

**THE INFLUENCE OF COMMUNITY ON ATHLETIC
DEVELOPMENT: AN INTEGRATED CASE STUDY**

by

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A thesis submitted to the School of Kinesiology and Health Studies

In conformity with the requirements for
the degree of Master of Science

Queen's University

Kingston, Ontario, Canada

(June, 2011)

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Abstract

Athletes are embedded within an environment that can be conceptualized as comprising multiple nested hierarchical levels that span increasingly larger contexts—the most salient being the individual level, the club level, and the community level. Viewing the field of sport psychology broadly, it is apparent that the majority of research has been conducted at lower levels, such as athletes' developmental trajectories (Côté, Baker, & Abernethy, 2003) and peer interactions (Smith, 2003). While sport scientists have begun to study higher levels such as successful sport programs (Martindale, Collins, & Abraham, 2007; Vallee & Bloom, 2005) and successful clubs (Henriksen, Stambulova, & Roessler, 2010a, 2010b) there is a lack of research at the community level. The purpose of this project was to conduct an integrated case study to systematically gather rich information via diverse sources to effectively understand how one successful sporting community develops athletic talent. Lockeport, Nova Scotia—a relatively small, rural, maritime community with a population of approximately 650 residents—was chosen based on athletic success. Twenty-two community residents, including athletes, parents, coaches, a grandparent, the recreation coordinator, and the mayor, were interviewed with the aim to understand how community level factors may have influenced athletic development within a recent ten year span (2000-2009). Interviews were qualitatively analyzed using the method of content analysis (Côté, Salmela, Baria, & Russell, 1993). Results supported existing athlete development research and highlighted underexplored areas. Specifically, results fell into one of three themes: (1) athletes' *developmental experiences*, (2) the *community influences* that caused or enabled these developmental experiences, (3) and *socio-cultural influences* expressed by participants. Regarding developmental experiences, athletes in Lockeport engaged in large amounts of unorganized youth-led sport activities comprised of mixed-age athletes. Athletes also participated in various different organized sports, whose members remained stable throughout

development. Regarding community influences, coaches created community sporting events, celebrations, and learning opportunities for youth. This was facilitated by the integration of the local high school and community. Regarding socio-cultural influences, participants expressed a sense of community and shared a collective identity, which may have facilitated the presence of role modeling and pro-community behavior apparent in Lockeport.

Co-Authorship

This thesis represents the original work of Shea Balish in collaboration with his advisor, Dr. Jean Côté.

Acknowledgements

Foremost, I would like to acknowledge my supervisor, Dr. Jean Côté for his mentorship. Jean, I will carry your teachings with me for the rest of my life. Your leadership and vision inspires me. Also, Jen, Colleen, Matt, Karl, Dany, Mark, and Virginie, I hope to someday repay all the motivation and learning you provided me over the course of these last two years. The culture you created here at Queen's and in the PLAYS lab is one I will try to reconstruct throughout my life. Geoffrey, Faizan, and Sarah, I look forward to seeing you flourish under Jean's guidance in the coming years. Angie, you are the linchpin that keeps the SKHS graduate studies together. Sherri, everyday I passed you in the halls your attitude brightened my day. I would also like to acknowledge John McCabe for without you I would not be travelling this path. Elizabeth, you inspire me to be a better person. All my accomplishments over the last year are a reflection of your support. Finally, I would like to acknowledge my friends, family, and fellow community members from Lockeport. Everyday I try to represent the ideals we share. *Palma non sine pulvere.*

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Chapter 1: Introduction

Athletic talent is developed through specific athlete-environment interactions, what Bronfenbrenner (2005) categorizes as “proximal processes.” However, there is always a complex web of interactions that cause or enable the emergence of these proximal processes, similarly termed “distal processes.” Specifically, distal processes are interactions that influence athletic development indirectly by acting on proximal processes. Both proximal and distal processes are situated within the athlete’s environment, which is characterized by nested hierarchical levels that span increasingly larger contexts—individual athletes comprise teams, which are part of clubs or institutions, which are situated within communities (Krebs, 2009). As the scientific study of athletic talent development (ATD) is concerned with both direct and indirect influences (Abernethy, 2008; Baker & Horton, 2004), sport scientists have acknowledged the importance of analyzing both “lower” levels (e.g., coach-athlete relationships, athletes’ developmental trajectories) and “higher” levels (e.g., sporting clubs, communities) of the athlete’s environment, and how these levels are interconnected (Baker & Horton, 2004; Côté, et al., 2006; Davids & Baker, 2007; Henriksen, et al., 2010a; Stambulova, & Alfermann, 2009).

For practical reasons, research on ATD has traditionally focused on lower levels, such as athlete-coach relationships (Poczwardowski, Barott, & Jowett, 2006) and developmental trajectories (Côté, Baker, & Abernathy, 2003). These logical starting points reflect the “atomizing” approach of studying athletic development at the individual level, allowing for increased control of variables (Campbell, 1994; Haidt, Seder, & Kesebir, 2008). Indeed, there is little doubt that this atomizing approach is vital as it has provided and will continue to provide important insights on ATD (Baker, MacMahon, & Farrow, 2008; Ericsson & Starkes, 2003; Williams & Hodges, 2005). Moreover, as the study of ATD is situated within the applied social sciences, most research is melioristic—motivated by the need to translate findings into real world

applications. It is quite obvious that proximal processes situated at lower levels of the athlete's environment are easier to translate into the real world than distal processes interconnected throughout higher levels.

However, while this atomizing approach has generated rich evidence and practical applications, it is limited in explaining group level processes and thus may be insufficient to fully address higher levels of the human environment (Campbell, 1994; Haidt, et al., 2008). Attempting to explain group level psychological processes by isolating individuals ignores emergent properties¹ apparent at the group level (Wilson, Van Vugt, & O'Gorman, 2008). That is to say, there are properties at the group level that are not fully reducible to the individual level. For instance, there is fundamental difference between "a group of successful athletes" and "a successful group of athletes." Successful groups of athletes are often said to be "more" than the sum of their parts, however, this "more" is not an ontological claim inferring some material increase, but rather an epistemological claim regarding an emergent set of group-level patterns that are indistinguishable when giving sole analytic priority to the individual level.

