bourne, 2009). However, even though Matveyev's all-encompassing theory was holistic in nature, the contemporary uptake of his theory in endurance training has been on the incorporation and planning of the correct training activities that target the specific *physiological* characteristics of athletes. In this way, periodization and science became inextricably linked to endurance coaching.

## 2.2 Physiology

The application of science in endurance running was seen to enable endurance coaches to move away from hearsay and trial-and-error when planning their athletes' training. Coaches could utilize scientific knowledge that was guaranteed and proven to be correct. The dominant science in the effective endurance coaching or training literature came to be exercise physiology. Physiology evolved out of a symbiotic relationship between medically trained physicians, academically based anatomists and physical educators. However, the most significant advances in physiology were made by medically trained physiologists because they were able to use a myriad of sub-specialties to make the strongest scientific claims. Armed with this scientific support, medically trained physiologists were better positioned to significantly influence university exercise physiology curricula, like those of Dr. Gerschler, Professor of Physical Education at Freiburg University, Germany (Mcardle, Katch, & Katch, 2001).

In general terms, physiology is the study of how the cells and organ systems enable the body to perform its functions. Physiology is seen as the rational underpinning knowledge for the design of training methods for endurance athletes because physiology is a knowledge that explains how a specific type of training "influences the organism and [so] induces a specific effect that will improve a specific capacity" (Arcelli & Canova, 1999, p. 6). As a result, the underpinning knowledge for contemporary endurance training theory came to be the understanding of the body's bioenergetic functions, or how the body supplies energy in order to meet the physical demands of the activity (Bompa & Haff, 2009). In other words, within endurance coach education knowledge of physiology is seen as essential for effective endurance coaching. For example, at the aforementioned European Endurance Coaching Conference in London in 2011, alongside presentations of successful training plans, were presentations by leading physiologists. Bourne

(2009) provided an excellent example of why physiological knowledge is seen as being so essential for endurance coaches.

> Of all the branches of exercise science, exercise physiology perhaps has the greatest potential to help coaches and athletes (particularly in the endurance events) in their quest for improved performance. With its detailed knowledge of bodily systems (cardiovascular, respiratory, endocrine and musculoskeletal) along with the ability to obtain objective measurements of various physiological phenomena (such as levels of oxygen uptake and lactate production) exercise physiology is ideally positioned to provide strategic information to enhance performance and validate previously un-used methods of training. (p. 302)

Just as Matveyev (1981) had applied Selye's (1956) theory of adaptation to sports training, endurance coaches were able to interpret Selye's work to understand that different forms of endurance running could create a variety of stressors on the body that in time the body could adapt to. How the body reacted and adapted to those stressors determined the level of workload the individual body could tolerate and ultimately how fast that body could run. Within this rationale, nutrition was a peripheral concept that was essential for the endurance coach to understand. Nutrition provided an understanding of the "fuel for biologic work and chemicals for extracting and using the potential energy within this fuel" (McArdle et al., 2001, p. 1). An additional endurance training concept is understanding how muscles contract, because muscle contraction is seen as the essential physiological event that enables one to run (Noakes, 2005).

Clearly, the athletic body came to be seen as a developing biological organism—an ever-adapting energy system. This understanding of the specific needs and requirements of the energy systems for a specific event is so crucial for performance that the exercise physiologist was viewed as being ideally positioned to provide the endurance coach with strategic information to

guide the planning of his or her training. Accordingly, it is now commonly thought that the specific application of physiological knowledge is important to enable the *best structured training plans* that create the best athletic performances (Duffield, Dawson, & Goodman, 2003). As a result of the detailed knowledge of physiology, endurance coaches are able to have greater control over the training process and ultimately make better decisions for their athletes. It is precisely this level of detailed knowledge that enabled Bourne (2009, p. 4) to refer to contemporary endurance training regimes as "highly sophisticated… [and] aimed at peaking [the athletic body] at the right time." Endurance coaching thus emerged as a highly technical activity because coaching involved training or conditioning an organism to develop specific running capacities that enabled specific performances to occur at specific times.

**2.2.1 Contemporary training theory.** Contemporary training theory is the information that is used to establish the foundation from which training plans can be developed (e.g., Bompa & Haff, 2009; Daniels, 2005; Matveyev, 1981; Noakes, 2005; Sunderland, 2011). These theories enable endurance coaches to modulate the athletic bodies' adaptive processes and subsequently direct or achieve specific training outcomes. Endurance running requires contrasting energy qualities—anaerobic and aerobic energy systems—or more commonly known among coaches as speed and endurance. The specific physiological characteristics that constitute aerobic energy (the highest rate at which oxygen can be taken up and used by the body during maximal exercise) are, the pulmonary system (the movement of blood from heart to lungs and back again), cardiac output (volume of blood pumped by the heart), oxygen transport (the capacity of the cardio respiratory system to transport oxygen), skeletal muscle (type, density of mitochondria (the site in the cells where aerobic respiration occurs), capillary density (blood vessels that supply the muscles with blood) and lactate threshold (the point at which lactate acid starts to build in the blood). The

specific anaerobic characteristics that affect performance are bioenergetics (stores of energy such as adenosine triphosphate (ATP), phosphocreatine and muscle glycogen), lactic acid-buffering capacity (the ability to buffer/prevent the build up of lactate acid) and cardiovascular and neuromuscular systems (Bompa & Haff, 2009).

One of the most important factors in training theory is finding the right balance in the development of all the aforementioned energetic capacities in the body. For example, a high aerobic capacity enables athletes to exploit their anaerobic capacity without detrimental effects. This exploitation can only occur when one of the energetic qualities is not underdeveloped (Tikhonov, 1992). Critically, the energetic balance is also defined in relation to the physiological attributes of the individual athlete and the specific endurance event (e.g., 800m, 1500m, 3000m (steeplechase), 5000m, 10,000m, marathon, or cross-country). Each endurance event is thought to require a different balance in its energetic requirement. For example, an 800m runner, whose competition lasts less than two minutes, requires a bioenergetic contribution of 80-50% anaerobic energy system and 20-50% aerobic system. In contrast, a 5000m runner's bioenergetic contribution needs to be 40-50% anaerobic and 60-95% aerobic (Bompa & Haff, 2009). The exact energetic balance for each event is a matter of some debate among scientists (Duffield et al., 2003). Nonetheless, the ideal balance of these specific energy systems is essential for endurance bodies because that balance enables athletes to run at their top speeds for consistently longer times, increase their speed with greater ease and accelerate to top speed in ways that effectively enhance performance (Noakes, 2005).

There are other significant mediating factors in the physiological composition of training theory. Matveyev (1981) illustrated that it was essential for a coach to understand how the volume of running (time, duration, or load of training) and intensity of running (the quality of the work

performed) in training, can impact on an athlete's development. The coach's manipulation of varying levels of intensity and volume that target the body's specific energy systems can steadily overload the athlete in a number of ways. Thus, the manipulation of intensity and volume can bring about different physiological adaptations in the body at different times. Therefore, endurance coaches plan the manipulation of specific workouts in order for their athletes to produce peak performances at specific times. Hence the shifting emphasis, or changing priorities, of planning different running volumes and intensities in training, is fundamental to the effective endurance coaching process.

The underlying assumption of endurance training theory is that more intense and longer volumes of training produce greater physiological stresses in the athlete, and accordingly, greater physiological adaptations. The variables of volume and intensity are thought to be inversely related therefore, if endurance coaches increase the training volume of their athletes these coaches will also likely need to decrease the intensity in their athletes' running (Daniels, 2005). Interspersing bursts of high-intensity running (work) with periods of low-intensity running (work) are thought to be the training workouts that bring about the best physiological adaptations in athletes. I have already noted how these types of structured training workouts are called interval training. Today, the term 'interval' has changed and refers to the athlete running repeat 'intervals' of specific volume and intensity with specific periods of rest.

Contemporary training theorists refer to the balance of volume and intensity as workload (e.g., Bompa & Haff, 2009; Daniels, 2005; Matveyev, 1981; Noakes, 2005; Sunderland, 2011). In addition to interval training there are other strategies for increasing workload, such as increasing resistance (i.e., the gradient of the run), or decreasing the rest between repetitions and grouping the intervals into sets, with periods of prolonged rest between the sets. As a result, according to

contemporary training theory, the most common practices for developing the aforementioned physiological systems of the endurance athlete are long to medium low-intensity running, interval training or medium duration aerobic threshold running, anaerobic intervals, of less than two minutes duration and *fartlek* training. Owing to the specific bio-energetic contribution of each endurance event, athletes are most likely to adapt to a specific 'type' of bioenergetic balance in their training plans. For example, the 800m runner is most likely to adapt best to high quality (high intensity), low volume training. In contrast, the 5000m athlete will require a different balance of training that involves low quality (intensity) but very high volume training. However, the precise balance or energetic contributions will vary according to the specific period (meso-cycle) of the season (macro-cycle).

**2.2.2 Super compensation.** In practical terms, the greatest training adaptations for endurance athletes are thought to occur if the adaptations are alternated and progressively loaded. This means that after a period of rest, athletes can perform at higher levels than they did during training—super compensation. Super compensation is therefore a relationship between work and regeneration of the body. High loads of training with decreased loading phases may increase strength, strength-speed, and strength-endurance (Noakes, 2005). For example, a 1500m athlete before the competitive period starts is likely to have experienced training that aimed at increasing his or her aerobic capacities. In this way, although contemporary endurance coaches maintain specific performance qualities of their athletes—such as speed—throughout the training year, the pre-competition period is the time to significantly develop and focus on the anaerobic qualities of the athlete, because those capacities are likely to have been less active for a while. "To maximize the athlete's performance the coach must regularly challenge the athlete's physiology, which elevates the ceilings of adaptation and, ultimately, performance" (Noakes, 2005, p. 20). In these

ways, endurance coaches must alternate high and low intensity training in progressively increasing cycles of super compensation to enable the best physiological adaptations (and so performances) to continually occur.

According to contemporary endurance training theory, effective coaches are considered to be able to progressively increase cycles of super compensation, not just throughout athletes' training year, but also athletes' entire careers (Daniels, 2005; Sunderland, 2011). In Harry Wilson's (1988)—coach to the 1980 Olympic 800m champion Steve Ovett—book, *Running My Way*, Wilson described how the publisher of a national German athletic magazine refused his article on the training plan of the then 18-year old Ovett because they thought it was impossible for an athlete to train so lightly, yet perform so well. A few years later, the same publisher turned down a similar article because they refused to believe the then 26-year-old Ovett trained so hard. The point Wilson was making, was that he had successfully and carefully planned a progressive super-compensatory physiological adaptation in Ovett's training, and it was this adaptation that was largely responsible for Ovett's success.

> The coach who understands the bio-energetic properties of physical activity and sport as well as the impact of the timing of the presentation of training stimuli on the timeline for physical adaptation will have a greater chance of developing effective training plans. (Bompa & Haff, 2009, p. 3)

Although endurance running is not an overtly technical sport, the balance of training variables is so delicate and complex that getting this balance right, and achieving the best periodized plan, is seen as a complicated technical process. Thus conceived, the effective endurance coach is continually balancing or planning for the development of the aerobic and anaerobic qualities of the athlete in relation to the energetic requirement of the targeted event. If

the training factors are increased too sharply or too soon, overtraining will occur. If the training factors are increased too sedately, there will be little or limited training effect. Matveyev's (1981) theory has now spawned a variety of different models of periodization, such as linear, random, traditional, step-wise, undulating, over-reaching, single, double or triple super compensation, over compensation, short-to-long, long-to-short. Not all of these models are appropriate to the endurance runner. However, the research that aims to establish which periodization model is the most productive generally shows all of these periodization models to be more effective than random training. Although, precisely how random training has been measured is unclear. As a result, contemporary training theory comprises a number of planning models (e.g., Bompa, 1994; Daniels, 2005; Sunderland, 2011), that have been designed as the best way to help endurance running coaches plan their athletes' training.

The final complicating factor in contemporary training theory is that it is a commonly held view that if the body experiences excessive workloads for excessive periods of time, that body is highly likely to break down with injury. A period of rest from training then has to occur in order for the body's injury to heal. However, this period of inactivity is damaging for the pursuit of performance because in simple terms, the body, as a biological organism stops adapting. Accordingly, the effective endurance coach has to create and manage, or design and implement training plans that progress the best physiological adaptations in the athlete with tremendous care. Therefore, the underlying concepts and factors in training theory are so complex that it is easy to understand why Sunderland (2011, p. 9) stated, "planning a training program is an art."

**2.3 Sports Coach Education Research**

In my introduction, I noted that sports coach education research was once an academic field studied mainly from the perspective of sport psychologists and pedagogists (Potrac et al.,

2013). Sport psychology researchers largely focussed on improving coaching through two processes. Firstly, researchers attempted to describe the actual behaviors of effective coaches (Becker, 2013; Chelladurai, 1980, 1990; Jowett, 2003; Smoll & Smith, 1979, 1996; Smith & Smoll, 1996). Secondly, researchers conceptualized effective coaching as a series of training processes that were best broken down into manageable goals and performance targets. Given the connections between endurance coaching and planning training programs, my interest concerns the research that promoted the notion that effective coaching can be structured, organized and predictable. One example of the need for a systematic approach to the design of training programs was Fair's (1987) coaching model. Fairs proposed that effective coaching should involve the design of dynamic, organized, systematic and deliberate training plans. In other words, effective coaching should involve a series of orderly and interrelated steps. Similarly, Lyle (1999, 2002) argued that the coaching process should be co-ordinated and integrated. Lyle's (2002) coaching model constructed a set of building blocks of coaching skills.

> The assumption of a rational approach and the purposeful integration of the contributing performance variables towards an identified goal result in a need for systematic progression towards those goals. Improvement in performance is intended to be stable, predictable and, of course, manageable. (Lyle, 2002, p. 103)

The intention of Fair's (1987) and Lyle's (2002) effective coaching models was to reduce the unpredictability of performance and gain as much control over the coaching process as possible—control the controllables (Gordon, 2009). Accordingly, effective coaches were conceived to be able, as far as possible, to manage uncertainty and retain control of as many of the factors that influenced performance. Therefore, effective coaching involved gathering relevant

data, being able to anticipate potential problems and having a ready stock of solutions at hand. Consequently, Lyle (1992) argued that the first step of any effective coach should be the plan.

> Planning is a specialized part of the coaching process and the capacity to progress from planning the session to planning for a multi-year cycle is a mark of the developing expertise of the coach. It is important to situate the planning process within the conceptual framework… (it) provides the link between aspirations, intentions and activity. It is a guide to day-to-day activity, provides a template against which changes can be calculated, and is a strategic overview of the process. As one of the defining characteristics of the coaching process, it is an essential element of performance coaching. The criteria for evaluating practice as more or less systematic are firmly rooted in planning-led behavior. (p. 125)

The inter-dependence between effective coaching and planning was an outcome of two assumptions that underpinned modern sporting cultures. Firstly, that the scientific knowledge used to explain the sporting body, and its potential, could be exactly calculated and predicted. For example, Bourne's (2009) doctoral dissertation of the history of contemporary endurance training methods—mirroring the contemporary understanding of effective endurance coaching—reads like an unquestioned appreciation of science. The overriding assumption in Bourne's dissertation is that science equips coaches with the knowledge that guarantees a legitimate application of training methods on the body. Whether or not these scientific methods are appropriate for endurance coaching is not a question that Bourne ever raises. The second assumption that underpins modern sporting cultures is that, as a number of sports historians have shown, sport developed as an activity that was mainly focused on achieving order and control for society (e.g., Burstyn, 1999; Coakley, 2009; Hobsbawm, 1975; Holt, 1989; Mangan, 1973). Therefore, notions

that progressive training variables could be controlled resulted in the perception that progressive training variables should be controlled. With such underpinning control, effective coaches could make evidenced, principled and accurate decisions. Thus, as science provides society with more truths, coaches are able to become more sophisticated planners; science and sport are today seen as an unproblematic, inevitable and a widely welcomed mix.

The planning of training based on scientific principles has become a theme of such importance in endurance coaching that today the best coaches are largely seen as those coaches who access as much scientific support as possible in order to write some of the most detailed plans. The importance of this sophisticated control in the coaching process can be mirrored in the recent attributions of Sir Dave Brailsford, the performance director of the globally successful Great Britain cycling team. One of Brailsford's unique coaching strategies is termed, 'marginal gains'. Marginal gains enable coaches to plan the 'very small details' which on their own are seen to make little difference, but when added together are said to make *the* difference between success and failure. In other words, designing a solid foundational training program requires planning to the level of a myriad of 1% details.

**2.3.1 The socio-cultural critique of planning.** Socio-cultural scholars have for some time argued that coaching is a social activity and, as such, has an inevitably complex nature (Potrac et al., 2013). Unsurprisingly, these scholars have argued that both the development of coaching knowledge, and therefore the development of coaching skills, are much more complicated processes than sport psychology researchers traditionally assumed (Rossi, 1996). Gergen (1991) elegantly argued that the privileging of a rationally conceived, objective and universal system of thought, that underpins much of the sport psychology coach education research, no longer makes sense. In today's world, people are continually bombarded or saturated with information, opinion

and knowledge. Today's world contrasts significantly with the developing modern world that was characterized by face-to-face communities. In the societies of the 18th and 19th Centuries, it took days and weeks to communicate information. In such a world, the belief in objectivity is understandable because the generally slow pace of communication meant that there was a general lack of conflicting opinions. Information, knowledge and possibilities in this world were relatively consistent, coherent and subsequently, slow to change. Alternatively, as communication occurs at a faster pace and opinions inevitably become more varied and subtle, it becomes increasingly difficult to determine precisely what is true, or what is effective. The development of knowledge becomes no more a question of the facts, but questions concerning whose facts, why those facts and not others, what gets accepted as true and why, and, what else could be out there?

Reinforcing Gergen's (1991) important observations about the saturation of knowledge, it has also been argued that language establishes a dichotomous relationship that privileges one knowledge base over another, and so, can result in a choice between the knowledges that are considered essential for coaching (Tinning, 1997). Choosing between appropriate knowledges may limit the effective analyses of coaching processes. As I noted in my introduction (refer to chapter 1.0), research in coach education has also consistently shown that the primary sources of knowledge for coaches are the experiences and observations of other coaches (Cushion, et al., 2003). Socialization within a sport's subculture is said to be crucial to the process of learning to become a coach (Jones et al., 2004). Jones et al., adopted Goffman's (1959) role theory to argue that coaches adopt behaviors that they believe are congruent with the coaching role, while Cushion et al, drew on Bourdieu's (1962) concept of habitus, a set of beliefs and dispositions that guide actions and is tempered by years of experience in the sport. Therefore, certain experiences,

knowledges or practices of coaching may become privileged, and any training practice that remain outside coaches' habitus are likely to be ignored.

As a consequence of socialization within a sport's subculture, coaches develop a general, yet strong sense, of 'how things should be done' that is based on the tried-and-trusted methods that seemed to have worked before (Lyle, 1999). In addition to this socialization, Alvesson and Wilmott (1996) observed that experienced coaches frame issues in ways that privilege their own reasoning, which gives those experienced coaches the initiative in any interactions that take place. Indeed, Strean, Senecal, Howlett, and Burgess (1997) illustrated how difficult it is for coaches to challenge even their most basic coaching assumptions. A form of social editing is said to occur, as experienced coaches eliminate some themes and promote others (Lawson, 1984). Talk, "privileges and legitimizes, and excludes and marginalizes" (Cassidy et al., 2004, p. 117). As a result, effective coaching is "inextricably linked to both the constraints and opportunities of human interaction" (Potrac, et al., 2002, p. 184).

To date, researchers in coach education have routinely failed to consider how coaches' practices have been shaped and informed by a range of socio-cultural-historical constructions of the sort that I have outlined thus far. As a result, it may be that a host of problematic coaching knowledges and practices repeat themselves in generational cycles. When seen in this light, traditional sport psychology models of coaching behavior that theorize effective coaching as a series of reductive causal factors may be problematic (e.g., Horn, 2008). It simply isn't clear, in any way, how the posited causal factors impact on coaches' behavior. Just because coaches display certain behaviors is no guarantee that those behaviors are as effective as they could be, because no one has questioned those behaviors before. Consequently, it is critical to conduct

analyses of effective coaching that attempt to uncover some of the many reasons why coaches behave in certain ways (Erickson & Côté, 2013; Myers et al., 2005).

**2.3.2 Socio-cultural research suggestions.** There is no doubt that coaches can be intelligent, well-meaning and successful people. However, making effective coaching judgments is not as straightforward a process as a number of researchers have assumed (e.g., Boardley, Kavussanu, & Ring, 2008; Holt, 2008; Horn, 2008; Myers, Beauchamp, & Chase, 2011; Paquette, & Sullivan, 2012; Sullivan, Paquette, Holt, & Bloom, 2012). Even with honorable intentions, it may be that coaches are restricted by the dominant understanding of what constitutes effective training. Indeed, Erickson and Côté (2013) recently observed that despite a great deal of coach education research, very little understanding has been uncovered about how effective coaches come to do what they do. By extension, it is also worth noting that coach education researchers know even less about how effective coaches know what they know. In this light, the recent proposition by Côté and Gilbert (2009) of a clearly integrated definition of coach effectiveness may be problematic.

According to Côté and Gilbert (2009), effective coaching is the "consistent application of integrated professional, interpersonal, and intrapersonal knowledge to improve athletes' competence, confidence, connection and character in specific coaching contexts" (p. 316). The problem with Côté and Gilbert's definition is that no account is made for any of the types of knowledges that underpin coaches' practices. In simple terms, Côté and Gilbert's definition of effective coaching is too vague because there is no attempt to understand how knowledge informs practice. As I stated in the introduction, it seems naïve to continue to accept contemporary coaching knowledges as the most effective ways of being without ever questioning them.

A number of socio-cultural scholars have made important suggestions about the development and education of effective coaches that have yet to be developed. For instance, Tinning, Kirk & Evans (1993) called for coaching methods to be exposed, and open to scrutiny and challenge. Cushion et al. (2003) argued that analyses of effective coaching should begin with coaches' knowledge and language, so that these analyses can ultimately lead to an awareness of how coaches' professional subjectivities have been constructed. More recently, North (2013) argued that there is a need to understand how coaches' strategies and reasoning have been shaped by broader structural conditions and forces. Therefore, in the context of my study, it is clear that contemporary endurance training theory has come to be dominated by two themes: physiology and planning, however the effectiveness of these two themes has never been questioned. Indeed, there are a host of aspects of the relationship between physiology, planning and effectiveness that are unclear.

A number of sport sociologists have warned against articulating the body in objective or instrumental ways—as a machine—by highlighting the dangers of drawing the body out of its socio-cultural context (e.g., Cassidy & Tinning, 2004; Chapman, 1997; Denison, 1996, 1999; Heikkala, 1993; Hoberman, 1992; Howe, 2004; Hughson, 2009; Johns & Johns, 2000; Jones, et al., 2004; Kirk, 2002; Markula & Martin, 2007; Miller, 1995; Pronger, 1995; Shilling, 2003; Shogan, 1999; Sparkes, 1998, 2003), yet there are many unexplored aspects of this critique. In other words, these sport sociologists have not drawn on their criticisms in any detailed or rigorous ways for the advancement of endurance coach education. Subsequently, the implications of the body being understood in an objective manner or the consequences of thinking about the sporting body in such a specific way for coaches' practices are simply not known.

Cushion (2011) argued that coaches' knowledges are unlikely to be sufficient to be able to resolve the sorts of performance-related problems that they regularly face because of the dis-connect between scientific and socio-cultural forms of analysis of the sporting body. Along these lines, contemporary understandings of coaches' planning practices may result in the production of coaches who are driven by mechanistic considerations, and therefore, unable to comprehend and adapt to a more complex human socio-cultural context (Cushion, et al., 2003). "There should be no fit between dream and machine: machines cannot dream because imagination is inviolably human. This ought to be a mixed metaphor. But it's not. It's utterly appropriate" (Miller, 1995, p. 6). Yet, unless analyses are conducted that develop the mechanistic criticism of the sporting body, there is no way of knowing how relevant these critiques are. A host of unexplored questions for coach education scholars remain. For example, does the dominance of the themes of physiology and planning automatically lead to the machine metaphor? Do endurance coaches really perceive their athletes as machines? How do we know the machine metaphor is inappropriate in a performance context? What do coaches do when their athletes—as machines—voice opinions, feelings, emotions, aspirations or thoughts that challenge their plans? What do coaches do when their athletes' bodies—as machines—continually break down? What do athletes do when—as machines—they are denied basic human emotions because they have to focus on their training and performance?

There are other elements of the dominant understanding that physiology is the essential knowledge for endurance coaches that are also unclear. Precisely how rigidly applied is the physiological understanding of endurance coaching? What other professionals or knowledges should endurance coaches use to inform their planning practices? What helps endurance coaches alter their plans when problems arise? Are there any associated problems with the formations of

knowledge, or are these formations as effective as they are assumed to be? Does every aspect of this understanding make sense? What are the effects or consequences of this understanding? How is a physiological training plan monitored, or evaluated? In other words, rational approaches to knowledge may have resulted in many taken-for-granted assumptions in endurance coaching cultures, so that it is no longer acceptable to assume that what has gone before are the most effective ways of being and thinking.

It is essential to gain a deeper understanding of how the 'types' of knowledges that underpin endurance coaches' design of their training plans actually work. Moreover, it is important that such analyses uncover what gets talked about, understood, practiced and reinforced, and what doesn't. A number of socio-cultural scholars have argued that conducting research that examines the broader structural emergence of coaches' knowledges will enable the development of education programs that provide coaches with a better ability to critique their own tried-and-trusted methods rather than adopting unproblematic, generic guidelines laid down by others (e.g., Cushion et al., 2003; Cushion, 2006; North, 2013; Rossi & Cassidy, 1999; Tinning et al., 1993; Tinning, 2002). Despite these suggestions there has been a noted absence of research that has either provided evidence of coaches' knowledge, language or reasoning, or provided more specific details about precisely how coaches could become effective critical thinkers. As a result, there remain many unanswered questions about effective coaching in the coach education literature, and coach education continues to focus on developing curriculums that are focused on the application of specific scientific knowledges.

**2.3.3 A post-structural analysis.** In order to answer the many observations, questions and criticisms that I have outlined in the preceding two sections, I believe it is necessary to conduct an analysis that seeks to understand as many of the intricacies of the development of coaching

knowledge and practice as possible. I stated in my introduction, that a consistently repeated theme within socio-cultural coach education research is that coaches' knowledge is constructed and generated under very specific conditions. Inevitably, and it is worth repeating, understanding those conditions is as important as understanding the very concepts produced through those conditions (Phillips & Hicks, 2000). Otherwise, it is easy to see how endurance coaches might become locked into fixed ways of thinking about planning their athletes' training programs, and so perpetuate practices that may be ineffective. By extension, it may be that endurance coaches' practices are inappropriate or even harmful (König, 1995; Shogan, 2007). This moment is an important juncture for the field of coach education, for as I noted in my introduction, whenever a social order can be said to be fixed, stable or unambiguous, then this stability should be understood more as an act of power than an acknowledgement of truth (Seidman, 1994).

I stated in my introduction that traditional analyses in coach education tended to rely on the tendency of post-positivist researchers to reduce and test objective cause-and-effect rationalities (e.g., Boardley, et al., 2008; Holt, 2008; Horn, 2008; Myers, et al., 2011; Paquette & Sullivan, 2012; Sullivan, et al., 2012). More recent socio-cultural coach education research (e.g., Alvesson & Wilmott, 1996; Cassidy et al., 2004; Cushion et al., 2003; Jones et al., 2004; Gilbert & Trudel, 2006; Lawson, 1984; Lyle, 2002; Potrac et al., 2002) has been conducted by scholars who operate within the humanist—interpretive and critical—paradigm. These socio-cultural coach education researchers will therefore ask different questions, and articulate a different analysis from those questions that I am asking. In short, unlike previous examinations of effective coaching, I am attempting to carry out a different analysis. Although both humanist—interpretive and critical—and post-structural analyses emphasize the socio-cultural construction of knowledge, a post-structural analysis operates under a different set of philosophical assumptions. As I stated

in the introduction, a post-structural analysis endeavors to generate understandings of a phenomena based on a more complex interaction of socio-cultural forces and power relations. It is this complex interaction that enables the consideration of how coaches' dominant ways of knowing, talking, thinking and being have impacted on their practices. A post-structural analysis, therefore, has the potential to highlight problems associated with an objective value system's constructed truths and make coaches aware of any potential problems in the practices they commonly take-for-granted. Indeed Denison (2010) argued:

> Until coaches and coach educators acknowledge how power relations have influenced their taken-for-grated assumptions about how to coach and how to educate coaches, respectively, it will be difficult to identify alternatives to challenge the many dominating discourses that surround sport and coaching and subsequently advance the practice of coaching. (pp. 490-491)

Within the post-structural paradigm, Michel Foucault's work adopted a unique conception of power. For Foucault, power was relational, productive, ever-present and so was indelibly linked to knowledge. As a result, it was essential that researchers attempted to understand the complex operation of power in as many ways as possible in order to conduct an effective analysis. In addition to a unique articulation of power, Foucault's work is the post-structural work that is most centrally focused on the production of the body. One of Foucault's (1977) tasks was to "expose a body totally imprinted by history and the process of history's destruction of the body" (p. 148). Foucault articulated a number of ways in which the body comes to be invested with a particular pattern of beliefs and habits through the complex operations of both power and knowledge (Foucault, 1980). Accordingly, a Foucauldian analysis can focus on coaches' knowledge, language, relations of power and an understanding of the body, and so has the

potential to address the many critiques made by socio-cultural sports coaching scholars concerning the construction of coaches' knowledge and practice.

The application of Foucault's work in sport studies is a burgeoning academic field that has generally attempted to uncover a range of problematic features in modern sport and fitness practices. The types of topics raised can be broadly categorized as follows: the disciplining practices in competitive sport that produce unwelcome effects for athletes (Barker-Ruchti & Tinning, 2010; Johns & Johns, 2000; Shogan, 1999); the construction and negotiation of a range of identities such as the ideal feminine body (Markula, 1995), masculinity (Pringle & Hickey, 2010; Pringle & Markula, 2005) or the "fat" running body (Chase, 2008); and the application of technologies of self as 'transformative' in fitness and health (Lea, 2009; Markula, 2004) or ethical coaching (Pringle & Crockett, 2013). The only scholars to apply Foucault's work in coach education research adopted isolated aspects of Foucault's theoretical framework, although each article pointed to a rich future if researchers were able to adopt Foucault's work in a theoretically more comprehensive manner (Denison, 2007, 2010; Denison & Avner, 2011).

In line with my argument in this literature review, Denison (2010) was able to show how, when he was a coach, his practices were not flexible enough to consider other evidence as useful because his practices were based on a "strict understanding of progress and improvement informed presumably by technical, bio-medical training manuals" (p. 466). In commentating on Denison's (2007) analysis of his re-interpretation of a former coaching problem, Pringle (2007) argued that Foucault provided researchers with a set of theoretical concepts that could be used to examine the "construction of individual identities, the workings of power and the circulation of meanings" (p. 386). In this way, a Foucauldian analysis can enable a coach education scholar "to ask new questions, think differently and allow for the creation of new understandings and

possibilities" (Pringle, 2007, p. 392). In turn, Foucault's work may ultimately give coaches the ability to re-think common sporting problems, and become aware of some of the potential taken-for-granted consequences of their practices.

**2.3.4 Michel Foucault.** Michel Foucault's work has had a considerable impact on a wide range of academic disciplines. The online academic database, ISI Web of Sciences, states that Foucault is the most cited author in the wide field of humanities. It should be no surprise then, that Foucault's work continually sparks much debate among scholars. In spite of these debates, Foucault (1983) was clear that his main interest was in discovering how human beings acquire knowledge about themselves and their practices, "a history of the different modes by which, in our culture, human beings are made subjects" (p. 208). 'Subject' was a term that for Foucault had two meanings. Humans are subject to someone else's control, but are also made a subject of knowledge that ties one to an identity by a self-knowledge. The pair of meanings places the subject in complex relations of power that both "subjugates and makes subject to" (p. 215).

For Foucault, human beings became objects of knowledge that subsequently turned them into the subject of that knowledge in three main ways. Scientific classification that objectified the "speaking subject… the productive subject, the subject who labors" (Foucault, 1983, p. 208); dividing practices that separated and classified people, such as the mad and the sane; subjectivation, the way a human is turned into a subject. For Foucault, knowledge of humans and their activities created categories, which itself created identities, which finally imposed a law of truth on individuals. And humans, unaware of the categorization because they are unaware of the co-dependent construction and circulation of knowledge and power, become used to looking at the problems that exist within the various created categories. Foucault (1988a) referred to the problems that are *inside* the various categories of meaning as the immediate enemy. But for

Foucault, the real enemy was the forces and powers that produce those categories of meaning—the chief enemy. Thus, Foucault's work aimed at providing humans with the freedom to establish the chief enemy. It was this freedom that gave humans a better awareness of their present circumstances.

> The political and social processes by which the western Europeans' societies were put in order are not very apparent, have been forgotten or become habitual. They are a part of our most familiar landscape, and we don't perceive them anymore. But most of them once scandalized people. It is one of my targets to show people that a lot of things that are a part of their landscape—that people think are universal—are the result of some very precise historical change. All of my analyses are against the idea of universal necessities in human existence. They show the arbitrariness of institutions and show which space of freedom we can still enjoy and how many changes can be made. (Foucault, 1988a, p. 11)

A Foucauldian analysis of endurance coaches' planning practices may therefore bring a new perspective to the effective coaching of endurance athletes. In attempting to understand the production of knowledge—*regime du savoir*—of endurance coaching, a Foucauldian analysis may articulate generally accepted beliefs and practices as problematic while illuminating others. A Foucauldian analysis may enable a re-thinking of what was previously considered universal by endurance coaches, thereby making visible that which was previously invisible. In so doing, a Foucauldian analysis may illustrate the need for endurance coaches to develop new ways of thinking about the body, performance and development, and in this way make a significant contribution to the production and development of endurance coaches and athletes. In other words, for endurance coaches to be effective they don't just require more tools in their tool-box. Rather, they need a better understanding of how their tools actually work as well as a better understanding

of the structures and systems they work on. In turn, through Foucault, coach educators may be able to help endurance coaches better evaluate their knowledge and understanding of how they plan and develop their athletes' training. The objective of my study, therefore, is to adopt a Foucauldian analysis to provide endurance coaches with an awareness of the construction of their knowledges that have created meaning in contemporary endurance planning practices, and so enable them to think differently.

**2.4 My Study**

In summary, I believe it is crucial to examine endurance running coaches' understanding of planning through a Foucauldian lens. In this chapter I have tried to show how a number of specific social, cultural and historical conditions and contexts have led to the subsequent naturalization of endurance coaching theories and concepts, namely an emphasis on physiological planning as the only way to develop endurance runners. Furthermore, the general lack of research in the academic coach education literature that seeks to examine the knowledge and practices that form coaches' understanding of their everyday realities, means that it is essential to conduct an analysis that aims to establish the overall framework of coaches' understanding. An analysis that establishes, in-depth, what coaches currently know and why they know it. Or in more simple terms, an analysis that can explore the limits, boundaries and frames of endurance coaches' knowledge and practices. As Foucault (1972) showed, and I have repeatedly stated, understanding the specific social and historical conditions that gives rise to meaning is as important as understanding the very concepts produced by those conditions. A Foucauldian analysis of endurance running coaches would seek to analyze how knowledge functions and how knowledge is related to power, because it is this interaction that determines the everyday practices of

endurance coaches at the highest levels of performance. In more simple terms, how do knowledge and power interact and spread into the social body to create meaning?

As a result, my central research question is as follows: How do high-performance endurance running coaches understand how to design and implement their athletes' training plans? A Foucauldian analysis has the ability to make coaches aware of interpretations of designing training plans that would usually be inaccessible. In this sense, current power relations or taken-for-granted practices no longer need to be seen as secure but as being subject to the possibilities of change. It is crucial then that the first step in this process of change is to conduct an analysis that can ascertain the forces and powers that have created meaning in contemporary endurance planning practices, in order to establish whether there are problems with these meanings. In order to achieve such an analysis, my next task is to clearly articulate the relevant Foucauldian theoretical tools and concepts that have the capacity to answer my research question. Therefore, in the following chapter I intend to articulate Foucault's theoretical framework to illustrate how I can examine in sufficient depth the limits, boundaries and frames of high-performance coaches' knowledge and practices.

## 3.0 A Foucauldian Theoretical Framework

In the preceding chapters I outlined how specific social and historical conditions led to a naturalization of a selected knowledge—physiology—that underpins contemporary endurance training theory. Accordingly, endurance coaching theories and concepts have come to be seen as true, and therefore the only ways that coaches can be effective. As a result, endurance coaches may be locked into particular patterns of thinking about the endurance body. Importantly, these patterns of thinking have not been questioned before, and may contain problematic and taken-for-granted assumptions that come with a number of unintended consequences. The development of truly effective endurance coaches requires an analysis of how traditional patterns of thought impact on endurance coaches' understanding of planning. I have suggested that Foucault's theoretical concepts are one way to establish the overall framework of high-performance endurance coaches' understanding of planning. How then can I use Foucault's work to examine in sufficient depth the limits, boundaries and frames of high-performance coaches' knowledge and practices? Foucault was able to articulate the privileging of certain ways of being because he developed a theoretical framework that outlined how knowledge and power interacted and spread into the social body in ways that create meaning for everyday life. In this way, Foucault (1983) sought to determine the production of knowledge—*regime du savoir*—of a subject, any subject, such as planning endurance training programs.

It is inevitable that with such grand aims, in my context establishing the overall framework of high-performance endurance coaches' understanding of planning, that the nature of any Foucauldian analysis is likely to be deeply contextual and messy. A constant feature throughout Foucault's work was that any analysis would require an ongoing conceptualization of research findings and a constant rethinking of past work. For Foucault, the development of ideas about a

research topic could only occur if the researcher continually asked difficult questions (Mills, 2003). Foucault (1988a, p. 14) wrote, “do you think I have worked (like a dog) all those years to say the same thing and not be changed?” For Foucault, it was the processes of ongoing critical thought—problematizing—that would enable researchers to find more instructive ways of seeing the ‘things’ that society often assumes to be self-evident, such as physiologically dominated periodization models as the only way to prepare endurance athletes.