Consequently, there has been an emerging emphasis within sport psychology that higher levels cannot be fully understood by the atomizing approach (Henriksen, et al., 2010a, 2010b). Instead of trying to scale up research conducted at the individual level, each level of the environment must be integrated with surrounding levels and appreciated for its own emergent patterns. This emphasis has pushed ATD research to analyze larger systems of the athletes' environment, such as successful university sport programs (Valaree & Bloom, 2005) and more

¹ Emergent properties in so far as there are patterns at the group level that cannot be analyzed at lower levels. The foundation of this argument is often summarized as ontological monism combined with explanatory pluralism.

recently, whole clubs and institutions (Martindale, Collins, & Daubney, 2005; Henriksen, et al., 2010a, 2010b).

Despite the emerging emphasis on higher levels of the athletes' environment, there has yet to be research examining the community level. This apparent lack of research is a concern as evidence suggests communities vary drastically in their capacity to produce athletic talent (Côté, et al., 2006; MacDonald, Cheung, Abernethy, & Côté, 2009a). Many community level factors such as geography, population structure, social structure, economic systems, climate, and of course culture, have important implications for both individual and group-level psychological processes that can, and in some cases do influence sport (Oishi, 2010; Stambulova, 2009; Stambulova & Alfermann, 2009). Although various community-level factors have been hypothesized to influence athletic development (Baker, Schorer, Copley, Schimmer, & Wattie, 2009; Côté et al., 2006; MacDonald et al., 2009a, 2009c), currently, community level influences on ATD are practically unknown.

The purpose of this project was to conduct a single integrated case study that utilized information from diverse sources to effectively understand the functioning of one successful sporting community. Specifically, this project integrated various levels of the athlete's environment including the individual level, community level, and socio-cultural level. Attempts to integrate both lower and higher levels of the athletes' environment, as well as understanding emergent patterns at each level, has been referred to by Henriksen and colleagues (2010a, 2010b) as a holistic approach. This project utilized a holistic approach, however, by itself, a holistic approach is limited because it does not provide a multi-level overarching framework to situate and integrate established and emerging research. To this end, this project combined Bronfenbrenner's (2005) bioecological framework with a holistic approach (Henriksen et al., 2010a, 2010b). The following literature review will begin by describing the conceptual

framework guiding this study—a holistic approach and Bronfenbrenner’s (2005) bioecological framework. Subsequently, this review will delve into established literature concerning athletic development at the individual level, the club level, and the community level. Specifically, this review of literature will attempt to provide direction on possible interconnections between community level factors and ATD.

Chapter 2: Literature Review

The Holistic Approach

Groups are composed of individuals, but when those individuals are separated and studied in isolation, important and useful patterns at the group level are invisible (Slingerland, 2008). Attempting to simply scale up research conducted at the individual level to explain the group level (e.g., teams, clubs, communities) will form an incomplete understanding of the functioning of the group and the components that comprise that group. The esteemed social scientist Donald Campbell termed this problem “methodological individualism” which he described as “the dogma that all human social group processes are to be explained by laws of individual behavior” (1994, p.23). In fact, many researchers have been highly critical of attempts to explain group level processes with a narrow focus at the individual level because a group of individual organisms—as has been demonstrated throughout the natural environment—can often function as a single system (Wilson, 2009; Wilson, et al., 2008). Under the right conditions, human groups can exhibit characteristics of higher-level organisms, with their members serving organ-like functions (Richardson & Boyd, 2005; Sober & Wilson, 1998; Wilson & Wilson, 2007).

Higher levels of the athletes’ environment such as large institutions or communities exhibit a high degree of complexity and interdependence. Consequently, researchers accustomed to studying large groups (e.g., cultural psychologists, sociologists, and anthropologists) often view them as organic entities and stress the interdependence of their parts (Fiske & Fiske, 2007; Haidt, et al., 2008). Complementing Campbell’s argument, group-oriented researchers often see the atomizing approach of explaining group level processes by studying individuals as useful, yet insufficient (Haidt, et al., 2008; Slingerland, 2008). Within sport psychology, researchers

studying larger systems have employed systems theory (Bertalanffy, 1968) which crudely summarized, maintains that groups cannot be fully reduced to their parts, that is, groups have emergent patterns that need to be taken into account. Indeed, for anyone involved in team sport, it is quite obvious that having the “best” players on a team, does not immediately lead to the “best” team. The same can be said for whole communities; having the best coaches or best facilities may not produce the best athletes. The ability for a community to produce athletic talent is an outcome of complex interactions that simply cannot be understood when analytic priority is given solely to the individual level (Krebs, 2009). To adequately understand how a community consistently produces successful athletes, analytic priority must be given to both the individual and community level. To “see” the emergent patterns that differentiate a successful group of athletes from a group of unsuccessful athletes, researchers’ analytic “lens” must be broadened to the group level.

This approach—to integrate various levels of the athletes’ environment, while acknowledging emergent patterns at each level—has been termed by Henriksen and colleagues (2010a, 2010b) as a *holistic approach*. However, while a holistic approach can guide research conducted on athletes’ multi-level environment, it does not provide an overarching framework that can situate both established and emerging evidence of athletic development. To this end, many sport psychologists have wedded the holistic approach to Bronfenbrenner’s bioecological framework (Henriksen et al., 2010a, 2010b).

The Bioecological Framework

Ecological developmental psychology, made most prominent by Bronfenbrenner (1979, 2005), aims to understand human development by examining the interaction between the developing individual and the social and physical environment that make up that individuals

habitat (Bronfenbrenner, 2005). Bronfenbrenner's ecological perspective has come to be better known as the bioecological perspective of human development (Bronfenbrenner, 1979, 2005). Specifically, Bronfenbrenner's perspective is guided by a model comprising four interrelated components: (1) proximal processes, (2) person, (3) context, (4) and time. *Proximal processes*, considered the main driving force of development, are defined as exchanges of energy between the developing individual and the immediate environment (Bronfenbrenner, & Morris, 2006). The *person* refers to the characteristics of the developing individual such as genetic composition, gender, or temperament. *Context* refers to the multi-level environment the individual develops in (e.g., family, school, community, country). *Time* refers to length of time that the interaction is sustained. These four components formulate a person-process-context-time (PPCT) model (Bronfenbrenner, 2005).

Use of the Bronfenbrenner's PPCT model has become increasingly popular among researchers investigating athletic talent development (Bengoechea, 2002; Henriksen, et al., 2010a, 2010b; for a recent review see Krebs, 2009). In particular, research has borrowed heavily from Bronfenbrenner's (2005) conceptualization of the developmentally relevant context—the developing athlete's multilevel environment. Bronfenbrenner modeled the multilevel environment as a hierarchy of concentric circles, with the individual at the center and increasingly distal influences represented by larger circles. Specifically, Bronfenbrenner describes four levels of analysis that characterize the multi-level environment: (1) the microsystem, (2) the mesosystem, (3) the exosystem, and (4) the macrosystem (see figure 1).

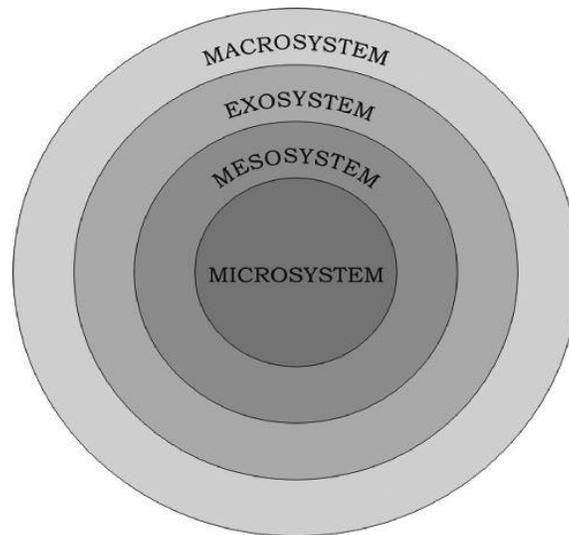


Figure 1. Bronfenbrenner's multi-level model (Source: Krebs, 2009)

The *microsystem* consists of a single proximal process, comprising the person, the environment, and energy being exchanged between both the person and the environment. The environment can be conceptualized as a physical space and the components residing in that space such as people (e.g., friends), the built environment (e.g., volleyball net), or the natural environment (e.g., field). Examples of microsystems in sport would be a young athlete practicing their basketball skills in a local gym, or a coach-athlete interaction at practice. The majority of research on ATD has occurred at this microsystem level (Ericsson & Starkes, 2003; Williams & Hodges, 2005).

The second level, the *mesosystem*, is conceptualized as a system of microsystems. In principle, this level of analysis can include as many microsystems as the researcher would find relevant to their research aim. Although it is daunting to include many microsystems within one analysis there has been a movement towards research that captures many of the athlete's microsystems in one analysis (Krebs, 2009). The most basic mesosystem analysis would include two environments, for instance, how an athlete interacts with his/her parent would influence how

that athlete interacts with his/her coach, and vice versa. Research that examines multiple proximal processes athletes engage in, such as the accumulated amounts of play and practice that differentiate expert and novice athletes, falls within the mesosystem level of analysis (Côté, et al., 2003).

The third level, the *exosystem*, concerns distal interactions, that is, interactions that occur between two parts of the environment (e.g., people, weather, equipment) that indirectly influence athletic development. For example, the interaction between an athlete's coach and the athlete's parents would fall within an exosystem level of analysis, as the coach-parent interaction would have an indirect effect on the athlete. Importantly, the exosystem level of analysis does not always require two individuals. For example, a local landscaper, who unprovoked, mows the local soccer field before each soccer game would be part of the exosystem as the interaction between the landscaper and the field would have an indirect effect on the athlete(s) proximal processes. The exosystem is centered on understanding distal processes that influence proximal processes. Primarily, the exosystem level of analysis is usually employed when researchers are attempting to understand how proximal processes are caused or enabled by distal processes that make up the athletes' overarching club or community.

The final level of Bronfenbrenner's (2005) framework is the macrosystem, encompassing the overarching pattern of ideology and social institutions that characterize higher levels of the athletes' environment. The macrosystem seems to be the most ignored and misunderstood level of Bronfenbrenner's (2005) multi-level model. Indeed, Bronfenbrenner updated his definition of the macrosystem several times, the final definition outlining that "the macrosystem may be thought of as a societal blueprint for a particular culture, subculture, or other broader social context" (Bronfenbrenner, 2005, p. 150). As the term culture has various contrasting definitions, it is worthwhile to define what this term is implying in this thesis. In this thesis, culture will be

defined following Baumeister (2005) as *an information-based system that enables people to live together in organized fashion and satisfy their basic needs*. This definition follows from the idea that, rather than viewing culture as disembodied, autonomous, or causeless, culture can be viewed as information, generated and socially learned via our psychology. Defining culture in this way establishes a foundation through which the study of psychology and culture can be mutually compatible, and moreover, complementary areas of inquiry rather than incommensurable realms. Ontologically, this thesis is guided by the assumption of materialism, however, because of emergent heuristic patterns at each level, epistemologically, this thesis is guided by the idea of explanatory pluralism or non-eliminative reductionism—different levels of analysis and corresponding disciplines should be made compatible, but in no way can be fully reduced to lower levels or disciplines (for a more in-depth explanation of these positions see Slingerland, 2008). Importantly, without making these distinctions, the central aim of this project—to understand how community level factors influence ATD—would not be feasible (Barkow, 2006; Slingerland, 2008).

Athletic Development Research and the Multi-Level Environment

A holistic approach centers the research focus on the interconnection between levels, and the levels themselves. Bronfenbrenner's (2005) multi-level model provides a framework that can situate both established and emerging research situated at different levels of the athletes' environment. When wedded together, Bronfenbrenner's (2005) multi-level model of the athletes' environment and a holistic approach advocated by Henriksen and colleagues (2010a, 2010b) provide an avenue to form an integrated account of increasingly larger systems that comprise athletes' developmentally relevant environment.

As the rationale for conducting this project is to understand how community level factors interconnect with lower levels and influence athletic development, already established research on ATD may provide direction towards understanding these interconnections. The following is a review of research on ATD that has been conducted at the individual level, the club level, and the community level.

The Individual Level

Ample research has been conducted at the individual level of the athletes' environment—ranging from personality profiles of expert athletes (Tenebaum & Bar-eli, 2007) to perceptual cues used for expert anticipation (Jackson, Abernethy, & Wernhart, 2009). However, one of the most prominent streams of research on ATD has concerned the developmental trajectories that athletes take through sport (Côté, Baker, & Abernethy, 2003). Specifically, this research has centered around two main programs—Ericsson's and colleagues (2003) deliberate practice framework and Côté and colleagues (2003) Developmental Model of Sport Participation.