I stated in the previous chapter that Foucault (1983) was clear that his main interest was in discovering how human beings acquire knowledge about themselves and their practices. For Foucault (1970) the societal transition to the modern age brought with it an accompanying attempt to understand (wo)man as both an object and subject of study. Under these new societal conditions, the sciences were ‘created’ to explain, categorize, normalize and ultimately control any human behavior, such as endurance coaching. “It was upon this threshold that the strange figure of knowledge called man first appeared and revealed a space proper to the human sciences” (Foucault, 1970, p. xxiv). The complementary development of society’s social institutions—the workplace, schools, universities, hospitals, the military, the media—helped disseminate and articulate knowledge in a way that placed people into different categories, such as the normal and abnormal. Therefore, modern socio-cultural-historical processes justified and legitimized the control of certain groups of people.

For Foucault, human beings became objects of knowledge that subsequently turned them into the subject of that knowledge in three main ways. Scientific classification, that objectified the “speaking subject… the productive subject, the subject who labors” (Foucault, 1983, p. 208); dividing practices, that separated and classified people, such as the mad and the sane; and subjectivation, the way a human is turned into a subject. In order to understand how the sciences

and dividing practices worked together within complex arrangements of power to construct how (wo)man knows her/himself, Foucault developed a number of theoretical tools. From a chronological perspective, the first of these tools was Foucault's attempt to understand the notion of discourse when he wrote *The Order of Things* and *The Archaeology of Knowledge*. 'Attempted' is an appropriate term because Foucault believed discourse to be a deeply complex concept. It was inevitable, he thought, that developing a coherent, all-encompassing understanding out of such inherent complexity was unlikely to be satisfactory. However, that did not mean one should not attempt to gain some coherence of what discourse is and how it worked. Therefore, the first of Foucault's concepts that I intend to outline is discourse, and because discourse was indelibly linked to power, I will follow by outlining Foucault's unique conception power. It is my final intention in this chapter to illustrate how Foucault elaborated in significantly more detail the different ways that power operates through the modern social body to "limit the field of possible actions" (Markula & Pringle, 2006, p. 38).

**3.1 Discourse**

Foucault (1972) outlined his conception of discourse in the *Archaeology of Knowledge* by attending to what he called the "methodological field of history" (p. 7). For Foucault, the term discourse had a fluctuation of meanings that he felt added to its potential meanings; "treating it sometimes as the general domain of all statements, sometimes as an individualizable group of statements, and sometimes as a regulated practice that accounts for a certain number of statements" (p. 80). Markula and Pringle (2006) provided some clarity on Foucault's (1972) meanings of discourse. Firstly, discourse can be understood as *all* utterances and statements that have *meaning* or *effect* of some kind. Further, discourse refers to the fact that some statements form a *grouping* around a particular topic. Finally, discourse also acts by producing unwritten frames—rules and

structures—that produce particular statements. Discourses control what can be understood about a subject but can also act to obscure what can be understood about a subject because in framing what is said discourses draw boundaries around a particular subject that often omits alternatives. In this way, discourse can be seen as a regulated set of statements that work with other statements, sometimes in predictable ways and sometimes via a set of rules that produce some statements, but not others. Moreover, some statements are circulated widely, while others are restricted, and it was this discursive operation of power that Foucault (1972) was interested in: the discursive 'rules of production'. Therefore, for Foucault, discourse was the analyzable unit of knowledge and was inextricably linked to power.

> We must make allowance for the complex and unstable process whereby discourse can be both an instrument and an effect of power, but also a hindrance, a stumbling block, a point of resistance and a starting point for an opposing strategy. Discourse transmits and produces power; it reinforces it, but also undermines it and exposes it, renders it fragile and makes it possible to thwart it. (Foucault, 1978, p. 101)

Discourse is not as simple as translating reality, instead it is the system that structure the way reality is perceived. Discourse is something that constrains our perceptions (Mills, 2008). It is difficult to think of expressing oneself in ways outside of discourse, because to do so one would be, by definition, outside of comprehension and reason (Young, 1981). Therefore, the types of statements that continually work together to maintain the assumption that effective endurance coaching should be a physiological, structured, rational, objective, systematic, planned set of processes are tremendously powerful. Foucault was interested in not just the rules of discourses' production but also the expression of discourses' power, or the way discourses worked to control what can be said about a subject.

**3.1.1 Framing what can be said.** In *The Order of Discourse* (1981) Foucault described a series of different techniques that enabled discourses to frame the production of meanings. The first set of techniques Foucault called 'exclusionary'. The three exclusionary techniques that framed meanings in discourse were *taboo*, a distinction between the *mad* and the *sane*, and a classification of *true* and *false*. The culmination of these exclusionary techniques made talking about certain subjects difficult because experts defined those subjects as being a certain way. Experts are generally considered the only people able to speak the truth about a subject while those people who are not in positions of power can easily be dismissed or defined as insane, especially if those people talk about taboo subjects.

In addition to the exclusionary practices Foucault (1981) elaborated four 'internal' procedures of exclusion that distinguished those people who were able to speak about a subject and those who were not. *Commentary*; the grouping or categorization of all the texts written by a particular *author*; the particular *discipline* the text is written in; and finally, the *rarefaction* of the speaking subject is a limit on who can say something. Collectively, these exclusionary techniques enabled discourses to circulate according to prescribed rules of function, only the statements that are held to be true, or that fit with other statements that society authorizes, will be circulated (Mills, 2008). Hence, discourses work in powerful ways to prevent alternative ideas circulating, even if those ideas are perfectly reasonable. These operations of discourse may be why Foucault (1978) was able to observe that, "sex was driven out of hiding and constrained to lead a discursive existence" (p. 32). In other words, discourse works to limit or restrict understanding.

**3.1.2 Discourse—the methodology.** For Foucault (1972, 1978) discourse was inextricably linked to power, and as a result Foucault saw the history of thought as a series of discrepancies, or a series of developments that "seems to be seeking, and discovering, more and more

discontinuities, whereas history itself appears to be abandoning the irruption of events in favor of stable structures" (1972, p. 6). The aim of Foucault's (1972) text, *The Archaeology of Knowledge*, was to provide researchers with the ability to seek the principles and consequences of the evolution of the historical knowledge of his or her topic of interest, such as effective endurance coaching. For Foucault, history is far more complex than the neat linear progression of ideas and developments that many historians would suggest. As Foucault (1977) observed in his essay, *Nietzsche, Geneaology, History*, words do not keep their meaning, ideas do not retain their logic and desires do not always point in a single direction. The book, "belongs to that field in which the questions of the human being, consciousness, origin, and the subject emerge, intersect, mingle and separate off" (p. 16). Truths are not self-evident, a whole range of institutions—universities, schools, the media, government—work to exclude statements they characterize as false and maintain in circulation those they believe to be true. Foucault (1972), therefore, felt his task was to uncover the history of the human sciences.

Foucault had started the process of uncovering the history of the human sciences in his preceding book *The Order of Things* (1970). In this book, Foucault examined systems of thought at three different times in history: the Renaissance, the Classical Age and the Modern Age. In so doing, one discursive concept that is significant for my analysis was the *episteme*. The episteme was the group of discursive formations—common groups of statements about a topic—the complex set of relationships between those formations, and the rules by which those formations are generated at any one time in history.

> A world-view, a slice of history common to all branches of knowledge, which imposes on each one the same norms and postulates, a general stage of reason, a certain structure of thought that the men (sic) of a particular period cannot escape. (Foucault, 1972, p. 191)

The episteme was therefore a set of constraints and limitations that were imposed on discourse at a particular time. For example, my review of literature (refer to chapter 2.0) detailed how modern conceptions of sport circulated scientifically based (objective and true) knowledges, rational technologies and organized and structured institutions (Andrews, 2001). Accordingly, Foucault (1972) felt it was more important to comprehend the relationships between what is known and how that is produced rather than the sum of everything that can be known. A field of knowledge could never be truly recovered to its origin because of the excesses of its own speech, and through the workings of power. Power is a theoretical concept, therefore, that has a unique understanding in both the post-structural paradigm and Foucault's theoretical framework. As a result, it is imperative to outline the Foucauldian notion of power because it is so central to understanding Foucault's theoretical framework. It is to this end that I turn next.

**3.2 Relations of Power**

Despite power being such a fundamental theme of Foucault's work, Foucault (1987) himself was clear, "I hardly ever use the word 'power' and if I do sometimes, it is always a short cut to the expression I always use: the relationships of power" (p. 11). Foucault was trying to distance himself from a more traditional understanding of power as something that an individual or institution has in order to repress or constrain others. Foucault outlined his conception of power as being completely different to a repressive power in the book, *The History Of Sexuality Vol. 1* (1978). In the move from ancient to modern society, the workings of power significantly changed. Modern power advanced into society and branched out, "penetrating further into reality" (Foucault, 1978, p. 42). Accordingly, for Foucault (1978) power was a strategy, power was a verb not a noun, power does something, power was constantly performed, power was a 'multiplicity of force relations', it was omnipresent.

> Power… is produced from one moment to the next, at every point, or rather in every relation from one point to another. Power is everywhere, not because it embraces everything, but because it comes from everywhere… it is the name that one attributes to a complex strategical situation in a particular society. (p. 93)

There are a number of important consequences associated with Foucault's conceptualization of power. The first observation to make is that for Foucault power was 'intentional and nonsubjective', meaning that power is difficult to locate and explain. Accordingly, Foucault (1978) argued that no-one invented power or formulated it, there were no "headquarters that presides over its rationality" (p. 95). In contrast, power was "an implicit characteristic of the great anonymous, almost unspoken strategies" (p. 95). As a consequence, one was always 'inside' power, there was no escaping it. This means there will always be some form of resistance to power, but because of power's relational aspect there would be a 'multiplicty of points of resistance' and they would be present *everywhere*. With such a definition, each moment of resistance of power was a special case. Further, because power has an inherently complex nature, resistance will not necessarily be reactionary. Instead "the points, knots, or focuses of resistance are spread over time and space at varying densities" (p. 96). Therefore, rather than being a set of relations, power is more like a net—a 'capillary-like network'. "Just as the network of power relations ends by forming a dense web that passes through apparatuses and institutions, without being exactly localized in them, so too the swarm of points of resistance traverses social stratifications and individual unities" (p. 96). As a result, one cannot start an analysis of power as operating from a center and spreading out in force. Instead, Foucault (1978, 1980) described how an analysis should start from the bottom and work up, an ascending analysis of power.

> Starting, that is, from its infinitesimal mechanisms, which each have their own history, their own trajectory, their own techniques and tactics, and then see how these mechanisms of power have been—and continue to be—invested, colonized, utilized, involuted, transformed, displaced, extended etc., by ever more general mechanisms and by forms of global domination. (Foucault, 1980, p. 99)

More traditional descending analyses of power result in and consequently justify the easy and inevitable exclusion of the *not normal*, such as the endurance coach who doesn't plan in detail. Alternatively, because power was not easy to observe or pin down, relationships of power come to be "among the best hidden things in the social body… (and our task) is to discover them in their material play" (Foucault, 1988b, p. 119). This means that drawing out and linking the main themes of the development of coaching knowledge is not enough on its own. An effective Foucauldian analysis of endurance coaching has to be deeper, more rigorous and more complex. From a Foucauldian perspective, it is critical to analyze how relationships of power are played out in coaching contexts and scenarios in order to be able to understand the limits, boundaries and frames of endurance coaches' knowledge and practices. In other terms, an effective analysis has to develop an understanding of the local and subtle forms of power, and the way power is negotiated by endurance coaches and their athletes: "the sphere of force relations" (Foucault, 1978, p. 97).

As I have already stated, for Foucault, one of the main ways power was played out was through discourse. Foucault (1978) brought discourse (that produce truth) into the relationship with power and asked how they worked together to produce each other. How did local power relations make possible discourses of truth, and conversely, how are these discourses used to support power relations? It was in discourse that 'techniques of knowledge' and 'strategies of power' were joined and played out. The final consequence of Foucault's understanding of power

is that it was a productive force. Power 'produces' the truths that shape our realities and inevitably 'produces' our *selves*. This is what is important to understand and study if one is to conduct a Foucauldian analysis of coaching: both effective coaching discourses and the way power operates in coach-athlete relationships and groups—the social body.

> What I mean is this: in a society such as ours… there are manifold relations of power which permeate, characterize and constitute the social body, and these relations of power cannot themselves be established, consolidated nor implemented without the production, accumulation, circulation, and functioning of a discourse…We are subjected to the production of truth through power and we cannot exercise power except through the production of truth. (Foucault, 1980, p. 93)

**3.2.1 Linking knowledge with power and discourse.** A question that is relevant to my study is, how does power work with discourse to create an individual's (coach's) day-to-day practices? According to Deleuze (1988), Foucault's close friend, *The Archaeology of Knowledge* (1972) and *Discipline and Punish* (1995) were significant turning points in Foucault's work. The former articulated a distinction between two types of practical formations, "the one 'discursive', involving statements, the other 'non-discursive', involving environment" (Deleuze, 1988, p. 31). The two formations, although different from one another, are mutually dependent. Coaches' practices change their form because of coaches' knowledge. While coaches' knowledge change their system by virtue of coaches' practices. "The [formations]…grapple like fighters, force one another to do something or capture one another, and on every occasion constitute 'truth'" (Deleuze, 1988, p. 67). As I have already stated, in the books *The History of Sexuality Vol. 1* (1978) and *Discipline and Punish* (1995) Foucault elaborated in much greater detail the different ways that power operates through the social body to "limit the field of possible actions" (Markula

& Pringle, 2006, p. 38). Foucault called these processes of power, 'technologies of domination', and they worked by making individuals strive towards achieving socially constructed norms that individuals believed to be true. It is an understanding of the technologies of domination that I turn to next.

### 3.3 The Technologies of Domination—Disciplinary Techniques

Even though Foucault's (1995) aim in *Discipline and Punish* was to chart the changes in modern society's approach to punishment, from the abolition of torture to the modern penitentiary, he began the elaboration of his disciplinary theory with a description of the soldier. As with every new aspect in modern society, the body was now the object and target of power. As a result, the 'soldier' and later the 'athlete', was something that could be made. As I described in chapter 2.0, the athletic body is conceived as pliable and compliant, it can undergo radically managed change (Miller, 1995).

> The great book of Man-the Machine was written simultaneously on two registers: the anatomo-physical register, of which Descartes wrote the first pages… and the techno-political register, which was constituted by a whole set of regulations and … calculated methods relating to the army, the school, and the hospital, for controlling or correcting the operations of the body. (Foucault, 1995, p. 136)

However, for Foucault (1995) the analysis and manipulation of the body came at a cost. The subjection, use, transformation and improvement of the body necessary for increasing performance (utility), rendered the body docile. A relation of docility-utility had been imposed, and it was these processes that Foucault (1995) termed the 'disciplines'.

> Discipline increases the forces of the body (in economic terms of utility) and diminishes these same forces (in political terms of obedience)… on the one hand, it (the body) turns

> into an ‘aptitude’, a ‘capacity’, which it seeks to increase; on the other hand, it reverses the course of the energy… and turns it into a relation of strict subjection. (p. 138)

The disciplinary processes were so powerful that Foucault (1995) utilized a huge number of terms to convey the completeness of their hold. Disciplinary processes were a ‘general formula of domination’, a ‘new scale of control’, a ‘subtle coercion’, an ‘infinitesimal power over the active body’, an ‘uninterrupted, constant coercion’; ‘a policy of coercions’, ‘a calculated manipulation’, ‘a machinery of power’, a ’political anatomy’, a ‘mechanics of power’; a ‘multiplicity of often minor processes, of different or in and scattered location’, the ‘blueprint of a general method’; ‘always meticulous, often minute, techniques’; a ‘new micro-physics of power’, ‘small acts of cunning’, ‘subtle arrangements, apparently innocent but profoundly suspicious’. Disciplinary processes made ‘the meticulous control of the operations of the athletic body possible and assured the ‘constant subjection of its forces’. In short, “discipline was a political anatomy of detail” (Foucault, 1995, p. 139).

In using the word ‘detail’, Foucault (1995) illustrated the importance of the finer details of the body’s organization that are ordinarily taken-for-granted by the organizers, such as army generals, prison wardens, school teachers or endurance coaches. With such fine details, disciplinary techniques can ensure a complete fixing or control over the body, but importantly only make sense when the techniques are articulated in their entirety. Many of the techniques appear self-evident and to be without them simply wouldn’t make sense. However, it is only when considering the totality, or the complete combination of the small details, that one can start to get a sense of the strength of the technique’s hold. Therefore, my analysis of endurance coaches’ knowledges and practices should start from the small details. It is the foundation without which it would be impossible to understand anything. Foucault (1995) described,

> the meticulousness of the regulations, the fussiness of the inspections, the supervision of the smallest fragment of life and the body and of the body will soon provide…an economic or technical rationality for this mystical calculus of the infinitesimal and the infinite. (p. 140)

Athletic bodies, as living organisms, enter whole new machineries, hence the reference to political anatomy—anatomo-political power. Foucault's (1995) intention was to map a series of examples of the ways in which the techniques were adopted in the main social institutions, including endurance coaches' practices. Accordingly, it is my aim to outline these techniques in order to demonstrate how they may be used in my analysis. It follows that if the disciplinary techniques are evident in endurance coaches' practices, then Foucault's (1995) assertion that the body is rendered docile may be problematic for endurance coaches and athletes.

**3.3.1 The art of distributions.** The first of the disciplinary concepts that I intend to use in my analysis was the 'art of distributions', or the way in which institutions' were able to instill discipline through the re-organization of *space*. There were a number of ways in which the re-organization of space was pertinent for Foucault (1995). Firstly, discipline identified a number of specific places where specific things were too happen—*enclosure*—the "protected place of disciplinary monotony" (p. 141). Enclosure was the most efficient way of organizing the soldier's or convict's training as it enabled physical adaptations (production) to become more concentrated. Enclosure "derive(s) the maximum advantages and… neutralize(s) the inconveniencies" (p. 141). However, the enclosed space also needed to be organized in flexible and detailed ways. An organization of space that is achieved by *partitioning*. Within these organizational processes, each convict had a specific place within the greater space, in order to be judged and supervised in relation to his or her stage of transformation. "It [partitioning] was a procedure, therefore, aimed

at knowing, mastering and using. Discipline organizes an analytical space" (p. 143). These techniques may well be observable among endurance coaches who, as I demonstrated in the review of literature, have to organize a systematic and structured physiological progression of their athletes.

Thirdly, alongside the ability to judge and supervise, specific spaces had to have a *function*, a 'useful' space. Adam Smith (1776) had already outlined how the future wealth of nations was based on the efficient organization (division and specialization) of labor. Each worker became an expert in one area of production, one that suited the worker the best, and by not having to switch tasks during the day, the worker's efficiency significantly increased. "All these serializations formed a permanent grid: confusion was eliminated" (Foucault, 1995, p. 145). By organizing space in functional ways, it was possible for workers to be judged against each other, thereby classifying them according to their abilities. Therefore, *rank* was added to the disciplining techniques. "It [rank] individualizes bodies by a location that does not give them a fixed position, but distributes them and circulates them in a network of relations" (p. 146). Athletes may be positioned according to their stage of physical adaptation in relation to their performance targets. The combination of these disciplinary techniques, Foucault (1995) observed, enabled coaching spaces to become not just 'learning (coaching) machines' but also machines that supervised, hierarchized and rewarded. Supervision was achieved because space was organized via 'cells, 'places' and 'ranks', all of which guaranteed a better organization of the body.

As a result of the detailed organization of space, Foucault (1995) argued that rational classifications were established in the 18$^{th}$ Century through the drawing up of tables 'of' and 'for' any 'thing'. For example, today endurance coaching manuals use tables that illustrate how athletes should perform different length training workouts, at varying intensities to achieve specific

outcomes (e.g., Daniels, 2005). The table can define the speed and length of training repetitions (athlete movements) that are to be analyzed. The table becomes "both a technique of power and a procedure of knowledge… it has the function of characterizing (and consequently reducing individual singularities) and constituting classes (and therefore of excluding considerations of number)" (pp. 148-149). By virtue of the spatial distribution and organization of the body, Foucault (1995) called discipline 'cellular'. The cellular distribution of the body enabled the classification of movements, and the drawing up of tables of knowledge.

**3.3.2 The control of activity.** Having set controls for the way space organizes production, the next disciplinary task was to *time-table* it. Religious authorities had always adhered to temporal organization but what was new in the modern order was that time became divided into smaller, more 'minute' segments. In this way, the quality of time could be assured; a "totally useful time… in which the body is constantly applied to its exercise" (Foucault, 1995, pp. 150-151). The body, therefore, is seen to be constantly progressing towards an ultimate performance. Foucault (1995) elaborated other temporal disciplining methods. *The temporal elaboration of the act* was the sorts of movements and gestures that were essential for performance. These movements were broken down into more precise elements designed to make the soldier, student or convict more efficient in his or her movements, a 'collective and obligatory rhythm' that is both constraining and sustaining. Precise movements enables time to penetrate 'into' the body and leads to a third temporal disciplinary technique.

The *correlation of the body and the gesture* extended the temporal control of movement because the disciplinary technique ensured that each gesture had to be the most precise or the most efficient possible, or the 'best relation'. Even the smallest gesture or feature of whatever drill that was being taught becomes disciplined, as the general moulds each soldier into an

appropriately disciplined military posture. The extension of the correlation of the body and gesture, was that the same precision could be added to the manipulation of whatever object (that one sees in endurance athletics, e.g., athletic strap, brace, shoe insert, stopwatch) the body was using, a *body-object articulation*; or the 'instrumental coding of the body'. Finally, Foucault (1995) argued that all the temporal principles worked collectively to create a final temporal principle of *exhaustion*. Wasting time is now impossible, "from time, ever more available moments and, from each moment, ever more useful forces" (p. 154). Each teaching moment becomes intensified; time is not used, instead time is exhausted. Maximum speed, efficiency and progression in the body can now be ensured.

Foucault (1995) stated that the body's subjection to temporal disciplinary techniques forces the body to become objectified. The body starts to become a mechanical body. The body is exposed to new forms of power, and consequently, knowledge (subjection). The body is now inserted into the 'natural machinery' of institutions where all activities are subject to disciplinary control. As a result, the body "manipulated by authority… of useful training" (p. 155) is "required to be docile in its minutest operations" (p. 156). In this way, the organized requirements of the machine-like (disciplinary) institutions become naturalized. Disciplinary power's temporal organization codes all activities and prescribes all movements, and therefore is "not only analytical and 'cellular', but also natural and 'organic'" (p. 156). More importantly, disciplinary power comes to be the most basic element of human life because disciplinary techniques are normalized. The disciplinary strategy becomes effective because humans cannot consider *any other way of being*.

**3.3.3 The organization of genesis.** Having established the ways in which disciplinary techniques were used to organize space and time, the pressing question for modern society was

how best to 'capitalize' on these processes. For Foucault (1995), military organization was the best example of how the organization of time and space was exploited. Time was to be broken down and divided into specific *successive or parallel segments*, or more simply 'one bit at a time'. These segments of time were re-organized to form an *analytical* plan, a 'succession of elements of increasing complexity'. The segments were finalized, organized, and structured. In order to 'test' an individual's progress the segments concluded with an *examination*. A final stage of disciplinary organization entailed drawing up a *series of series of exercises* that were suited to an individual's needs—a 'disciplinary polyphony of exercises'. "Each individual is caught up in a temporal series which specifically defines his level or his rank" (p. 159). The times for specific training could therefore become specialized and so coaches' training plans can be defined.

In endurance training, different stages of training achieve different physiological adaptations that are monitored and evaluated by graded exams. Disciplinary techniques enable coaches to be able to design the most efficient plans that enable their athletes to train in the most efficient manner. The most illustrative example of the genetic disciplinary processes is the contemporary adoption, in a number of sports including track and field, of the Long-Term Athletic Development Plan (LTAD). Within this framework, young athletes are considered to develop skills at specific or prime 'windows of opportunity'. If athletes miss these development opportunities it can be assumed they are unlikely to be successful. Or as Foucault (1995) noted, "a whole analytical pedagogy was being formed, meticulous in its detail… and also very precocious in its history" (p. 159).

For Foucault (1995), the division of activities produced a linear time where all progress oriented to a fixed, stable point. At the same time modern society upholds a general ideal of 'progress'. As a result, what Foucault (1995) called the 'genesis' (evolution) of individuals and

the general progress in society, combines to form a new power of domination. Therefore, exercise—any 'body' tasks that are repetitive and different but *always* graduated—can become both continuous *and* constraining. Accordingly, progress became aimed at fixed points.

> The striving of the whole community towards salvation became the collective, permanent competition of individuals being classified in relation to one another….(a) collectively useful aptitude ….(that) served to economize the time of life…. a subjection that never reaches its limit." (p. 162)

Crucially, athletic development becomes a gradual and careful transformation, which guarantees the good behavior of the athlete.

**3.3.4 The composition of forces.** The new disciplining techniques in modern society no longer required large numbers of people to effectively organize society. Better organized, smaller units—a "whole calculated practice of individual and collective dispositions, movement of groups or isolated elements" (Foucault, 1995, p. 163), constituted new productive machinery that was to be maximized. Discipline combines these cellular, organic and genetic forces in order to develop an efficient machine. This combination of forces occurred in a number of ways. For example, in the military an individual soldier is but one *element* of the platoon. The individual's placement is therefore more important than any of his or her individual qualities. Foucault (1995) stated that the individual's placement was a functional reduction of the body because the soldier, pupil, convict or athlete is now defined as part of a multi-segmentary machine. The performance of each body must be held in perfect *time* with the performance of the others in the group to ensure the maximum force of all the parts of the machine. Accordingly, there was *not one moment in life* in which one could not extract forces. Therefore, each soldier was continually involved in a permanent utilization of training that was defined by his or her generals. In order to achieve this

combination of force, the component parts of the platoon need to respond to *precise commands* that are clear, concise and do not need elaboration. Pre-arranged commands need to be perceived and responded to immediately. In this way, generals combine forces and construct *tactics* for the platoon. Foucault (1995) called the final aspect of the disciplines *combinatory*, because of the composition of all the forces.

In summary, Foucault (1995) was able to define disciplinary techniques as being cellular, organic, genetic, and combinatory. The move to a modern society necessitated a 'military dream' as *the* general blueprint for *every* aspect of society, such as endurance coaching. To ensure the efficient and maximal organization of the training group, the disciplinary techniques had to include knowledge of *all* the things that made up its various parts. The main focus of the coach can now be the "meticulously subordinated cogs of a machine… permanent coercions…to indefinitely progressive forms of training… to automatic docility" (p. 169). Having outlined some of the essential disciplinary techniques that most easily spread from one to another, Foucault (1995) stated that the main aim of disciplinary power was to train the mass of confusion into a 'multiplicity of individual elements'. "Discipline 'makes' individuals; it is the specific technique of a power that regards individuals both as objects and as an instrument of its exercise" (p. 170). For Foucault (1995) disciplinary power was derived from what he regarded as three simple instruments.

**3.3.5 Hierarchical observation.** The first instrument of disciplinary power that Foucault (1995) articulated was hierarchical observation. Disciplinary techniques are clearly visible; they need to be to in order to be effective. Comparing the development of hierarchical observation to the new inventions of the telescope, the lens and the light beam, Foucault (1995) asserted that in the perfect institution, all power emanates from exact observation. The new problem for modern

architects was how to create spaces that afforded control via a single gaze. A gaze that can see all. For this reason, in the 18th Century circular spaces were designed, replacing the square and rectangular shaped spaces of the past. The rewards of production in industrial society dramatically rose and the subsequent machinery of production required greater numbers of workers. Even the slightest incompetence repeated often could be costly. As a result, supervision became harder to achieve, and so, became entrusted to only those with a special relationship with the owners. At the same time, observation had to be discreet so that it did not suffocate those being viewed; an intense, continuous supervision that became a 'decisive economic operator'. The greater the rewards, the more intense and discreet the surveillance, "an.. anonymous power ..supervisors perpetually supervised" (pp. 176-177). Hierarchical observation is an observation that is everywhere, and consequently is able to maintain power with ease. Crucially, because hierarchical observation functions 'largely in silence', it is an instrument of power that does not need coercion or force to fulfill its needs. Even more critically, the individual is unaware of hierarchical observation's operation.

**3.3.6 Normalizing judgment.** Normalizing judgment organizes a system of assistants to distribute a new world of punishment, "a punishable, punishing universality" (Foucault, 1995, p. 178). Everything could now be punishable, 'a whole micro-penality'. Normalizing judgment is such a powerful disciplinary instrument because the list of potential offences include non-conformity to whatever norms are established. Punishment is artificial, its function is corrective. The role of punishment is to now reduce the gaps between deficiencies and preferred behaviors. Punishment makes the athlete better, or faster. "To punish is to exercise" (p. 180). Punishment is also only one part of the disciplinary instrument, the other parts being the rewards that encourage athletes. Normalizing judgment endorses binary opposed values of the permitted and forbidden,

so that students can become judged according to the truths defined by the teacher. Crucially, students are made to need to be like one another as normalizing judgment instills a constant pressure on the individual to conform. Punishment, compares, differentiates, establishes rules and standards, measures, hierarchizes, and lastly, excludes. “In short, it normalizes” (p. 183).

**3.3.7 The examination.** Combining both disciplinary instruments (hierarchical observation and normalizing judgment), the examination works by establishing a continual visibility that judges the transformation of the individual. In simple terms, competitions enable the perpetual comparison of endurance athletes. Although the aim of sport is to win, in endurance running this aim is transferred to the ability to run fast times which ultimately gives one the capacity to win. The running track, as a standardized competitive space, and the watch, that standardizes time, enables athletes to be compared by the times they run over the distances they race. And so, the body is subject to a new invisible power that objectifies it. The body is engaged in a mass of writing, in which it is ‘captured and fixed’. For example, endurance coaching manuals and training diaries are just a small part of the mass of documents that enable an effective monitoring of any part of the coaching process. The mass of documents Foucault (1995) argued, was initially designed to track down any deserters from the army. The documents also enabled comparative fields of knowledge to be better organized; classifications established, categories formed, averages and distributions determined, norms fixed. The body became a describable, and therefore, an analyzable object. The body can now be “under the gaze of a permanent corpus of knowledge” (p. 190). The body can be described, judged, measured, and compared in order to be trained, corrected, normalized, and excluded; a ‘procedure of objectification and subjection’.

> It is the examination which, by combining hierarchical surveillance and normalizing judgment, assures great disciplinary functions of distribution and classification,

> maximum extraction of forces and time, continuous genetic accumulation, optimum combination of aptitudes and thereby, the fabrication of cellular, organic, genetic and combinatory individuality. (p. 192)

The disciplines produce the power of individual difference, and in so doing produce *reality*, "domains of objects and rituals of truth" (p. 194). Foucault's (1995) next task was to consider how the ritual of truth could be achieved.

**3.3.8 The Panopticon.** The answer to the question as to how society could define truths, according to Foucault (1995), was to use a binary division to mark and individualize exclusion. This exclusion legitimated a whole set of techniques for measuring, supervising and correcting the abnormal individual. The 'architectural figure' that enabled the marking of exclusion to happen, was Jeremy Bentham's design for the prison—the *Panopticon*. "Morals reformed—health preserved—industry invigorated—instruction diffused—public burthens lightened—economy seated, as it were, upon a rock—all by a simple idea in architecture" (Bentham as cited in Foucault, 1995, p. 39). The Panopticon was a model that enabled prison wardens to effectively instill a state of conscious and permanent visibility in all the convicts, and so was a model of power that defined everyday power relations. Whenever a particular form of behavior needed to be imposed on any group or institution, the panoptic mechanism should be used (Foucault, 1995). The Panopticon was "a way of making power relations function in a function, and of making a function function through these power relations" (p. 207). The Panopticon became the new general principle of the political anatomy that ensured disciplining relations could spread thoughout the entire social body. As a result, Foucault (1995) claimed a disciplinary society was formed, a 'whole disciplinary generalization'.

***3.3.8.1 The design of the Panopticon.*** At the center of the prison was a tower with wide windows and on the outside was a building divided into cells. With backlighting, the tower was always visible, as was the small shadows from the cells. The resulting effect meant that the supervisor could see each individual convict, who in turn could see only the supervisor but not his or her peers. For Foucault (1995), the invisibility of the supervisor ensured order because the division of the cells prevented collaboration between the convicts. The crowd of convicts effectively became a collection of separated individuals. The panoptic design ensured two key characteristics. First, was the characteristic of visibility, in which the convict could not escape looking at the central tower where he or she knew the supervisor was. The second characteristic of the panoptic design, was that the design was unverifiable because the convict never knew if he or she was being looked at, only that he or she may be looked at, at any time. Magnificently, power spreads to the minds of the individual and grips them in conformity. “In the peripheric ring, one is totally seen, without ever seeing; in the central tower, one sees everything without ever being seen” (Foucault, 1995, p. 202). Consequently, it does not matter who the supervisor is anyone can operate the machine. The transparency of the panoptic scheme means that power is significantly more efficient because it increases the number of people who can be controlled and decreases the number of people who are needed to operate the power.

Disciplinary techniques and instruments become a type of power that is able to operate a whole set of procedures, which may be taken over by any/all institutions—the military, workplaces, schools, hospitals, athletic training environments. The aim of the disciplines is of maximum efficiency in every aspect of an ever-growing, modern, capitalist society—the maximum intensity for the lowest cost. “In short, to increase both the docility and the utility of all the elements in the system” (Foucault, 1995, p. 218). Panopticism is the technique that enables a

widespread coercion of individuals. Foucault (1995) observed that the Enlightenment may have invented the liberties but it also created the disciplines. Panopticism is a machinery that is 'immense and minute', that affords 'panopticisms' every day, and that is given respectability and legitimacy by science, a 'set of physico-political techniques'. Therefore, what was new in the 18th Century was that the combination and generalization (and increase) of disciplinary techniques (power) and the formation of knowledge "reinforce each other in a circular process" (p. 224). For Foucault (1995) the middle ages invented the judicial investigation, while the 18th Century invented the techniques of discipline. "Is it surprising that prisons resemble factories, schools, barracks, hospitals, which all resemble prisons?" (p. 228)

**3.4 The Confessional Techniques**

As I stated in the review of literature (refer to section 2.3.5), Foucault (1983) was clear that the main interest in his work was in discovering how human beings acquired knowledge about themselves and their practices, "a history of the different modes by which, in our culture, human beings are made subjects" (p. 208). 'Subject' was a term that, for Foucault, had two meanings; humans are made a subject of knowledge, and so, are subject to someone else's control that ties one to an identity by a self-knowledge. The pair of meanings places the subject in complex relations of power that both "subjugates and makes subject to" (p. 215). Both forms of subjection occurred through confessional techniques.

> Tell what one is and what one does, what one recollects and what one has forgotten, what one is thinking and what one thinks he is not thinking …Imagine how exorbitant must have seemed the order given to Christians at the beginning of the thirteenth century, to kneel at least once a year and confess to all their transgressions, without omitting a single one. (Foucault, 1978, pp. 60-61)

According to Foucault (1978), a further procedure that Western societies relied on for the production of truths was the confession. The confession evolved from the middle ages and worked by giving people a conscience. The confession was so deeply ingrained in society "that we no longer perceive it as the effect of a power that constrains us" (p. 60). So infective, so taken-for-granted is the confession, that it is even debatable whether it should be included as part of my analysis. For Foucault (1978), the confession was a 'ritual of discourse' in which 'the speaking subject is also the subject of the statement'. The confession unfolds within a relationship of power because it occurs in the presence of an authority who had the ability to judge, punish, forgive, console and reconcile the confessor. Foucault (1978) detailed how sex had become a science, a set of practices created by the "interference of two modes of production of truth: procedures of confession and scientific discursivity" (p. 84). By confessing, the confessor can achieve internal modifications so that he or she becomes exonerated, redeemed, purified, unburdened, liberated, and closer to salvation. Throughout the middle ages, the confession was an annual activity. However, the rise of protestantism, the counter-reformation and the changes towards modern society (that for Foucault (1978) included the growth of 19th Century medicine) the confession spread until it was employed in a whole series of relationships.

> Think of that obscure partisan, seven centuries later, who had come to rejoin the Serbian resistance deep in the mountains; his superiors asked him to write his life story and when he brought them a few miserable pages scribbled in the night, they did not look at them but only said to him, "Start over and tell the truth." (pp. 60-61)

There were five analytic steps of the confession that work to produce the truths to which the *self* has to become. The combination of the physical examination and personal history of the symptoms of any illness, led to the confession becoming an acceptable scientific observational

technique (Markula & Pringle, 2006). The first confessional step, the *personal history* enabled a description of abnormality to act as a "decipherable sign or symptom" (Foucault, 1978, p. 65). "The postulate of a general and diffuse causality" (p. 65), was the second confessional step. This *general causality* in the personal history worked to create every 'bad' thing that the confessor was confessing. In other words, the generality in the description of whatever the cause of the 'bad' thing was, created a 'limitless danger' because any deviation from normal, no matter how innocent, or whether created by accident or chance, could be explained by the overall illness. The third principle was of *latency*. Latency concerned the things in the analysis that "tried to stay hidden" (p. 66). The vagueness and generality in the description of the 'bad' thing meant there would always be a 'thing' that the confessor did not know was a bad thing—a hidden 'thing'. The act of confessing produces new things that one didn't realize were necessary part of the problem. The fourth principle was therefore the *interpretation* of the expert or the authority, "the work of producing the truth was obliged to pass through this relationship if it was to be scientifically validated" (p. 66). The confession was only complete if it was verified by the interpretation of the 'expert'. "The one who listened was… the master of truth" (p. 67). The individual is no longer able to know about him or herself. What he or she knows, or needs to know, now has to pass through the interpretation of the expert. The final confessional step was the *therapy* itself, the "medicalization of the effects of the confession" (p. 67). The aforementioned confessional steps "were recodified as therapeutic operations" (p. 67). Adherence to the therapy will, eventually, enable the 'truth' to heal. As a result, the ties that bind individuals to the 'truths' established in the society are strengthened and reinforced.

### 3.5 Summary

Foucault's theoretical tool-kit has the capacity to complete a sufficiently rigorous examination of the knowledge and practices of endurance coaches because the tool-kit can articulate, in-depth, ways of knowing and practicing that were previously unconsidered. The current dominant ways of knowing about how to design and implement endurance training plans is not natural or pre-given, but is the product of complex human actions and interactions, human history, society and culture (Rapley, 2007). By articulating these circumstances in detail, via Foucault's theoretical toolkit, I believe my study can enable coach educators to help coaches "to ask new questions, think differently and allow for the creation of new understandings and possibilities" (Pringle, 2007, p. 392). In so doing, Foucault articulated a method that can examine whether there are any problematic features of endurance coaches' knowledge and practices. More specifically, a Foucauldian analysis has the capacity to establish the limits, boundaries and frames of high-performance endurance coaches' knowledge and practices. My next step, therefore, is to articulate precisely how my Foucauldian analysis can be achieved. In so doing, it is my aim in the next chapter to describe in detail the methodological tools that I intend to use to answer my research question.

# 4.0 Methodology

## 4.1 Philosophical Underpinning of the Project

I have repeatedly stated throughout my dissertation that my research is located within a post-structural paradigm. Paradigms are conceptual frames of reference that provide the ontological (how the researcher sees the world) and epistemological (how that view guides the gaining of knowledge) frames that guide the researcher (Kvale, 1996). Such clarity enables researchers to provide a justification for their methods and the subsequent claims that the research makes. In so doing, the research makes sense (Markula & Silk, 2011). Post-structuralism was born out of a response to the academic work of Ferdinand de Saussure, a linguist, and Claude Levi-Strauss, an anthropologist. These scholars had a significant impact on their respective academic fields by espousing 'structural' theories, or the search for underlying patterns of thought (structures) in language, structures that create meanings in all forms of human activity. The French philosophers, Derrida, Lacan, Foucault and Deleuze, are generally considered as articulating the most powerful theories that, although different, were united in their opposition of the universal nature of structuralism. This opposition is today referred to as post-structuralism.

In the absence of modern universal systems of knowledge or generalizable theories, in post-structural thinking there is an emphasis on perspective, context and multiple meanings of reality. Individual's inner lives are filtered through a multitude of lenses, such as language, gender, social class, race, and ethnicity. Therefore, post-structural scholars completely reject the idea of one true objective reality in the world. In contrast, "it is the structures of language that speak through the person" (Kvale, 1996, p. 52). Language, therefore, takes on new emphasis in contemporary modern society because it has to become commercial—a productive commodity—in orientation, and is also supported by huge ongoing technological changes. As a result, only

certain terms will become dominant and so problematic contradictions are likely to become an integral feature of language. Post-structural scholars believe that it this privileging of terms that creates meanings for everyday life. Instead of being fixed, meanings are therefore constantly changing and subject to a complex array of influences. Inevitably, the emergence of some terms over others is related to the structures or workings of power.

> And in this context, I say that our role as thinkers is to deepen our understanding of what goes on in language, to critique the vapid idea of information, to reveal an irremediable opacity at the very core of language. (Lyotard, 1989, p. 218)

Post-structuralist scholars in contrast to scholars from other paradigms, believe that understanding how power works or operates in society is essential to understanding the meanings that people attach to their lives. Rather than seeing power as being held by one group of people over another in order to create dominance and subordination as interpretive (critical) scholars would, power is believed to be relational, ever-present and therefore indelibly linked to the social construction of knowledge. Thus, a post-structural stance requires a more elaborate understanding of socio-cultural-historical conditions in society, and the ways in which power works through those conditions. It is these contextual conditions in society that will have an inevitable impact on the creation of knowledge and understanding.

Language is not the only site for analysis for the post-structuralist. As the social theorist who carried a unique conception of the operation of power in his work, Foucault (1977) was concerned about trying to understand the ways in which power was enacted on the body in order to "expose a body totally imprinted by history and the process of history's destruction of the body" (p. 148). This understanding—how power works on the body—also occurs through discourse, and collectively leads to the normalization of certain practices. In this way, the interpretive ideal that a

human can be authentically free or self-determined is highly questionable. Alternatively, power works in complex and meticulous ways, and so humans are actually fixed into specific roles that limit their understanding of possible actions. Raising awareness of the operations of power is therefore crucial to helping individuals become more effective. These processes of awareness enable post-structuralists to consider how their research outcomes can have maximum ethical impact.

**4.1.1 The purpose and meaning of my study.** The post-structural paradigm has enabled me to approach the question of effective coaching in endurance running in specific ways. I was not interested in understanding what high-performance endurance coaches are. Rather, I was interested in how effective endurance coaches come to know what they know and do what they do. In more simple terms, I was interested in attempting to establish the overall framework of coaches' understanding. As a result, my central research question was as follows: How do high-performance endurance running coaches understand how to design and implement their athletes' training plans? A post-structural paradigm has enabled me to address some of the taken-for-granted assumptions that currently pervade both the endurance coaching and coach education literature because the post-structural paradigm provided me with a theoretical framework with which to understand the social construction of the knowledge and practices of effective endurance coaching. As a result of the modern formation of coaching knowledge that I outlined in the first two chapters, I have argued that coaches may be stuck in a problematic cycle of inherent contradictions that might be limiting their effectiveness. Instead of viewing the knowledge that underpins effective coaching as universal and fixed, a post-structural analysis has great possibilities for articulating the boundaries of understanding, and in so doing, highlighting some of the problems that potentially lie within the framework of understanding. In these ways, the

current assumptions that the modern knowledge and understanding of the endurance body as being *de facto* may be dis-credited, with space then opened for the consideration of the possibilities of other knowledges and practices.

In order to create this space for the consideration of other knowledges and practices, it was crucial that I conducted an examination of what is currently known about planning effective endurance training programs. A post-structural paradigmatical framework therefore, not only shaped my critiques of the existing effective coaching literature and my subsequent research aims, but also worked to shape the methods with which I could address my research question. It was the intention of my Foucauldian analysis to analyze how knowledge functioned and interacted with power, because it is this complex relationship that determines the everyday practices of high-performance endurance coaches. How do knowledge and power interact and spread into the social body to create meaning? Accordingly, my intention was to study effective endurance coaching in a manner that would generate complexity, and abandon simplistic binary divisions that so often tend to structure endurance coaches' thinking about effective coaching. In what follows, I will detail my choice of methods that enabled me to answer my research question.

**4.2 Sampling**

In broad terms, sampling refers to the cases of data collection that should be included in a research project (Gibson & Brown, 2009). A researcher has to decide the best way of examining his or her population, which in my case was endurance coaches. Having identified the population, it is incumbent on the researcher to identify a sample that is representative of that population, within realistic and practical parameters of accessing the chosen sample. This type of sampling is called purposive sampling (Patton, 2002). The aim of purposive sampling is to select research participants or settings that possess the characteristics that are relevant to the research (Gibson &

Brown, 2009). According to Markula and Silk (2011), there are no clear or hard rules when it comes to the sampling of research participants; nor is there a required set number of research participants. Logic held that my sample should reflect information-rich cases for in-depth study. Research participants should possess the characteristics, roles, opinions, knowledge, ideas or experiences (or whatever else) that are capable of providing rich data; a "pre-determined criterion of importance" (Patton, 2002, p. 94). At this moment, it is important to note that it was never my intention to recruit an exclusively male set of participants. Unfortunately, there were less female endurance coaches in my sample and the one female coach who expressed interest in my study was unable to participate when I was gathering data.

**4.2.1 Sample criterion.** I recruited a sample of 15 experienced male high-performance endurance coaches to participate in my study in the United Kingdom (U.K.) and the United States (U.S.) (refer to Table 1). The U.K. was the main location for my participants because I was living in the U.K. when I carried out this study. Although, 15 is a comparatively small participant size for a comprehensive research project, each participant was required to participate in approximately four to five hours of data collection (refer to section 4.3.2 for a specific breakdown of the time needed for data collection). Therefore, the sample size enabled me to acquire rich and in-depth quality data (Sparkes, 2000). The coaches that participated had to satisfy my pre-determined criterion in order to be involved in the study. These coaches had to have coached at least one international endurance athlete or made a significant contribution to endurance coach education, such as writing a book, speaking at or leading a conference, being a mentor coach or writing articles or coach education materials. I used my previous experiences as a former U.K. international endurance athlete to contact several coaches who I had past contact with. Table 1 describes the participants in more detail (pseudonyms are used).

*Table 1*. Participant Information

| Pseudonym | Years coaching | Status of athletes coached | Status when an athlete | Additional information |
|---|---|---|---|---|
| Steve | 13 | World/Olympic Champion/Medalists, Numerous international Athletes | World Record Holder | |
| Keiran | 18 | World Champ Finalist, Two International Athletes | Former International | Training Partner of Former World Record Holder/Olympic Champion |
| Patrick | 50+ | Olympic Medalist/World Record Holder, Numerous International Athletes | | National Coach Educator |
| Lauren | 15 | One International Athlete | | Coach Educator, Written Book |
| Dennis | 10 | Numerous International Athletes, Advisor to World/Olympic Champion/Medalists | Former Olympian | |
| Aaron | 12 | Numerous International Athletes | Former Olympian | National Coach Educator/Mentor |
| Thierry | 15 | World/Olympic Finalists | Former Olympian | National Coach Educator |
| Ian | 40+ | Numerous International Athletes | | International Coach Educator |
| Carl | 24 | Three National Champions, Numerous International Athletes | | |

| | | | | |
|---|---|---|---|---|
| Jack | 40+ | Three World Champ Medalists, Numerous International Athletes | | Former National Coach Educator |
| Alex | 46 | European/Commonwealth Champions, Olympic/World Medalists/Finalists, Numerous International Athletes | | |
| Theo | 10 | Olympic/World Finalists, Numerous International Athletes | Former Olympian | National Coach Educator |
| Tony | 50+ | Former World Record Holder, Numerous International Athletes | | Former National Coach Educator |
| Oliver | 14 | Five International Athletes | Former World Championship Participant | |
| Lukas | 8 | Junior World Medalist | | Former National Coach Educator |

From some of these contacts, I used a snow-ball method—where the participants suggested, and in some cases contacted future recruits—to increase the sample size.

**4.3 Methodological Practices**

In my review of literature I argued that a thoroughly detailed, rigorous and sufficiently deep Foucauldian examination of coaching knowledge and practices was missing from the coach education literature. Such an examination could be achieved by utilising what I termed a 'theoretically-complete' Foucauldian analysis. What I meant by the term 'theoretically complete' was an analysis that adopted the appropriate theoretical concepts and methodological tools that could provide enough detail to develop a coherent understanding of what was currently known about the design and implementation of endurance coaches' training plans, and so answer my research question. I outlined the theoretical tools that I drew on in the previous chapter. I now discuss the methods that I used to answer my research question.

**4.3.1 Data collection.** A post-structural focus is on the "interpretation and negotiation of the meanings of the social world" (Kvale, 1996, p. 52). Individuals, are seldom able to give full explanations of their actions or intentions; all individuals can offer are accounts, or stories, about what they did and why. It is unlikely that a single research method would be able to grasp the subtle variations in ongoing human experience (Denzin & Lincoln, 1998). Naturalistic researchers obtain data through participant observation and qualitative interviewing, which are sometimes done separately and sometimes done together (Rubin & Rubin, 2005). Therefore, as a post-structural researcher, I opted to combine methods because of the inherent complexities involved in establishing the meanings of my participants' experiences. Indeed, combining methods make sense when considering the oft noted observation by qualitative researchers that what people say they do, and even believe they do, differs markedly from what they actually do (Atkinson & Coffey, 2002). Therefore, Markula and Pringle (2006) advised post-structural researchers that well-conducted, rigorous studies can help strengthen the findings.

**4.3.2 Procedures.** The inherent complexities in understanding the meanings of participants' experiences caused Markula and Pringle (2006) to advise researchers who undertake a post-structural analysis to look for the participants' contradictory discourses that govern their perceptions. Indeed, Foucault (1972) would encourage an examination that attempted to account for as wide a range of complexities—the overlaps, tensions and relations—as possible. The default position of the Foucauldian researcher is to challenge dominant ways of thinking or practicing, (i.e., outside of reason or normal). However, it is important to note that it was not my aim to make endurance coaches feel that the ways of practicing that have taken years of work to achieve should be undermined. I did realize that a Foucauldian project had the potential to undermine long-cherished beliefs. As a result, there existed a tension between my need to 'tread

carefully' and also conduct valuable, insightful research. In order to best address all these aforementioned tensions, I opted to use two sets of interviews and the observation in a specific order—initial interview and observation, proceeded by a follow-up interview. It was expected that the initial interviews would require 90 minutes of participation, and the follow-up interviews would require one hour. Each observation of a workout was expected to last for two hours. Therefore, each participant was required to experience four to five hours of data collection. As a result of the in-depth procedures I was better positioned to explore as many of the tensions that arose with each participant as possible. Traditionally, interviewing is such a dominant qualitative method that it could be seen as leading investigations and producing data that could be supported and strengthened by observation (Atkinson & Silverman, 1997; Markula & Silk, 2011). However, my intention was to use the data gathered from the initial interview and the observation in order to enable a follow-up interview to take place.

**4.3.3 Interviews.** According to Atkinson and Silverman (1997) we live in an interview society. Interviews are an endemic part of every social body or apparatus. Whenever something needs to be known interviews are seen as being the most efficient means by which to ascertain it. As a result, Fontana and Frey (2000) stated that interviewing has become "a means of contemporary storytelling" (p. 647). Unsurprisingly, interviews are seen as a staple method within qualitative research and, as a result, interviews have come to assume many forms or variations that exist on a continuum from structured to unstructured. Each variation of interviewing has its own strengths and weaknesses that often relate to the paradigmatic assumptions of the research. Markula and Silk (2011) cautioned against a perceived over-use of interviews by stating that researchers should endeavor to ensure that the choice of interviewing is seen as an appropriate

way of answering the research question rather than a common sense notion that qualitative researchers should engage in interviews.

Qualitative interviews are conversations in which a researcher gently guides a conversational partner in an extended discussion. The researcher is able to elicit depth and detail about the research topic by following up on answers given by the interviewee during the discussion (Rubin & Rubin, 2005). Thus, the goal of interviewing is depth rather than breadth of understanding of the research topic. One way the researcher can achieve this standard is by exploring the context in and around the participant's world. By exploring the context of the participants' worlds I attempted to deal with the complexity of multiple, overlapping, and sometimes conflicting themes, and I paid attention to the specifics of meanings, situations and history. Overall, qualitative research interviews require more intense listening than normal conversations, a respect for and curiosity about what people say, a willingness to acknowledge what is not understood, and the ability to ask what is not yet known. Therefore, I acknowledged that my research design and questioning had to remain flexible to accommodate new information, to adapt to the actual experiences that people have and to adjust to unexpected situations. In order to achieve these standards, I developed a semi-structured interview guide that supported the initial or first interview. Therefore, I established main questions, probes and follow-up questions. However, according to Rapley (2004), a researcher doesn't necessarily need to use any of the pre-prepared questions. The point is to follow the interviewee's talk, work with him or her and not strictly delimit the talk to a predetermined agenda. Put simply, if the interviewee feels comfortable, he or she will find it easier to talk to the interviewer. As a result, the most insightful advice about interviews that I followed was:

> In the one-to-one interview you start level in not knowing where you are going… You do it your own way. You experiment. You try this, you try that. With one person one's best, with another person another. Stay loose, stay flexible. (Turkel, 1995 cited in Rapley, 2004, p. 30)

The aim of my research was to establish the overall framework of endurance coaches' understanding of how they design and implement their training programs. Therefore, I designed an interview guide that aimed to uncover as much of the participants' understanding of their knowledges and practices of planning as possible (refer to Appendix A). To some degree these guiding questions also changed as a result of the unfolding nature of the data collection. The first theme of my interview guide was based on dominant practices and aimed to establish how the participants had gained their knowledge of planning, and what that knowledge was. The second theme, design and implementation, further explored the nature of the participants' knowledge and practice. The third theme, problem-solving, aimed to uncover any problematic features of the participants knowledge and practice. The final theme, limitation and constraints, was designed in order to gain a more probing, or deeper understanding of any problematic features of the participants' approaches to planning their athletes' training programs.

**4.3.4 The role of the researcher during interviews.** Although, I have discussed many of the ways that I conducted myself during both sets of interviews, such as attempting to elicit as much relevant talk from the participants as possible, there is an additional feature of interviews that was important to address. An obvious deficiency, and therefore critique, of conducting interviews is the tendency for bias and influence to contaminate the communication between researcher and participant. However, as a post-structural researcher, it would be impossible for me to claim objectivity and neutrality in my communication. Nonetheless, it is incumbent on me to

declare my potential for bias in the interviews. I am a former international middle-distance athlete who competed for 25 years. As a result, I have a deep knowledge of endurance running cultures and coaches' behaviors and knowledges. I perceived my previous experiences as an advantage in the communication that occurred in the interviews. With such a depth of knowledge and experience I was able to gain the participants' respect and I could ask more penetrative questions.

**4.3.5 Observations.** Within qualitative research it is widely understood that observation can yield a more complete understanding of events than reliance on interviews about those events alone (Atkinson & Coffey, 2002). Observation makes it possible for the researcher to check descriptions and note discrepancies, in short to become more aware. Observation provides an allowance for the tendency of participants to see actions, especially cherished ones, through rose-tinted spectacles. Therefore, observation is a method that enables the researcher to uncover information that other research methods can't reach. However, Gibson and Brown (2009) cautioned that it was important to make a distinction between the situation where a researcher is a passive and known observer looking in at the setting, as I was, and one in which a researcher attempts to be an active participant within it. My aim was to use the observations to understand the experiences of the participants that I learned through my first interview in relation to Foucault's theoretical framework. In this way, I hoped to gain as deep an understanding of the settings, practices, behaviors and meanings that the participants gave to their activities. Therefore, each observation was of a workout that participant had planned. For some participants the location of their workout was a running track, for others it was a local playing field, while for others it was a local woods or park. As with the interviews, I aimed to 'tread carefully' during the observations and attempted to withdraw into the background to allow the participant to carry on as close to normal as possible. Most of the participants not only had large numbers of athletes in their

training groups, but also had a number of 'other people' at each of the workouts, such as parents, supporters, helpers, assistant coaches, and sport scientists. Consequently, I was able to observe the participant interact with a number of different people. During my observations I aimed to find examples of the operations of as many of Foucault's theoretical techniques as possible. Whenever I noticed an aspect of the observation that related to Foucault's theoretical framework and my research question, I recorded my observation on my digital voice recorder. In addition, I followed Gibson and Brown's (2009, p. 102) recommendations for researchers' conducting unstructured observational research:

- What features of the observed actions were interesting? What things in particular did you notice? Why were they interesting/relevant? How do those things relate to other things that you have observed in other instances?
- Was there anything you didn't understand? Would those things help you to formulate your research interests? Is there someone who can explain them to you?
- If you have a recording of the observation, what happens when you show insiders the things you observed? Do they see things you didn't see? Do you see things that they don't see? Do they agree with your observations? If not, why not?
- How do the different observations you have conducted compare with each other? Are the data similar or different? Do they support the same suppositions /ideas/rationales?

**4.3.6 The role of the researcher during observations.** One of the oft-cited criticisms of observational research is that viewing the social world as a series of unproblematic events is an assumption. The observer may adjudicate between a real description of events and a distorted one, and as a result evaluate 'degrees' of distortion in his or her description of events (Atkinson & Coffey, 2002). A further caution of observational research is that although the researcher is able to

participate directly in the settings, these processes may be off-set by a likelihood that the researcher can contaminate the setting by his or her very presence. Equally, he or she could become too much of a participant and lose his or her overall research focus (Atkinson & Coffey, 2002). To counter these dangers, it is incumbent on the researcher to be 'actively reflexive' throughout the data gathering process. Active reflexivity can be achieved via recognition that the researcher is a part of the social events and processes that he or she is observing. Both the participants and I were part of the same meaning-making process. Marcus and Fischer (1986) also voiced reflexive concerns about the ways in which the researcher influences the study, and in so doing, provided some additional suggestions. To minimize the potentially contaminating influence of the researcher, Marcus and Fischer (1986) suggested making assumptions, premises and problems as clear as possible. The multiple perspectives of the participants should be reported, and any differences and problems encountered (that are not always clear) discussed and confronted, rather than glossed over. I attempted to strike a balance of reflexivity, awareness and sensitivity to the needs of the participants and the research settings by withdrawing into the background as much as possible. From my distanced position I was able to speak freely into my voice recorder without being heard by the participant or his athletes. Therefore, I was able to describe, as accurately as possible, the events, contexts and any pressing themes that emerged. In addition, I attempted to politely engage in conversation whenever I was approached.

**4.3.7 Follow-up interview.** The aim of conducting a follow-up interview was to enable me, as the researcher, to be able to ask as many of Gibson and Brown's (2009) recommended questions and explore as many of the complexities—taken-for-granted assumptions and contradictions that were uncovered in the initial interview and participant observations—as possible. In this way, I hoped to be able to gain a deeper understanding of the many, inevitably

complicated, processes involved in constructing the participants' knowledge and practice of planning their athletes' training. Therefore, it was not appropriate to develop an interview guide for my follow-up interview, because the questions were so dependent on my Foucauldian interpretation of the participants' responses in the initial interview and the observations I had made during the participants' workouts. As my data-gathering and analytic focus progressed, the questions I asked in the follow-up interviews started to follow my developing theoretical/analytical structure that I could see was beginning to unfold. In short, I became interested in those 'things' that related to the developing theoretical/analytical structure. As a result, I actively pursued those theoretical/analytical issues in the follow-up interview.

It was inevitable that without the knowledge of Foucault's theories, there were many occasions when I was aware I had asked my participants questions that were generally considered as coming out of 'left field'. Therefore, I had to proceed with great respect for the participants' beliefs and values. Although it is important to note that while I also acted in this careful way during both the first interviews and observations, in the follow-up interview I was asking experienced, knowledgeable and successful coaches to consider different ways of thinking about practices that those coaches are generally considered as experts. Consequently, this situation had the potential to produce uncomfortable moments. As a result, I phrased many questions to my participants indirectly such as, "I wonder if"; "I get a sense that"; "What would you think if I suggested?" "You're already very good at that but how do we make more coaches aware?" "I wonder if you would indulge me?" "I wonder if we could explore together?" I found that generally the participants enjoyed the chance to 'get dirty' with ideas and practices they are extremely passionate about. This meant that often my participants took some time to process some of the questions, suggestions or exchanges that took place in their interviews. Subsequently, the

most fruitful part of the interview process was often at the very end of the interview when the participant wanted to return to discuss issues that he had clearly been ruminating on.

**4.3.8 Data recording and transcription.** I used a digital recorder to record all the interview and observational data with the participants. During the observations I noted the research contexts, scenarios, settings, rapport and any small observations that related to my research question and theoretical framework. Using a digital-recorder gave me the freedom to be more flexible and record detailed information. I downloaded a copy of the electronic data on my home Mac, and transcribed all the interviews and observation notes as soon as possible after each interview and observation. Doing the transcriptions on my own meant that I developed a much closer connection to the unfolding data, a technique that had important ramifications for my data analysis. Both Rapley (2007) and Markula and Silk (2011) observed how transcribing interviews from oral form, (where conversation has a natural flow and rhythm because it is supported by contextual factors such as setting, body language etc.) to written form, can be a 'jarring' process because the latter form simply cannot provide an adequate account of the many contextual factors involved in communication. Verbal ticks and pauses are an integral part of conversation that I didn't capture in the transcription, unless it was crucial to the analysis. For example, a lengthy pause and hesitation while the participants considered a more thoughtful response could help illustrate that the answer may not have been as straight-forward as the text assumed.

**4.3.9 Pilot.** By its nature, qualitative research is iterative, messy, contextual and therefore rarely straightforward (Gibson & Brown, 2009). Any manner of problems can arise when humans interact in unnatural contexts. In order to get a better understanding of potential problems with any aspects of my data-gathering process (e.g., asking challenging questions, gaining the (co)participant's trust, understanding the conventions of the social spaces), I engaged in two pilot

interviews/observations. This involved an initial interview/participant observation/follow-up interview with two coaches that met my selection criteria and that I had good access to because I knew them well from my own athletic career. These pilot experiences gave me a greater understanding of the boundaries within which it was appropriate for me to operate, and significantly more confidence as a researcher. More specifically, my more focussed sense of how to proceed with the other participants included understanding how some questions were more useful than others in the initial interview. For example, I realized that some questions in the different themes of my interview guide were similar (e.g., from the third and fourth themes, the questions, how often do your plans go smoothly? What would help with the implementation or smoother operation of your plans?). Therefore, the pilot interviews lost some flow, as the participants repeated information that they had stated earlier.

**4.4 Systematic Data Analysis**

As qualitative research moves further away from the post-positivist paradigm, there is a decreasing expectation that researchers engage in detailed or specific analytic techniques (Markula & Silk, 2011). Rather than provide a detailed verification of the data gathering process to ensure objectivity, post-structural researchers need to draw on their adopted theoretical framework to analyze their empirical material. Post-structural research is by its nature, subjective. As a result, Denzin and Lincoln (2008) noted that in the post-structural moment, researchers are interpreting individuals' accounts, or stories, about what they did and why. Nonetheless, Markula and Pringle (2006) advised post-structural researchers that well-conducted, rigorous studies help strengthen the findings. With that advice in mind, Markula and Silk (2011) offered post-structural researchers a suggested pattern for analysis that I adapted for my study.

**4.4.1 Differences in my analysis of interview and observation data.** To date, there are very few examples of sports or coaching researchers that have used Foucault's theoretical framework to gather data. One feature of my study was the use of both interview and observational research methods. Accordingly, it is important to note how I 'handled' or analyzed these different types of data. The aim of my analysis was not to develop a 'true' account of endurance coaches' planning strategies, but a representation of how coaches constructed their knowledge based on the theoretical frame (refer to chapter 3.0) that I used for interpreting the meanings in the data. In the interviews, this representation of the participants' knowledge was co-actively produced by myself and the participants. In the observations, the data that was produced was my interpretation of what the participants did as coaches.

My aim was to use the observations to understand in more depth the experiences of the participants that I learned through my first interview in relation to Foucault's theoretical framework in order to gain as deep an understanding of the settings, practices, and meanings that the participants gave to their activities. Therefore, in the observations the first stages of analysis occurred as the data was being produced, as I was mainly drawn to record events that I knew related to my ongoing analysis. I was mindful of the data's relevance by trying to understand why things happened as they did in relation to my research question, Foucault's theoretical framework and the interview data. I continually compared, and reflected on, the relationship between what I observed and what the participants had said (in both the interviews and observations). For example, in one of the first interviews, Lukas described how he liked to change the venues of his athletes' workouts on a regular basis. But during the observation, it was obvious that this workout was at a venue that never changed, and as a result, I became more interested in recording observations that were to do with Lukas' organization and use of space. Therefore, as I undertook

more observations (in conjunction with both sets of interviews), I gained a more focused idea about what was of interest, and consequently, I wanted to know more about some things than others (Gibson & Brown, 2009). More simply, my observational and analytic foci were mutually dependent and developed alongside (and also as a result of) each other.

**4.4.2. Identifying themes.** Foucault's method is inextricably linked to theory, and so, it was simply not possible to proceed in my data analysis without an appropriate understanding of Foucault's theoretical framework. I regularly re-visited Foucault's theoretical framework and read, and re-read sections of *The History of Sexuality Vol. 1* (1978), and *Discipline and Punish* (1995). In these ways, for a lengthy period of time, I was completely immersed in my findings, theoretical framework and emergence of key themes in relation to Foucault's framework. To support this immersion, I engaged in regular lengthy meetings with my supervisor to discuss the unfolding data. The first themes to emerge were based on the common topics of talk produced by my participants. All the participants were consistent in their perception that their training plans were being designed for an individual. All the participants talked about the ways they had acquired their knowledge and learning. All the participants described an overwhelming amount of small details that they considered when designing plans. The final striking theme was the participants' general inability to describe the specific ways in which their training plans were passing on responsibility to their athletes.

**4.4.3 Analysis of themes.** As I acquired more data, I started to select key extracts to show how my findings related to the initial thematic categories that I had identified. I then related those categories of data to particular theoretical concepts from Foucault's framework, and in turn used those particular themes as the structure to start to tell my research story. My ongoing analysis, theoretical reflections and data collection, was further aided by my encouragement from Foucault

(1972) to go after contradiction, complexity, and be a troublesome dinner guest. At every turn, as I returned to review theory in between data collection points, new ways of looking at or considering the unfolding data occurred. I then used these insights to further challenge my participants. As a result, I was involved in a constant cycle of going back to the data, Foucault's theories and my emerging analysis, in order to attempt to understand my emerging categories in gradually sharper and deeper ways. Accordingly, many of the most fruitful findings arose from what for most researchers would appear small, inconsequential or insignificant moments.

**4.4.4 Intersections and development of themes.** Given my aims to examine as wide a range of complexities as was feasible, it was inevitable that my initial themes would change, develop and intersect, especially as I was gradually acquiring more focused data. At this developing stage of my analysis, I started to use my observation data analysis to support my interview data analysis. My initial themes had developed into four strong themes that I called, 'the body', 'the cocoon', 'the athlete being overwhelmed', and 'putting the athlete on the throne'. 'The body', referred to the general understanding the participants had of their athletes, or the type of running body the participants were building. This understanding of the body seemed to emanate from the ways in which the participants were acquiring knowledge of how to design their athletes' training plans. 'The cocoon' referred to the totality of the small details that the participants described when they designed their plans. 'The athlete being overwhelmed', referred to the observation that there were so many small details that the participants considered, that it appeared to me that there was a real possibility for the participants' athletes to be overwhelmed by interventions that were actually designed to help their performance. 'Putting the athlete on the throne', referred to one participant's phrase that described why a training plan was designed for an individual athlete.

**4.4.5 Discrepancies with themes.** From each of the themes that I articulated, I could see there were a number of consequences for my participants' understandings. At first, I felt these consequences developed from the initial conceptualization of the participants' knowledge. As I started to analyze these consequences, I could see that the relationship between the consequences of their specific knowledge was significantly more tangled than I first thought. I could also understand how the participants' construction of knowledge operated in more complex ways than I had previously considered. At the end of my analysis of the first theme that I had written about—the body—I could see that this theme was actually about knowledge, a knowledge of the body. On returning to Foucault's theoretical framework, I came to a better understanding of the role of knowledge in modern, disciplinary society. My second theme and third themes—the cocoon, and the athlete being overwhelmed—I could start to see were actually part of the same, broader theme of my participants' practices. These practices seemed to occur because the participants only seemed to use one knowledge. Thus, I felt that there was an overall sense of ever-increasing restrictions in the participants' knowledge and practices. I also came to understand how my final theme, of 'putting the athlete on the throne', was used by all my participants' whenever I used Foucault's observations of disciplinary techniques to challenge their practices.

**4.4.6 New themes.** As a result of my active and constant reflection on my unfolding data, moments of data that I had earlier interpreted in one way, I later interpreted differently. For example, I had acquired a strong sense of how one of the disciplinary instruments, normalizing judgment worked so well to maintain power. However, I came to understand that this instrument did not operate in isolation, and that together, all the operations of power that Foucault articulated in the technologies of domination worked to establish the participants' understanding that their

plans were individual ones. At the same time, I could start to understand that the role of knowledge and practice in a modern (disciplinary society) was related to the operations of power. Therefore, the final themes that I established in my analysis were knowledge, practice and power.

**4.4.7 Connections with power relations, theory and previous literature.** A faithful Foucauldian analysis requires the researcher to intertwine as many aspects of the theoretical framework as possible. Such weaving is very difficult to articulate as a series of discreet and separate steps. The reality of my analysis was that the methods, data, analysis and theoretical reflections gradually became sharper, and more clearly defined. This gradual understanding that culminated in my final analysis could only occur by constant critical reflection and an increasingly deeper understanding of Foucault's work. Thus, by my final analysis, I also came to a deeper understanding of discourses and their relation to knowledge, the role of knowledge and practice in a disciplinary society, and finally, the enormity of power relations themselves. It was the operation and maintenance of power that seemed to enable knowledge, discourse and practice to work, and this awareness of power seemed responsible for the understandings that my participants experienced in their everyday practices. Therefore, when I explored the socio-cultural coaching literature which made a number of critical observations about coaches' practices, I could appreciate how strong Foucault's articulation of power actually was because these practices were unlikely to change.

## 4.5 Ethics

Researchers in the post-structural paradigm consider ethics to be an integral part of their research studies. The researcher is embedded in the power relations that help create and form every aspect of the research process (the question, collecting data, influencing and representing participants, presentation of results etc.). Therefore, post-structural researchers need to continually

think carefully about how this power should be used with a minimum of domination for maximum ethical impact (Markula & Silk, 2011). Although my study did not involve physical risk (and was not expected to produce psychological risk) to any participant, it was still important to provide a description of how I conducted an ethical research study. I have already described some of the ways in which I aimed to practice ethical research, such as maintaining a high degree of reflexivity by using a digital recorder to record all my reflections and thoughts, and ensuring coherence between the theoretical framework and the methods that I used. In addition, my study gained ethics approval from the University of Alberta's Ethics Board, and I adopted the Canadian REB's (Research Ethics Board) guidelines regarding the conduct of ethical research. This process involved adhering to the following principles outlined by Markula and Silk (2011).

**4.5.1 Respect for dignity.** I have already described (refer to 4.2.5) how I intended to 'tread carefully' with the research participants. One of the main aims of a Foucauldian research project is to dis-credit systems of power or entrenched patterns of thinking (which is arguably why Foucault had so many critics). Coaches have spent years believing in the efficacy of their practices, some of which have been handed down from cherished mentors or helped them to become Olympians. There was a very real danger that my involvement in the form of observations and questions may have seemed too threatening and de-stabilizing to the participants' cherished and long-held memories and beliefs. Being aware of this issue was not enough on its own, and I ensured that I adhered to the following ethical principles.

**4.5.2 Free and informed consent.** The participants needed to make an informed decision as to whether they should take part in my study. This meant having the appropriate information about the research project. Thus, the information pertaining to the research aims, and design, also detailed any potential risks and benefits from participation. Additionally, potential participants

were told how their participation was voluntary, and that they were free to withdraw at any point during the data collection process (Kvale & Brinkmann, 2009). As a result, I completed an ethics checklist which contained: a written information sheet with the appropriate details and benefits of my research project (e.g., that clarified how the interview guide did not contain any personal questions or ask the subject to comment on anyone else), detailed my research participants' rights (e.g., right to withdraw from the study, right to not answer my questions, etc.) and how these guidelines would be respected (e.g., use of pseudonyms, anonymity, etc.), detailed how I planned to conduct the observations and interviews (e.g., use of audio-recorder, etc.) and how I planned to use the research material. In addition, I prepared an informed consent sheet (to be signed), which I checked had been read and understood by the participants so that any queries were addressed before the start of each observation. One potential participant opted to withdraw from my study having read the ethics checklist (refer to Appendix B for my ethics checklist).

**4.5.3 Vulnerable persons.** I did not envisage my research project requiring data from people with "diminished competence to make decisions" (Markula & Silk, 2011, p. 18).

**4.5.4 Privacy and confidentiality.** It was essential that the participants were clear exactly how their anonymity was to be guaranteed. Endurance running cultures, especially at the highest levels of performance, tend to be small communities. In addition, some of the participants are well-known, or famous in the public eye. As I have previously mentioned, the information that explained how anonymity was guaranteed and that all talk was confidential was detailed on the written information sheet. In addition, I made it clear to the participants how the data was to be stored on my personal home Mac.

**4.5.5 Justice and inclusiveness.** The final ethical principle concerned the distribution of the benefits and costs of the research so that no group of people would be unduly burdened by the

research. This principle required forethought of what the potential benefits of the research could be. In this sense, it was crucial that I was clear about the aim of my project—the consideration of how the dominant discourses of modern sport have impacted on endurance coaches' practices. As a result, my research project had implications for coach educators, coaches, athletes, and scholars. For coach educators, I hoped to expand the understanding of coach effectiveness to include critical thinking and coaches' ability to work with complex technical and contextual information in planning training programs that hold the greatest promise for developing their athletes. For coaches, the potential benefits of my research included expanding the knowledge and subsequent practices that would be useful for coaching athletes and developing a deeper contextual understanding of athletes' progressions. An additional potential benefit to my research was helping coaches to become better critical thinkers. Although I did not collect data directly from any athletes, it was hoped that they may also benefit from my research by the development of a more ethical training and competitive environment based on a broader understanding of athlete development. Finally, it was hoped that my post-structural study uncovered an understanding of effective coaching that has yet to be developed in coach education research. The ongoing need for conducting ethical research is inextricably linked with the ongoing concern for research validation, to which my methodology chapter turns next.

**4.6 Research Validation**

Denzin and Lincoln (2008) described qualitative research as developing through a series of stages. One of the last of these, the linguistic turn, was a stage in which scholars recognized the importance of language as a structuring agent. Denzin and Lincoln argued that the nature of this recognition made it more difficult to understand how qualitative research should be represented and legitimated. How are qualitative studies to be evaluated in the post-structural moment? Post-

structuralists have contributed to the understanding that there is no clear window into the inner lives of individuals, which means no single method can grasp the subtle variations in ongoing human experience. Indeed, as Denzin and Lincoln highlighted, within qualitative research, there have never been so many paradigms, strategies of inquiry, or methods of analysis to draw upon and utilize. Any gaze is always to be filtered through a multitude of lenses. All individuals can offer are accounts, or stories, about what they did and why. Therefore, Denzin and Lincoln (2008) suggested that to some degree, the validation of a study results from the study's research design. In this sense, the logic of validation is incumbent on theoretically driven, practically applicable, socially situated knowledge (Markula & Silk, 2011). Therefore, as I described in the data analysis section (refer to section 4.4), I attempted to insure a degree of theoretical clarity and methodological consistency throughout every aspect of my study. In conducting a study by remaining true to Foucault's theoretical framework, the methodological tools that I had chosen, and my own knowledge and reflections, I was able to claim quality in my 'craftsmanship' (Kvale, 1996). Such quality, according to Kvale, includes maintaining a degree of consistency between the conceptualization of the study, the choice of methods, the researcher's position, ethics, research skills and sensitivities. In contrast to a procedural check-list, researchers should ask themselves how they have managed to "tap into what is not yet known, elusive and unfinished" (Kvale & Brinkmann, 2009, p. 221).