The Deliberate Practice Framework

One of the most popular, and likewise, controversial contributions to the study of ATD has been the deliberate practice framework (Ericsson, Krampe, & Tesch-Römer, 1993; Ericsson, 2003). Building on an original expertise framework by Simon and Chase (1973), Ericsson and colleagues (1993) have advanced a polemic environmental stance where expertise is influenced by a highly conscious, deliberate style of practice that supposedly trumps genetic influences (Ericsson, 2003). From retrospective interviews with novice and expert musicians, Ericsson and colleagues (1993) have proposed that performing practice that is specifically designed to improve performance, termed *deliberate practice*, leads to the acquisition of expertise. Specifically,

Ericsson and colleagues (1993) suggested deliberate practice should exemplify four characteristics: (1) occurs in a daily work-like manner, (2) does not lead to any instantaneous rewards, (3) is not intrinsically fun, and (4) requires significant effort. Ericsson suggests (2003) that skill acquisition in sport is predominantly, if not solely, determined by participation in deliberate practice. The general application of the deliberate practice framework has led to the claim that beginning deliberate practice as early as possible is advantageous for acquiring peak level of skill (Ericsson, 2003).

Despite the popularity of Ericsson's (2003) deliberate practice framework, it has received extensive scientific criticism (Baker, 2007; Balish & Balish, in press), especially concerning the proposition that the earlier a child begins engaging in deliberate practice the greater level of expertise attained (Côté, et al., 2003). Specifically, Côté and colleagues (2003) have amassed extensive evidence suggesting that participation in deliberate practice at young ages (before 14-15 years of age) is not required to attain peak levels of skill, and in fact, may be disadvantageous at early ages as it leads to higher rates of dropout and injury (Côté & Fraser-Thomas, 2011). To compare and contrast various trajectories that characterize athletes' development through sport, and importantly the outcomes of these trajectories, Côté and colleagues have developed through a series of studies the Developmental Model of Sport Participation (Côté, 1999; Côté & Hay, 2002; Côté, et al., 2003).

The Developmental Model of Sport Participation

Perhaps the most important contribution to the current consensus of ATD research has been the work of Côté and colleagues (Côté, 1999; Côté & Hay, 2002; Côté, Baker & Abernathy, 2003). From a breadth of in-depth qualitative and quantitative interviews with expert, elite, and novice athletes, Côté brought forth the notion that optimal learning environments and activities

change throughout an athlete's development (Côté, 1999). Building on Bloom and colleagues (1985) foundational research, Côté and colleagues (Côté, 1999; Côté & Hay, 2003) have demonstrated that deliberate practice is not required at early ages for reaching expert levels of performance later in development (Côté, et al., 2003). Moreover, deliberate practice may not be advantageous during early years as it may limit the development of diverse motor skills and resilience of extrinsic motivation—increasing the likelihood of injuries and dropout (Côté & Fraser-Thomas, 2011). In contrast to deliberate practice, Côté and colleagues have proposed the construct of *deliberate play* where young athletes engage in rule-based play solely for fun, which in turn fosters intrinsic motivation and the propensity to be externally motivated in later years (Côté, 1999; Côté, et al., 2003; Côté, Baker, & Abernethy, 2007). Along with deliberate play, evidence suggests that young athletes who sample a diverse set of sport settings and behaviors may develop fundamental motor and cognitive skills that contribute to skill acquisition (Abernethy, Baker, & Côté, 2005).

To situate and compare the dominant trajectories throughout sporting development, Côté and colleagues have proposed the Developmental Model of Sport Participation (DMSP; Côté, 1999; Soberlak & Côté, 2003; Côté, et al., 2003). The DMSP describes three dominant trajectories that characterize athletic careers: (1) recreation participation through sampling, (2) elite performance through sampling, and (3) elite performance through early specialization. For the concerns of this thesis, recreational participation through sampling will receive limited attention because it does not focus on the development of athletic talent.

The *elite performance through early specialization trajectory*, most closely aligned with the deliberate practice framework, is characterized by early specialization in one sport, where the athlete engages in high amounts of deliberate practice and low amounts of deliberate play. This trajectory is primarily concerned with maximizing skill acquisition and thus neglects the athletes'

healthy psychosocial development and overall participation opportunities (Côté & Fraser-Thomas, 2011). Within the *elite performance through sampling trajectory*, athletes proceed through three stages, each of which includes different learning environments and activities. The first stage, *the sampling years* (5-12 years of age), is characterized by engagement in sport activities for fun—initially free play and then deliberate play. A characteristic of this stage is “sampling”, that is, participating in different sports, different positions within sports, and different sporting behaviours. The second stage is the *specializing years* (13-16 years of age), which is characterized by the athlete narrowing their participation to a few different sports. Deliberate practice increases in this stage with a decrease in deliberate play. In the third stage, *the investment years* (16+ years of age) the athlete will have specialized in one sport and is thoroughly investing in deliberate practice activities. The outcomes of the elite performance through early sampling trajectory are more balanced than an early specialization trajectory, that is, it values performance outcomes, along with athletes’ personal development, and participation opportunities (Côté & Fraser-Thomas, 2011).

Interconnections with Higher Levels

To assess how activities at the individual level may be caused or enabled by the surrounding environment (e.g., the club and community) it is critical to understand the specific nature of these activities so that important distal processes can be identified. Deliberate practice is centered on the proposition that practice and training activities should be designed with the explicit goal of improvement. Specifically, Ericsson et al. (2003) suggested that optimal learning occurs when activities are well defined, pitched at an appropriate level of difficulty, when useful feedback is provided, and when the opportunity for repetition, error detection, and error correction is available. The responsibility of ensuring that these training characteristics are met is

predominantly held by the coach (Ericsson, 2003). Indeed, Vickers (1994) echo's Ericsson's observations in so far as she has highlighted similar characteristics of teaching motor skills that are universally shared by sport coaches: (1) assess entry skill, (2) provide instruction, (3) facilitate practice, (4) provide feedback, and (5) evaluate learning.