Yet, validating post-structural research is arguably more complex. According to Smith (1984) the idea of assessing post-structural research is antithetical to the nature of this research and the world it attempts to study. In the post-structural moment, "the real is no longer what it used to be... the very definition of the real becomes: *that of which it is possible to give an equivalent reproduction* [italics in original]" (Baudrillard, 1983, pp. 12-13). In any situation, the

researcher can only produce a text that reproduces multiple versions of the real, showing how each version impinges on and shapes the phenomenon being studied (Denzin, 1995). Therefore, any attempt to classify a post-structural analysis is, by its very nature, unlikely to be completely satisfactory. "They are all reflexive and messy. That is as it should be, for the world we encounter is neither neat nor easy to make sense of" (Denzin, 1995, p. 45). Richardson (2000) referred to a process she called crystallization, which "provides us with a deepened, complex, thoroughly partial, understanding of the topic. Paradoxically, we know more and doubt what we know… we know there is always more to know" (p. 934). Such a process, as part of a post-structural paradigm, seeks to capture the multidimensional aspects of research knowledge through various angles. Researchers are encouraged to always consider their topic from multiple perspectives and so produce rich, nuanced, coherent, reflexive and contextualized research knowledge.

As a result of the inherent complexities in assessing the qualities of post-structural research, it is incumbent on the post-structural researcher to regularly engage in reflexive practices. This reflexivity involved clarifying how my perspective—personal filters—shaped every aspect of the research process, including the research question. To some degree, I have already described how my analytic insights developed throughout the data-gathering process. However, it is also important to state that I was able to engage in this analytic reflexivity by following Gibson and Brown's (2009) specific recommendations:

- Work through the ways in which the research question develops as data is produced.
- Reflect on the practices of data gathering and the issues that the strategies used may have on the data that is generated through those research interventions.
- Think through the relationship between epistemological orientations and more specific theoretical/analytical conceptions.

- Make a note of other possible lines of inquiry.

Gibson and Brown's guidelines, that I followed, were designed to enable the researcher to have thinking space, log his or her thoughts and develop analytic insights by giving researchers the space and opportunity to make connections between different parts of their analytic work and contrasting concepts in the literature one is referring to or one's theoretical framework. Accordingly, it is important to state that I am not claiming that my analysis represents the truth about endurance coaches' understanding of how to design and implement their athletes' training plans. Rather, I am able to state that my analysis of endurance coaches' understanding of planning is based on my knowledges and experiences, my choice of methods, and my interpretation of the data through my interpretation of Foucault's (1972, 1978, 1995) theoretical framework.

**4.7 Summary**

In this chapter I have illustrated how I made my project 'move'. I have described some of the assumptions of a post-structural framework to illustrate how it was connected to Foucault's theoretical framework, and by extension, how my choice of methods enabled me to answer my research question. My choice of structuring the data collection by conducting a semi-structured initial interview, an unstructured participant observation and an unstructured follow-up interview aimed at developing an understanding of how dominant discourses have formed the knowledge that underpins effective endurance coaching. As a result, I was able to understand the consequences of this knowledge formation for effective endurance coaching practice. In addition, my research design enabled me to understand some of the potential consequences of the specific construction of knowledge. Both research methods—interviews and participant observations—enabled me to better understand how dominant discourses have impacted on practice. As a result, I have been able to create a more comprehensive understanding of modern forms of effective

endurance coaching; an understanding that, at a later stage, may enable me to open spaces for other potential knowledge and practices. I have also described how I analyzed and provided validation for my data. Finally, I have described the ways in which I made sure that my research met the general ethical guidelines of the Canadian REB (Research Ethics Board) as outlined by Markula and Silk (2011). In so doing, I have attempted to emphasize that my role as a researcher required an ongoing problematization—self-reflexivity—of all aspects of the research process, not just to create ethical research but also an effective Foucauldian analysis.

## 5.0 Knowledge

In order to examine how high-performance endurance running coaches understand how to plan their athletes' training, one of my main intentions was to provide a deeper articulation of how knowledge and power interact and spread into the modern social body to create meaning for the everyday practices of high-performance endurance coaches. When Foucault (1995) articulated disciplinary powers in the modern prison, he argued that prison wardens had to have knowledge of the right 'type' of body required for modern society—a knowledge of mankind, a knowledge that would drive the warden's transformation of the convict. The aim of this first results chapter, therefore, is to understand precisely the knowledge that high-performance endurance coaches have acquired in order to drive the transformation of their athletes—the knowledge that underpins the design and implementation of endurance coaches' training plans. In order to gain a sense of the frames, limits and boundaries of endurance coaches' knowledge, it is necessary to understand the sorts of discourses that circulate in modern endurance running coaching cultures. What discourses are used to describe the 'right type' of endurance body; what sorts of discursive categories of understanding are created; what is understood as acceptable speech, and what topics about the endurance body and planning are subsequently reinforced. My final aim of this chapter is to understand the effects that endurance coaching discourses produce. In other words, what 'type' of body should the endurance coach—the one with the special autonomy—plan to build?

### 5.1 Forming Coaches' Knowledge

"I just think you have to fall back on the physiological knowledge that we've developed over the last 100-150 years" (Aaron).

My participants' knowledge of planning was constructed in two main ways. Firstly, some of the participants gained their knowledge of planning training programs formally, such as by

reading text books. Secondly, some of the participants gained their knowledge of planning training programs informally through practice, such as their experience of being an athlete or working with other coaches. As Aaron described in the quote above, physiology was the overwhelmingly dominant knowledge that saturated both formal and informal knowledge constructions.

**5.1.1 Formal constructions of the knowledge of planning.** Several of the participants described the origins of their knowledge of planning as their own independent search for knowledge. These participants gained their knowledge by reading a variety of written sources—academic research in physiology (either textbooks or scientific articles), coaching text books and popular magazines, such as *Track and Field News* or *Runner's World* in the U.S., and *Athletics Weekly* in the U.K. Carl stated that:

> My theoretical background knowledge is physiology. I've done a lot of reading on physiology. I mainly relied on textbooks when I first started coaching. I went up to London to a good quality bookshop in St Martins' Lane and literally ploughed my way through the medical physiology section.

Alex had a similar experience:

> I lived close to two teacher-training colleges which had really good libraries that I could access. I used to go in, read the physiology textbooks and go home again. I decided that because I didn't know anything, I needed to read some stuff to answer the questions that the athletes at the track were asking me. So I started to read physiology, literally every physiological book I could find.

Ian described how his knowledge was formed by reading scientific articles, an experience that he referred to as research.

> I tried to read scientific papers in physiology, not text books, because they are too general. I tried to do the actual research [reading physiology journal articles], and I can also remember seeking out and talking to some very well renowned physiologists in the U.K.

Ian was not a physiologist, and so his use of the term 'doing research' meant reading scientific journal articles, rather than conducting experiments. However, the most salient point to make is that Ian chose to learn physiology over other scientific knowledges. Reinforcing the dominance of physiology in the participants' knowledge construction was the participants' general understanding that designing more effective training plans could only occur through a deeper application of physiological knowledge. Kieran confirmed this point:

> What are the next bits? Well it is science, it is all the physiological stuff, those guys are doing so much [research]. We've never been in a more exciting period, ever. Great stuff will be coming out, is coming out, you know. Now we know things that are categorically clear, like the benefits of altitude training for example. Now we have reasons when things can go badly at altitude camps, and that's all come from physiologists.

Clearly Kieran believed that when scientists 'discover' and pass on more information about the body, endurance coaches will be able to design much more effective training plans. A very clear sense of acceptable speech for effective endurance coaching begins to emerge from these participants' experiences. This is why many of the participants sourced physiological knowledge in order to start coaching. Thus, I am able to confirm the accuracy of my description in the review of literature, that the first significant finding of the participants' knowledge construction was the dominance of physiology.

Ian also described the knowledge he gained about planning as emanating from Matveyev's iconic text that I referred to in the review of literature (refer to section 2.1.2).

> My planning knowledge very clearly comes from Frank Dick because he translated the Russian material into English by writing his own book. Frank borrowed the work of people like Matveyev who wrote the first logically systemized approach to planning training. Frank had enough vision to realize this material was valuable to all coaches and he called his book, *Planning and Periodization*.

Ian described Frank Dick, not Matveyev, as being his main source of inspiration and this experience is important because Foucault (1972) was interested in the discursive rules of production. In other words, Foucault wanted to understand the rules that allowed the appearance of some statements and not others? Accordingly, it is important to note how Dick, in publishing the book that was actually titled *Periodization: An Approach to the Training Year* in 1975, chose to articulate only Matveyev's themes that fitted with the dominant emphasis—the episteme or 'general stage of reason'—of rational scientific values and sub-disciplinarity in sport science in the late 20$^{th}$ Century. In contrast to Ian's belief, Matveyev wrote a holistic and broad interpretation of training that encompassed many subjects of enquiry, such as philosophy, ethics, history and sociology. Yet, Dick's translation and subsequently Ian's interpretation, was that Matveyev had devised an overtly structured, systematic and precisely controlled approach to training. The understanding of effective endurance coaching that developed was that the physiological development of the body could be structured, and so endurance training should be planned. In other words, the second finding in my participants' construction of knowledge—structuring physiological adaptations—was made possible. As a result, the endurance training plans that were thought to produce the strongest physiological adaptations and the fastest runners, were seen as the best plans. For example, the book that Lukas described as having the most impact on his learning was:

> Peter Coe [coach to son Sebastian, 1980/84 Olympic 1500m champion] and David Martin's [a physiologist] book, but that was as an athlete. I was getting into the marathon and so looking at the fuel I needed to last the distance, just out of curiosity really. You know from a physiological perspective. I don't have a science background and the book was very scientific, so reading that book was tough going.

In essence, Coe and Martin's book was based on both physiology and structuring the physiological adaptations for athletes in a certain way. As I noted in the review of literature (refer to section 2.1) these specific ways of structuring the physiological adaptations of the body represented an endurance coaches' training plans or methods. Subsequently, a number of the participants described the importance of reading books or magazines that documented the methods of successful coaches and athletes. For example, Dennis described the following:

> I'd go to the library when I was at university because they had backlogs of *Track and Field News*, like whole years of it. I loved sitting in the library for hours at a time reading those magazines. I've probably read every single edition from 1958 to1994, from cover to cover. I'd just read all the interviews with all the coaches and look at the workouts and the splits of the famous athletes and their data and all this stuff, and to me, it was fascinating.

Therefore, a third persistent finding of the participants' construction of knowledge, that Dennis experienced, was reading about the planning methods of successful athletes and their coaches. This finding suggests that the planning methods that get understood and then copied are only those of successful athletes and coaches. Dennis's experience was important if one is to analyze knowledge effectively because Foucault (1978) felt it essential to gain a sense of the strategies of the discourses that comprised that knowledge. Therefore, although I have repeatedly stated physiology was a knowledge that dominated endurance coaching, it is important to gain a more

detailed sense of the ways in which physiological knowledge infiltrates endurance coaches' knowledges. For Foucault, discourse is discontinuous and unstable, and there were a "multiplicity of discursive elements that can come into play in various strategies. It is this distribution that we must reconstruct" (p. 100).

My participants' formal construction of knowledge was consequently formed in three formal ways. That is, the scientific knowledge of physiology, the knowledge of structuring physiological adaptations in the body and knowledge of the coaches' planning methods that produced the fastest endurance athletes. In more simple terms, the discursive categories that are acceptable in modern endurance coaching and, as a result get circulated, exist on a continuum: physiology, structuring physiological adaptations and proven planning (proven physiological adaptations) methods. Understanding the acceptable discursive categories for effective endurance coaching is essential for my analysis because, being true to my Foucauldian sensibility, it is important to analyze the understanding of planning that is produced by this overall construction of endurance knowledge. Therefore, my aim is not necessarily to critique the discourses of effective endurance coaching, for it makes sense that a coach would copy the training methods of the fastest performing athletes? Rather, it is more important to examine the effects of the specific discourses on the construction of endurance coaches' knowledges and practices.

**5.1.2 Informal constructions of the knowledge of planning.** I have stated that my Foucauldian analysis is focused on discursive strategies. Therefore, one of my aims is to be aware of the distribution of discursive elements within power relations:

> …with the things said and those concealed, the enunciations required and those forbidden, that it comprises; with the variants and different effect—according to who is speaking, his

> position of power, the institutional context in which he happens to be situated—that it implies. (Foucault, 1978, p. 100)

Therefore, the most important point to make about the participants who described an informal learning about planning was that there were only certain people the participants were interested in learning from. Tremendous influence is accorded to the people who are able to speak about a subject, that is the fastest athletes, the coaches of the fastest athletes or physiologists. Without knowing about Foucault's work, Alex described a similar distribution of power at the start of his first interview.

> Coaches are known by the standards and performances of the athletes they coach. If that's going well then inevitably it is likely more athletes will want you to coach them. If you look at Mick Woods [coach to 2010 Commonwealth 1500m bronze medalist, Steph Twell] at the minute if you were a 14, 15, or 16-year old girl he'd be the only person you'd want as a coach because of the athletes he's coached over the last few years and what they've achieved. Now if you go back a few years Mick got those athletes because of who he coached before and once you get on a role, your coaching career snowballs. That's what happened to me, I became successful because the first athletes I coached ran internationally.

Out of such a snowball develops tremendous force for the construction of endurance coaches' knowledge because high-performance endurance coaches gain a reputation that make other athletes want to be coached by them, and other coaches want to learn from them. It is worth repeating that while learning from the coaches of the fastest athletes might make sense, this learning is not wholly innocent because of the effects for the distribution of discourse and power relations. As I described in chapter 3.0, Foucault (1981) argued that discourse works to both

define and categorize normality and delinquency, sanity and insanity, truth and falsehood, taboo or acceptability. Importantly, discourse working through power constantly reinforces *only* those definitions and categories that are acceptable, and not others. "What is inexistent has no right to show itself" (Foucault, 1978, p. 83). Thus, a training method of any kind can be ratified and accepted as normal and true if a fast athlete, or coach of a fast athlete, endorses that particular method. Indeed, when I asked Carl to name the most influential book in his knowledge construction on planning athletes' training, he replied: "well the main book that sticks in my mind was *Problem Athletes and How to Handle Them* by Ogilvie and Tutko." This response from Carl suggests that athletes can easily be conceived as problem athletes unless they subscribe to the methods that produced the fastest athletes.

The participants' observations and interactions with fast athletes and their coaches occurred in a number of ways. Some of the participants described the importance of learning from or through their own interaction with influential endurance coaches. Jack described his comprehensive experience of interacting with a series of successful coaches.

> My experience of over 35 years with other coaches is fairly extensive. Knowledge of planning is a hard one because it is a fairly nebulous concept, but certainly I gained a lot from talking to guys like Harry Wilson [coach to 1980 Olympic 800m champion, Steve Ovett], Alan Storey [coach to 1984 Olympic 10,000m silver medalist, Mike McLeod]. You know, real brilliant coaches and I was also fortunate to meet and have some long talks with Arthur Lydiard [coach to the world dominating New Zealand athletes in the 1960's and 1970's, such as Peter Snell the three time Olympic Champion] in South Wales, who was inspirational.

Similarly, Lauren described his main influence on planning as being Alan Storey.

> My main influence is from people like Alan Storey. I'd be interested to know most of the other coaches you are talking to because I would say one way or another, all of them have had, well they've probably all had a lot of influence from Alan Storey.

Carl stated that his main influence was Mark Rowland (coach to 2002 1500m Commonwealth champion, Michael East).

> Mark was really helpful and a very; very good planner, very well organized and methodical, no doubt about it. I studied the slides of a talk that he gave, that had all the training cycles and phases on, you know meso and micro cycles. The slides described where he did what type of training and what he did. I looked up to him quite a bit because he was coaching Olympic level athletes.

Carl's quote was interesting because Mark Rowland, the 1988 Olympic steeplechase bronze medalist, was himself coached by Alan Storey. Other participants also described how they gained a lot of knowledge from watching other successful coaches. For example, Alex said:

> I watch what other coaches do and what their athletes do. For example, I watched how George Gandy [advisor of Sebastian Coe, 1980/84 Olympic 1500m champion] coached. I looked at the training George set his athletes, I read it and watched it, and looked at how his athletes came into and out of form when it mattered, and drew my own conclusions.

Other participants expressed their experiences as athletes as having the most significant impact on their formation of their knowledge of planning. These participants had been very successful athletes (several Olympians and one world record holder) while others had trained with Olympic athletes. Olivier had extensive experience as an athlete.

> I think my knowledge as a coach, has come from observing how I responded to training, and how my peers responded to training and watching their progression. You know I've

> spent time with so many different coaches and athletes over the years, like Steve Cram [former world mile record holder], Mick McLeod [1984 10,000m Olympic silver medalist], the Baumanns [Dieter Baumann was the 1992 5000m Olympic champion and was coached by his wife, Isabelle]. So my learning is just an ongoing process of over 40 years of running really, of learning what does and doesn't work, and how a number of other coaches have come to understand planning.

The set of discursive rules that enabled Olivier's statement, "what does and doesn't work", to operate are whether the training methods are ones that, as Kieran described, can make an athlete "run fast, or not." As I stated in chapter 3.0, although the aim of sport is to win, in endurance running this aim is transferred to the ability to run fast times which ultimately gives one the capacity to win. As a result, throughout the data collection the participants' continually referred to producing runners who could run fast times, rather than win. In this temporal way, the aim of the participants' training plans was for their athletes to produce a peak (ultimate) performance or a personal record (PR), a clearly defined objective measure of athletic ability. From hereon I intend to mirror the words used by my participants and refer to the production of fast rather than winning athletes. Thus, when Lyle (1999) referred to effective coaches as those who learn the methods that 'seem' to work, this was because the methods are based on the fastest performers. In so doing, the ways of being that other athletes have to fit into are established. As Carl observed when highlighting how the book that had the most influence on his knowledge of planning was *Problem Athletes and How to Handle Them*, coaches are therefore not given access to thinking about designing training plans that differs from the general understanding of the 'right' methods.

Steve found it harder to locate an actual source of his knowledge of planning his athletes' training programs, but reflected that he had gradually acquired a general sense of the right things to do.

> My planning process is something that I just developed myself, just through practice. Lots of practice, kind of through evolution, do you know what I mean? There's no formal planning process that I've ever been taught, but I learnt a lot as an athlete. My college coach, I would say, was an instinctual coach. He did no formal planning but he knew the right things to do. There were a lot of things I did on my own, just through word of mouth, things I heard from other people. I talked to a lot of people.

Kieran discussed how his own training with Steve Ovett (the 1980 800m Olympic champion) had been his most significant learning experience.

> I think everything I do now, really has an influence from being an athlete myself. We all worked pretty much off of what Steve was doing. His coach was the national U.K. endurance coach, Harry Wilson, who was really, really good. I was a 16-year old lad, you know, that was coming along to the track and doing a few reps with him, just hanging on for as long as possible.

Some of the participants described learning about planning from watching successful athletes. For example, Ian described the impact on his learning of watching distance-running icons, David Bedford and Henry Rono.

> I learnt about planning by watching a 19 year-old David Bedford [former world 10,000m record holder] and Henry Rono [who broke four distance running world records in 81 days in 1978], both run by surging, relaxing, surging, relaxing and being really successful.

As a result, some participants (similarly to Olivier) described the interactions they had with both coaches and athletes as the most significant in the formation of their knowledge of planning. Alex was sensitive to this issue: "I think you learn something from each athlete. The athlete learns from the coach and the coach learns from the athlete. Coaches also learn from other coaches." Patrick, the longest serving coach in my sample said:

> I've been coaching 50-plus years. I was an athlete but not to any great standard. On a Friday, I would go to Duke Hills with Franz Stampfl [advisor to Roger Bannister] and Chataway [Chris, former 5000m world record holder]. Then I went in the armed forces and did my training in the National Service and got deeply involved with the Hungarians. I met Igloi [coach to 49 world record holders] who was the coach, and Roszavolgi [former 1500m world record holder] and Iharos [former multiple, 1500m, 5000m, 10,000m world record holder] and those sorts of people.

Interestingly, the participants did not describe interactions with the coaches who had been their own coaches in the early stages of their endurance running careers as influential in their construction of knowledge. These formative coaches were often glossed over, dismissed, or seen as lacking in some way. Exactly as Patrick emphasized, the participants' significant learning experiences were from a series of iconic athletes and coaches. This source of learning, from the coaches to fast athletes, alongside physiology and structuring physiological adaptations, is an observation of understated importance for my analysis. As I have already stated and intend to demonstrate in later chapters, when knowledge of a subject is established, both discourse and relations of power work together in ways that prevent other ways of knowing about that subject: "discourse transmits and produces power; it reinforces it" (Foucault, 1978, p. 101). Subsequently,

a very specific understanding of knowledge that drives the transformation of the endurance body is constructed, and it is this understanding that I aim to develop next.

**5.2 The Effects of the Construction of Knowledge—the Endurance Body**

I have continually stated throughout this chapter that tremendous influence is accorded to whatever discourses are created by the frames, limits and boundaries of the knowledge that high-performance endurance coaches acquire in order to enact the transformation of their athletes' bodies. The planning concepts that are appropriate to talk about and understand—what is usual, what is possible—reside within this formation of knowledge. As Markula and Pringle (2006) articulated, Foucault's concept of discourse works by producing unwritten frames—rules and structures—that produce particular statements so that statements form a *grouping* around a particular topic. Foucault (1972) stated, "one would only be in the true, however, if one obeyed the rules of some discursive 'policy' that would have to be, reactivated every time one spoke" (p. 224). My dominant findings of the participants' construction of knowledge—physiology, structuring physiological adaptations, the methods of successful athletes/coaches—create the rules of 'truth' about the endurance body. These three findings are the acceptable categories of discourse that work together—'grappling like fighters' Deleuze (1988)—to produce, underpin, practice, validate, reinforce, confirm, complete and finalize endurance coaches' knowledges. Every presentation spoken—such as those in the coach education conferences that I referred to in my review of literature (refer to section 2.1) in Vancouver, Canada, and London, U.K.—every book, magazine article or blog written, website developed, or athletes/coaches observed will reinforce the talk about physiology, planning and the methods of successful athletes/coaches. In this way, discourse is the system that structures the way that reality is perceived (Mills, 2008).

**5.2.1 Discourses of truth—physiology and the body.** Throughout my data collection the participants continually demonstrated a clear sense of knowing and adhering to the 'truth'. As a result, the participants were firm in their understanding that there was a general set of rules—a reality of endurance coaching—that they needed to consider when designing their athletes' training plans. Alex articulated the physiological understanding of endurance coaching reality very well.

> We can't get away from the fact that there are certain physiological rules that apply to training that everyone must understand. If you want your athletes to get better at tolerating higher levels of lactate then they have to get better at producing higher levels of lactate. There isn't any other way around that, that's it.

Alex reinforced the belief in physiology when he observed how, in spite of Harry Wilson's superior coaching record, the better coach of that generation was a coach who had a much deeper understanding of physiology.

> The best coach by far, who was even better than Harry [Wilson], was Ron Holman. Harry had the gift of the gab and would tell you how he needed to coach you, but Ron was excellent. He was more or less the brains of the operation because he had a much better understanding of exercise physiology, which Harry didn't have.

Dennis was also firm in the belief in the importance of physiology as the source of coaches' knowledge of planning.

> I think you need to have a reasonable sense of physiology first. It is simple. You've got to have those physiological parameters intact, you simply have to. You've got to know the mechanisms of everything, but you've also got to be clever enough to think outside those physiological parameters.

For Dennis, thinking outside the physiological 'parameters' meant being aware of the moments when it wasn't appropriate that his athletes trained.

> You know these are human beings, and they have emotional problems they have to deal with, or they get sick or get hurt. You can't just be clinical all the time. You can go three steps forward and you might go one or two back.

In other words, Dennis's athletes were exempt from the physiological parameters of endurance training only when they weren't able to train. Therefore, Dennis wasn't thinking outside the physiological parameters as he thought, because when his athletes were training, they were emphatically immersed into a physiological framework. For example, Dennis went on to say:

> You know, there's the Darwin expression adapt or die, right? I provide the right stresses and the right stimulus based on some facts. The athletes have to improve their V02 max, or lower their threshold, those sorts of things. I'm going to give the athletes tiny little doses of stress that make them faster over the course of their career, so that their bodies can make little tiny micro adaptations as they go, that's being smart.

Theo, like Alex, Dennis and Ian, was just as emphatic in his understanding of the realities of endurance planning.

> If you want to be a good coach, the first thing you have to understand is what the event requires in terms of demand on the energy systems. What the athletes have got in terms of his or her physiological abilities and how you're going to match the two up. That's the pinnacle, or the framework, around which your plans are going to be written.

I asked in my review of literature, what happens when endurance coaches think about the body in specific ways? Clearly, endurance coaches talk and think about designing training methods that enable the endurance body to convert energy into motion through a series of 'energetic

adaptations'. In other words, endurance coaches are designing or producing the best engines. Unsurprisingly, the engine analogy was a dominant feature of the participants' discourses of planning.

**5.2.2 The engine.** My participants often talked about their athletes as engines with various capacities and systems in place to benefit performance. Aaron stated: "to me, the size of the engine may be important but it is not the killer [most important] capacity because I'm building engine capacity." The engine analogy was such a dominant theme in my data that many of my participants' quotes are mirrored in the words of the introductory learning website, *ehow.com*, that describes a series of steps that the novice mechanic needs to consider when first thinking about building an engine. In order to demonstrate the depth of the engine analogy and the endurance body in this section, I will lead with a quote from the website, *ehow.com* that describes the order of concepts the novice mechanic should think about, and then provide support from one of my participants' quotes. *Ehow.com* starts the description of building an engine with the following quote: "An engine is a machine that requires time and patience to build alongside an experienced mechanic." Similarly, in an endurance coaching context, Olivier stated:

> I always say to my athletes that if you want to be successful at distance running then it is all about planning because it is a gradual build up over five years. That's if you're going to achieve your potential as a distance runner. Success is definitely a long-term program, just gradually building up the training, year-on-year, over quite a few years.

*Ehow.com*: "Building a car engine entails more than just throwing parts together." In support of this idea, Carl noted: "If the training is random, I can't see how any athlete or coach is confident you're going to achieve that target. So planning is essential, it is the essential tool to fit everything

else into." *Ehow.com*: "Depending on the type of engine, there are different tolerances and torque settings on various nuts and bolts that need to be maintained." Similarly, Aaron stated:

> Well it all depends on the athlete. One of my guys, well he's definitely on the power end of the equation, he's a classic petrol engine. For him to be able to run a good marathon, he definitely needs to be running a 10,000m personal best (PB) and then all I've got to do is try and maintain his aerobic capacities as much as I can. So I'll lengthen out his workout reps and lengthen out his long runs, in order to make him more of a fat burning animal that can capitalize on his petrol engine.

*Ehow.com*: "There are many different types of engines though the most popular you will run across are 4-cylinder, 6-cylinder and 8-cylinder engines." Lukas provided the endurance coaching correlation for this statement:

> You do look at where your runners are coming from for any event. Like in the 1500m, are you closer to a 400m/800m runner because that's very different to the 800m/1500m specialist. I think those runners would have quite different training and the plans would be quite different then. Some 1500m runners are not good enough at 800m, and others are not good enough at 3000m or 5000m.

*Ehow.com*: "Engines are further broken down into the type, i.e., carburetor or fuel-injected, single overhead cam, double overhead cam, or conventional cam engines." Again, Aaron noted:

> Canova [Renato Canova, an I.A.A.F. coach educator and coach to the current world 3000m steeplechase world record holder, Saif Saaeed Shaheen] calls athletes either petrol or diesel based engine-type characters. You know, is the athlete essentially fast or slow-twitch based [muscle composition], or an enduring type or power type I think Canova calls them. One of my athletes, Sheila, is a good example. Sheila's a classic diesel engine-

> type, so for her, to be honest if she can run a half-marathon PB she can run a 10,000m PB because she's just a diesel engine. No speed, but she can keep going forever.

*Ehow.com*: "No matter which engine you have, the major components are the same." Dennis agreed:

> There's a common core, within reason yes, the same methods with different plug-ins. Very few coaches would be able to say they've invented some specific workout. Virtually all [workouts] are done by lots of people so if you like there is a common core [knowledge] that every coach in the world uses. No one's got a completely hundred percent unique system.

The ease with which I was able to use the participants' quotes to mirror the considerations of a student mechanic, illustrates the depth of penetration that physiology has in endurance coaches' discourses. Indeed, Emil Zatopek, the triple Gold medalist at 5000m, 10,000m and the Marathon from the 1952 Olympics—an unprecedented feat of endurance running—was known as the 'Czech Locomotive'. The bits of the engine's capacities or the underdeveloped physiological systems in the body, are added to the plan so that the athlete can perform. The training plan is therefore designed to develop the physiological systems of the body to enable a peak performance, as Theo summarized:

> Well you're constantly trying to move things on, it is like a wave and if you're putting a lot of emphasis on a certain capacity [energy] that will be the peak of the wave. That means that other capacities [energy systems] are going to sit down in a trough for a little while because there's only so much adaptability and energy in the body. Over a period of time, you're continually building this particular wave that's getting bigger and bigger, and then another wave. You're building all the different capacities [of the engine] over time.

Theo's last sentence has important ramifications for answering my research question—how endurance coaches understand how to design and implement their athletes' training plans—because endurance coaches understand that they are building different physiological capacities in the body. Thus, the grouping or category of statements that have meaning for designing training plans could be termed 'energy production and conversion.' It follows that because physiology is a scientific—reliable, truthful, objective—knowledge, planning adaptations by designing a training plan can be a structured, logical, systematic and planned process.

**5.2.3 Building the engine and designing the training plan.** All the participants conceived designing and implementing training plans as thinking about the systematic and logical ways that enabled athletes to develop their bodies' energy systems in order to meet the physiological requirements of their events. Therefore, many of the participants attributed their ability to design effective training plans to their 'other' careers in professions that required logical, systematic thinking. For example, Patrick described his background in business as being significant in his development as an endurance coach.

> Well my approach comes from a business background. My coaching is based on the amount of planning I had to do in my work with Barclays bank. I was in the marketing department where I had to set targets and so on, for branch managers and things like that. So planning was always at the very forefront of what I was doing.

Similarly Carl emphasized how his background in mathematics had given him a significant advantage to be a successful endurance coach.

> I think my background as a mathematician is used in terms of the organizational bit. I would argue that you've got to have enough facts at your disposal. This is my

> mathematician bit now, you've got to have instances of athletes that have achieved what they've achieved doing the same training. I think you need a fall-back of objective facts.

Lukas reflected how he had learnt from a coach who had an engineering background.

> There was an Austrian steeplechaser who ran about 8.10, which is pretty good. His coach, who was also his father, was entirely self-taught but because he [the coach] was an engineer you can see why he did so well. The father said to me, 'nearly all my coaching is based on my engineering skills'. Peter Coe was another successful coach who was an engineer.

Indeed, Peter Coe, once remarked that when he first started coaching his son, Sebastian, he found traditional methods of coaching as being "all tales, nothing seemed to make sense" (Butcher, 2005, p. 39). Coe clearly felt that traditional methods of coaching weren't planned or structured adequately. In order to design, build and maintain machines, engineers think in systematic ways to devise the appropriate solution to a problem. Lauren was equally systematic in his thinking.

> You basically start off with exercise physiology first, what the athletes' physiological capabilities are now and where they've got to go. And the plan is to take the athletes through logically from where they are, to where they want to be. Whether you're using complex, periodization or Lydiard or whatever you're using. And all those plans have to alter depending on the circumstances.

In addition to the design of a physiologically based, structured, logical and adaptive plan, I stated in the review of literature (refer to chapter 2.0) that one of the themes of modern sport is the importance attached to the pursuit of sheer performance (Bale, 2003). The pressure to produce outstanding performances in order to ultimately win, is such that it is possible to surmise that it's

not any engine that is being built by the coach, it's a Formula One engine. Steve supported this idea when he said:

> you need to convert incredible workouts into incredible performances but you can only do that for a certain amount of time. You need to be able to do some incredible shit [workouts] four weeks out, that's what periodization is. You get the breakthroughs when you do some crazy stuff three or four weeks out, and if we just get through this [period of time] in one piece, then we'll see some shit [great performances].

Thus, the engine that my participants were building has to be of an extremely high quality. It follows that an effective transformation of the endurance body requires that body to have a sophisticated engine that is delicately balanced, and very finely tuned.

**5.3 Objectifying the Endurance Body**

The dominant mechanistic understanding of the sporting body has long been a critique of socio-cultural scholars because objectifying the body has the potential to ignore many natural human experiences (e.g., Hoberman, 1992; Howe, 2004; Hughson, 2009; Miller, 1995; Pronger, 1995; Shilling, 2004). However, as I have stated previously, these scholars have never examined in detail what that objectification actually consists of for endurance coaching and performance or coach education research. As a result, endurance coach educators continue to assume the 'knowledges' that inform how they educate coaches to coach to be de facto. Therefore, the next step in my analysis is to examine whether there are any taken-for-granted problems with the knowledge that endurance coaches rely on to plan their athletes' training. In so doing, I intend to use the example of Carl. In my first interview with Carl, he explained the following:

> The best book is the Coe [Peter] and Martin [David] book by far, it's great quality you know. David Martin's a very eminent physiologist at one of the top American universities

> and Peter Coe has his engineering mind. Indeed, if you get a physiologist and you times that by a mathematician, or an engineer, clearly you're going to get a great planner…. and that's a great coach.

However, in my follow-up interview with Carl he said: "I would argue that the chances of having a perfect plan being achieved are, well, it's not going to happen, they're one in a thousand." At the same time Carl remained unaware of any problems with his initial conceptualization of an effective endurance coach that he or she needs to be both a logical thinker and an expert physiologist. Why is it that the systematic and logical thought of an engineer or mathematician, when combined with the knowledge of a physiologist can only produce, as Carl noted, such poor odds of a training plan working? Is this conception of the body solely as an energy producer/convertor appropriate for effective endurance coaching? From a Foucauldian perspective, my next aim is to explore the impact of a deeper understanding of the body as an energy producer/convertor, and so focus on my participants' everyday 'realities' of this understanding. In so doing, I aim to build on the critique from a number of socio-cultural scholars (e.g., Hoberman, 1992; Howe, 2004; Hughson, 2009; Miller, 1995; Pronger, 1995; Shilling, 2004) concerning the objectification of the body for high-performance coaching

**5.3.1 Breaking the machine and preventing engine building.** Unfortunately for my participants, a debilitating yet pervasive underpinning issue facing the design of their training plans, was that their athletes regularly broke down with illness and injury. In support of Carl's observation that well-conceived training plans rarely come off, Kieran said: "I think most athletes get a running injury that has some significant restricting effect on their running at least once, maybe twice a year, and I think that's the case at every level." While Lukas observed: "when you look at endurance running as a sport, we're known as the sport of injuries. Why is this happening?"

One potential answer to Lukas's question, and an obvious critique of the discourse of the endurance body as an engine, is that endurance discourses of the engine overlook the frame, or the structure that the engine has to carry when it moves (runs). I explored this critique with my participants, and in support suggested that physiology was clearly dominating their knowledge of planning. All of the participants disagreed, and in response argued that the solution to the many injury-problems that their athletes regularly experienced was to strengthen the body. Kieran described this sentiment well.

> The machine, well it is a robust machine. It is like you're building a 4x4 in comparison to building a go-kart. You know, a go-kart's got a really fast engine on it but so does a 4x4, it is just that the 4x4 is much more robust. I'm building robust machines, I'll probably end up with tractors though!

Kieran's use of the term 'tractors' meant that he was concerned that his training plans would produce too much strength in his athletes' bodies—a muscular bulk that would ultimately slow his athletes. Nonetheless, the greatest risk for the participants was that their athletes would suffer injuries because their bodies were not strong enough. Critically, if an athlete is injured he or she will experience a period of time in which his or her engine's capacity can not be developed. Therefore, strengthening the body was an additive element to the training plan that was designed to ensure the body's energetic capacities could continue to be developed. The longest active coach in my sample, Patrick noted:

> I like having my athletes do a lot of strength work. Strength work meaning weights, yes. 'Must be strong' and that's thing about Franz [Stampfl], I always remember from Franz, 'you must be strong, you must be strong'. He meant physically strong. Bannister [Roger]

> was weak, and Chataway, too. They were weak people and distance runners basically are not strong, so they've got to be strong physically.

There is a growing discourse of strength and conditioning (S&C) that exists alongside physiology in endurance coaching. Beck's (2005) *Run Strong* promised to make the runner much stronger overall by improving 'running-specific muscle strength'. Sunderland's (2011) *High-Performance Middle Distance Running* has one chapter on strength conditioning training. Therefore, there is an understanding that the body has to be strong or contain strong areas specific to the needs of running. The I.A.A.F. coaching handbook states, "a correctly strengthened muscle is more resistant to injury" (Thompson, 2009, p. 184). Tony described the importance of specific strength in the body when developing his athletes.

> When someone's injured, you're trying to build up strength in the area that's become weak, so the strength is going to be more specific. You're never going to have full strength in that area compared to where you were before but you're topping up the strength in that particular area.

Thierry provided another good example of the perception of strengthening the body.

> It is all [designing an effective plan to produce an effective endurance runner] about strengthening the lower back. Making sure the athletes are strong and mobile in the hips, good lower-legs, feet-ankle conditioning and making the athletes fit for purpose as much as anything else. The building and loading strength phase eventually becomes a more powerful phase. The exercises are all about strengthening, getting the athletes to be stronger physical units.

Finally, during my observation with Carl, he demonstrated his desire that his athletes be strong.

> Carl comes to tell me about John who's leading the reps by about ten yards from the chasing group. "He looks like a carthorse doesn't he. The others can't keep up with him, they have to run their nuts off to stay with him, they hate that John's so strong, immensely strong. I love him, he's so strong."

Accordingly, an alternate discourse of endurance running is that the body should be strong. One of Foucault's (1972) central discursive observations, that I have mentioned previously, is that the linear progression of ideas doesn't exist. This is why, as I have previously noted, Foucault referred to the 'discontinuous' segments of discourse. The relationship between discourse, power and knowledge is never straightforward. There will always be resistances in discourse because the tactical function of discourse is never uniform or stable. Such inherent complexity, contradiction and resistance is one reason why conducting a Foucauldian analysis is so difficult, and so important. As an example of resistance in discourse, Ian, an experienced and esteemed coach educator and I enjoyed some light-hearted banter in our first interview together:

> Ian: No, I don't think physiology saturates knowledge.
>
> Joe: I've seen you present a physiology talk at a conference.
>
> Ian: A talk about interval training that had some physiology in it.
>
> Joe: Based on the work of a physiologist and a cardiologist, it was either a successful coach or physiologist talking in that presentation.
>
> Ian: I think you make a good comment but I don't think it is as strong as you're implying.

Foucault (1978) argued that while there can be different and contradictory discourses within the same strategies, the important point is to gain a sense of the overall strategy of the discourses.

What are the resulting effects of power and knowledge that discourses ensure, and what is their 'strategical integration'?

**5.3.2 Fine-tuning the machine.** The participants did not see the body purely as a physiological organism and expressed the instability of the physiological discourse of the endurance body by expressing the need for increased levels of tuning in the body. In more simple terms, the endurance body needs a powerful engine and the frame carrying the engine—the chassis—has to be strong. As a result, the amount of fine-tuning to the training plan increases. For example, Dennis described the degree of precision involved when building such a machine.

> No doubt about it, you need a Porsche engine and a Porsche car otherwise forget being successful. Our physical therapist measures your stride length and your ground impact forces off of each foot to know how much time you're on the ground. Like, my athletes really are finely-tuned Porsches, I'm talking like a quarter of a percent difference between each foot.

Steve reinforced the degree of precision involved in the design of a training plan.

> My athletes, William and Frank, are just so finely-tuned and so strong now. But when William first got here, he was really weak and imbalanced, he couldn't do any of the agility or any of the strength work. I mean I could have wrestled him to the ground, and I'm an old man.

Moreover, during Steve's observation I recorded the following words that further reinforced the degrees of precision involved in his planning.

> The runners fly past, no sound of feet hitting the track, only their rhythmic breathing. Steve turns to me and says assertively, 'Frank is a FINELY-TUNED machine'. Steve's quite rightly very proud of his achievement and speaks authoritatively, accentuating the

> sound of each word, while also pinching and pointing with the fingers of his right hand for emphasis…. 'FIN-EL-Y-TOONED'.

The degrees of precision for building the endurance body are so fine and intense that the parallels with Foucault's disciplinary framework are obvious. When first articulating disciplinary powers in modern society, Foucault (1995) used the example of a soldier. The modern body was the object and target of power and the soldier, convict, pupil or athlete was something that could be made. Intriguingly Lukas, not having read Foucault, used the same analogy when describing exactly what he was trying to build:

> I'm creating a soldier going into battle, you want the athletes to almost not have to think about what's happening but feel what's happening. In that way, the athletes are reacting to stuff much quicker. I'm creating something that is very different from someone just running around a park. Some people, like my athlete Henry, he's just brilliant at not thinking. I'm trying to get my other athlete, Peter, to think more like Henry, and that's to think less, just to be instinctual.

In a similar vein to Lukas, Steve also said:

> You know, I'm preparing my athletes just like army generals preparing their troops. Marine captains, sergeants you know, they're really, really well prepared. When those guys hit the beach they're in charge, they're on their own, that's what these guys are used to, this is what is going to happen, this is what you have to think about, it is up to you.

In other words, the endurance body is so finely-tuned by the coach that it should just perform, like a wind-up toy.

**5.3.3. The consequences of the finely-tuned energy producing machine.** The participants' understanding that the endurance body is a finely-tuned energy producing/converting

machine was important because the energetic understanding made it acceptable for my participants to talk about very particular coaching concepts. A number of significant consequences developed. Firstly, it starts to become questionable whether the endurance body has any need for thought. Why would such a finely-tuned machine need to think? Thus, my participants were attempting to build, through very careful preparation, bodies that are so finely-tuned, primed, and ready for action that those bodies will just perform, automatically. Dennis noted: "we want the athletes running, just running, relieved from their own shackles and pressures. My athlete, Harry, couldn't tell you what he had for breakfast because he only thinks about running, and I think that's a positive". Lauren agreed:

> We're creating such hyper-tuned animals for want of a better word. You want the athletes not to have to think about what's happening because I think sometimes thinking is wrong. I think 'reacting' is instinct and 'thinking' can get in the way of that.

A second consequence of the participants' conception of the finely-tuned energy producing/converting endurance body is that such high levels of fine-tuning are only achievable if the body becomes thoroughly and systematically de-personalized and objectified. Indeed, Kieran described his wife, who was a former world-class athlete in the following way: "Wendy was a great technical *animal* and had a good bit of endurance in her." While, Aaron described his wife, who is currently a competitive international athlete in a similar way: "Sheila doesn't need much high-quality training because she's *just* a diesel engine." The problem with such deep levels of objectification of the body is that the body to be trained almost belongs to the coach to do with whatever he or she needs. As a result, a third consequence of this specific line of thinking about the body needing to be so finely-tuned, is that it is solely the coach's responsibility to 'build' the body in the most appropriate ways. However, in order that my participants knew *exactly* what sort

of training intervention to apply, the participants believed that it was better to almost become the body being trained. For example, Olivier said:

> I can't feel what my athletes' bodies needs, but I need to know what their bodies need and get that absolutely pin-point perfect. If you can grab that information from the athlete then that's great. So my long-term goal is to get to a point where I actually say to the athlete, 'what do you think you need?' and have that feedback be right.

Olivier's quote was interesting because I replied: "so that the athlete knows what you want him or her to need?" Olivier agreed and saw no problems with the large degree of control that he was exerting over his athletes. Further, Kieran reinforced the sentiment of the effective endurance coach almost 'being' the body being trained:

> As a coach you aim to make the athlete know exactly what he or she needs, what that body actually requires. What the athlete wants has to be what he or she needs. That integration between what they want and need has to be the best integration you can get.

Such understandings that the coach has to 'feel' as much as possible as the body he or she is training feels sets up further consequences that I will develop in later chapters, but at this point of my analysis it is enough to say that one final consequence of the conception of the finely-tuned endurance body is that the finesse involved in the body's tuning requires the intervention of other scientists. Each participant felt it essential that he had access to any combination of three scientists or practitioners—strength and conditioning (S&C), biomechanist or physiotherapist. Inevitably, all the participants felt it equally important that the scientist or practitioner understood the unique needs of the endurance athlete. Alex described in detail his reliance on one of his athlete's support teams.

> I'm sat in front of a doctor, a physio and a S&C coach and I'm saying 'ok, what's the injury, what's the prognosis, diagnosis, how long is it going to take to recover, what does he have to do? How do we stop the injury happening again?' I'm saying to them, 'my athlete Barney doesn't sprint very well. I want you to look at what he does. I want you to quality assure his current program. I want him to be able to sprint as fast as possible. I want him to be as strong as possible so he's biomechanically sound and I want him to be injury-free. This is what he does now, I want you to all look at it all'. It [a good training plan] requires this level of input from all those sorts of people.

In other words, Alex explained that the best endurance training plans have the best team of scientists and practitioners working collaboratively on them. Which is why as Bourne (2009) explained, the best endurance training plans are also the most sophisticated. And, as Daniels (2005) explained, successful training plans require only scientific based training. And, as Sunderland (2011) explained, planning a training program is an 'art', where nothing should be left to chance. And finally, as Dave Brailsford is said to have explained, designing a solid training plan requires consideration of a myriad of 1% marginal gains.

**5.4 Analyzing the Endurance Body**

I have argued in this chapter that the dominant findings of my participants' construction of knowledge—physiology, structuring physiological adaptations, the methods of successful athletes/coaches—create the rules of 'truth' about the endurance body. Therefore, the knowledge of 'mankind' that is used in the overall strategy of endurance coaching discourses is that the endurance body is understood to require a transformation that occurs through building strength, power, speed or stamina of movement. Thus conceived, the best endurance bodies are still the best producers and convertors of energy however that energy manifests itself—strength, power,

speed or stamina. This is an observation of understated importance if I want to establish the limits, boundaries and frames of endurance coaches' knowledge of planning because discourses control what can be understood about a subject but also can act to obscure other points of view or knowledge. Discourses, working with power, draw boundaries around a particular subject that frames what can be said and in so doing omits alternatives.

It is the alternatives, or the understandings that are concealed that are important in my analysis because these alternatives demonstrate how the frame of the dominant understanding is specific and limited. Focusing the analysis of effective endurance coaching on physiology or building an engine and strengthening the frame that engine is moving, seems limiting and problematic. Put simply, the body is not conceived as a structure with many interdependent and interrelated fluid-moving parts. A holism and fluidity that not only requires less effort or energy to produce motion but also incurs less wear or breakdowns in the processes of moving. In other words, the dominant discourses of energy production conceal a number of other ways of understanding the endurance body that raise important questions. What is the structural state of the body and the ease of movement in the body of the fastest performer? What daily experiences does the endurance body undergo that contributes to that body's capacity to move? What contribution do each of the 700+ muscles in the body make to that movement, and what freedom of movement is there in each of the 100+ joints? How does the excessive muscle contracting/building in endurance coaches' strengthening programs prevent muscle shortening, joint restriction or the efficient working of the body's internal organs (Kendall et al., 2005)? What are the benefits of endurance coaches learning about the structure of muscles themselves, such as epimysium, perimysium (Sunderland, 2011), rather than the structure of the organism being trained to move? What are the benefits of endurance coaches learning that the concept of

efficiency is expressed as the body's efficiency using oxygen when running at a given pace (Noakes, 2005) rather than an efficiency of movement? What other embodied experiences and sensations could endurance athletes learn and develop?

Discourses of a structured and controlled physiological adaptation of the body seems limiting because endurance races, as the events that athletes are training for, are inherently uncontrolled and spontaneous events. While focusing analysis on the training plans of the fastest performers also seems limiting because no account is made for the condition of the athlete prior to starting those training plans. As with the body, it is possible to ask a number of questions of the dominant endurance coaching discourses. For example, how much informal running training has the fastest athletes experienced prior to undergoing formal training plans? Did those athletes run to and from school everyday in their childhood, or take a bus? Did those athletes practice sports such as cycling and swimming, or chess and video games? How much continuous practice (uninterrupted by illness and injury) have the fastest performers enjoyed in the season, the previous season, and the seasons before that? What were the expectations of the fastest performer's family, extended family and friends as he or she grew up? What is the perception of effort of the fastest performer? What is the state of the fastest performers' personal life or other personal concerns? Rather than assume the most effective training plan being the plan that produced the fastest performance in a season, maybe the most effective training plan could be conceived as the training plan that produced the biggest degree of improvement in an athlete across a season. To reinforce my point that effective discourses of training plans could be broadened, it was noticeable that none of the participants described learning from a coach who had demonstrated the usefulness of educating athletes, or helping athletes to enjoy the sport, or helping athletes train as an injury-free performer—all of which may produce better performances

in the longer-term. Maybe coaches who facilitate the development of 'thoughtful' athletes will have more success than coaches who try to control every aspect of their athletes' training.

The point to make is that there are endless questions that endurance coaches could ask in order to help explain why one endurance athlete is faster than another. But these questions aren't asked because the dominant discourses that underpin the participants' construction of knowledge—physiology, structuring physiological adaptations, the methods of successful athletes/coaches—create such specific rules of 'truth' about the endurance body. In other words, a host of understandings of the performance factors that contribute to planning are not developed.

**5.4.1 Foucault's interpretation of knowledge in a disciplinary society.** Foucault (1995) argued that the prison extracts knowledge 'unceasingly' from the convict. A knowledge that will make possible that convict's transformation to becoming a useful member of society. Clearly, coaches are not prison warders and athletes are not convicts, yet the training environment of the endurance coach and his or her athletes is also the place for the formation and expression of knowledge about endurance athletes. Knowledge defines the standards by which individual bodies can be constantly observed, compared, measured, diagnosed, characterized, classified and judged in order to demonstrate the individual body's progress towards re-entry to the social body.

I have suggested that the endurance body experiences an energy-producing conversion—strength, power, speed or stamina. This energetic conversion requires movement analysis to be focused on the body's ability to produce energy and exert force, rather than convert and save energy through efficient movement. It follows that strengthening the body to withstand injury can only occur if the exercises are physically demanding. Indeed, during the observations of my participants coaching, the rehabilitation exercises that I witnessed required the athletes to produce forceful movements involving great energy expenditure. For example, athletes throwing a ball as

high as possible, jumping as far as possible, holding a static position for as long as possible, completing as many sit-ups as possible. Indeed, Alex noted: "the circuits I learnt to do were just blood and snots, it was just hard work so we all thought, 'it is going to make us better.'" These rehabilitation exercises were not based on gentle awareness of subtle muscles or efficiency of movement as the exercises would be if they were performed in a physiotherapist's clinic. In other words, the desire to produce strength in the body outweighs efficiency because the discourses of the endurance body require energy producing/converting transformations.

For Foucault (1978, 1995), knowledge joins with power and permits alternative ways—the reciprocal effects of power and knowledge—to understanding the individual athlete. I will develop my understanding of power in later result's chapters. For now, it is important to note the specificity of the constructed knowledge that endurance coaches acquire because that constructed knowledge is the *only* knowledge a coach can access. The frames or boundaries of knowledge are thick, strong and impenetrable. The frames, if they were picture frames, are from the 17th, not 21st Century. They are frames that are resistant to change. This resistance may be why Foucault (1972) was able to refer to discourses as "apparently unmoving histories" (p. 3). In more simple terms, the history of ideas about particular subjects in modern disciplinary societies, *don't change*. Therefore, in the final analysis, if the knowledge that drives the organizational principles that spread across modern endurance society is problematic because it is so narrowly defined, then endurance coaches are likely to experience many complications because their practices will also become rigidly defined. Indeed, Foucault (1995) borrowed from Baltard (1829), a French architect of the early 19th Century, and referred to the prison as a *complete* and *austere* institution. The prison is complete because no other interpretation of knowledge is allowed in, and the prison is austere because it is uncompromising in its extraction of knowledge.

**5.5. Conclusion**

Foucault (1995) showed how the knowledge that drove the transformation of the convict had to be guaranteed because it formed the penitentiary operation. Whatever knowledge is established as being useful to endurance coaches is crucial to understand because of the inherent limits that knowledge will place on the transformation of the body that is to occur. My Foucauldian analysis of knowledge is thus essential to the academic field of coach education because it has demonstrated specific and limited meanings that are established and commonly taken-for-granted. As an example of such specific and limited meanings in my participants' knowledges, Jack couldn't see the contradiction in his statement that he learnt inspirational *and* routine practices from a host of iconic endurance coaches.

> The keys to my knowledge on planning were definitely the great coaches, Lydiard and Storey, and also from great athletes like Tim Hutchings and Mark Rowland. There was an ongoing process of learning what does and doesn't work. It was all fairly predictable stuff, a longish run on the weekend, a hard-ish run on Saturday morning and a workout on Tuesday.

Having uncovered a deeper understanding of the knowledges that high-performance endurance coaches possess, the next step for my Foucauldian analysis of endurance coaching is to understand the penitentiary operation. That is, the techniques that transform endurance athletes, or the 'routine and inspirational' practices that endurance coaches design in order to produce the best endurance athletes.

## 6.0 Practice

The intention of the previous chapter was to understand precisely the knowledge that high-performance endurance coaches believe they need to acquire in order to drive the transformation of their athletes into a high quality engine, soldier or animal. Foucault (1995) used the terms 'knowledge of mankind' and 'biographical knowledge' interchangeably, presumably because these knowledges inform the prison warden about the convict's own journey to salvation. Or in my context, inform the endurance coach as to what sort of person the athlete is, what sort of person the athlete can become, and where the athlete currently resides in his or her own journey. It is this knowledge that enables the endurance coach to plan the practices that will enable the athlete to complete his or her athletic career. Thus, moving the endurance body from where the body is presently, to where it needs to be—matching the two up—is the aim of endurance coaches' training plans. As Theo noted in the previous chapter:

> The first thing the coach has to understand is what the event requires in terms of demand on the energy systems. What the athlete has got, in terms of his or her physiological abilities, and how you're going to match the two up. That's the pinnacle, or the framework, around which your plans are going to be written.

For Foucault (1995), the practices that transformed the body profoundly changed in the transition to modern society. The next step of my analysis then is to examine the techniques, or practices, that endurances coaches design in order to transform the endurance body. It is my intention in this chapter, to draw out and evidence these practices and to analyze the consequences of endurance coaches designing disciplined training programs.

### 6.1 The Disciplinary Framework for Planning Endurance Running

In spite of numerous applications of Foucault's disciplinary techniques in sports studies

(e.g., Chapman, 1997; Denison, 2007; Heikkala, 1993; Johns & Johns, 2000), rarely have scholars provided evidence that conveys the degree of precise adherence that coaches have to these techniques, one notable exception being Barker-Ruchti and Tinning (2010). Yet if my Foucauldian analysis of high-performance endurance coaches' understanding of planning is to make sense, it is important to illustrate the depth of discipline's infiltration on endurance coaches' planning by evidencing the many ways the disciplinary techniques are displayed in high-performance endurance coaches' practices. In so doing, the effects and consequences of endurance coaches' practices can begin to become apparent.

**6.1.1. Cellular distributions.** In chapters 3.0 and 5.0, I described how the endurance body has entered a whole new machinery of discipline, planning and organization, hence Foucault's (1995) reference to political anatomy. For Foucault (1995), in a disciplinary society, the body is caught in a comprehensive system of "constraints and privations, obligations and prohibitions… [the body] is (subject) to strict rules.. a new restraint" (p. 11). In point of fact, according to Ian, the practice of interval training—the staple endurance training method—evolved out of the army:

> Reindell and Gerschler [the doctors who are generally seen as pioneering interval training] were charged with getting the soldiers in the Austrian army, who in 1939 were preparing for war, fit very quickly. That's where interval training came from. They had thousands of army recruits, gave them interval training and found they could significantly increase the soldiers' V02 max in six weeks. Now because Gerschler happened to be a track coach as well, he thought he could use this knowledge with his athletes, so interval training did come from non-athletic sources.

Thus, building the soldier and building the endurance athlete are in many ways part of the very same transformation. Indeed, it is notable that the best endurance runners in the world, such as

Paavo Nurmi, Emil Zatopek and Vladmir Kuts, until the Cold War era, were all in the military during their athletic careers. Therefore, it may be unsurprising that there is a strong resemblance between disciplinary techniques and endurance coaches' training methods, and it is my intention to examine the strength of this resemblance.

The first disciplinary concept that Foucault (1995) elaborated was *cellular*, or the use and organization of space. Within the concept of space, there were four disciplinary techniques—*enclosure*, *partitioning*, *function*, *rank*—that worked together to instill discipline (Foucault, 1995). All of these techniques were clearly visible throughout the data collection. The first of these, *enclosure*, was the most efficient way of organizing the convict's, or endurance athlete's training as it enabled physical adaptations (production) to become more concentrated. Accordingly, all of the participants had specific spaces where specific workouts could happen, the "protected place of disciplinary monotony" (p. 141). This protected space wasn't necessarily the track, it was any regularly used space. While observing Kieran's workout in a park adjacent to the local track, I wrote the following words:

> "Who has the record for the fastest hill?" I ask the assistant coach. "Oh Barry will have that" he replies. I realize he means Barry Jones, former Olympic champion. I do a quick mental calculation "so you've been coming here for the last 40 years?" I ask. "Every Monday, yep, these are the hills that built Barry and a host of others," he replies.

At Dennis's workout, it became clear to me that his athletes, who consistently run in excess of 120 miles a week, do so on two wooded trails that total just over five miles. Subsequently, Dennis's athletes have to run numerous laps of the same course. I recorded these words:

> One of the athletes in the group tells me that she's not allowed to run on the road. Dennis overhears and explains, "I'd have a heart attack if the athletes ran on the roads, it is too

> hard a surface. The athletes would all get injured. I know it is boring but we do variations of routes." I think he feels awkward. Shirley, the athlete pipes up, "I sometimes do my steady-pace runs around the field of the local school, five miles, that's about 25 laps".

Space is therefore *enclosed* whenever its use is repeated (Foucault, 1995)—dramatically in Dennis's and Kieran's cases. Yet in every observation of a workout that occurred in the Fall, there was a striking similarity. The vast majority of these workouts were on grass because of the coaches' perception that their athletes can get injured if they do too much running on the road. Or as Dennis explained, *any* running on the road. Because many of the workouts occurred in the evening, it was imperative that the surface had to be lit from a nearby road, building or floodlights from a different sporting space. In this way, the space chosen by the participants, "derive(d) the maximum advantages and… neutralize(d) the inconveniencies" (Foucault, 1995, p. 141). And Lukas was therefore able to explain: "What built Jason was 30 weeks a year in the park up the road, rolling hills, week in, week out."

In each participant's case the spaces used were also *partitioned* (Foucault, 1995). Specific courses and routes were marked out (e.g., clockwise around the perimeter of the space), and repeated with great precision. For example, Jack described one of his peers (who is currently coaching a number of international endurance athletes) as being an outstanding endurance coach because he designed such precisely measured training routes.

> Thomas is a great coach because he practically measures, to the centimeter, every rep his athletes do. He gets quite stressed, quite frenetic and neurotic about measuring the courses. I once helped him mark the course and he kept telling me how exact the lap needed to be. At one moment he ran over, screaming at me because I was walking the wrong angle after a turn, and I thought 'what the fuck!'

As Foucault (1995) noted, “discipline organizes an analytical space” (p. 143). In other words, controlling space enables the measurement of what occurs in that space.

The overt organization and measurement of a precise training space was not unusual but what was noticeable is that the participants were unaware of just how precise their measurements often were. During my observation of Lukas’s workout, I noticed Lukas call to his assistants, who were a couple of hundred yards away: “Put the marker down there… no not there, another two metres”. Lukas went on to explain how he liked to regularly change the courses for his athletes to prevent boredom. Yet Lukas’ training group ran their Tuesday evening workout at the same location, the perfectly flat and manicured playing fields of a private school. Understandably, Lukas explained: “We don’t do that [change the course] on a Tuesday, we wouldn’t change this surface? We do the same lap each week, we just change the bits of the lap where we run hard”. Foucault (1995) illustrated how space has to be organized precisely in order to judge and supervise bodies in relation to their stage of adaptation and performance targets: “It was a procedure, therefore, aimed at knowing, mastering and using” (p. 143). Similarly, I wrote these words at Lukas’s observation while he addressed the training group:

> Lukas points at the younger athletes. “See how you go, but don’t plod off too slow at the back so it is like you’re not really doing it [working hard] because we need to make sure in these workouts that you show you’re fast enough to keep up with us when we go out on the road on a Thursday night… I think that’s fair isn’t it? So work on these [reps], I’ll see how you’re going, to see if you can run with us on Thursday and, well, just enjoy it.”

It is clear to see how Lukas, because space had a clear *function* perceived the training space as useful in a number of ways. Firstly, the surface (a grass playing field) was seen as producing less wear on the body than a road or running track. Secondly, the space was lit most of

the way round so the athletes could train on it in the evening. Thirdly, by being such a flat and manicured surface the athletes' running rhythm would not be interrupted, enabling them to run as fast as possible. Finally, the space was broken-up and used in different ways by athletes of differing abilities—*rank*. Thus, the fastest runners in Lukas' group had to run as fast as possible over four sets of two laps with one lap jog recovery between efforts. The second fastest group of athletes had to run three sets of two laps. The third fastest group of athletes had to run three sets of one lap at a steady pace and one lap as fast as possible. Crucially, using space in such a disciplined way enabled Lukas to monitor his athletes carefully and therefore, *rank* his athletes to judge whether they were capable of joining the 'Thursday' group.

Only two participants had a slightly different relationship with *enclosing* the spaces of their athletes. Jack who, in order to break up the monotony experienced by his athletes, rotated the park his training group used for their Tuesday workout—albeit in strict order—between five parks that were all in a mile radius of the regular meeting place. Theo rode his bike in order to follow his training group which enabled his athletes to run each repetition in a different part of a huge park. However, each training repetition was in the same park, the group met at the same place, performed the same warm-up routine, and the workouts involved the same types of running. Nevertheless, these were the only two examples in my data of participants changing their use of training space. The critical point to make is that endurance coaches consistently apply space in a precisely controlled and structured manner.

**6.1.2 Organic power.** The disciplinary techniques that comprised the concept of *organic* power, or time, were the *time-table*, the *temporal elaboration of the act*, the *correlation of the body and gesture*, *body-object articulation*, and *exhaustion* (Foucault, 1995). According to Foucault (1995), the combination of temporal techniques enabled prison wardens to establish

rhythms in the convicts' bodies that aided their transformation towards normality. As I illustrated in the previous chapter, the endurance coaching context is defined by physiological knowledge, and so coaches *time-table* their athletes' training. This *time-table* is the training plan and it establishes rhythms in the endurance body. In this temporal way, endurance coaches can help their athletes achieve specific physiological adaptations and by extension improved performances. The participants designed their training plans by regulating time, literally "regulat[ing] the cycles of repetition" (Foucault, 1995, p. 149). In other words, each workout, usually run at a certain time, is also run for a certain time and over a certain distance because it is that discipline that induces a specific training effect. In a disciplinary society the quality of time is assured and so each workout, and the time between each workout, progresses the endurance body closer to its ultimate performance.

While the *time-table* was only one organic technique, its effects were far-reaching. At Lauren's observation, the athletes were required to run five repetitions of five minutes duration on the track. Because the athletes were required to start each repetition from the start line, and were running the same pace throughout the workout, I soon noticed a developing pattern. Half-way through the workout I recorded these words:

> There's a groundhog monotony to this workout that I'm beginning to notice. Every runner is in the same order, with the same gaps between each other at every lap. When the whistle goes at the end of the five minutes, because the athletes are running the same distance on each repetition, the athletes re-appear from the same place. The leaders finish at the finish line, the next group finishes at the end of the home straight, another group by the water jump, and the final group by the hammer cage, which is as far away as it is possible to get. And the athletes repeat this on every repetition.

Time permeates the workout in a more complete way that adds to the repetitiveness of this particular workout. As Foucault (1995) noted, "the body is constantly applied to its exercise" (p. 151). Lauren had emailed me a brief plan for my observation of his workout that read: "Usual *time-table* is: Arrive and w/up 7pm; Core workout, on track, starts at 7.30pm; reps end 8.10pm; debrief and w/down to 8.25pm; then go." As I returned to my car at the end of the workout, that was a short walk away from the track, I glanced at my watch and noticed the time, 8.27pm, exactly to Lauren's plan.

Time is everywhere and it penetrates the endurance body in every aspect of the athletic training. The *temporal elaboration of the act* was the disciplinary technique that instilled the appropriate movements and gestures needed for the body's transformation, or the time that needed to be taken to run a specific repetition (Foucault, 1995). For Foucault (1995) these movements were broken down into more precise elements, both constraining and sustaining. For my participants these movements were also broken down into more specific elements defined by time. For example, Thierry described how time infiltrated his athletes' stretching exercises.

> The plan is certainly that the athletes should be stretching every day for half an hour. They hold each stretch for a minimum of ten and twenty seconds but the lower back for a minute, doing it a few times and each time getting a little deeper stretch.

Similarly, Carl explained to me how his athletes:

> Carry out their core sessions at least four times a week. Each session should last about 30 minutes each. In that session they do five sets of three exercises that last either 30 seconds or one minute, depending on the exercise. They have about 15 seconds rest between each repetition, and a minute between each set.

As Foucault (1995) described, precise movements enable time to penetrate the body and lead to the *correlation of the body and the gesture* that extends the temporal control of movement. Each gesture, or movement had to be the most precise or the most efficient possible. When I arrived at my observation of Kieran and his training group, I recorded these words:

> As I walk through the gap in the trees towards Kieran, to my right 50 runners in lines of five march past me their knees high in the air. "Extend your toes, keep your head high, drive your arms", comes the call from the assistant coach. The athletes proceed for thirty yards, stop, turn and walk slowly back to the start and repeat another drill. The assistant coaches keep a watchful eye. One has a whistle, the other starts clapping, and now the athletes beat their legs in time with the claps. The next drill is more complex, the athletes have to dance with fast feet now. A lot of drills, a lot of instructions.

The extension of the *correlation of the body and gesture*, was that the same precision could be added to the manipulation of whatever object the body was using, a *body-object articulation* (Foucault, 1995). For example, Thierry described his irritation with two of his athletes who were blasé about using a stopwatch.

> I had a couple of girls who, when they started training with me, never brought a watch with them. I used to get really frustrated because I thought, 'if I ain't got a watch then what are we going to do?' Do you know what I mean? I'd say, 'how are we going to train if you haven't got a watch? How do you know where you are? What's the point?' They left the group in the end.

While at my observation of Aaron, one of his athletes started to panic because she had forgotten her Garmin (GPS). I recorded these words:

> The weather is horrible, it is really cold, raining hard and there's a very strong wind blowing across the track. But one of Aaron's athletes doesn't want to start the workout because she's forgotten the watch part of her heart-rate monitor. She has the belt around her chest, but not the watch. The rest of the athletes are standing on the start line, freezing, and waiting. I'd be really irritated if I was them. She needs her heart-rate monitor because she has to run the first two minutes of her six-minute rep below her anaerobic threshold, so she wants to be in control of that information. "Don't worry I'll call out when to change effort", shouts Aaron. He wants the group to start as soon as possible. The irony is that the wind is so strong, every time the group run into the wind their heart rates are going to soar and the athletes' heart rates will be too high, above their threshold. The athletes would have to jog when they run into the wind to keep their heart-rates at the right level.

In spite of the poor weather conditions, Aaron's workout was still designed through the articulation of the body and the watch—a *body-object articulation* (Foucault, 1995).Thus, a heart-rate monitor was used to regulate the body's speed or intensity of movements for specific sections of the workout. In other words, time is constantly and continually penetrating. Without time, planning training can't happen. Time, or the use of time is, therefore, *exhausted*. Wasting time is impossible "from time, ever more available moments and, from each moment, ever more useful forces" (Foucault, 1995, p. 154). Long-term aims, yearly plans, meso-cycles, micro-cycles, the week's plan, the daily plan, the morning workout, the afternoon or evening workout, the steady runs, repetitions, the parts of repetitions or intervals, the recoveries between repetitions and the drills, the warm-ups and warm-downs (preparation), stretching, core-work, weights or circuit work, weeks off, days off, time between certain workouts, time with family and friends, and even sleeping and eating: "totally useful time… in which the body is constantly applied to its exercise"

(pp. 150-151). Tony described how precisely his athletes adhered to the planned times in their workouts.

> Once you're on the track the stopwatch comes in a bit more. I'm making sure the athletes are on the ball, mostly just making sure they have a discipline. If the plan says there is 60 seconds recovery in the workout, I'm making sure it is 60 and not 62. A former athlete of mine, Arnold, was a tremendous one for that. He'd jog up to the line at 60 seconds and he'd be off, and if the others weren't ready his attitude was 'sorry guys the plan says 60 seconds, not 62'. There's a discipline involved that the youngsters learn, they are just as disciplined.

In this way, if athletes allow their recovery times to slip from the plan the physiological adaptations of the specific energy systems being targeted will not be as effective. Therefore, there is not one moment of the plan, or athletes' lives, in which their progress cannot be monitored by time. In other words, endurance coaches are able to gain temporal control of the body's specific movements. Hence, Foucault (1995) stated that the body's subjection to *organic* techniques, that code all activities and prescribe all movements, is another way in which power works to enable the body to become known and subsequently objectified—a mechanical body. The athlete starts to be made a subject of a knowledge that prescribes his or her correct, disciplined movements. In turn, that athlete becomes subjected to that knowledge.

**6.1.3 The subjection that never reaches its limit.** The depth of the individual's subjection for Foucault (1995) enabled the formation of a disciplinary society. Time and space was organized and this disciplinary concept was called the *organization of genesis*. More specifically, time was to be broken down and divided into specific *successive or parallel segments* and applied with fine precision, or more simply 'one bit at a time' (Foucault, 1995). This

organization of time enabled the development of an *analytical* plan that was concluded with an *examination*. Collectively, these organizational processes entailed drawing up a *series of series of exercises* (Foucault, 1995). Again, all these disciplinary techniques were clearly seen among my participants' practices. Accordingly, if athletes weren't able to complete a workout at the designed pace, all the participants would adapt the workout so that each athlete could complete a productive workout. Because endurance coaches have such high aims—they are building finely-tuned machines— and because they have to design plans with such underpinning caution to avoid injury, the ability to tweak (apply a minor adaptation) the plan is essential. This ability to adapt the plan, and so apply time in a finely-controlled or *successive* manner was seen as being one of the most important elements of the planning process. For example, rather than an athlete completing six, five-minute repetitions, he or she might be asked to complete six, four-minute repetitions. Thus, Alex attributed his ability to apply a fine adaptation to the plan as the major skill that had enabled him to become a successful endurance coach.

> What I learnt to do, which was really hard and stressful, was from between the 30 minutes before the workout was going to start and the start, I tried to change the athlete's workout from the initial plan based on what I perceived his or her status to be in that period. No doubt this was the most important and significant part of the process.

Time enables the coaches to know that athletes need to run at specific speeds for specific times at specific stages of the season. Coaches also know what time of day gives the athletes the best chance of achieving the specific running times in their workouts. Accordingly, segments of time are re-organized to form an *analytical* plan, or a "succession of elements of increasing complexity" (Foucault, 1995, p. 158). For example, Thierry described an overarching structure to his training plans.

> The plan's over four phases; the build-up phase is quite generic, that is where the athletes gradually build running into 80-90% of their maximum mileage, that is the maximum mileage they will do in the biggest week of training in the season, and include all the different facets of the training; the weights, the drills, the conditioning, core stability work, stretching. Then we go into the next phase, general preparation, where the athletes are operating at full volume and building up those concepts of the work. As we go into April and May, the pre-competition phase, the athletes tend to get more event-specific in terms of the key workouts. Then, the final phase, in June obviously we're tapering the mileage and now the athletes can go fully into their event-specific training.

Within the plan, progress is checked because time can be so specifically organized. The training phases can be finalized and an individual's progress can be tested—the *examination* (Foucault, 1995). The concept of organizing time with such finite detail builds, so that eventually endurance coaches come to know that athletes that run at a specific speed for a specific number of repetitions divided by a specific recovery demonstrates the ability to run a specific time in a race. Thus, all the participants planned specific workouts that were designed to test whether their athletes were ready to race, and called these benchmark workouts. For example, Thierry explained how he typically applied his benchmark workouts.

> We have some benchmark workouts for 1500m. One good one is 10 x 400m, off a minute [recovery]. All else being equal for me the athletes should be running the reps pretty close to their race pace. So if the athletes average 59's, I'd expect them to run 3.40 in a 1500m race. If the athletes run 58's, I'd expect them to run 3.36, as long as they're in control of the pace in that workout then that's where they're roughly going to be.

Thus, while a race is also part of the *examination*, the athlete's capacity to be able to run a certain time in a workout is an essential part of the training plan.

As a consequence of the collection of finely-controlled disciplinary techniques, the final stage of disciplinary organization can occur. This final stage entailed the drawing up a *series of series of exercises* that were suited to an individual athlete's needs—a "disciplinary polyphony of exercises" (Foucault, 1995, p. 159). Thus, one of the strongest themes of my data collection was each participant's belief that he was designing an individual training plan that specifically addressed each individual's needs. The inherent individuality of the design of the training plan is the theme of my final results chapter, for now it is appropriate to know that each individual is always caught and, therefore, ranked in this disciplinary organizational process. As a result, the body always occupies a specific part of the analytic plan. The endurance body is then involved in a constant progression to running a peak performance and through discipline, is able to be known at every stage of its development. Thus Foucault (1995) observed how disciplinary behavior was bent to a "terminal state" (p. 161), that was the convict's transformation to becoming a useful member of society.

As an example of knowing the specific part of the analytic plan that the body occupied, an international standard male 1500m runner knows his training is progressing well if, during his steady-state runs, he averages 5.45 for each mile. Every training run or workout is a benchmark workout of sorts because at the start of the training year that 1500m athlete might expect to be averaging 6.00 minutes for each mile. Using Thierry's example, athletes who aim to run 59 seconds for their repeat 400m repetitions in order to indicate that they're in 3.40 1500m race condition, might be expected to run the repetitions in 61 seconds at an earlier stage of the plan. Or the athletes might be expected to run more 200m (20-30) repetitions at the same pace (29

seconds) at an even earlier stage of the plan; or the athletes might be expected to run 70 seconds for each lap of their mile repeats in November, and so on.

Collectively, the techniques within the organization of genesis enabled disciplined social institutions such as endurance coaching cultures, to best 'capitalize' on these organizational processes. As a result, and as I have already described, both planning and monitoring athletes' training were seen as the essential coaching skills by the majority of the participants. Carl reinforced the importance of planning.

> Planning is number one. It is the most important skill. I think both the athletes and myself just need a general framework. If you're talking about goal-setting, the plan's the means to achieve the goal because obviously we [the athlete and coach] never know if we're on target. Without planning, well if training is random, I can't see how anyone can be confident that his or her target will be achieved, so planning and monitoring is essential.

Lauren also explained the importance of planning.

> Planning to me is setting out a detailed system of training to achieve a goal. The plan is what gives the athlete the best chance of meeting that goal. I wrote about planning in my book because it is so important. I explained that as a skill, I rate planning extremely high and even, well, a cliché but 'fail to plan, plan to fail'.

My empirical material in the previous chapter illustrated that in order for the coach to be an effective planner and ensure the efficient and maximal organization of the training group, the coach has to have knowledge of all the things that make up the group's various parts. While this knowledge is part of the next disciplinary concept, the combination of forces, it is also knowledge of the individuals in a group. A knowledge of the individuals' progress that is essential for effective planning. Thus, Alex described:

> I want to know everything. I want to know how far the athletes are running, exactly what they're doing, because if I can't know then how do I set workouts when I can't be there? And that's wrong because then the athletes will blow [not complete the planned workout], and I don't want them to blow. So I need to set the first half of the workout as close to the speed I think the athletes can achieve the whole workout at.

Subsequently, the monitoring of the body's progress, as I also evidenced in the previous chapter, becomes as important a part of the planning process as the actual design of the plan. Endurance coaches have to know how their athletes have responded throughout their training to best adapt the plans for the future. Accordingly, to be a successful athlete there has to be *not one moment in life* in which the coach cannot extract forces. Athletes experience a limitless subjection of coaches' knowledge. Thus, the collective ensemble of disciplinary techniques enables an 'unceasing extraction' of knowledge of the individual athlete's transformation. In other words, effective planning requires both relentless and diligent monitoring. Aaron described the diligence he brought to monitoring his athletes' training with the following example.

> I've got, going back with my athletes, probably more excel spreadsheets with data than NASA has to send someone to the moon. If I lost my computer I would be an unhappy chap. For my athlete, Sheila, I've now got six and a half years of data where I've recorded every single training workout.

When I asked Aaron if he conducted physiology tests to monitor his athletes he replied,

> not regularly, probably two lab tests, and four Gigliotti tests in the year and then we'll do odd bits and bobs of individual testing, like lactate measures. I've got a little lactate meter. So essentially, except for the lab tests obviously, well… I guess I do test quite a lot.