Although deliberate practice can be conceptualized as an adult-led, highly structured activity, this does not necessarily imply that deliberate practice must occur in the vicinity of the coach, such as a team practice or training session with the coach. In fact, Ericsson's original conception of deliberate practice, constructed through research on expert musicians, suggested deliberate practice is primarily performed in a solitary setting and is self-directed. Coaches regularly meet with athletes to assess level of competence, provide feedback, and provide tasks (e.g., homework) which the athlete then implements during self-directed training. Beyond an engaged and knowledgeable coach, deliberate practice also requires a sporting club through which a coach and athlete can become aligned (unless the coach is part of the athlete's family or immediate social network). In addition, deliberate practice requires adequate equipment and specialized facilities (Côté, Baker, & Abernethy, 2007). Overall, deliberate practice seems to be both constrained and enabled by, but not limited to, the following resources: (1) accessible and specialized facilities (e.g., indoor gymnasium, soccer pitch, baseball diamond, hockey rink), (2) adequate equipment (e.g., basketball, basketball net, soccer ball, hockey skates), (3) organized sport system through which a coach and athlete become aligned (e.g., a school sport team, a club team), and (4) a coach with adequate knowledge and capacity to facilitate learning including social interactions that indirectly effect learning (e.g., professional, inter-personal and intra-personal knowledge).

Although deliberate practice is a vital activity for developing athletic talent, optimal learning environments are by no means limited to highly structured adult-led activities. As Côté and colleagues (2003) have suggested, activities that are unstructured and youth-led, such as play,

may directly and indirectly influence the acquisition of important psychological and motor skills. Deliberate play requires several resources, most obviously an accessible recreational area and equipment. Although coaches are often perceived as vital components of optimal learning environments, there are many learning environments in which the utility of the coach can be substituted and perhaps even surpassed. For example, role modeling and imitating peers is one of the most prevalent and productive forms of learning during development (Gray, 2009). In addition, just as a sporting system allows coaches and athletes to align, groups of youth need a social network to coordinate (intentionally or unintentionally) and self-assemble in recreational areas. From this brief review deliberate play seems to be both constrained and enabled by, but not limited to, the following resources: (1) accessible and safe recreational areas (e.g., indoor gymnasium, soccer pitch, baseball diamond, hockey rink), (2) adequate equipment (e.g., basketball, basketball net, soccer ball, hockey skates), (3) a group of youth with a social network that enables them to coordinate and self-assemble in recreational areas.

The Club Level

As clubs and institutions primarily concern adult-led structured activities rather than youth-led unstructured activities, the majority of research reviewed in this section will focus on the interconnection between organized practice and sport clubs. To address how successful clubs and institutions influence ATD, recent research has followed two general avenues. The first concerns the coaching environment, specifically, how successful coaches coordinate their interactions with athletes and the overarching aims and framework that guide these interactions. The second theme has taken a more holistic perspective as it has attempted to understand the various interactions that comprise successful clubs, including coach-athlete, and athlete-athlete

interactions. In both avenues of research the criteria for the “success” of a coach, club, or institution is the production of skilled athletes.

The Coaching Environment

The process by which coaches influence the development of athletic talent has been a longstanding and productive avenue in ATD research (Salmela & Moraes, 2003). In efforts to form an integrative summary of ATD literature that can be utilized in the real world, Martindale and colleagues (2005) reviewed the scholarly ATD literature. This overview identified five key themes apparent in the literature: (1) long-term aims and methods of talent development, (2) wide ranging coherent messages and support, (3) emphasis on appropriate development rather than early selection, (4) individualized and ongoing development, (5) and finally integrated, holistic, and systematic development. These five themes were then formulated into an interview guide that was utilized in qualitative interviews with 16 expert coaches from 13 different sports in the United Kingdom (Martindale, Collins, & Abraham, 2007). The coaches they interviewed were selected as experts in developing talent by their respective governing sport bodies. Martindale and colleagues (2007) interviewed these coaches with the aim to (1) reveal perceptions of goals and systems of developing talent within a British context and (2) to test their previous review of literature against expert opinion. Martindale and colleagues (2007) found support for their previous review of literature, however, they admit, “no entirely new concepts emerged from the analysis.”

Most recently in 2010, Martindale and colleagues proposed the Talent Development Environment Questionnaire for Sport (TDEQS) that was created from the authors past research (Martindale, et al., 2007), past literature review (Martindale, Collins, & Daubney, 2005), and pilot tests with 43 developing athletes. TSEQS yielded a 59 item, seven-factor solution that

demonstrated sound reliability (Martindale, Collins, Wang, McNeill, Lee, Sproule, et al., 2010). These seven factors were described as (1) long-term development focus, (2) quality preparation (3) communication, (4) understanding the athlete, (5) support network, (6) challenging and supportive environment, (7) long term development fundamentals. Although there is little doubt that Martindale's TDEQS and research on talent development will aid coaches, this questionnaire focused solely on the coaching environment.

Taking a similar perspective on the coaching environment, Vallée and Bloom (2005) interviewed five successful Canadian university team sport coaches in efforts to grasp the role of the coach in constructing successful sport programs at university and college institutions. The interviews were aimed to gather information related to the key characteristics of coaches of successful sport programs, rather than specific ways in which coaches contributed to their successful programs. The results of the interviews suggested that coaches possessed (1) an ability to display appropriate leadership behaviors depending on the situation they faced, (2) a personal desire to foster their players' individual growth, (3) organizational skills for planning the season and preparing games, (4) an ability and vision to link various aspects of their program together which involved the athletes "buying in."

In summary, it is quite clear that Martindale and colleagues (2005, 2007) and Vallée and Bloom (2005) have focused on unearthing the nature of coach-athlete interactions and the overarching ideas that guide these interactions. Martindale and colleagues (2007), for example, places emphasis on "wide ranging and coherent messages and support" which pertains directly to proximal processes, most likely those between the athlete and coach. As well, Vallée and Bloom (2005) revealed that coaches who have built successful programs possessed, among other characteristics, a desire to foster individual growth. These examples, and others mentioned by the

authors, do not address the environment per se; rather, they focus on proximal processes that occur with the coach.

The Organizational Environment

Moving beyond the coaching environment, Henriksen (2010) recently conducted three independent case studies of Scandinavian sport organizations (Kayak, Sailing, and Track & Field) that consistently produced international level competitive athletes. Henriksen (2010) utilized three methods of data collection: interviews, observation, and archival data. In all, 28 interviews were conducted with various members of the three clubs, including prospective athletes, senior athletes, parents, coaches, and club managers. During a six-month period, Henriksen logged just over 300 hours of observation, evenly spread between each of the three organizations. Archival data included success statistics, training charts, mission statements, and training programs.