Thus, Aaron started to become aware that he tested his athletes more often than he thought. Lukas, throughout the data gathering process, described himself as a "bit of an anti-planner", yet was unaware of the contradiction in his methods because he took very detailed records.

> I take detailed records of every workout we do, the times, everything, so it is all written in a big diary. I'm more meticulous in recording than I am in planning. I'll look back at what we've done because that's the accurate bit, that's what's actually happened.

I then asked what Lukas recorded and he responded as follows:

> Everything (very long pause), everything, I mean as much as possible, so the athletes text me after their morning run and the text goes in the book. S&C, weights lifted, everything. Nutrition based on my numerous conversations with the athletes about what they're eating, and all the training, drills, etc., it all gets recorded.

I asked how often Lukas consulted that record—his big diary—and he replied: "Oh, my recording diary is never away from me, it is always by my side. I leave it on my kitchen table, so I've got it the whole time, it is never away." In other words, "a whole analytical pedagogy was being formed, meticulous in its detail… and also very precocious in its history" (Foucault, 1995, p. 159). Consequently, it can be said that Aaron's and Lukas's athletes experience a subjection that never reaches its limit.

**6.1.4 The collective coercion of bodies.** The last disciplinary concept that Foucault (1995) articulated was *combinatory*, in that all the disciplinary techniques were combined to produce the most efficient transformation machine. The *combination of forces* meant that the individual athlete comes to be but one element of a larger multi-segmentary machine. Accordingly, the techniques that comprise this final disciplinary technique relate to the *tactics* within the group. That is the *precise commands* that enable each individual (*element*) to function

as part of the collective team (Foucault, 1995). Olivier observed that training a person just as an individual was almost impossible.

> You're weighing up the advantages and disadvantages of having a sizeable group where you've got to get people working together. I mean sometimes I split the group into two groups to do a workout, especially in the summer. I alter the workouts where some do all the reps and others don't do all the reps, but you are occasionally sacrificing individuals' training to have a group working together.

*Exactly* as Foucault (1995) outlined, the main aim of disciplinary power was to train the mass of confusion into a 'multiplicity of individual elements'. Along those lines Thierry stated:

> I'd have a big sheet that said on this Tuesday the athletes are going to be on the track, which means it is the same workout for everybody. But then this particular person is racing at the weekend so instead of doing 10 x 1000m, we'll cut him down to six but keep him to the same speed. So within the framework of the group I would adjust the training load and the intensity for individual athletes within the group.

Therefore, disciplinary techniques work to make individuals within the context of larger groups. Athletes, by their nature, are defined in relation to each other. In other words, athletes must be like one another. A series of norms are established and expected, alternatives are not considered. I will develop the point that athletes are like one another in the next chapter, whereas for now it is important to note that one ever-present belief held by all the participants was that individual athletes should train in the group. Kieran noted:

> The S&C workouts twice a week come with a huge bit of prehab, all the stuff that prevents injuries. For example, I have the athletes do loads of foot drills, loads of lower legwork, loads of hurdle drills, loads of hip and adductor stuff. It is pretty boring unless you do

> them in a group and get the athletes fired-up for the workout by putting some music on and having a laugh.

Tony added another dimension to the importance of group training.

> I'm varying the workouts a little bit, there's definitely advantages of having a big group of a similar standard. Not only from a 'pushing each other' point of view but from a fun and social point of view because a lot of the athletes go out socially together and have a good time.

It wasn't just the social benefits of group training that the participants saw as advantageous but the belief that the individual athlete would run faster if he or she was running as part of a group. If there was a difficult workout planned for the athlete, that workout was better planned to be conducted with the training group, to enable the athlete to run faster. Lauren described this well:

> In a key workout that the athletes need to do, I would say it is better that they're working together. But the athletes are still trying to do the very best they can. In the summer if the athletes know they've got a specific workout they're up for it together. Sophie does a lot of training on her own and she says that she enjoys training with the group. She'll often travel three hours to be with the group for those big workouts.

However, the most positive aspect of group training that was highlighted by the participants was the role that peer pressure played within the group. Kieran described how he saw the value of having his older athletes educating the younger athletes in the correct ways to behave.

> It is easier in a group dynamic for me to not be so teacherly. If you have the athletes from when they're quite young then they buy into the plan because they want to be like the older ones. The peer group pressure works really, really well.

Summarizing my data that evidences the strength of the participants' adherence to disciplinary techniques in their practices, it is possible to detect why Foucault (1995) was able to say that discipline was a political anatomy of detail composed of subtle arrangements, meticulous regulations, fussy inspections and "supervision of the apparently innocent but profoundly suspicious" (p. 140). Thus, Dennis expected his athletes to run over 120 miles a week (each week) on a five mile wooded trail loop to avoid running on the road; Lukas ensured his assistants move the course marker an extra two metres and described himself as a 'laid-back anti-planner' but ensured he recorded nearly every part of his athletes' lives and kept that record on his breakfast table so it was never far away from him; Jack described Thomas as a great coach because Thomas got cross if his athletes didn't run their reps on precisely measured courses; Kieran has used the same training space for his group's Tuesday workout for 40 years; Tony wouldn't allow his athletes to slip two seconds in a 60 second recovery; Aaron had more athlete data than NASA has data, and designed a workout that required his athletes to use a heart-rate monitor to prevent their heart rates from rising too high even though the weather was so severe that running, of any kind, would cause each athletes' heart rate to be too high.

Most significantly, these disciplinary techniques that established an 'infinitesimal power over the active body' also established the sorts of details that enabled endurance coaches to be considered as effective. These disciplinary techniques enabled the participants to design their athletes' training plans. The techniques are the coaching practices that work, that are passed on through the workings of discourse and that successful endurance coaches and athletes attribute to their success. The practices that become the 'tried-and-trusted' methods that all coaches and athletes have to implement because they are the practices that have been seen to have worked before (Lyle, 1999). Therefore, the participants believed that the more precisely controlled and

structured the plan, the more sophisticated and finer the level of detail in the plan and the more 1% marginal gains that are considered; then the more likely it is that the coach designing that plan will be considered effective. In turn, the more likely the endurance athlete is to succeed, and the more likely that other coaches will learn this finely-detailed planning method, and so the cycle of knowledge and practice continues. Having evidenced an emphatic uptake of disciplinary techniques in endurance coaching, the next step for my analysis is to consider the broader effects of disciplining techniques on the design of endurance coaches' training plans.

**6.2 The Effects of Endurance Planning through Disciplinary Techniques**

In the previous section I described the way the disciplinary techniques were manifest in my participants' practices. As a result, a number of cascading consequences occurred. Firstly, there existed a strong sense in a 'right' way of designing a training plan. Secondly, and as a result of the general sense in a 'correct' way, there was an equally strong sense that it was the endurance coach's responsibility to design the plan. The coach is the person with the appropriate knowledge, and so is the person who is able to define right from wrong. Finally, and as a result of the previous two understandings, it followed that the endurance coach had to take a large onus of control in the design and implementation of the plan. I have described these consequences as cascading because they seemed to develop as a result of each other.

With such a strong coherence about the right, true or correct way of planning training programs, it was notable that all of the participants spoke in clear, definite and categorical terms. For example, Aaron said: "Periodization is this continual moving forward, doing the *right* things at the *right* time, that's what periodization is." Carl had an equally strong sense of the right methods as he described one of his former athletes:

> In Graham's case, you could see he was highly motivated and talented and if he could be encouraged down the *right* routes, and do the *right* training then I could see that he could do exceptional things. I'm aware that was a selfish approach from me but it [Graham's training] needed to be *right*.

Thierry spoke about designing the 'right' training in equally emphatic terms.

> I've *got* to try as much as possible to reduce the risk of injuries and that not only means doing the *right* training but also wearing the *right* shoes, having the *right* diet, doing the *right* strength and conditioning and that *is* my job to make sure my athletes do all these *right* things.

While Alex described a coach that he knew who was immature because he did not plan the *right* training.

> There's a new coach who has been posting online about training, he was an athlete, and I'm thinking, I don't even think your training was *right* for the event you were doing and you're still doing that training now. How on earth do you think you can be setting the *right* workouts in the *right* order? If I was him, I'd be keeping my head down, keeping *quiet*.

And finally, Kieran emphasized how his faith in science equipped him with the knowledge of the right things.

> Great stuff is coming out of science, all the physiologist's stuff that is *categorically clear*. We *know* you've *got* to get your blood tested two weeks before you go to altitude for example, and if you're iron deficient *don't go* up it is *not worth* it.

This understanding of needing to plan the 'right' training is mirrored in contemporary understandings of training theory. Kruger (2006) explained that Roger Bannister, who was well

known for being self-coached, was the first man to run a sub-four minute-mile because as a scientist he "did little that was *wrong*" (p. 319) by contemporary standards.

Out of such a firm, restrictive framework for thinking about planning came an inherent and honorable belief that the design and implementation of the plan was the coach's sole responsibility. Alex illustrated why he felt he had to take so much responsibility for planning: "Basically, they're [athletes] not clever enough to know the context of the workout and judge it on its real merits." Equally Aaron described how he believed the coach had to take responsibility for the design of the training plan:

> If your athletes aren't achieving what you're expecting then I'll hold my hands up and say their failure is my issue. It is not the athlete's fault, it is my coaching that is at fault, nothing to do with the athlete. You have to have a structure imposed by the coach, so the locus of control in coaching with an athlete will start off with 100% the coach.

Dennis firmly believed that the expert was the coach, not the athlete.

> I think for athletes to be successful in some ways they need to train with blinders on, almost like a racehorse. Let the coaches do the thinking, the science work and all those sorts of things. I'm going to manage my athletes' training and my athletes' successes and failures so that my athletes can have more successes, otherwise why have a coach?

Steve also reinforced the belief in the coach's expertise.

> Barry's [the athlete] a grown man now with his own opinion on things but when it comes to the coach-athlete dynamic, it is very clear who's in charge. I'm in charge even if he disagrees with what I say. He might voice his opinion because he wants to take ownership but, well, can he tell me why he thinks his ideas are superior to mine?

Jack discussed why he was in charge of planning:

> I'm going to manage the data and the information and I'm going to take it and try to make my athletes more successful and so, what I do with that [data] is ultimately my decision. Now if the athletes don't like what I say, it is not the old 'my way or the high way', it is not that, you [the athlete] take ownership yes, but to be in charge, no.

With such emphatic responsibility held by the coach for designing the training plan came other, equally assertive, assumptions. It was the coach who did the research on training methods because the athletes were seen as not wanting that knowledge, or not having the wisdom to know what to do with that knowledge. Patrick asked me:

> Did you Joe, as an athlete, want to talk about micro-cycles and things like that? [I shook my head in agreement]. You see, I remember talking to one of my athletes and I said, "do you want me to give a talk on physiology?" "No way," he said, "you tell us what to do," and that was the end of the conversation, so I think you've got to keep it simple quite frankly.

Tony agreed that athletes did not need to know about contemporary training theory:

> You don't encourage people to go into too great a detail. As I mentioned earlier, you've got to deal with the outlook of your athletes, almost the intelligence of your athletes in a sense. Don't try and baffle the athletes with science, as they won't particularly understand that knowledge and they won't respect you any more for trying to implement it.

With such responsibility, the participants also believed that to be effective they needed as much content coaching knowledge as possible. In this way, the participants would be able to provide an answer to any question their athletes asked. Olivier described why he needed to have more knowledge than his athletes.

> Generally my athletes don't know anything about the Vdot principle [a shortened form of V02 max, maximum oxygen uptake], they haven't read Daniels [iconic endurance coach and physiologist]. I use that information myself, if somebody asks me a question about what pace to do his or her easy or threshold runs, I would base my answer on my experience of them and the Vdot tables because they're very good. I've got to give my athletes an answer, I have to provide an answer.

The point to make at this juncture in my analysis is the strong degree to which Olivier felt he needed to know more than his athletes so that he could answer any question. Indeed, during Olivier's observation I wrote the following words that illustrate how the participants needed to know more than their athletes.

> Olivier explains, "I need to check the new lad, Tim, tonight and make sure he's ok. The new athlete, the one that doesn't know." Or at least Olivier doesn't know what Tim knows because he hasn't seen enough of Tim yet. Olivier needs to know what Tim knows so Olivier can begin to plan his strategy for Tim. Olivier continues, "if I can't explain why an athlete needs to do a five-mile run then I can't be any good as a coach".

Steve was the only participant who was less emphatic in his need to know more than his athletes, but that was because Steve felt his athletes were less concerned about needing to know everything.

> I can't remember exactly what question I couldn't answer but I'll be the first to say, 'good question we've got to think about that, let me look into that.' If you make a bullshit answer, the athletes are going to work it out and have less respect for you. But most athletes will ask me something, and I'll pause halfway through to think how better to answer but they've only needed a little bit [of information] and will go, 'oh ok, good' and they don't get frustrated, they'll just go, 'yeah whatever, you know.'

In other words, Steve's athletes know he knows; and Steve and his athletes all know that the athletes don't always need to know. However, the most important effect of such an emphatic understanding of truth is the effect on the endurance coaches' panoptic gaze. It is this panoptic effect that I intend to develop next.

**6.2.1 The strength of endurance coaches' panoptic gaze.** The panoptic scheme was developed as an efficient tool of power in the modern disciplinary society. As I explained in section 3.3.8, the Panopticon makes individuals self-monitor because they assume a guard—who can watch at any time—is watching them. The number of people controlled increases, while the number of people needed to be in control decreases, significantly. In fact, as my data has just shown, the general coherence of the 'right' way to design endurance training plans is so strong that it does not matter who the supervisor is, anyone can operate the machine. The Panopticon is, thus, a scheme of power constantly and continually reinforces normality. Coaches don't actually need to be at the track to monitor their athletes because they know their athletes will conform to the training plan. The athletes have to conform, otherwise they won't be able to run fast. As Patrick expressed: "I will know if the athletes have not been doing the work on the plan because it shows up on the track, it shows up in performance, ok?" The effects of power, through the Panopticon, are brought "to the most minute and distant elements. It assures infinitesimal distribution of the power relations…it was an event in the 'history of the human mind'" (Foucault, 1995, p. 214). Or as Tony also said:

> The athletes absolutely know it is down to them. Don't cheat me necessarily, you're just cheating yourself. If the athletes want to get anywhere they've got to do the work. The coach can do the thinking and the planning but he can't do the running, they all know that.

As a result, many of the participants maintained long-distance coaching relationships with their athletes. Kieran's fastest athlete had recently moved to university without any adverse impact on his performances. Patrick's two fastest athletes both lived and trained overseas. Alex's fastest athlete lived over 100 miles from Alex. Moreover, Steve's fastest athlete spent large periods of time living and training overseas. It was interesting, therefore, that while the participants didn't necessarily need to observe many aspects of their athletes' training and lives, an overt monitoring and direct gaze still occurred. For example, when Steve's fastest athlete was not at the training base, Steve often employed a local coach to administer that athlete's workouts.

Accordingly, there was a strong sense of caution among the participants, and a subsequent need to be in as much control as possible. Therefore, as became clear in the previous chapter, the participants needed to know as much as possible about the body's experiences when training: How the body was feeling, whether it could 'do' more, or needed to 'do' less, or whether the plan needed to be altered? In short, an underpinning theme of extreme caution exists in endurance coaches' planning. For example, Steve described an ever-present risk when designing his athletes' training plans.

> There's risk though, there's risk, because whenever you do this stuff [train] it is a risk. Whenever you do anything different and if you hurt somebody and they get injured, you know? Coaches have to be so careful and so cautious. I never really do things [experiment with different training methods] because I'm scared of getting the athletes all injured.

In addition to knowing about the body's experiences of the plan, because designing a plan is such a cautious activity, it is also essential that the effective endurance coach knows as much as possible about the body's life. In this way, the endurance coach is better positioned to make effective judgments about adapting the plan. The endurance coach's panoptic gaze, as Foucault

(1995) would state, has to, therefore, be both "immense and minute" (p. 223). In short, the endurance coach's gaze penetrates the athlete's life. This is why Foucault (1995) was able to state that the prison warden's knowledge is a biographical knowledge. The endurance coach's knowledge is based on the athlete's own story, from where they are now, to where they have got to be. Dennis almost used the very same words as Foucault (1995) when he described how he used his athletes' own stories to monitor their progress:

> I really get into the details when I monitor the athletes. I keep very good data and keep track of how the athletes are doing emotionally. Are there injuries, sicknesses, what are their bio-rhythms? I really compare that to their 'own biography' right? You know what, when my athlete Ralph gets sick, he bounces back faster than most athletes. So I take the athletes' own personal stories. I record almost everything the athletes do on a daily basis and really look at that. I pay a lot of attention to each athlete's own story and let that story just grow and grow. I need to coach in a caring and thoughtful way, but when I look at the data, I look at it clinically.

Lukas also explained why the monitoring of his athletes' lives was so crucial:

> Everything, everything's important, Joe, isn't it really? Everything. I mean if one of my athletes suddenly gets a boyfriend or girlfriend that doesn't like running, it could be catastrophic. So I think in a certain, almost 'trying not to be too manipulative about it' type of way, I'm trying to almost have as much control over my athletes' lives as I can, where they're accepting of it. I think if any of my athletes moved into my house and lived with me for four years and didn't go anywhere, I could prepare them perfectly.

If Lukas's athletes lived with him they could be perfectly prepared and their correction would be more likely to be successful. From such a regulated perspective it is easy to see why Foucault

(1995) described the panoptic gaze as being the general principle of the new political anatomy. The gaze was a conscious and permanent visibility over the body to be transformed. It was a type machinery of control that afforded panopticisms every day. An omnipresent and overwhelming gaze that is not seen, and that is given respectability and legitimacy by science—a 'set of physico-political techniques'. Subsequently, the panoptic gaze is so absolute and so complete that when endurance coaches consider designing training plans, there is no end to the amount and types of detail that can be included. A comprehensive level of detail that has deeper consequences for my analysis of endurance coaches' understanding of planning that I aim to develop in the next section. My present intention is to provide examples of the strength of my participants' engagement in the panoptic power arrangement. One example was the following excerpt from my interview with Steve:

> Steve: I believe in controlling the workout and once in a while the athletes can go really fast but I want to know what it is they've done. I want to know exactly what they've done.
>
> Joe: But do you always need to know?
>
> Steve: No, but I don't want them to overdo it. I'm not a control freak about it but I don't want it completely out of whack, which is what's going to happen if I'm not controlling it.
>
> Joe: So how 'out of whack' are you prepared to let it go?
>
> Steve: Well, my athlete Colin ran way too fast the other day and was wiped out for the next three days. So I said to the coach I had timing him, 'if you're just going to time him and not control him what's the point of you being there. You've got to make him stick to the workout plan, that's what he should have been doing, *don't do that again*.'

For some participants the panoptic gaze manifested itself through the need for effective coach-athlete communication. However, the communication was mainly one-way. For example, Patrick

wanted his athletes to tell him everything, rather than Patrick feeling he should tell his athletes everything:

> Constant communication, constant evaluation, constant contact makes the plans run smooth, ok? Tell me if there are any problems, I don't want you going through problems, if you've got them tell me. No matter what they are, you know what I mean? You come to me, it may be something trivial, tell me, I'll decide. If it is affecting your life it is going to affect your running, so I want to know, tell me, tell me.

In other words, Patrick, not his athletes, was in control of whether one of his athletes' personal issues should affect their training. Similarly, Tony described his need to know as many details about his athletes as possible:

> I said to one of my female athletes when she started competing abroad, 'you're now going to places that I can't go'. She said 'where?' and I said 'ladies' changing rooms, and you'll hear things said, I want you to tell me, so that we can talk them over together and make decisions about them.' You've [an effective endurance coach] got to analyze everything.

Finally, Lukas noted that it was this sort of almost complete control that, as I noted in the review of literature, has recently been attributed to the success of the Great Britain cycling teams.

> There is an infinite number of small details that matter, that's what Dave Brailsford [Performance Director of British Cycling and Team Sky] would say, isn't it? I don't think you can stop [considering the small details], there is no end line. I don't think a good coach ever stops. Sleep, for example, is one of the biggest markers. You can tell if the athletes are overtraining or undertraining, sleep is a really good tracker.

In other words, effective coaches need to know about, monitor and control an infinite number of aspects of their athletes' lives.

**6.2.2 Problematizing the endurance Panopticon.** One of the striking themes of every observation that I made at my participants' training workouts was the positive atmosphere in each training group and the affection both the participants and their athletes had for each other. As an example, one of the participants was recently asked to perform the wedding ceremony for one of his athletes. Nevertheless, there may be unforeseen consequences out of my participants' overt consideration for their athletes and this is one reason why thinking through a post-structural lens is so important for coach education research. Both knowledge and practices continue to combine to create very specific meanings. These specific meanings allow only restricted practices when they are so narrowly defined. In turn, more of the same knowledges and practices are produced. Power and meaning are built, reinforced, and continue building a very specific form, so that only certain practices become permissible. Yet, as I described in the previous chapter, the meaning that is created—structuring a body's energy conversion capacities—is rarely questioned, so the specificity of the form remains. Out of such meanings evolve a dominant theme of effective endurance coaching—coach control. The more details endurance coaches know, or are in control of, the more likely they and their athletes are to be successful. Exactly as Lukas described, the best coaches are conceived to know more about their athletes. Lauren supported this sentiment when he said, "one thing I do notice is that the very, very best coaches see things in much more tightly managed ways." It is because there is no unintentional or possible end to the endurance coaches' panoptic gaze that makes effective coaches have to exercise overt control over their athletes. Yet the depth of this control—that most athletes want (Jones & Standage, 2006)—may be problematic.

**6.2.3 The unforeseen consequences of panopticisms.** In order to develop my argument that there are unfortunate consequences of the endurance coach who controls as many of the

minute training details as possible, the first question to ask is how do athletes learn to make decisions in their performances? If there are so many aspects—1% marginal gains—of athletes' performances and preparation that are decided, or controlled by their coaches, when do athletes practice taking control? For in needing to know so much about the athletes' training experiences and lives, the danger is that coaches are undermining their athletes because the athletes are not being prepared to make decisions, or take control of their efforts in their races. In short, athletes rarely practice taking control. A good example of the dilemma of coaches taking too much decision-making responsibility was present throughout my data collection with Ian. There is no doubt that Ian is a considerate and socially supportive coach. For example, he said: "if you cannot build and develop relationships you cannot coach. It is a fundamental skill of coaching that is often missing." He went on to describe, in great depth, how he constantly tries to gauge his athletes' state of readiness so that he can alter the planned workout:

> I look at the whole picture. I look at the quality of the [athlete's] skin. I look at the eyes. I look at the face. I can tell when someone's upset. I always ask, 'do you have enough mental energy for this? How much physical energy do you have?'

Yet there is an unforeseen consequence in all this caring. For in needing to be so sensitive to his athletes' needs, Ian and not his athletes, was in control of the information that is regularly used to make decisions about the training process, such as prescribing the sorts of running efforts his athletes undergo. However, in a race it is Ian's athletes and not Ian, who need to make effective decisions. Except it is hard to see at which point in the training program the athletes have practiced making decisions. During my follow-up interview Ian described a clear tension when discussing one of his athlete's social plans for the weekend. He was aware that decisions about his athlete's social life were not his to make. But in needing to know as much information

about his athlete's circumstances as possible—to make effective planning decisions—Ian had to be consulted. In other words, Ian to be considered an effective coach was forced to be in a position where he had to be consulted. Again, the panoptic gaze has no end. For example, Alex stated that he felt he knew his athletes better than they knew themselves.

> This girl I coach now, I can tell you within reading the first line in the morning text from her what phase she's at of her menstrual cycle. I know her so well just by reading her text messages. I know for example that from Saturday to Tuesday is the time she's most aggressive.

In the final analysis, this panoptic gaze of the athlete is such a strong element of the coaching process that Dennis described one of his peers in the following way: "You know, I think that Dexter in a lot of ways is on that start line with the athletes, at least emotionally he is, definitely, no question and the athletes, they know that." Yet, in endurance coaching this may be problematic because Ian, Alex and Dexter are not on the start line and so are unable to be consulted when it truly matters—during the race. This may seem an obvious statement, yet Foucault (1995) defined disciplinary techniques as "a hold by another over others' bodies" (p. 138). The fact remains that in the race, the other body can no longer be held. Or can it? It is worth positing that athletes race in the way they have been coached. The coach doesn't even need to attend his or her athlete's performance, there is nothing new to watch because it is the coach who holds the performing body. The coach knows what sort of athlete he or she has created. This is an ironic state of affairs, because maybe it is the coach, not the athlete, who is on the track. It may well be that the athlete's performance doesn't reflect the athlete's athletic ability, it reflects the coach's coaching ability. It is the validity of the coach's training plans and methods that are being tested, not the athlete.

From a Foucauldian perspective, too much of the planning, implementing and monitoring process is coach-led, defined and evaluated. Yet the sorts of efforts that the body has to engage in during competitive endurance running are so intense that only that body can control it. It makes sense to suggest that the body that is in control during the competition should experience and practice more control during its training. This is after all the body that has to constantly, consistently and continually make decisions based on *its perception of its own state* during performances. Thus, when Dennis described Dexter, his peer as being emotionally on the start line with his athletes, I replied, "no, actually he isn't and I wonder how helpful to the athletes that is". Dennis responded: "yes, I know and I hear what you're saying but…", and then he changed topic. It doesn't make sense that the participants claim their athletes take ownership of the race when they are unable to take ownership of any other part of the planning/training process. Foucault's theoretical framework has enabled me problematize the framework of endurance coaches' practices. However, Foucault (1995) also described the potential problems of the disciplinary framework, and it his understanding of the problems inherent in the disciplinary frameworks that I intend to use in order to complete my analysis of endurance coaches' practices.

**6.3 Docility-Utility**

Foucault's (1995) interpretation of disciplining techniques was that the limitless subjection of the body—that he described and my data has shown—necessary for increasing performance (utility), renders the body docile. This state may or may not be problematic for performance. Disciplinary techniques impose a relationship of docility-utility, which is a point not to be forgotten. Collectively the participants' methods have contributed to World Records, Olympic, World, European, Commonwealth and national medals, which is clearly great utility. In spite of the docility-utility relationship being such a fundamental part of Foucault's theorizing, rarely have

scholars expanded on the meaning of docility or its potential to be problematic. In the main, docility has been assumed as a problem in and of itself. The only scholar to have considered its effects in any meaningful way was Denison (2007), who observed how one of the athletes he had coached had competed in a daze, with no obvious sign or cause for his distress. Therefore, it seems somewhat unfair that scholars have assumed docility to necessarily be a problem without analyzing its effects and consequences as a problem. For not only do many of the disciplinary techniques, in terms of coaching, make absolute sense, but the word docile derives from the Latin word *docilis*, meaning 'easily taught', which is an attitude most coaches would likely appreciate.

**6.3.1 Expressing docility.** The everyday reality for all the participants was that their athletes encountered a persistent and under riding experience as a result of 'docility'. Thus, the participants were coaching docile athletes because a series of 'continually-expressed-yet-unexplainable-athlete-frustrations' dominated every participant's experiences. These frustrating experiences were so pervasive and endemic that there was a general sense of resignation among that the participants spoke in broad and emphatic terms about the constant disappointments their athletes faced. Kieran said: "I think, well the reality is that it is when you get into your 20's that it all goes tits up." Jack said: "I know most, if not all athletes finish their career thinking 'I know I could have gone faster' and this and that, and I totally agree with you, it is a disappointing sport." The general frustrations regularly experienced by the participants were so persistent that the participants understood frustrations as a *normal* part of the coaching process. Carl told me during his interview: "you've probably got only four or five races in your career where you can 'empty the barrel'." Another example of docility was my interview exchange with Aaron:

> Aaron: One of my athlete's has run between 2.37.34 and 2.37.56 for her last five marathons. I go back over the plans, loads of internal questioning or me staring at computer screens.

I'm analyzing *everything*, physiological tests left, right and center. We did it all, and I would have put my HOUSE on the fact that she would run 2.32 to 2.34 and yet she goes and runs 2.37 high. She said she felt that there wasn't that bounce, or freedom in her movement.

Joe: Okay, now can I change topic slightly and ask you whether you think there is any part of the training design, the planning and implementation process that doesn't make sense to you?

Aaron: Errmm….[long pause]… no…[laugh, thoughtfully and hesitantly]. I plan carefully. I have a philosophy and I'm flexible. I know if I do these things in this period, that will build into this, and that will build into that, and then I review.

Joe: But might I venture that five marathons all run in the same time doesn't make sense?

Aaron: Oh yeah…you're right, it doesn't make sense but things like that happen all the time.

Today, the 'unexplainable' frustrations of endurance running have even been pathologized as an illness called 'unexplained underperformance syndrome' (UPS) (Budgett et al., 2000). Critically, of the scientists that operationalized UPS, one was a world-class marathon runner and another was a national track and field team manager. Exactly as Foucault (1995) noted, everything, including disappointing performances is given a respectable face by science.

**6.3.2 Analyzing the organizational framework of endurance training plans.** The organizational techniques of discipline were designed to organize large numbers of bodies to be productive—the organization of the many to create wealth for the few. The disciplinary framework is, consequently, based on general economic principles of capitalism, which drove the juggernaut that was modernity (Andrews, 2001). The concept of winning, or individual peak performance, is therefore based on a framework that efficiently organized the transformation of the convict from an "evil-doer" to a mechanized, functional member of the 'new' industrial

society, not the exquisite production of a brilliant individual. Therefore, the idea that contemporary endurance training plans can create a winning performance is, by the very nature of those training plans, questionable. In other words, disciplined training plans are designed to produce effective team members, not peak athletic performances.

Without awareness of the evolution of disciplining powers, it is inevitable that endurance coaches come to perceive disciplinary techniques, as I have shown, as enabling rather than controlling. In contrast, planning individual peak performances are at a different end of the organizational spectrum. Peak performances are intent on transcending that which was thought possible—an exquisite performance. By its very nature an athlete's peak performances is different from anything that has come before in that athlete's life. Currently, and as I intend to show in the proceeding chapter, the tyranny of the PR (personal record) means performances can be disregarded too easily. Broader conceptions of performance may mean athletes are more likely to progressively, positively and continually learn beneficial elements of performance. In this way each performance enables the athlete to experience a productive lesson that may ultimately produce faster times or winning performances in the future.

The current conceptions of designing and implementing training plans are based on disciplining techniques that may well be ineffective for producing what the plan is aiming for. One of the most robust and simple findings in sport science is that performance improves as a function of practice (Ericsson, Krampe, & Tesch-Romer, 1993). An endurance race, by its nature, is a spontaneous, unpredictable, uncontrolled event in which competitors have to make untold decisions that relate to their many bodily states. Kieran rather bluntly noted that a race is a unique running act because: "your balls are hanging out [laughs]; races are bloody, bloody horrible actually." Yet, I have provided a lot of evidence that shows how endurance coaches design

training plans that structure running practice as methodical, systematic, predictable, very controlled and inherently a cautious process. Therefore, it's not clear how the design of endurance runners' training plans transfers to the needs of racing. From such a perspective many of the features of the design/implementation planning process start to make less sense because athletes practice methodical, systematic, predictable, very controlled and inherently cautious running. In short, athletes practice a host of performance elements that could easily be perceived as unhelpful.

Endurance races don't end at exactly a quarter way through the total distance, nor are the competitors allowed to have six to eight breaks in between running the total distance by taking a 30, 60, 90, 120 seconds series of rests. There is no such race called 8 x 400m with a minute's recovery in between, or 20 x 200m with 30 seconds rest, or 6 x 1600m, etc. An athlete's training partners, or the training group, are rarely there to pace that athlete throughout the race to make him or her run faster, as they do in workouts. Races require a great deal of thought, as Alex acknowledged: "In a race athletes have to think. In fact, athletes have to make so many decisions that they're not even aware of having to make, so they have to think." In any event, the requirement to not think requires thought in the first place. Finally, and most obviously, there is nothing controlled or planned about a race. Disruption can and does occur at any stage in a race and yet it rarely does in training. It is in the nature of racing that, as Kieran described, the athlete feels uncomfortable. Yet, the athlete is being trained to produce only controlled discomfort because his or her training is conceived as part of a periodized plan in which physiological adaptation occurs over systematically and predictably organized and controlled cycles of time.

I explored the theme of practice needing to more closely mirror the needs of competition with some of the participants. Kieran was at a loss as to how he could organize such practices:

> You know Joe, I completely agree with this. I completely agree with this, and I know yeah, well, what do I say here? I want to be more spontaneous and I like to think I am spontaneous but in reality you've made me think I'm not. But the reality is I need to find a way to be more spontaneous… and this is going to sound really contradictory and ridiculous, but I need to be more spontaneous in a controlled environment.

Aaron was equally flustered by the discrepancy between the design of his training plans and the aims in performances and claimed that the answer was to find some kind of "unstructured measuring tool." Other participants returned to type—more control, more knowing—and reminded me that the final aim of their training plans was that the athlete on the start line is able to assume responsibility. Except these participants couldn't explain precisely the ways in which their training plans could pass responsibility to their athletes.

The contradictory nature of planning endurance training programs is a key point to make. There is no doubt that my participants were very intelligent people with more than honorable intentions. Indeed, all of my participants have dedicated their lives to the pursuit of helping athletes run faster. But the modern formation of coaches' knowledge and their practices creates such specific meanings that high levels of athlete docility are an inevitable feature of the planning processes. The term 'docility' may mean 'easily taught', but that ease of teaching is no guarantee of any quality in the learning. Both Kieran and Aaron were aware that their athletes have broader needs in a race than the design of structured controlled workouts implied, but at the same time, they were unable to relinquish control. This juxtaposition arguably led to Kieran and Aaron to confuse terms such as "spontaneous control" and "unstructured measuring". This is precisely what makes a Foucauldian analysis so important for coach education research: my evidence and analysis clearly demonstrate that coach educators cannot rely solely on the application of

scientific knowledge to enhance coaches' effectiveness without consideration of the wider, broader effects of the social construction of knowledge and practice.

**6.4 Conclusion**

Throughout this chapter I have provided evidence to show that athletes' training plans are meticulously controlled: the organization of the time and space of endurance training is broken down into very specific chunks; the organization of training depends on the pace of others; the organism/machine that is being built is denied basic human functions such as thinking; and finally, planning processes are mediated by an*other* body than the one doing the racing. While endurance athletes becoming better at unrelated aspects of performance, they are not getting the chance to control or regulate their own performances. In short, endurance athletes are becoming more effective at controlled, blunted, monotonous, thoughtless, broken-up performances where they have to rely on other athletes because that is how their training plans are designed by their coaches. Lyle and Vergeer (2013) argued that coaches should bring a measure of control to the coaching process by employing specific strategies and performance plans to help their athletes maintain a focus on their performance goals. However, I believe it is pertinent to ask how much of that coach defined control is helpful for the athlete's actual performance? It is also worth stating that endurance coaches don't bring a measure of control, for in some instances as I have shown, coaches bring complete or overt control.

Canadian schoolteachers of five-year old children are emphatic with the children's parents that in no way can the parents put the children's snowsuits on for them in the winter. The children have to learn to do this for themselves, otherwise the teachers have to put 30 snowsuits on 30 children at recess. Unfortunately, high-performance endurance coaches design and implement their athletes' plans in ways that are akin to putting the snowsuits on their athletes all the time.

They do this until the time when it really matters, recess—the race. Coaches design plans for their athletes based on a strict—yet unknowing—adherence to a disciplinary framework. These are the sum of a host of training practices that are far removed from the realities of racing. In short, athletes are repeatedly and consistently *not* practicing their event. At the very least, athletes are not practicing the type or style of running that the plan is supposedly designed to achieve in the first place.

In this chapter I have outlined, in some detail, the practices that high-performance endurance coaches use to transform the endurance body from one state to the ultimate state. These are the practices, techniques, methods, operations, and plans that endurance coaches design and implement. Or, in Foucault's (1995) words, these are the "system of constraints and privations, obligations and prohibitions" (p. 11) that the endurance body is subjected to. Thus, having outlined, these practices that were used to enact correction in the individual body, the final step of my analysis is to investigate precisely this, the individual, or the individualizing nature of the correction.

## 7.0 Power

In the previous two chapters, I argued that there are currently a number of problematic features of the meanings that are established in the framework of high-performance endurance coaches' knowledges and practices. This overall strategy produced through the complex interaction of knowledge and power—structuring a body's energy conversion capacities—creates such specific and restrictive meanings that a host of other meanings are ignored. For example, the body is conceived to need to 'produce' energy and so move with force, power or stamina rather than move efficiently and so use force, power or stamina more effectively and incur less energy and wear in the process. Thus, by implication I am suggesting that contemporary endurance coaches' knowledges and practices limit coaches' effectiveness. However, what I have yet to do is to provide evidence for the way in which power works to maintain and reinforce those meanings. In other words, while I have analyzed the meanings that are established in the overall framework of high-performance endurance coaches' understanding of training the body, I haven't asked how those meanings are managed and sustained. Thus, while the focus of my final results chapter is power, it is important to note that the first part of the chapter is focused on the maintenance of power, as opposed to power itself.

In chapter 5.0 I described some of the ways that discourses works to permit alternative meanings, however it may be that high-performance endurance coaches are successful because they are able to negotiate some of the limitations and restrictions in their practices. One of Foucault's (1995) central observations was that because disciplinary powers aimed at creating the ideal type of person for modern society—a docile industrial worker—the carceral system was an inherently individual and individualizing institution. As a result and somewhat unsurprisingly, one of the current dominant assumptions within coach education is that effective coaches are able to

place their athletes, who are likely to have specific needs, at the center of the coaching process (Nelson, Cushion, Potrac, & Groom, 2012). In other words, effective coaches are able to design individual training plans. Thus, it may be that if high-performance endurance coaches design training plans that can address an individual's *specific needs*, as my participants were adamant they all did, then that design could open-up the inherent restrictions of coaches' knowledge and practices. Therefore, I ask, can designing a training plan based on an individual's specific needs counter some of the inherent restrictions of high-performance endurance coaches' knowledge and practices? In other words, how do high-performance coaches overcome the restrictions that I have identified in their knowledges and practices?

## 7.1 Discipline's Instruments and The Confession

As I described in section 3.3.4, Foucault (1995) stated that the success of disciplinary power derived from the use of three disciplinary instruments. These three instruments, hierarchical observation, normalizing judgment and the examination, together with the confession, worked to reinforce norms and solidify truth. Consequently, the disciplinary instruments and the confession are an apparatus that maintains power. Through the construction of knowledge and practices, meanings and norms build; through the maintenance of power, meanings and norms cement. As a result, my first aim in this final results chapter is to provide evidence for the ways in which the disciplinary instruments and the confession were seen in my collection of data. Following from this, I intend to analyze the consequences of the maintenance of power in order to ascertain whether high-performance coaches are able to negotiate the problems I have highlighted in my dissertation.

### 7.1.1 Hierarchical observation—"subdividing the gazes of a progressive objectification in the observation machine."

Disciplinary techniques required a system of

supervision to help the prison warden, teacher or coach transform his or her convicts, pupils or athletes. A simple system perhaps, but one of astonishing influence for in the hierarchical organization the assistants had their own assistants, who could also have assistants and so on. Thus, a system of assistants 'subdivided the gazes', and in this ever-increasing way the reaches of control were able to stretch as wide and far as possible and penetrate deep into the social body. This may be why Foucault (1995) called the workings of hierarchical observation, "a perfect eye that nothing would escape" (p. 173). Disciplinary power had to be exercised in such a comprehensive way, for as Foucault (1995) observed when referring to the military, it was a power that had to be exercised over armed men. Fine analytical divisions were created as a way of observing, recording and training the soldiers. Or as I recorded at Kieran's observation:

> the assistant coach is upset and speaking with great urgency to Kieran. "We simply need some help, we've too many young athletes, especially since the Olympics. We were thinking that some of your senior athletes could come and take little groups of juniors that we pre-selected." "Absolutely" says Kieran empathetically, "we just need to think carefully about how we organize that, we need to pick the seniors carefully, only the ones we can trust."

In short, Kieran's endurance training group was about to be organized with four levels of assistants. Equally as important, the standards of Kieran's athletes were also organized hierarchically as he explained to me during the observation: "if the athletes are any good they also come to my house on a Tuesday and Thursday night for extra training." Thus, the junior athletes could see that the sensible, and fast, senior athletes were chosen to assist, and so the juniors start to behave in ways that will make them one day be chosen. Thus, hierarchical observation enabled

power to continue its reach. Similarly, Theo stated that he was nurturing his unsuccessful athletes to become coaches:

> One of my guys is having season after season of disappointments. I said to him 'you know while your spending time in this environment get your coaching qualification.' He's seen another of my athletes, Brian, do it. I'm sort of grooming them to come and help me when they can't go any further as athletes because I think they'll get something from becoming qualified coaches.

Theo's quote illustrates why there is never a waste of power in a disciplinary society. If athletes can't produce good enough performances they can become an assistant coach, and eventually a head coach. Knowledge and practice is continually passed on by means of a constant and continued supervision:

> The apparatus as a whole produces 'power' and distributes individuals in this permanent and continuous field. This enables disciplinary power to be both absolutely indiscreet, since it is everywhere and always alert, since by its very principle it leaves no zone of shade and constantly supervises the very individuals who are entrusted with the task of supervising; and absolutely 'discreet', for it functions permanently and largely in silence…. the uninterrupted play of calculated gazes. (Foucault, 1995, p. 177)

Hierarchical observation enables power to work so efficiently because the instrument works continuously, and at every level of society. Therefore, formal organization is not necessary and so organization can become informal. In other words, an array of informal techniques can be used to maintain order. For example, Thierry described using his 'good' athletes to maintain order in his group:

> I try to pre-empt the distractions to training, which can be anything like friends or boyfriends as best I can. I have to be honest, this is the lazy man's answer, but I try to use the peer group scenario, you know pressure from the other [good athletes] brings them [errant athletes] back in line.

In other words, Thierry was astute enough (not lazy as he thought) to acknowledge that he could maintain order discreetly. Friends, boyfriends, girlfriends—life—is a potential distraction to the endurance runner but the effective coach is unable to make such an unreasonable declaration. Instead Thierry could, without knowing Foucault's theories, use the pressure from the group and the assistants within the group to keep the errant athletes in line. Hierarchical observation was therefore an 'observation machine' and as a result the ubiquitous yet discreet nature of the disciplinary techniques in endurance coaches' everyday practices—anatomo-political power—is reinforced.

**7.1.2 Normalizing judgment—boy/girlfriends not allowed.** The second disciplinary instrument that enabled the disciplinary techniques to work was normalizing judgment. Normalizing judgment complemented hierarchical observation as an instrument that maintained disciplinary power because it made it possible to know, alter and therefore hold the individual in a series of specific ways that the assistants would maintain. As such normalizing judgment enjoyed its own rules, privileges, judgments and offences. Accordingly, it was an instrument which meant discipline would not need "excess, force or violence" (Foucault, 1995, p. 177). As I have just evidenced, boy/girlfriends may not be allowed in the disciplined endurance society because they could distract the athletes from their training. In other words, the athlete with a boy/girlfriend is not normal. Olivier felt it very important to explain to me that he wasn't in control of his athletes' lives:

> Listen, I'm not telling the athletes how to run their lives. Most say, 'I want to go out', and I don't say to them 'you can't do that'. There's no way my intrusion would work, they'd resent it. But I explain that, especially in the athletes' key training time if they're going out a lot and missing key workouts, that it is going to affect their running, but it is the athletes' choice entirely.

Foucault (1995) explained, "by assessing acts with precision, discipline judges individuals 'in truth', the penalty that it implements is integrated into the cycle of knowledge of individuals" (p. 181). Thus, an individual is only ever able to be an individual if he or she is adhering to whatever is true or normal in that society. Therefore, in spite of Olivier's belief that he gives his athletes choices, if those athletes want to be successful they really have no choices at all. In other words, Olivier is in control of his athletes' lives.

Normalizing judgment reinforces truths and that is precisely why understanding what is established as being 'true' is so essential. Rather than truths being self-evident, truths evolve over time via complex workings of power and knowledge in specific socio-cultural-historical conditions. As I showed in chapter 5.0, only those 'normal' statements and practices that are acceptable within the endurance society are retained in circulation. Thus, if talk is not based on structuring a body's energy conversion capacities then that talk is simply not heard. Some ideas such as interval training are retained, while others such as *fartlek* disappear (*Fartlek's* popular use as an endurance training method has significantly changed from its original intent). Normalizing judgment was, thus, an ever-present feature throughout the data collection. One simple, yet powerful example of normal talk occurred during my observation with Carl. I recorded the following:

> as I walk into the changing room I can hear Carl's voice. He's cajoling an athlete, not telling off, not being nasty but jovial. He says, "I knew you were racing, but you didn't tell me you were going to go that fast, you said 52 minutes steady, not 49". Said athlete is looking very humble, he ran too fast in the ten-mile road race the previous weekend. "Train smart, train smart, you're gonna get injured, so you've got to go easy tonight because you've been running too hard". Carl continues, repeating the same sentiments and half-jokingly grabs his athlete in a headlock and knocks on his head, "knucklehead". I can see normalizing judgment's enormous influence in maintaining order. The athlete is not being told off, he is not being scolded, he is not being isolated or punished, he is being *normalized*.

Carl's constant reinforcements—"red zone, you're all too close to the red zone" he repeatedly called out during the workout—work to prevent non-conformity. Carl's athletes had to run their workout cautiously, with care. Carl's plan was adapted because he felt his athletes had in recent weeks been training and racing so hard that they could easily break down with an injury, hence Carl's reference to the red zone. It was a situation that was not without contradictions, as I noted:

> to instill caution Carl repeatedly calls out, "keep it relaxed lads, I'M NOT TAKING TIMES TONIGHT, so you can relax…. 2.56, 2.57, 2.58 [he's calling out the times].

As I just used Foucault's words to state, every act, even during less important workouts, are (still) assessed with 'precision'.

Through such precision, non-conformity of any kind, like having a boyfriend/girlfriend, is frowned upon. Therefore, even when the participants were aware of potential problems or contradictions in some of their training methods, those methods were seen as integral to the plan and retained their use. For example, planning benchmark workouts (track workouts that

determined what kind of time an athlete should run in a race) can often erode an athlete's confidence. As Steve said: "I can't begin to describe to you how nervous I am before a benchmark workout". Theo also said: "Well I had to cover the display on the treadmill cos it was obvious my athlete, Kevin, was not hitting the data he was hitting the previous year". Nonetheless, such training methods continue to be planned because they are an important part of the overall framework of knowledge and practice—they test the endurance body's energy conversion. At the end of Carl's observation I recorded the following passage:

> As Carl and I walk away from the workout I ask him what his training group had been laughing about at the end of the workout. "They were talking about another athlete who sometimes trains with us, a kamikaze pilot," says Carl. "He's an idiot," Carl says, "such untapped potential. He's run 2.16 for the marathon, but he could easily run 2.12. I mean he's a moron, his training's all over the place, there's simply no structure to it. His long, slow runs aren't slow or long enough, and the short, fast runs aren't short or fast enough.

Intrigued by such normality, and my growing awareness of the operations of power, I followed-up this situation with Carl at the end of his second interview.

> Joe: Can you imagine if that situation was flipped completely and we laughed at your training because it was so structured. Instead we respected the kamikaze pilot's training because it was more spontaneous and creative?
>
> Carl: I can imagine that, you'd allow people to do far more what they wanted, when they felt like it.
>
> Joe: Which is what they need to do in a race?
>
> Carl: Which *is* what they need to do in a race but in the end [smiles], well, I operate

> [in this way] because I teach in a school, and school's the right word, you know. I can really understand what you're saying but coaches are judged by outcomes, that's the problem to say the least, it is an outcome driven sport.

As Foucault (1995) observed, normalizing judgment spread into the entire social body and occupied the areas that formal laws had left empty.

**7.1.3 The examination.** The final disciplinary instrument that was designed to link all the disciplinary forces together was the examination. Thus, without knowing it, Carl was alluding to the influence of the examination. The examination absolutely guarantees compliance to the disciplinary framework because it so rigidly defines a successful competitive performance. Do athletes win? Or as Kieran noted in chapter 5.0, do the athletes: "run fast or not"? This was to give athletes the ultimate chance of winning. Or as Foucault (1995) stated, the examination "establishes over individuals a visibility through which one differentiates them and judges them" (p. 184). Thus, in endurance cultures, the examination is expressed through the record. I described in the introduction and review of literature how the 19$^{th}$ Century witnessed an intensity of sheer performance because society held new beliefs in man's ever expanding biological capacities (Bale, 2003). Thus, Mandell (1976) argued that the idea of the record was a product of modern industrial society because it was a way of precisely measuring performance in quantifiable units. Mandell's definition of the record was that it was a "generally acknowledged statistic indicating the unique nature of a supreme athletic performance of a recognized kind" (p. 250). The record or the examination makes athletes and coaches understand that success means being able to run a faster time than their peers. The personal record (PR) then establishes a hierarchy where an athlete is only as good as the time he or she has run, and an endurance coach is only as good as the times his or her athletes have run.

I discussed in chapter 3.0, Foucault (1995) showed how the carceral system changed from a system where power was exercised only over what was seen to a system where power worked "through its invisibility" (p. 187). In a smoothly running, efficient, modern disciplinary society, compliance has to be guaranteed without recourse to overt coercion. Modern power, as I have previously noted, doesn't take life, it gives life, administers life, manages life and controls life. Repression is simply inefficient. A beautiful giant carrot replaces a stick, and so everyone conforms. Paradoxically, the examination is a visible and objective, yet also unseen, instrument that maintains, reinforces and solidifies power. Consequently, in endurance running, the examination exerts a tremendous pressure on everyone to achieve the fastest times because it provides a clear objective 'stamp' or 'mark' of one's ability—a clearly visible judgment of one's ability. Indeed, it is worth noting that in spite of my analysis, the examination is so enormous a force that I still find it difficult to write my own personal record—stamp—because my fastest time (PR) was not as fast as I believed I could have run. Thus, Patrick noted how important it was to run fast: "you can put those major races in the plan and training's geared to getting the times to get into the championships and to giving the athletes the best chance to run fast in the championship". Or as Alex said:

> an athlete's long-term goal can be to win medals in major championship, but the medium term plan has to cover qualifying for those championships. If an athlete wants to run in the national championship then he or she is going to have to find a fast race in May or June. We can look for one race abroad or a couple of BMC [British Miler's Club] races.

Kieran observed that the pressure of running fast times was a part of endurance running's culture.

> It is the culture of running, everyone knows that it is [success] done around times. Athletes know they need to get a time posted in order to get selected. If athletes don't have a time it

> doesn't matter if they get in the first three at the trials or win it, if the athletes haven't got the time they don't go, end of story.

Consequently, the time an athlete runs, or global championship success, is also a measure of the worth and value of the person. For example, during Patrick's observation he introduced me to a peer of his in the following way: "Frank, do you know Joe? You must do, you must do, Joe Mills, 3.40 and err…" In that situation, my identity and value as a person was being assessed by the fastest time I had run as a competitive athlete for 1500m. Similarly, when I met Dennis for the first time, because his participation in my study had been organized through a third party, he didn't know me very well. Our first interactions were very polite, but also very tentative. After a few minutes Dennis said: "I'm not sure how well versed you are with track talk?" I replied: "I ran 3.40". I didn't need to say anymore, from that moment I was accepted and trusted. Dennis relaxed and was more than forthcoming for the duration of the data collection. I had obviously said a very powerful, quantifiable number. Indeed, my observation notes recalled: "Dennis is more enthusiastic now and only stops talking when the athletes need something."

With such tremendous influence, the examination does more than provide a mark of every individual's ability. It reinforces the appropriateness of whatever methods are used to produce that mark. Thus, I described in section 5.1.2 that the assessment of whether a coach is effective is based on how fast his or her athlete runs, or whether that coach produces a winning athlete. As Alex unknowingly described in that section, out of the interpretation of time, endurance coaches' methods and plans become known and their reputation "snowballs". The examination not only allows hierarchical observation and normalizing judgment to work, the examination allows all the disciplinary techniques to work. This is why Foucault (1995) stated that disciplinary power "seeks to bind them [disciplinary techniques] together in such a way as to multiply and use them" (p.

170). The examination proves that discipline can complete the body's transformation. Thus, the type of athlete a coach knows that athlete can become and the methods used to enact that transformation become clearly defined, normalized and accepted. Further, the type of endurance coach who is allowed to talk, the coach of the fastest athletes, is also clearly defined and accepted by endurance society. When athletes win or perform successful running times they become interesting to those around them, and subsequently reinforce the normal framework of endurance coaching. Foucault (1995) observed: "The superimposition of the power relations and knowledge relations assumes in the examination all its visible brilliance" (p. 185).

Therefore, the examination exerts a similarly tremendous pressure on everyone to conform to whatever methods are established as being true. As Foucault (1995) stated: discipline, "exercised over them a constant pressure to conform to the same model…. so that they might all be like one another" (p. 183). The examination permitted the arrangement of a new authority of knowledge, a new type of disciplinary power, or a 'homogenous, continuous power'. Thus, Alex emphatically stated how he would only coach an athlete who would conform to his methods in order to achieve the highest standards:

> I don't want to coach anybody who doesn't want to be the best they possibly can be. If they're going to mess about, it is going to take time and effort on my behalf, why am I going to put time and effort in if they're not? Coaching is an equal partnership.

Similarly, Lauren added:

> It is interesting because deciding that an athlete is someone I want to put time and effort into is part of the initial selection or checking I do. To be honest, it has been quite a while where I've had a problem, some athletes are actually more monastic than is ideal.

Great significance emanates from these understandings, as the athlete and coach are always known. In other words, the examination enables the individual to be subjected to a state of perpetual or uninterrupted examination(s). As I observed in the previous chapter, time cascades through every level of the design of endurance athletes' training plans. This is a reason why the participants developed the practice of benchmark workouts. But the reality is that *every* workout, *every* run, at *every* stage of the season, is a benchmark workout of sorts. Thierry noted:

> I have to be confident that the athletes are capable of pulling that [benchmark workout] off and that would be the training program [times the athletes had run in the training program] over the winter and at the start of the athletes' pre-competition training phase. I get a good idea from all that training because the athletes have been doing similar workouts to a benchmark workout, and so I'll have a pretty good guarantee of where they are [in their transformation].

Therefore, Thierry could be confident that his athletes could achieve running the planned times in a benchmark workout because he monitored so carefully how they had run in their workouts throughout the plan.

**7.1.4 Confessing.** The confession worked by giving people a conscience that held those people to the norms and truths established in the social body. "Since the Middle Ages at least, Western societies have established the confession as one of the main rituals we rely on for the production of the truth" (Foucault, 1978, p. 58). As a retainer of normality and producer of truth, the confession, alongside discipline's instruments, worked to maintain power. In more simple terms, through the operation of the confession, truth becomes locked, finalized and completed. Foucault (1978) elaborated the confession as a five-step procedure that an individual experiences. Therefore, I intend to demonstrate the moments in my data collection when any of the

confessional procedures occurred. I do not, however, intend to evidence the employment of confessional procedures in the specific order that Foucault (1978) articulated, because the confession was very much in operation throughout my data collection.

As I have shown thus far, in the disciplined endurance society the arbiter of truth was someone who was an expert in producing fast times—either endurance coach or athlete. In endurance running, being fast is being normal and thus the coaches to the fastest athletes or the fastest athletes are the most normal individuals. One expression of abnormality is not running fast enough. Both the identification of normality/abnormality and expertise in being able to articulate normality, enable the operation of the confession. Therefore, the analytic steps of the confession can proceed when an expert is identified. The confessor can then divulge his or her *personal history* or the description of his or her abnormality to that expert, and the expert can give his or her *interpretation* (the fourth analytical step) of that abnormality. Therefore, the important point to make is that the belief in expertise—or someone who was better at being normal—were the endurance coaches who had proven themselves capable of designing plans that had produced sufficiently fast athletes. Thus, for Lukas, the experts, or the only coaches worth approaching for advice were: "Salazar [coach to 2012 Olympic 5000m champion and 10,000m champion and runner-up] or Savanova's [the female 2012 Olympic 800m champion] coach." Lukas did not deem the coaches of other Olympic finalists as being expert enough to listen to because their athletes hadn't run fast enough. Interestingly, Aaron described approaching a more 'normal' experienced female marathon international, not a physiotherapist or osteopath, for advice on one of his athlete's ongoing hamstring problem.

On another occasion, I inadvertently became the confessor when Patrick, without my prompting, made himself the expert and explored the *general causality* (second analytic step) in

my own personal history. From Patrick's perspective, I hadn't run fast enough in my competitive career: "I saw you train, you should have run 3.36. Why didn't you run 3.36?" The 'overall illness' was my 'failed' athletic career, and I recorded the general causality in my notes.

> I should have run more steady-paced miles. I'm confused, and explain that actually I ran probably more steady miles than most of my peers. "But what type of miles?" asks Patrick. "There probably wasn't enough tempo or threshold runs, it doesn't matter if you do lots of miles if they're not fast enough." I realize I'm confessing, how did this happen? I'm receiving the *latent* [third confessional stage] principle—the thing that was hidden that I didn't know was bad. I didn't run enough of the 'right-type' of miles. Hence my *therapy,* if I was still competitive. According to Patrick, I should have been like Fred, the *fastest* of his athletes who is able to run his six-mile tempo/threshold runs in 28.50. The confession doesn't stop though. Patrick continues and tells me how, as an athlete, I was also unaware of my lack of positive self-belief and my lack of courage to approach a 'better' [in his opinion] coach. He concludes, "if you knew what you know now, you could have fought off all those negative feelings and run faster."

The most noteworthy aspect of my interaction with Patrick was that this was not the only occasion that I was obliged to confess during the data collection. Indeed, Foucault (1978) described that the obligation to confess is seen in so many aspects of everyday life "that we no longer perceive it as the effect of a power that constrains us" (p. 60). Hence, on their own, the examples of evidence that I have given, as with discipline, may seem too random, irrelevant or subtle for analytic consideration. But this is why Foucault (1988b) conceived power as such a complex concept that the operations of its maintenance are not easy to observe. Accordingly, "(our task) is to discover them [relations of power] in their material play" (p. 119). It is also why Foucault (1978) described

how analyses of relations of power should be ascending: starting from the bottom and working up. From this Foucauldian understanding of power, it follows that no moment is innocent, every moment has analytic value. During my observation of Jack's workout, one of his athletes was taking a break from training. Exactly like 'Brian', who Denison (2007) focused his Foucauldian analysis on, this athlete was performing in an unexplained apathetic haze that both he and Jack were at a loss to explain. I recorded my interaction with the athlete:

> "What time did you run, Joe?" the athlete asks me. It was faster than he's currently run. A few minutes later, as our conversation continued, I noticed that I had become the one who was to listen [the expert] as the athlete was giving me [without my prompting] his detailed *personal history*, a *general causality*, and then he asked what I thought was *latent*, and so my *interpretation* of what I thought his potential *therapy* could be.

The confession worked continually and strategically because whatever is spoken refers only to whatever is normal or true. Therefore, the confession worked at *any time, all the time*: "It [the confession] put into operation an entire machinery for producing true discourses concerning it" (Foucault, 1978, p. 69). As a final example of the confession's influence in my data collection, Aaron, a national coach educator, described his and some of his peers' steadfast belief that the most successful endurance coaches (some of whom were participants in this study) had a mystical X-factor that enabled those successful coaches to get the most from their athletes. Aaron believed there was a latent principle in operation: there was some 'thing' that the most successful coaches knew about or did, but that was hidden from Aaron and his peers. Aaron said:

> We can talk physiology and we know this workout will do that, and that workout will do this. We can artistically put the workouts together in the best plan, and get a result at the end. But there is that X-factor of the coach-athlete relationship that the 'guru', for want of

> a better word, coach has. I think there's immense power in that relationship and that ability to get the athlete to be able to get that extra per-cent out of themselves.

However, because Aaron and his peers had no idea what the hidden 'thing' was, they resorted to calling it the X-factor.

Hierarchical observation, normalizing judgment and the examination are an astonishing apparatus for maintaining power that is further supported by the confession. Through these Foucauldian concepts, normal standards are reinforced and rewarded, supervision is passed to only trustworthy people, and other experts in normality provide judgments of acceptability. Consequently, the disciplinary instruments and the confession work in ways that makes the suggestion of freedom to choose one's own training methods highly questionable. Olivier reinforced this point when he emphasized that there was a 'bottom line' of endurance running.

> This [run fast] is what you have to do to get selected, that is it or it is what you have to do to qualify or get the sponsors to want. Ultimately this [run fast] is how the international paying circuit works. This is where you perform and it is off this 'time' that you know you need to do. That is the bottom line.

Arguably my most important finding is that the disciplinary instruments along with the confession enable the disciplinary techniques to work without ever being undermined. In other words, the meanings that are established in the overall framework of high-performance endurance coaches' understanding of training the body are easily reinforced and maintained. According to Foucault (1995) the examination completed hierarchical observation and normalizing judgment, and in so doing enabled "a perpetual comparison of each and all that made it possible to measure and judge… a constantly repeated ritual of power" (p. 186). As an example of this perpetual comparison, I was invited to attend a coach education training day by Patrick. At the start of the

workout Patrick needed to organize the athletes into groups. He called out: “could we have the four minute [1500m] runners over here [pointing], the 4.15 people over there [pointing] and the 4.30 ‘ones’ over there [pointing].” In other words, in a disciplinary society every individual is not just always judged, but is always known. Thus for Foucault (1995), the moment disciplinary powers were effectively instilled in society was the moment that a new invisible power was arranged over bodies. A power that objectified the body because the body was now able to be classified, captured, fixed, categorized, averaged and normed by an expert. Foucault (1995) stated:

> That moment when the sciences of man became possible is the moment when a new technology of power and a new political anatomy of the body were implemented… thus substituting for the individuality of the memorable man that of the calculable man. (p. 193)

It is the significance of this ‘technology of power’ and the ‘calculation of the body’ that emanates from the disciplinary framework that I aim to develop next.

**7.2 Athlete-Centered Coaching and Foucault**

I have structured my results chapters by three striking themes that occurred throughout my data collection. The first theme was the dominance of physiological knowledge in framing coaches’ understanding of the endurance body. The second theme was the meticulous control of both time and space of coaches’ practices. The final striking theme was that every participant was so firm in his belief that the planning process was inherently individual that it was one of the first points he wanted to impress upon me. In turn, the participants’ respect for the individual athlete led to their strong beliefs in flexible planning, constant adaptations and a resulting desire for effective communication. What could be problematic about endurance coaches who, driven by

common-sense, care for their athletes to such a degree that they carefully plan their athletes' training and are constantly open to scientific changes? Yet the disciplinary framework is so powerful because it produces and easily maintains such a specific, and limited, understanding of the acceptable knowledge and practice for endurance coaches. The framework is not powerful in an overtly threatening, dictatorial or repressive way. For Foucault, power is far more coercive than authoritarian coaching behaviors ever producing satisfied athletes or effective performances. Ancient power 'took' life, whereas modern power 'gives' life, it administers life and it controls life. Thus, modern power becomes the reconstitution of the 'sordid detail' of a life in the form of knowledge and practice (Foucault, 1995).

**7.2.1 Athlete-centered coaching.** I have already stated that there is an abundance of research that extols the virtues of not just athlete-centered coaching, but also coach-centered education. Athlete-centered coaching has grown out of humanistic psychology and, more specifically, the work of psychologist Carl Rogers. Placing the athlete or coach at the center of the learning process is such a dominant theme in contemporary coaching cultures, that it appears to have been "uncritically advocated as the best and often the only way" (Nelson et al., 2012, p. 2). According to Rogers (1951), education can help individuals learn:

> to take self-initiated action and to be responsible for those actions; …[education can help individuals] who are capable of intelligent choice and self-direction; who are critical learners… who have acquired knowledge relevant to the solution of problems; who, even more importantly… utilize all pertinent experience freely and creatively. (pp. 387-388)

Rogers's work has become a driving force for athlete-centered coaching and coach-centered education. More importantly, because athlete-centered coaching is concentrated on one individual's sporting needs there is a strong assumption that athlete-centered coaching is flexible

enough to compensate for any inadequacies in a training plan. An endurance coach doesn't have to design the most effective training plan because athlete-centered coaching enables that coach to still meet the individual athlete's needs. Unsurprisingly, all the participants informally expressed these individual forces. As an example, Jack was very passionate when he described the importance of his approach to planning, an approach that mirrored athlete-centered coaching.

> You have to grow the person as well as the athlete, which sounds fairly sanctimonious. Lots of athletes are very lacking in balance, so you're trying to grow the whole person so they actually take ownership of their athletics and their lives. Using a clichéd word, we're trying a holistic approach to make the athletes fully rounded individuals. It all sounds very grand but my approach is based on banter and taking the piss. I suppose the teacher part in me comes out, when you teach you're also a social worker and a pseudo-psychiatrist, in other words you're naturally empathetic.

While other participants also described how if they weren't considerate of their athletes' needs and lifestyles it would be impossible for their athletes to perform. For example, Olivier was equally as emphatic as Jack about the need to be considerate of his athletes' needs.

> The athletes must be very much involved in the plan, it is very important I listen to them. They need to be letting me know how the plan is going, it is a two-way meeting. It is not a case of me saying that this is what I want, this is what you're doing. I'm not telling the athletes how to run their lives. You need that one-to-one contact, no doubt. I meet the athletes individually and regularly for a coffee to find out where they are and what they are doing.

Aaron also had strong elements of athlete-centered coaching in his practices, he said:

> I do try to discuss with the athletes where they're heading, so it is their journey and they're pretty much in control of their journey. I'm definitely trying to give responsibility to the athletes. It is [the planning process] an experiment of one and the higher the level of the athlete, it is even more an experiment of one. Dave Brailsford [Performance Director of British Cycling and Team Sky] and Steve Peters [sport psychiatrist to the Team Sky cycling team] have a model that basically says the athlete 'sits on the throne', meaning the athlete sits in the center. The athletes are the ones in control, not the coach.

Furthermore, other participants described the planning process in the following ways: planning was inherently individual, planning was an experiment of one, planning held the athlete at the center of the coaching process, planning depended on the athlete's abilities and aims. These understandings of the planning process have been described by a number of scholars as effective coaching because coaches who behave in socially supportive and empathetic ways are generally considered to be more able to effect the transformation of their athletes (e.g., Becker, 2013; Chelladurai, 1980, 1990; Jowett, 2003; Smoll & Smith, 1979, 1996; Smith & Smoll, 1996). The most striking consequence for my analysis of the participants' perception that the planning processes were inherently individual. The individualizing, empathetic and socially supportive nature of the planning process, made the participants' practices immune to criticism. When I explored with the participants a way to use Foucault's critique of time, space and organization to alter the design of their training plans, of the sort that I described in the previous chapter, each participant would reply that he designed individual plans. Accordingly, each participant could easily recall an occasion when he had applied a significant adaptation to the plan for an individual, such as not recording the times in the workout, or moving the tough workout to the proceeding day because the athlete wasn't ready. In other words, the participant believed he was *already*

behaving in a Foucauldian way (by being flexible and breaking up the times, spaces and organization of his athletes' training) and so easily deflected my challenge to his methods.

In this sense, the participants' methods were immune to criticism because of the inherent flexibility afforded by conceiving plans in individual terms. But this was one of Foucault's (1978, 1995) main points, modern power is considerably more efficient. Modern power is more discreet, more devious, it has "polymorphous techniques" (Foucault, 1978, p. 11). In these complex ways power is accepted: "power is tolerable only on condition that it mask a substantial part of itself…Would power be accepted if it were entirely cynical…it leaves a measure of freedom—however slight—intact" (p. 86). Consequently, it is completely unsurprising that the endurance coach can't see the specificities and restrictions in his or her knowledges and practices. Power produces and gives knowledge, power doesn't take knowledge away. However, most importantly for my analysis, the lack of awareness of the specificity of the meanings created in endurance coaching knowledge and practice—the systematic energy conversion of the body via meticulously controlled structured running efforts—means it is debatable whether athlete-centered coaching can be as effective as it purports to be. It is my intention now to complete my analysis by questioning athlete-centered coaching and coach-centered coach education.

**7.2.2 The panoptic gaze part two.** It is worth re-stating how panopticism was "polyvalent in its applications… an intensificator of power" (Foucault, 1995, p. 205). It is precisely this intensity, the increasing or 'maximization' of power that makes Foucault's theoretical framework so important. As I have just evidenced over the previous two chapters, the combined effects of the overall framework of knowledge, practice and power relations are startling because they place the athlete and coach within a framework of understanding and practice that is by its nature very specific and restrictive. Therefore, modern power is so effective because it establishes and retains

only certain meanings. For example, it simply isn't possible to coach a runner by designing 'play-type workouts' or gentle exercises. Resistance is unfeasible if one doesn't know what is possible. Hence, while Cassidy et al (2009), Lyle and Cushion (2010) and Nelson et al (2012) observed that coaches desire to develop responsible, adaptive and creative athletes is actually only rhetoric, it is important to show how those coaches have little choice. The participants were not hiding behind a smokescreen designed to make themselves look good. Instead, the participants believed they were behaving in an altruistic manner for the benefit of their athletes. The small details that, from a Foucauldian perspective, were restrictive, were perceived by the participants as expansive. With finer details, the participants believed, they were able to design an effective training plan because inevitably the participants would be in control of more variables.

Foucault (1995) argued that discipline could only achieve such scope in power because it operates through a mechanism that is "a perpetual victory that avoids physical confrontation and which is always decided in advance…the house of certainty" (p. 202). The industrial system required a free market in labor, a mechanism of power that operated without an operating presence. Foucault (1995) continued, "whenever one is dealing with a multiplicity of individuals on whom a task or a particular form of behavior must be imposed, the panoptic schema may be used" (p. 205). The clearly arranged spaces replaced locks, bars and chains because people now subjected to visibility made the constraints of power 'play spontaneously' on themselves. Remarkably, given that I described at the end of the previous chapter how disciplining plans produce docile athletes, Thierry stated: "my ultimate point about the whole process [designing effective training plans] is that it is so important that the athletes think for themselves, that would be my main point around which is everything I do". In other words, the participants believed that they were designing individual, empowering and autonomous training plans. Dennis said:

> My plans change with each athlete to a large extent. Each athlete is absolutely an individual; you know everything is unique to that one person. If something matters to that one person then it is significant. So I look at that, every athlete is absolutely different.

Yet the Panopticon's scope—based on norms and truths—is enormous, its reach is ever expanding because discipline makes the coaches and athletes need to be like one another. Foucault (1995) stated, "the constant pressure acts even before the offences, mistakes or crimes have been committed…it gives power of mind over mind…(it) makes any apparatus of power more intense" (p. 206). In other words, it is possible to argue that if high-performance endurance coaches are to produce the truly autonomous athletes they purport to create, it is essential that those coaches are aware of the constructed nature of the general framework of understanding how to design endurance training plans.

**7.2.3 The fallacy of athlete-centered coaching.** Part of the overall strategy of the framework of knowledge, power and practice is to reinforce knowledge and practice, keep attacks at bay, prevent coups and revolutions and retain power. As Foucault explained (1995), "it must neutralize the effects of a counter-power that spring from them and which form a resistance to the power that wishes to dominate it" (p. 219). As my data has shown, the instruments of discipline clearly made it hard for my participants to look outside of the overall strategy of the framework of knowledge, practice and power. Therefore, it is worth re-stating that because meaning resides in the framework of knowledge and practice, the answer to any performance-related problems also resides in the same the general framework. There is no reason to look outside the framework because any understanding that exists there is, by its very definition, wrong. Therefore, the answer to any performance-related problems is likely to be an intervention that emanates from the normal framework, an additional scientific knowledge that also resides in the same framework.

Performance enhancement becomes the domain of another scientific knowledge, an aspect of the body that hasn't been considered before—an additive philosophy of performance enhancement. For example, a pre-performance *plan* might be designed in consultation with a sport psychologist. Or a food *plan*—meticulously controlled diet—is designed in consultation with a nutritionist. Or a strengthening *plan* is designed in consultation with a strength and conditioning (S&C) coach. In other words, to be effective every intervention is *planned* and *monitored* so the athlete has significantly more to think about. In other words, the athlete is more, not less docile, more, not less overwhelmed. These observations of taken-for-granted dominant practices reinforce the importance of thinking through a Foucauldian lens.

Other socio-cultural scholars (e.g., Jones et al., 2004; Jones & Standage, 2006; Nelson et al., 2012) have questioned the degree to which athletes and coaches are able to make free and 'unfettered' choices regarding their own training because the pressure to perform is so great that innovation is stifled. However, Foucault's theoretical framework has enabled me to analyze coaches' understanding of planning as a practice in which the perception of the right things to do is so strong that it is hard to see whether coaches actually have any other choices. Thus, when Brookfield (2009) wrote that self-directed learning serves repressive interests, or when Cushion and Jones (2006, 2012) reported how elite footballers were excluded from discussions surrounding their training and performance in an authoritarian, aggressive and overtly-hierarchal coaching culture, we shouldn't be surprised. Surely it is obvious that shouting at an athlete is only ever likely to elicit resentment and a poor performance. But what is surprising is that even when the coaching culture could be described as altruistic, noble, honorable, considerate, democratic or socially supportive, free choices or "truly authentic desires" (Nelson et al., 2012, p. 10) felt deeply at the core of an athlete's identity *are still unlikely to be heard*.

As I worked through the data and Foucault's theoretical framework, I gained an ever-increasing sense of the integral workings of power. At the end of Jack's observation I wrote the following words:

> Jack and his assistant coaches are checking the athlete at the end of a good workout. Jemima (who twisted her ankle) is putting her shoes on by the time Jack gets to her, "I'm fine" she says, "just feeling a bit paranoid. I'll ice my ankle when I get home. I'll be fine." "Good" Jack says empathetically. "She's a clever girl," says Mae, the star athlete who is standing nearby. Jemima is clearly satisfied, she's grinning broadly but she's injured and in pain. This behavior confuses me. And this is the moment the significance of normalizing judgment as a power grabs me. *Everyone knows* that you ice when you have the first sign of pain or a niggle. *Everyone knows* you ease back the intensity of your running. *That's what you should do*. I realize that Jemima's pleased because she's been picked out for behaving normally. Mae, the star athlete, reinforces Jemima's normal behavior in front of everyone. "She's a good girl", Mae says smiling. Jack confirms the good behavior. "She is, Mae." He smiles and pats Jemima on the back. Jemima's normal behavior is acknowledged. She's got an injury and she's dealing with it correctly. She knows, that they know, that she's a real athlete.

Endurance coaches and their athletes know that to be successful they always have to do the correct things, however minute. Indeed, it is in the collection of minutiae that coaches and athletes can excel because it is here that they can retain their normality. The minutia is why Foucault (1995) stated analysts must have a liking for stone-cutting as well as architecture. In other words, power resides in the analysis of these small details. The control of such minutiae enables panopticism to become the "technique, universally widespread, of coercion" (p. 222). Therefore,

the ongoing learning and development of coaches and athletes that scholars (e.g., Cassidy et al., 2004) have advocated through athlete-centered coaching and coach-centered coach education, is within a framework that Foucault has enabled me to show as being formed in very specific ways. In other words, coach educators, coaches and athletes learn the same things, the same meanings, the same understandings. However complex the construction, there is only one knowledge of 'mankind', and one articulation of the 'penal' practices that can transform the endurance athlete—the systematic energy conversion of the body via meticulously controlled structured running efforts. Consequently, endurance coaches are being taught and empowered to do what their predecessors have done before them. Nelson and Colquhoun (2013) argued that an effective coach is someone who by using questioning, prompts and feedback can lead his or her athletes to gradually discover the solutions to various problems. However, because our formations of knowledge and practice are so restrictive, the athletes will only do the 'normal' things that the coaches would have done anyway. Therefore, it is worth questioning how effective it would be to let athletes take control of their planning processes—putting athletes on the throne—as Aaron reported Dave Brailsford and Steve Peters had done. The astute athlete would only ever do what the astute coach would do. Accordingly, the endurance planning process may be perceived as an experiment of one, but it is actually the same experiment with the same methods, for everyone.