After compiling the data and performing a cross-case analysis of the three organizations, Henriksen (2010) and colleagues proposed eight features of successful Scandinavian sport organizations: (1) supportive relationships within training groups, (2) proximal role models, (3) support of sporting goals by wider environment, (4) facilitate the development of psychosocial skills, (5) training allows for diversification, (6) focus on long-term development, (7) strong, coherent organizational structure, (8) and finally the integration of individual effort. Henriksen's (2010) research demonstrates a significant step towards a more holistic understanding of the club level of athletes' environment, however the results are limited to the age of the athletes examined (15-21 years of age), leaving the early stages of development unexplored. In addition Henriksen's (2010) conclusions largely ignore how the sport organizations interact with the surrounding community, including the overarching culture, and social structure.

Interconnections with Surrounding Levels

Coaches and clubs influence deliberate practice activities, however, coaches and clubs are themselves influenced by the communities they are embedded within, which vary in many important aspects, such as social structure, climate, geography, and culture. Indeed, there are various questions that highlight the interconnection between club and community levels: How does the overarching social structure of a community influence how members of a sporting club cooperate? Would sporting clubs within a rural, tight-knit community where the athletes' and coaches have stable and interconnected relationships differ from a more urban community where relationships between club members are more transient? How would community support for a club that aligns and represents the surrounding community's cultural norms and in-group markers, differ for a club who does not align and represent the surrounding community's culture?

Youth-led unstructured deliberate play activities are predominantly disregarded by research at the club level simply because they are not constructed in a top down fashion by adults. However, clubs and institutions can influence deliberate play activities as they can provide resources that enable these activities to occur. While deliberate play predominantly occurs in outdoor areas, it can also occur in indoor areas such as within gymnasiums, rinks, or aquatic centers. What type of social structure, policies, or culture would influence decision makers within clubs or institutions to make these indoor recreational areas accessible to youth in the community?

The Community Level

Although the mechanisms by which community level factors influence ATD has yet to be explored, recent evidence has demonstrated that communities do in fact vary drastically in their capacity to develop athletic talent. In 2006, Côté and colleagues (2006) provided evidence that

North American professional athletes born in cities less than 500,000 were over-represented in professional sports when compared to national census population data. For example, approximately 33 % of the Canadian population lives in cities with a population larger than 500,000, yet only roughly 15% of Canadian NHL hockey players were born in such size cities. This over-representation, termed the “birthplace effect”, has been found in all professional North American sports studied to date. Although evidence of the association between geography and talent are not necessarily novel (Carlson, 1988; Curtis & Birch, 1986; Waylen & Snook, 1990; Yetman & Eitzen, 1973), Côté and colleagues were the first to demonstrate the birthplace effect on such an in-depth and widespread scale. Since the initial article by Côté and colleagues (2006), researchers have found supporting evidence in several other professional North American sports (Baker & Logan, 2007; MacDonald, King, Côté, & Abernethy, 2009c; MacDonald, Cheung, Côté, & Abernethy, 2009a). However, research on the birthplace effect in different countries and at different competitive levels has been less consistent, suggesting that the birthplace effect may be buffered by broader socio-cultural mechanisms (Baker, Schorer, Colby, Schimmer, & Wattie, 2009).

Evidence of the birthplace effect has highlighted the community level as a potentially rich and fruitful area of inquiry that may offer important insights on ATD. Baker and Horton (2004) have also highlighted this need for community level research as they used anecdotal evidence in theorizing how a community’s cultural emphasis on certain sports may lead to increase training resources and increased extrinsic motivation. Baker and Horton (2004) however do not attempt to specify the psychological mechanisms that would connect how a community’s cultural emphasis on a particular sport could create increased training resources or motivation to train. One possible type of behavior that may lead to increases in accessibility has been termed by Oishi (2010) as “pro-community behavior”, that is, helping behavior aimed at the community

one is embedded within. The psychological mechanism enabling pro-community behavior is identification with the overarching community, which has been found to be more common in rural, small, tight knit communities, rather than urban, large, transient cities (Stürmer & Snyder, 2010).

In a meta-analysis comparing research conducted in urban and rural environments, Steblay (1974) observed that 46 out of 65 studies he examined found rural environments demonstrated more helping behavior than urban. More recently, Levine, Martinez, Brase, and Soreson (1994) found that residents of more densely populated cities were less likely to help their community than members of less densely populated cities. Research in sport, although limited, aligns with this notion as Bale (2003) has observed that members of small communities identify themselves with local sport teams and talented athletes more often than members of large cities. Those studying civic engagement have provided evidence suggesting that the mechanism explaining why religious people give more to charity than nonreligious people is not the specific religious beliefs one holds, but rather the social structure religion offers—a tight knit stable community with shared ideals (Graham & Haidt, 2010; Jackson, Bachmeier, Wood, & Craft, 1995; Monsma, 2007). The political scientist Robert Putnam has also reported that pro-community behavior observed among members of bowling leagues is comparable to religious people (Putnam, 2000). Essentially, this evidence suggests that the more individuals are embedded within a tight knit community with shared ideals that correspond with interdependence rather than autonomy, the more people will be willing to part with their time or money—especially to benefit their own community (Stürmer & Snyder, 2009).

Interconnections with Lower Levels

Some have argued that psychology, including sport psychology, is parochial, in that, the majority of research has been conducted on WEIRD people—members of western, educated, industrialized, rich, and democratic societies (Henrich, Heine, & Norenzayan, 2010). Although this is not the first critique of psychology's reliance on undergraduates, Henrich and colleagues (2010) have amassed a vast amount of converging evidence suggesting that cross-cultural psychological differences are quite substantial. The authors review domains often assumed by sports scientists as concrete and unchanging, including visual perception, spatial reasoning, self-concepts, fairness, cooperation, and moral reasoning. Among these cross-cultural differences people from WEIRD societies are distant outliers. This is an obvious problem—sport psychology is a normative discipline aiming to provide real world applications, but if research has only been conducted on such a thin and rather unusual slice of humanity, application of current research to non-WEIRD societies may be problematic on a variety of grounds. More relevant to this thesis however, this review by Henrich and colleagues (2010) supports the emerging realization in sport psychology that community level factors such as social structure, culture, and the physical environment are influential and must be understood to generate a full understanding of athletic development. Cross-cultural research could help reveal and remove at least some of our own ethnocentrism—how we see our way of living as natural and others and unnatural. By viewing sport psychology through a wider cross-cultural lens, the natural can be made strange and the myriad ways that the community level influences athletic development may become more salient. In turn, sport psychologists may be drawn towards more interdisciplinary pursuits that contribute to their ultimate aims—synthesizing explanatory and applicable knowledge related to athletic development.

Attempting to unearth how these community levels factors influence ATD is vital for a full understanding of how athletes develop skill in sport. This review literature centered on one such mechanism that may link the community level to the individual level—group-identification with the community sporting system that in turn facilitates pro-social behavior. Within the domain of sport, this may be manifested in many ways such as community members volunteering, or local businesses donating money. However, there are of course many different community level factors that influence athletic development. Unfortunately they are unknown as there is an apparent lack of studies that investigate how community level factors may contribute to ATD.

Purpose

The developing athlete's environment is extensive, spanning multiple levels (individual, team, organization, community) that are interconnected and display emergent patterns. Although research has begun to take the club level of the athletes' environment into account, currently, no research has attempted to investigate how community level factors facilitate the development of athletic talent. The purpose of this project was to conduct an integrated case study to systematically gather rich information via diverse sources to effectively understand how one successful sporting community develops athletic talent. Due to the novelty of this project, and moreover the lack of a falsifiable community-level theoretical model, data collection was qualitative in nature. Results of this research project will provide a novel view of how community level factors may influence talent development.

Chapter 3: Method

Community Selection

This project examined the community of Lockeport, Nova Scotia as it displayed three important characteristics that aligned with the purpose of this study. First, Lockeport has had a consistent record of producing successful athletes and teams. From 2000 to 2009, Lockeport produced seven athletes who represented the province of Nova Scotia at national level competitions. Eventually, four of these seven provincial level athletes, along with six others (10 in total) transitioned from high school sport participation to post-secondary sport participation at the national level. Thus, throughout this ten-year span, Lockeport produced, on average, one post-secondary athlete per year. When considering that Lockeport has a total population of 646 and the lone local high school has an average graduating class of 24, this record of athletic development is sizeable. Within the same ten-year span (2000-2009), athletic teams representing the local high school captured ten provincial championships, and five 2nd place finishes. This record of high school provincial championships, between 2000 and 2009, is more than double any similar size school in Nova Scotia.

Second, consistent sporting success occurred in several different sports. Of the ten athletes that transitioned to post-secondary sport participation, six played basketball, three played soccer, and one track and field. Similarly, six of the ten high school provincial championships were won in basketball, the other four in soccer. The third characteristic was that Lockeport could be considered a “unique bounded system”, a vital condition for the case study research design being employed (Stake, 1995; Yin, 2009). Lockeport’s municipal boundaries encompass an island and a small portion of the surrounding mainland. The island, where the majority of the residents live, is attached to the mainland via an artificially constructed causeway. This causeway is the only way

on or off the island. The distance between Lockeport and surrounding communities is far enough that it is assumed the majority of the children growing up in Lockeport attend the local high school, and do not transfer to and from others. Supporting this assumption, the mobility status² of Lockeport's residents is approximately eleven percent greater than the provincial average (Statistics Canada, 2007). Moreover, through personal communication with several coaches in Lockeport, it seems Lockeport does not recruit or have any influx of athletes from surrounding communities.

Community Description

Lockeport is a small fishing village located on the southeastern coast of Nova Scotia, Canada. Incorporated as a town in 1907, but inhabited since the mid 1700's, Lockeport was once considered one of the most prosperous communities in Nova Scotia, functioning as both a trading port with the West Indies, and as a fishing port in close proximity to the then highly fertile fishing grounds on the Grand Banks. However, the Atlantic fish market collapse in the 1890's and several large-scale fires in Lockeport shifted the community's economic trajectory towards a state of decay. Currently, the majority of Lockeport's economy is comprised of local lobster fisheries, several seafood production plants, and an electronic manufacturing business.

In 2006, the average family income within Lockeport was 37.8% lower than the provincial average (Statistics Canada, 2007). Between 1981 and 2006 the community's population decreased approximately 30 % (Statistics Canada, 2007). However, the current population of 646 has been projected to be stable into the foreseeable future (Gunn, 2010). The spatial boundary of the community encompasses a small natural island and a portion of the

² Mobility status was measured by the percentage of community residents who, in 2006, reported switching residences at least once within the past five years.

surrounding mainland (See figure 1). The majority of the community's inhabitants live on the island, which is accessible by vehicle via an artificially constructed causeway. Lockeport is situated in a secluded area of rural Nova Scotia. The nearest town has a driving distance of 31 kilometers; the nearest city (with a population greater than 100,000) has a driving distance of 207 kilometers.

The community contains one elementary school (primary - grade 6) and one high school (grades 7-12), which are positioned next to each other near the entrance of the island, along with a soccer field, baseball diamond, outdoor basketball court, and playground. The ocean borders two sides of the school grounds. On one side is a small harbor, and on the other is a long crescent beach. The only other recreational areas outside the school grounds, other than natural fields and beaches, are two tennis courts near the south end of the island. The local schools and the community of Lockeport share a symbiotic relationship. A recent technical report (Gunn, 2010) published by an independent educational consulting firm described that "A long history of a strong, mutually supportive relationship between Lockeport Regional High School and the Town of Lockeport continues to create tangible advantages to both the school and the town." This report went on to describe that "The culture and life style of the Town of Lockeport and the communities in the Lockeport loop reflect an independence and self-sufficiency most likely shaped by the relative remoteness of the geography."

Archival records suggest that the majority of community gatherings within Lockeport have historically revolved around sport. Beyond the recent ten-year time frame bounding this case, the local high school has been consistent in achieving sporting success. The lone high school in Lockeport was opened in 1949-1950, and since this time, the school's athletic teams have won 44 provincial championships, with 25 in basketball (16 female, 9 male), 14 in soccer (7 female, 7 male) and 5 in track and field (co-ed). Notable athletes from the community include a

cyclist who held several international world records, three international level athletes (two of which competed at the Olympic level), a basketball coach who went on to be an assistant coach for the Houston Rockets of the National Basketball Association (NBA), a member of the Canadian Football League (CFL), and a competitive rower with 8 international titles.



Figure 2. Aerial photo of Lockeport, Nova Scotia.

Positionality Statement

I, the primary author, have a vested interest in the town and people of Lockeport as this is where I was born and raised. I am, or at least was, an insider within Lockeport. Of particular relevance, I was a known athlete within the community and thus most community residents know

me through my sporting endeavors. As identified through archival analysis, the local high school athletic teams won ten provincial championships within the last ten years. I was a member of two of those championships teams. Within the ten-year time span bounding the case, I spent five years in the community. My parents and siblings were also heavily involved in the community's sporting culture. Due to the tight-knit structure of the community, everyone who took part in my study, formally or informally, had close relationships with both my family and me.