**7.2.4 Being like one another.** Of the 15 participants in my study, 10 participant observations occurred during October and November 2012. Table 2 shows the workouts that each participant had planned and that I observed in that time. The reader can probably sense that with such a rigid disciplined framework of planning, it is likely that each participant had his athletes complete similar workouts. However, the degree of similarity is compelling. To place the observations in context, it should be noted that these participants collectively plan the training

*Table 2.* Observations of participants workouts that occurred in October – November 2012; approx 400 athletes

| Workout | Recoveries | Distance | Time (reps) | Pace | Surface |
|---|---|---|---|---|---|
| 8 x 600m hill | Easy return | 9.4km | n/a | 10km race | grass (lit) |
| 3, 2, 1, 1, 2 laps* | 90 secs | 9km | n/a | 10km race | grass |
| 800m, 400m, 400mx5 | 60 secs | 8km | n/a | 10km race | park walkway |
| 6 x 1600m | 60 secs | 9.6km | n/a | 10km race | track |
| 10 x 1000m | 45 secs | 10km | n/a | 10km race | grass (lit) |
| 3, 2, 1, 1, 1 lap | 90 secs | 8km | n/a | 10km race | grass (lit) |
| 2 x 5, 4, 3, 2 min | 90 secs | n/a | 28 mins | 10km race | grass (lit) |
| 5 x 5 mins; 4 x 1min | 60 secs | n/a | 29 mins | 8-10km race | track |
| 3 x 3, 4, 5 mins | 60 secs | n/a | 36 mins | 10km race | grass (lit) |
| 5 x 5 mins** + 4x400m | 60 secs | n/a | 30 mins | 8-10km race | track |
| 3 x 5 mins + 3 x 2.5, 1.5 mins | 60 secs | n/a | 30 mins | 10km race | park walkway |

* 3 lap rep; first lap ‘tempo’, second lap ‘threshold’, third lap ‘hard’
** First 90 secs ‘flat out’, 3.5 mins threshold pace

of in excess of the best 400 athletes in the U.K. and the U.S. Endurance athletes that cover every endurance event, from 800m to the marathon, and yet clearly the athletes were all doing a very similar workout. Note the pace for each workout that the athletes were designed to run at is exactly the same. Note also how the recoveries varied from 45-90 seconds, but were rounded up, so in reality the athletes had 45, 60 or 90 seconds recovery; not a random number in between.

Note how the participants measured the workout by either total distance run or total time run, the options for the athletes being 8-10km in distance, or 28-36 minutes in time (which means running approximately 8-10km). Note also how the surface for each workout was one of three options, running track, park walkway or grass (lit because the workout was at night). In addition, it is also noteworthy that eight out of these 10 workouts took place on a Tuesday afternoon/evening. Note, therefore, that each individual athlete experienced, essentially, the same type of running efforts. This is only one example of a general tendency for coaches to apply the same planning principles to their athletes' training. If athletes are all individuals, they are treated in remarkably similar ways. Thus, it appears, athlete autonomy will only ever occur when athletes can be trusted to do what the coach would do or if his or her autonomy is expressed within the same framework of understanding adopted by his or her coach—that is measuring and strictly controlling runs that incur high-energy expenditure in the body. This is why discipline fixes: it arrests or regulates movements; it clears up confusion; it dissipates compact groupings of individuals wandering about the country in unpredictable ways; it establishes calculated distributions (Foucault, 1995). Accordingly, individual adaptations to the training plans occurred, rather more simply, because of varying degrees of athletes' illness, injury and lifestyle. The rigidity of the framework remains almost impenetrable. A good example of the impenetrability of the framework of knowledge and practice was one interview exchange I had with Ian, who was undoubtedly one of the more considerate and deep-thinking participants. Ian challenged my sense that there was a general understanding of key workouts that every coach seemed to be doing. I had stated, as an example, that each workout seemed to end in a '0' (e.g., 200m, 400m). Ian disagreed, but the examples he used to counter my argument were:

> 267m, mine do 3 x 267m, because that makes 800m [which ends in an 0]; the unforgiving minute, so each athlete runs for a minute so it is a time-based rep on the track [which ends in a 0]; or I take data from a VV02 max workout to ascertain how far the athletes could run in six minutes and then take two minutes off that [which ends in a 0]; yes, I see what you're saying, they [workouts] won't now [end in 0]!

In other words, it is almost impossible to conceive planning endurance workouts in any other way.

**7.2.5 The difficulties of athlete-centered coaching.** It is extremely difficult for coaches to challenge the dominant ways of thinking about planning, irrespective of their intelligence, compassion or social concern. As I have previously stated, all the participants were very successful, intelligent and pleasant people who I greatly enjoyed spending time with, which is in contrast to the sense one gains when reading about the coaches in other studies (e.g., Barker-Ruchti & Tinning, 2010). The participants were also deep thinkers who spent a lot of time considering the design and implementation of their training plans. Indeed, after my Foucauldian-inspired exploration of some of the participants' taken-for-granted assumptions in the design of their training plans, there was a sense among some, not all, of the participants that deeply problematic and troubling features did exist. Towards the end of my final interview with Lukas he 'blurted' out in exasperation, while shaking his head:

> I feel like I have these shackles put on me by what we see as, you know the usual methods of planning. I know very well that we're constrained by our, you know, our memories, our experiences, books that have all been written on how we should train. I do feel, maybe there's a different way, and I certainly don't know what it is yet but there's definitely room for looking at training in a whole new way. I don't know what else I can say if there's not a better way then it just means that running's a nightmarishly hard sport.

Lukas' confusion is one example of why thinking through a post-structuralist framework is so important. I'm not attempting to be critical of the coaches' methods, practices or beliefs. Instead, I am attempting, with Foucault's help, to be very critical of the operations of power that have created those beliefs. Endurance coaches are not repressive agents of control as Halas and Hanson (2001) might have had us believe. Instead, the participants were well-meaning, clever, thoughtful, reflective and ultimately considerate coaches. But there is a danger that their results and methods may be similar to the authoritarian, overtly hierarchical coaches. For example, most of the participants struggled to accept any aspect of their athletes' lives that threatened normal training processes. Kieran said:

> Would I let my athletes go skiing? Err, I'd entrust them not to [long pause] I think. Well, I snowboard myself so I'd have to say yes wouldn't I? It comes down to how dedicated the athletes are. The coach should teach the athletes well enough so they know what they need in terms of training programs and won't want to go snowboarding. In two years time, my athlete, Horace, could write his own program, if he's capable of that he's also very capable of going, 'snowboarding can wait until I've finished'. [long pause] Look I want to say 'yes it is ok' but I would prefer him to choose not to. We're lucky to be runners, it is a great lifestyle to have. You have to make those sacrifices if you're going to be any good.

Keiran knew it was his belief itself that was problematic but could not confront this belief because the 'normal' training that resides in the overall framework of knowledge and practice is so strongly understood. This tension, between the threat to normal training processes and the need to be altruistic and allow athlete autonomy, was a constant struggle for the participants. In many cases, the participants knew they *should* ease up with their treatment and expectations of their athletes, but the reality was they *couldn't*.

**7.2.6 'Seeing' the omnipotence of power.** In spite of the rigid and limited frames of understanding about endurance planning, it is not until 'seeing' the effects of power in their totality, that one can gain a better sense of the strength of this rigidity. Similarly, if one bought a lottery ticket, because the competitors are not in direct view, one always believes there is a chance, albeit slim, of winning. However, if one is at a major sporting event, because the competitors can all be seen, one never believes that one has a chance of winning the stadium raffle, even though there are significantly less competitors than in a lottery. Thus, when Patrick, a coach educator, invited me to a regional endurance training day with 80 athletes and 20 coaches, I was able to gain a deeper respect for the effects of power. For on this particular observation, the amount of talk concerning 'different yet similar' topics was overwhelming. I recorded these words:

> It is hard to find the right words to accurately describe what I'm observing. I can hear the background noise of constant, excited talk. Hundreds of conversations taking place at the same time. A constant cacophony of talk about training endurance runners, a talk that reinforces, strengthens, tightens the grip of normality and regimes of truth. I'm really excited and I want to find a way of accurately capturing this moment. Every conversation reinforces normal endurance coaching. It maintains endurance coaching's definition, prevents alternatives. It is one thing to suggest to a coach that he plan a workout without a stopwatch in an interview. In the presence of such a large group, I'm intimidated all of a sudden. I couldn't go and ask that question to each little group. I'm the only person, out of the 100 or so gathered in the room not wearing normal running or coaching clothes. Almost every phrase, sentence or group of words that I hear uttered, I attach to a different meaning; source it; think of alternatives. I see power, in its infinite varieties, its web-like manifestation, the capillaries, this is what Foucault meant. I get to see more of its

> expressions, continually. Power is everywhere, but also I can see how immensely strong and *restricting* it is. Power is not capillary-like, it is thicker than that, it is spaghetti-like, it is tagliatelle. Power is frozen, impenetrable, it is ice and it works to prevent movement. Like Shackleton's ship—ironically called *Endurance*—that got stuck in the ice [power] on its way to the South Pole, the ship can't move. *And this is a coach education day*.

As I gathered more data, I became increasingly struck by the sense of the enormity of power operating in endurance coaching, and it is this sense that I am attempting to convey. It is limiting to perceive my overall analysis through the narrow interpretation of individual actors. Every technique of understanding might make sense because that technique is seen in isolation. However, when one sees the combinations of the collective ensemble of understanding, power and knowledge become thicker, less penetrable. The point to make is that because endurance coaches operate within a disciplinary framework created and supported by modern power relations, it is extremely difficult for coaches to design training plans that produce anything other than restrictive and docile performances. But because there is no other standard to compare those performances against, docile performances are accepted as frustrating, unexplainable and normal. Indeed, as I have said before, there is no way of knowing whether faster athletes could run faster.

Recently, socio-cultural coach education researchers have made important suggestions in the coaching literature concerning coaches operating in ways that do not have their athletes' best interests in mind, even if this is their coaches' aim. Nelson et al (2012) suggested that coaches needed to consider whether they were inadvertently imposing their 'ideologies' and values on their athletes rather than providing plans that would best meet their athletes' individual needs. Potrac and Jones (2009), operating within a critical (humanist) paradigm, suggested that coaches present an illusion of empowerment in which power was only lent until it no longer benefitted the

coach, at which point power was taken back. Yet, the overall framework of endurance knowledge and practice is too strong for endurance coaches to problematize their planning methods. Endurance coaches see their planning methods as true and de facto—not flawed and arbitrary, as I am suggesting—and therefore essential to pass on. For example, Lauren said:

> I mean sport is so much about measurement and time and it has always been that way. You know I mean even going back to very humble levels, people have always been driven by the measured targets. No judge is ever giving you 8.2 for the style of performance, it is simply, what does the watch say?

When I explained to Lauren that the concept of measured targets and the record was a relatively recent historical concept, he was genuinely surprised. Therefore, endurance coaches believe they are doing exactly what Nelson et al suggested they do: coaches are helping or facilitating their athletes' progression through the only ways that it is possible to be. As an example of the altruistic and noble nature of the participants, one of their ultimate aims that was repeatedly expressed was that—as ethical practitioners—the participants wanted to ultimately coach themselves out of a role. Aaron explained:

> eventually coaches should become redundant with their athletes. Or the bits that coaches have input on becomes less and less because there are loads of stuff that the athletes have got to grips with to a level which I say to them is okay.

When the athlete is trusted to make the same decisions as the coach that is when power is formally given up by the coach, meaning power isn't actually given up at all. It is not even an illusion of empowerment as Potrac and Jones (2009) suggested. Instead, all of the participants believed their athletes would resent the obvious intrusions into their personal lives that Potrac and Jones (2009) hinted at. Hence, the participants were genuine in their belief that they were growing

the whole person. When or if coaches do try to overtly take over, or become too visibly controlling, it is usually because the coaches are so scared their athletes will overdo their training—run too hard or too far—and get injured. I demonstrated in both the previous results chapters that the participants talked about being cautious or 'holding the reins' on their athletes. For example, Steve noted:

> most of the athletes at this level they will be much more apt to overdo training rather than underdo it. Whenever I tell the athletes to do something like to run a certain time or whatever, they never run slower, they're always trying to run faster.

Lukas also said:

> it also boils down to a "please don't get injured and you know that well." There's certain things that could easily hurt the athletes, like a 22-mile run every Sunday morning because they're doing Lydiard's methods, it would be very difficult for any of us to accept that.

Nelson et al (2012) and Cushion (2010) advised that coaches should endeavor to guide athlete activity via a diverse range of approaches rather than force their own will onto the athletes. Yet when Patrick asked his athletes to take responsibility for a workout, he said:

> the athletes won't take control. I've tried that. I once said, 'I want you to come up with the workout today'. Well, silence. So eventually I said, 'well it is 10 x 400m', and they said, 'great' [clap] well done chief, that is it, chief said we're doing 10 x 400's.' The athletes didn't have to take responsibility, they didn't want to. Another time, I was coming home from a week in hospital and my athlete was texting me because the workout I'd set didn't make sense! What do you mean? Doesn't make sense, I've just had heart surgery!

The problem is that the understanding of the endurance body as requiring an energy conversion via the structured and systematic marking of time and space by someone other than who is

running is not seen as problematic, *by anyone*. It is worth re-stating that Foucault (1995) cautioned that for a society to be effective, power had to make decisions in advance, the "house of certainty" (p. 202). Therefore, endurance coaches would rather be normal than be effective, because being normal is more likely to make those coaches effective. Thus, empowering athletes is likely to need more consideration than Nelson et al (2012) and Cushion (2010) implied.

**7.3 Conclusion**

Thinking outside of the overall framework of knowledge and practice is only likely if it emerges from an awareness of that framework's existence. Coaching truths are rigidly defined and then guaranteed because of the way modern power relations work. Therefore, the meanings that are established as being the truth, or normal, are so critical to understand. Once established it is hard to see the truth changing, because truth circles back on itself, reinvents itself, reforms itself, reinvigorates itself, just with a very slight twist that retains the overall strategy but keeps the individual feeling that he or she has been progressive. No matter how many new activities are designed within the plan, unless those activities aim to destabilize the effects of power they remain just a new disciplined activity. A 'disciplined' activity ironically increases, not decreases, docility. The same can be said for the additive nature of scientific interventions that are incorporated into the plan to resolve specific athlete problems such as burnout. That intervention, by its very nature—mood, sleep, dietary, motivational diary—will require more, not less, monitoring. Again, the practical reality is that docility increases, not decreases. Thus, not only will performance-related problems, such as burnout, likely remain but the problems will transfer elsewhere because *the effects of discipline remain untouched*. The athlete having undergone a mood, sleep, dietary or motivational intervention when standing on the starting line remains more not less overwhelmed. The athlete is less, not more, likely to win. But it leaves the endurance

coach feeling he or she has been effective and progressive. That is why modern power is so effective. Power is not a dark, ideological game of clandestine oppression. Power produces the only way we think we can be and it proves itself. It proves itself time and again.

## 8.0 Conclusion

My Foucauldian interpretation of high-performance endurance running coaches' understanding of training has demonstrated that the specific ways of designing and implementing training plans are continually reinforced because of the operations and circulation of power in modern society. As a result, high-performance endurance running coaches acquire a specific interpretation of the body, and a specific interpretation of practice, that ultimately construct the same specific meanings *on* every individual runner. Critically, because these specific meanings are imposed on individuals, coaches are led to believe that every case is *different*, when actually *every case is the same*—the 'reconstituted practice of compulsion.' As a result, endurance running coach educators, coaches and athletes for the most part continue to design training plans and advocate approaches to planning without questioning the knowledge or practices that support those plans. In many respects this is unsurprising given that the apparatus for maintaining power is so efficient in its ability to reinforce the same ways of knowing and practicing. In other words, the current ways of understanding how to design and implement endurance running training plans is guaranteed through the technologies of domination as legitimate and, therefore, extremely difficult to change.

Andrews's (2008) observation that the athletic body is as much a social, cultural, philosophical and historical entity as it is a genetic, physiological and psychological one is a crucial point for the future of coach education. Currently, coach education programs tend to articulate the body in ways that mean coaches come to know the body only as a scientific creation. This is an observation of understated importance because, as my results have shown, endurance running coaches hold the widespread assumption that progressive training methods are the preserve of bio-scientists who are experts in sophisticated scientific knowledge. Thus, the

encroachment of science into endurance running training theory is generally seen as inevitable, unproblematic and welcome. Yet the adoption of a Foucauldian theoretical framework to examine endurance running coaches' planning practices has enabled me to provide compelling evidence that suggests there are a number of problematic features of the 'way-we-currently-do-things.' For alongside the issues of docility that I discussed in section 6.3.1 there were a series of contradictions among the exercises my participants designed to enable their athletes to carry out unhindered training plans. For example, Thierry emphasized foot strengthening as a significant part of his training plans, but had six of his athletes develop plantar fasciitis (a debilitating foot injury) in the previous season. Carl described how his strongest athlete, John, was also the athlete who got injured the most. Steve bemoaned the poor strength condition of an athlete he had taken over coaching from Alex, who was the participant who described using an in-depth scientific support team to strengthen that same athlete (refer to p. 123). While Theo espoused the virtues of S&C training when he led coach education courses, he made sure his athletes did not conduct such exercises because they experienced more niggles the more S&C practices they did.

Thus, although he was exaggerating, Carl, who has coached a number of national champions, observed that only one in a thousand training plans come off without problems. Consequently, the general perception among all of my participants was that endurance running is a sport of perpetual disappointments. I believe it is appropriate to state, therefore, that as we currently understand it endurance running coaching is dominated by bio-scientific interventions and endemic under-performance. In other words, in its present guise endurance running coaching remains very much a scientific activity saturated with confusing issues (refer to section 6.3.1. and 8.2.2). I would argue that this is a conception of everyday sporting reality that makes little sense.

Because Foucault (1972) encouraged examinations that attempted to account for as many

tensions, contradictions and complexities as possible, I was able to raise these confusions with my participants. It was interesting that all of them found the opportunity to 'get dirty' with their knowledge and practice during my time with them intellectually challenging. Yet my sense was that this stimulation was based on the freshness and uniqueness of my Foucauldian-inspired suggestions that they had never previously considered, rather than any emphatic agreement that some of the confusing issues we discussed spoke to more serious problems concerning the assumptions that underpinned there approach to planning. Thus, while every participant stated that he greatly enjoyed participating in my study, and some even asked to contact me after the data collection to continue to explore their practices, none actually did make contact. Although there could have been many reasons for this lack of contact, the key point to make is that the general framework of understanding how to design endurance training plans—the systematic energy conversion of the body via meticulously controlled structured running efforts—is *not likely to change* anytime soon. For example, one of the last points Theo wanted to tell me before completing his participation was the following:

> Listen to this, my guys are at an altitude training camp right for the fourth year in a row, and you won't believe what my guys were texting me as soon as they'd arrived. 'Theo' they said, 'it is the same fucking program, again! Fucking hell, the head coach hasn't changed it once in four years.'

This resistance to change is one of Foucault's (1978, 1995) central points. Power operates in invisible yet omnipresent and multifarious ways, and it focuses attention only on the meanings that reside in whatever the framework of knowledge and practice allows. This is precisely why thinking through a post-structural lens is so important for the future of endurance running coach education. In other words, it is only through understanding power that meaningful change can

occur: meaningful change that can destabilize the relations of power and so expand the range of acceptable meanings in endurance coaching knowledge and practice. Thus, by definition I am suggesting that many contemporary educational approaches to eliciting change in coaches' practices are ineffective. In the following section I explain how it could be beneficial for coach educators to adopt a Foucauldian sensibilitiy when designing curricula for endurance coaches' learning and development.

**8.1 Problematizing Reflection**

One of the dominant ways that coach educators currently use to change or improve coaches' knowledge and their practices is through processes of reflection (Schön, 1983). Indeed, the concept of experience and reflection has always been at the forefront of psychological studies on human learning and development (Dewey, 1933). Accordingly, Schön argued that students (coaches) would continuously learn if they reflected on new knowledges. Reflecting in this way should be one of the defining characteristics of professional practice because it enables the student/professional learner to become a more effective practitioner. However, if as Foucault (1972, 1978, 1995) theorized, and my results showed, power works to produce and maintain such stifling or restrictive meanings for knowledge and practice then the process of reflection is inherently problematic because reflection will likely retain the same restricted meanings for knowledge and practice. Consequently, student coaches are judged against their ability to be normal, or their ability to know the truth better than their peers. In other words, the outstanding students and professionals are the ones that apply the most normal behaviors. It also means that student reflections are only valid when they concur with the same truths that everybody is searching for.

In the previous chapter I illustrated how effective the disciplinary instruments—hierarchical observation, normalizing judgment and the examination—and the confession worked to maintain power. As a consequence of such an effective maintenance of power, the meanings that are already established as being true will remain true. In other words, reflective coach education practices make assessing coaches judge student coaches on their ability to design 'normal', 'true' or 'right' practices. Moreover, because the confession works through a principle of latency—hidden things that one didn't realize were part of the problem—there is a danger that there are a myriad of 'incorrect' ways of practicing. Thus, the assessing coach has so many aspects of practice that he or she can correct that the student coach can make any number of inappropriate suggestions about his or her learning that effectively keep him or her tied to normalized judgments. Accordingly, as a coach development practice, reflection as it is currently promoted by coach educators (e.g., Cassidy et al., 2004; Gilbert & Trudel, 2006; Lyle, 2002) is not able to change the meanings within the overall framework of knowledge and practice. Put differently, relations of power establish a framework of understanding that looks in on itself and reflection, in its present guise, aids this 'looking-in' process. Thus, one of the issues with Schön's (1983) conceptualization of reflection is that it is so accepting of existing knowledge that the practice of reflection may be harmful. As I said in the previous chapter, this apparatus of power is precisely why it was never my intention to be critical of my participants' methods, practices or beliefs. Instead, I was attempting, with Foucault's help, to be very critical of the operations of power that have created their beliefs.

Another of the consistent activities in contemporary coach education that is used to develop coaches' learning, or effective coaching, is the development of one's 'coaching philosophy'. Student coaches are consistently encouraged to develop their own 'philosophies'

around their approaches to coaching. However, the danger of using a term such as 'coaching philosophy' is that it implies fixing or securing knowledge. Yet again, the norms that already exist are simply reinforced. In other words, reflecting or instilling coaching philosophies in the ways they are currently conceived actually works to make the ice (power)—meanings created by knowledge and practice—that trapped the *Endurance* on its way to the South Pole thicker. The ship is less, not more likely to move.

The inherent difficulties of overcoming the established 'norms' and 'truths' of designing endurance running plans were evidenced in my interactions with Aaron who was a coach educator for a national athletics organization. In both of Aaron's interviews he referred to an iconic endurance coach who had led the coach education course that had most inspired Aaron. "He [the iconic coach] kept telling us to explore the dark corners of practice, to see what's out there, what we can do better." But when I explored the dark corners with Aaron, remarkably the darkest practice he could possibly conceive was that he might, one day, use an: "unstructured measuring device." In other words, Aaron might allow his athletes to run a random distance for their repetitions but he still needed to measure them. Thus, even when he was pressed to break from normal practices, Aaron still needed to monitor and be in control of his athletes' workouts. Aaron, quite simply could not conceive being a coach in any other way. In spite of Aaron's efforts to explore the 'dark corners', the surface of the general strategy for understanding endurance running coaching isn't even acknowledged, let alone scratched. Further, Ian who was also responsible for coach education lamented that in their present guise coach education curricula work to prevent innovation of the kind that Dick Fosbury developed and showed to the world in the 1968 Olympic high jump competition. Thus conceived, the important questions to ask are, how can coach education guard against reflective thinking and developing coach philosophies that

look in on themselves and produce static and stagnant practices? How does the student engaged in the process of continuous learning know what things are more important to reflect on than others? How does the student display progressive practice? Ironically, continuous learning, avoiding stagnant practices and encouraging progressive practices are the very coach practices that reflection was designed to produce.

Thus, continuing with Aaron as an example, he demonstrated that he is an outstanding coach because he displays many of the 'correct' knowledge and practices. Aaron has a coaching philosophy; he is friendly, approachable and considerate of his athletes; he takes responsibility for his athletes' under-performances; he plans with extreme care; he takes comprehensive records; he analyzes an almost immeasurable amount of variables; he reviews, reflects and adapts continually; he seeks out more experienced coaches and engages his peers in discussions about effective coaching. In short, Aaron works really hard and understandably doesn't see the problems that power has created for his coaching practices. Aaron—who does all the 'right' things—doesn't *see* how the design of his training plans restricts, constrains and limits meaning and practice through a range of power relations. As a result, Aaron doesn't *see* an athlete who runs five marathons within thirty seconds of the same time, or has an ongoing hamstring injury problem that no professional can solve, as problematic. In contrast, Aaron *views* these performance-related issues as troubling yet *normal*. It is worth re-stating how Aaron, when talking about his athlete who kept running the same marathon time, concluded that: "[these issues] happen all the time." As Foucault (1995, p. 222) stated: "The 'Enlightenment', which discovered the liberties, also invented the disciplines."

Currently, there is a danger that coach educators are trapped in a humanistic framework of thinking that prevents true critique of knowledge and practice. At present, coach education focuses on the holistic development of the person, not the development of holistic knowledge and

holistic practice that creates that person. Indeed, the burgeoning focus on holistic coaching within coach education seems problematic in an era where knowledge production is dominated by objective, rational and reductionist sport science disciplines. Sciences separate, isolate and reduce the body in order to gather adequate explanations, rather than view the body in its wholeness (Strean & Mills, 2012). As Cassidy (2013) argued, to date there has been little research conducted that can adequately explain what holistic sports coaching or holistic coach education actually is or even should be. Thus, the key point to make is that the humanistic framework of thinking that focuses development on an individual neglects to consider how knowledge and practice work together to create that individual.

Foucault (1978, 1995) pointed out that so much of the operations of power, knowledge and practice—that create and retain meaning—had to be invisible because society had such grand aims, such as security, extreme wealth and global power. Unless change aims to destabilize the effects of power that change is likely to remain just a new disciplined,  and problematic activity. As evidence of this apparent status quo, and having experienced some of my Foucauldian-inspired challenges to his planning practices, Lukas noted that he felt that he had shackles placed on his coaching, but had no idea how or where to start effecting change. My sense was that Lukas and the other participants felt there were deeply troubling aspects of their planning processes but they are currently helpless to initiate change because the apparatus for maintaining power are so effective at retaining power.

Without a better awareness of some of the ways in which power operates, asking coaches to reflect, think critically or develop a progressive or truly holistic coaching philosophy is comparable to giving them a job to do with old-fashioned tools. The practice of reflection is then little more than an arbitrary process that a coach can claim proficiency in, without providing any

substantial evidence of change. In other words, if coach educators are to develop more effective coaches they are going to have to develop curricula that challenges as many manifestations of power as possible (Denison & Avner, 2011; Pringle & Crockett, 2013). In this way, I am suggesting coach educators develop curricula that can enable endurance running coaches to think about their knowledges and practices from multiple perspectives in order to disturb some of the inherent restrictions and limitations that I have illustrated in my dissertation. Otherwise, endurance running coaches are unlikely to become as effective as their coaching efforts deserve. In what follows I provide examples of what such curricula could like that.

**8.2 Implications and Future Directions for Coach Learning and Development**

For Foucault (1983) no discourse is inherently good or bad and so the search for superior discourses, or discounting one truth with another, would result in an endless self-defeating cycle. In contrast, a more ethical circulation of knowledge involves awareness of the dominance of specific discourses, each of which offer only partial stories. Thus, thinking about new practices is potentially problematic because it implies developing a new set of practices or a new series of norms. Furthermore, I had to complete a doctoral dissertation before being able to see the effects of power on endurance running coaches' practices. To educate endurance coaches to align their thinking with Foucault, without the contextual support of Foucault's theoretical framework and historical scholarship, is unlikely to be an easy process. But without an awareness of the framework of knowledge, practice and power, why would high-performance endurance coaches think change is necessary? In the absence of a theoretically informed/inspired intervention to change coaches' practices there is a danger that what evolves is a series of frivolous gimmicks that coaches don't take seriously and result in a quick return-to-type. Therefore, coach educators need to develop a Foucauldian-inspired coaching curriculum that is purposively designed, through

the development of Foucauldian-inspired coaching competencies, to destabilize and challenge as many aspects of the framework of coaching knowledge, power and practice as possible. Armed with an understanding of power's effects, endurance running coaches could be better positioned to consider the wider implications of their practices.

As a consequence of the basic assumptions that underpin Foucauldian scholarship, an ever-present feature of a Foucauldian-inspired coaching curriculum would be an understanding that no method or knowledge is seen as true, or superior, thus forming a new relationship with knowledge. This new relationship could be designed to enable the student coach to explore and not be bound or judged in relation to arbitrary truths. Rather than assuming that new knowledges will aid progressive coaching, coaches need to critically question the knowledges they currently have; coaches need the freedom to make the *familiar strange* by asking obvious and innocent questions and without feeling foolish for doing so; coaches need to practice elaborating and exploring that which they already know so that no practice or knowledge is ever taken-for-granted. By extension, endurance running coaches could become considerably more aware of the impact of some of their practices: an awareness that is likely to provide endurance running coaches with a number of different positions from which to operate. It is these multiple positions that could enable coaches to express constant fluidity and so develop new understandings of what it means to practice as an endurance running coach. From more flexible positions, power wouldn't just be challenged in as many guises as possible, power would be continually and constantly challenged. Consequently, a central focus of designing a Foucauldian-inspired coaching curriculum would be broadening the conception of acceptable knowledges and practices.

**8.2.1 Increasing awareness of knowledge and practice.** As I stated above, I believe that endurance coaches can become more effective with an increased awareness of different positions

from which it is possible to operate. In this multitudinous way, they will be better prepared to consider the broader impact of their practices. As Markula and Pringle (2006, p. 38) stated, the technologies of domination worked by making individuals strive towards achieving socially constructed norms believed to be true thereby limiting "the field of possible actions". Therefore, the aims of a Foucauldian-inspired coaching curriculum would be to destabilize the socially constructed norms and in so doing, expand the field of possible actions. For example, my results and analysis in chapter 5.0 demonstrated that the socially constructed endurance body experiences an energy-producing conversion—strength, power, speed or stamina. This energetic conversion required movement analysis to be focused on the body's ability to exert force, rather than be efficient. Consequently, in order to critically examine this socially constructed norm it is necessary to conduct a Foucauldian analysis of discourse in biomechanics and S&C. In turn, coach educators may be able to develop a broader understanding of the relationship between the body's habitual socio-cultural patterns of movement and the inter-connectedness of the body. Following from this, endurance coaches may be able to articulate their coaching as an endeavor that isn't based solely on the socially constructed norm of energy-production.

However, the bigger point to make is that socially constructed norms are not disturbed just for their own sake, but that they are disturbed through an awareness of the discursive constructions of knowledges and practice. For example, it is not enough to suggest that Foucault's critique of discipline's overt control of time, space and organization could be used to suggest new practices. Practices such as running a workout in a different space (e.g., clockwise in the eighth lane of a track), or experimenting with time (e.g., removing the stopwatch for a month), or completing a different sequence of workouts (e.g., three days of workouts in one day, or training hard on the days athletes feel fatigued, and run easy on days when athletes are bursting with

energy) need to be accompanied by a broader understanding of the effects of power in the social construction of knowledge and practice *and* the broader docile-inducing consequences of discipline. More precisely, if these new practices stand alone then endurance coaches will still be operating from their default settings and remain constrained by the overall framework of endurance coaching knowledge and practice.

Coaching with Foucault will never be as simple as directing, or controlling, athletes to complete a different organization of workouts or exercises. If coaches are to challenge as many aspects of power as possible, they need to consider a more ethical circulation of knowledge, as well as practice. The key point to make, is that in a Foucauldian-inspired coach education curriculum there should be an inherent conception that endurance running coaches' plans need to be fluid and changeable at all times. In this ever-changing way, it should be possible to suggest that there is never an established norm because practices are never static but open to constant change, which is after all what happens in a race. Importantly, coaches need support to become competent at continually thinking of new ways of tapping away at whatever is normal. However, this does not mean they have to discard everything they were doing. For example, there may be times when endurance coaches do use a watch, monitor a workout, control time and space, pass judgment or rank their athletes. However, this controlled training no longer needs to be the endurance coach's primary conception of how to coach, but one that is intermingled or mixed-in with a myriad of other practices.

I am therefore suggesting that coaching with Foucault involves new relationships with knowledge and practice. Unless coaches actively seek problems and enjoy challenges or feel comfortable not knowing about any aspects that relate to designing training plans, those coaches can never be as effective as they could be. Rather than searching for answers, coaches may be

more effective if they practices getting better at asking obvious questions. Coaches need to learn how to ask questions that challenge even the most basic taken-for-granted assumptions surrounding their current training practices. In other words, I believe Foucault's theoretical framework could be used to encourage coaches to become competent at asking simple yet awkward questions. For example, why do fellow athletes cheer their team-mates? Why do athletes pace or help out their team-mates in training? Why do athletes need to train as part of a group? In all three questions, wouldn't athletes be more effective learning to perform on their own, without any intervention from other people because what happens at races when those supportive people aren't there? In these ways, change and the development of new ideas, or continuous learning, is more likely to happen.

### 8.3 Summary

There are a number of implications for coach learning and development resulting from my dissertation that I believe can enhance endurance running coaches' effectiveness. I recognize that my challenges to contemporary endurance running coaching could be viewed as a threat to many coaches' long held assumptions—their coaching logic. Undoubtedly, my challenges could easily impact coaches' authority, the respect given to them by their athletes and their esteem, qualities that are seen as essential to coaching success. But as Foucault (1995) noted, the prison was not born with the new codes, there are no laws that state 'this is the correct use of space, time or organization' for athletes to use. Therefore, the current moment is an exciting one for post-structural coach education scholars. For it is up to the post-structural coach education scholar to produce research that effectively convinces coach educators and coaches to see the value in exploring other meanings associated with designing endurance running plans. Through Foucault, this challenge to the general orthodoxy is feasible because it is possible to gain an understanding

of what power is and how it continues to operate. Through Foucault it becomes possible to tap away at the ice, and every tap is more likely to eventually break that ice and so enable the ship to sail in a different direction, wherever it chooses to go. This is why other Foucauldian analyses needs to occur in order to prevent—as happened with the *Endurance* that was eventually crushed by the ice—the premature and unsatisfactory end of coaches and athletes' journeys.

# Appendices

## Appendix A: Interview Guide for the Initial Interview

### Dominant practices.

- How do you understand planning? Describe your approach to planning? How important out of all the coaching skills is planning a training program?
- What has informed your approach to planning and the ways you think about planning? Where have you gained your knowledge from? What books, coaches, athletes, experiences, websites etc..?
- What other professionals or disciplines do you seek help from? Where else or who else do you go to for advice about planning?
- To what extent does your planning change with each athlete, and to what extent do you allow your athlete a voice in the planning process? Is there a general blue-print you follow?

### Design and Implementation

- What are the main priorities or goals when you design a training plan?
- How do you think about your athletes' progress from season to season, or plan to plan?
- How do you monitor your athletes' training plans/programs? What do you use to measure progress and evaluate the design of your plan? How do you ensure the plan is carried out? What effects or demands from training are you looking for?
- How do you, when do you or why do you make changes to the plan?
- Can you imagine setting a workout which had no pre-determined recovery, distance or speed?

### Problem-Solving

- How often do your plans go smoothly? What sorts of problems come up? Are they the same sorts of problems?
- How do you deal with these problems? How do you know it's a problem?
- Why do you respond to problems in the way you do? What does that say about your understanding of the body, performance and your relationship with your athletes?
- What other practices do you think might help you solve some of these problems? What do you discount that you know others include and why?
- Do you think there are any aspects of the design and implementation process of your planning that is problematic, or doesn't seem to make sense?

**Limitations and Constraints**

- What would help with the implementation or smoother operation of your plans? What would you like to be able to do more of?
- What gets in the way of or prevents you from better implementing your plans?
- How do you know if you've designed a successful plan or not?
- What is the future? What is going to help you in the future? What do you have high hopes that will help you in the future?

**Appendix B: Written information sheet and informed consent sheet.**

UNIVERSITY OF ALBERTA

Faculty of Physical Education and Recreation

E488 Van Vliet Centre
Edmonton, Alberta, Canada T6G 2H9

Dear Participant:

I would like to invite you to participate in my research study titled "Planning for Elite Endurance Performance". As we discussed earlier over email, the aims of the research are to understand how high-performance middle and long-distance coaches come to know about the way they plan their athletes' training. In this way, our intended outcomes are to gain a deeper knowledge of why particular practices are effective, in order to benefit coaches in the future. What criteria, for example, is used to adapt an athlete's training.

You will be asked to participate in an interview that will take between an hour and a half and two hours, allow an observation of one of your training workouts and then participate in a follow-up interview. In the real 'gritty' world, coaches have to continually make decisions based on what they 'see' in that moment, as well as use their theoretical knowledge. The observations are intended to capture exactly that—the informal criteria talented coaches employ. The observations are not designed to assess or make judgments of coaching styles.

The interview will be digitally recorded and later transcribed word for word. This is done so that you can review the transcript if you choose and so that information from your interview can be written accurately into a research paper suitable for publication in a sport science or coach education journal. Information you provide will be general in nature regarding problem-solving, as I am not interested in any personal details of you or your athletes. Pseudonyms will be used throughout the transcripts in order to prevent identification. Therefore, the risk to you or your athletes for participating in this study is minimal, if none at all. In addition, the interview material will be kept in a locked file cabinet that only myself and my supervisor will have access.

Your participation in this study is entirely voluntary. However, some of the benefits from participating could include an opportunity to reflect on your coaching practices and to help advance coach education in athletics. In addition, if at any time you feel uncomfortable about answering a question you can chose not to do so and we will move immediately to a different question. You can also ask to have the digital recorder switched off at any time during the interview. You can also withdraw from the study up to one month after your interview by contacting me via e-mail or phone, and all of the information you provided will be destroyed. Further, all interview material will be kept for a period of 5 years post-publication after which it will be destroyed.

If you have any questions concerning the study, please feel free to ask at any point. You are also free to contact me at 07734794944 or jpmills@ualberta.ca, or my supervisor Dr Jim Denison at +1 (780) 492-6284 or jim.denison@ualberta.ca. The plan for this study has been reviewed for its adherence to ethical guidelines and approved by Research Ethics Board 1 at the University of Alberta. For questions regarding participant rights and ethical conduct of research, contact the Research Ethics Office at (780) 492-2615.

Thank you for your participation in this project.

Sincerely,

Joseph Mills
PhD Candidate
Faculty of Physical Education and Recreation
University of Alberta

**Consent**

I……agree to participate in Joseph Mills's research study. The purpose and nature of the study has been explained to me in writing. I am participating voluntarily and I understand that I can withdraw from the study up to one month after my final interview, without repercussions. I understand that anonymity will be guaranteed in the write-up by disguising my identity and that extracts from my interview may be quoted in the dissertation and any subsequent publications.

Signed……. Date…….

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