Data Collection

Participants

The primary aim of participant selection was to assemble diverse, yet rich perspectives of sport within Lockeport during the ten-year time frame (2000-2009) bounding this study.

Accordingly, 26 individuals were recruited, yet due to practical constraints, four individuals declined interviewing. Thus a total of 22 participants were purposely selected (Patton, 2002).

These participants were selected, in part, because they were conveniently located in Lockeport and surrounding communities and cities. Participants included athletes, coaches, parents, high school teachers, an athletic director, a grandmother, a former Olympic athlete, the community recreation director, and the mayor. Twenty of the twenty-two participants were born in the community and resided there at least until graduation from high school. The two participants not born in Lockeport were born in a neighboring community and subsequently moved to Lockeport, one during early adolescence and the other in later adulthood. The developmental experiences of the eleven interviewed athletes varied. Seven athletes ended their sport participation after high school while four others continued on to play post-secondary sport. Although most athletes reported a primary interest in one particular sport, all but one participated in both soccer and basketball throughout their entire junior high and high school athletic careers. Coaches varied in

age (21 – 64 years of age) and together had relatively even experience with both female and male sport at various ages of competition. Throughout the ten-year time frame, the coaches had a combined total of 24 seasons of coaching experience in basketball and soccer.

Table 1. Descriptions of interviewees

Participants (In the order they were interviewed)	Description of sport involvement
Participant 1 - Parent/Coach/Teacher Gender: Male Age: 60 Years living in Lockeport: 57	Accumulated 27 provincial championships as Athletic Director of the local high school. Accumulated 13 provincial championships as coach of high school soccer and basketball teams (5 male, 8 female). Acquired a national teaching award, and a provincial lifetime coaching award.
Participant 2 - Athlete Gender: Male Age: 21 Years living in Lockeport: 17	Won four provincial high school championships, three in basketball and one in soccer. Competed nationally on provincial team and during college education. Both parents were coaches.
Participant 3 - Athlete Gender: Male Age: 22 Years living in Lockeport: 17	Won four provincial high school championships, three in basketball and one in soccer.
Participant 4 - Athlete Gender: Male Age: 21 Years living in Lockeport: 17	Won four provincial high school championships, three in basketball and one in soccer. Father was a coach within Lockeport. Competed nationally on provincial team.
Participant 5 - Athlete Gender: Male Age: 22 Years living in Lockeport: 17	Won four provincial high school championships, three in basketball and one in soccer. Competed athletically during college. Father was a coach within Lockeport.
Participant 6 - Athlete Gender: Male Age: 22 Years living in Lockeport: 17	Won four provincial high school championships, three in basketball and one in soccer.
Participant 7 - Athlete Gender: Male Age: 25 Years living in Lockeport: 17	Won one provincial high school championship in basketball. Father was a coach within Lockeport.

<p>Participant 8 - Parent / Coach Gender: female Age: 47 Years living in Lockeport: 46</p>	<p>A longtime volunteer and youth sport coach. Received a lifetime volunteering award for community service. Had three children who played sport during the ten-year time frame.</p>
<p>Participant 9 - Coach Gender: female Age: 52 Years living in Lockeport: 27</p>	<p>Competed athletically in university as an athlete. Directs and coaches the annual community basketball camp. Ranked as one of the top 50 greatest Nova Scotia athletes.</p>
<p>Participant 10 - Coach Gender: Male Age: 30 Years living in Lockeport: 25</p>	<p>Participated in both soccer and basketball throughout high school. Competed in college basketball, gained rookie of year honors. Currently coaches senior high boys basketball.</p>
<p>Participant 11 - Athlete/ Coach Gender: male Age: 21 Years living in Lockeport: 17</p>	<p>Won four provincial high school championships, three in basketball and one in soccer. Currently an assistant coach with the high school boys' basketball team in Lockeport.</p>
<p>Participant 12 - Recreation Director Gender: female Age: 53 Years living in Lockeport: 11</p>	<p>Community recreation director for 10 years. Has 2 years experience as coach of senior boys basketball at local high school. Coordinates several annual summer sport camps and large community festivals.</p>
<p>Participant 13 - Athlete / Coach Gender: male Age: 52 Years living in Lockeport: 52</p>	<p>Has over 24 years experience competing as an athlete and assistant coach in the Special Olympics. Has accumulated over 80+ medals. Active volunteer with the community's recreation department and local festivals. Lifetime resident.</p>
<p>Participant 14 - Athlete Gender: Male Age: 21 Years living in Lockeport: 19</p>	<p>Won two provincial high school championships in basketball.</p>
<p>Participant 15 - Athlete Gender: female Age: 19 Years living in Lockeport: 17</p>	<p>Won two provincial high school championships, one in basketball and one in soccer. Mother was a coach in Lockeport.</p>
<p>Participant 16 - Grandparent Gender: female Age: 74 Years living in Lockeport: 67</p>	<p>Longtime resident of community and supporter of local sport programs. Has had a seat reserved in the local high school gym for all basketball games for past 15 years. All children and several grandchildren participated in sport in the community.</p>
<p>Participant 17 - Community leader Gender: female Age: 61 Years living in Lockeport: 49</p>	<p>Former Olympic athlete. Inducted into Nova Scotia sport hall of fame. Regularly invited to speak to local schools and athletic teams. Community icon.</p>

Participant 18 - Athlete / Coach Gender: Male Age: 64 Years living in Lockeport: 64	Several international titles in dory rowing. Regularly invited to speak to local schools and athletic teams. Part time coach with boys and girls high school basketball.
Participant 19 - Parent / Teacher / Coach Gender: Male Age: 50 Years living in Lockeport: 46	Former recreation director and athlete. Longtime coach of both boys and girls basketball and soccer at various levels. Three sons who participated in sport.
Participant 20 - Mayor Gender: Male Age: 36 Years living in Lockeport: 33	Longtime community resident. Did not participate in competitive sport. 11 years as Mayor. Spearheaded several community revitalization projects.
Participant 21 - Parent Gender: Male Age: 47 Years living in Lockeport: 47	A former athlete and has two sons who participated in competitive sport. Part time coach and longtime sport supporter. Community facilities manager, including all sport and recreational areas in the community.
Participant 22 - Athlete Gender: female Age: 22 Years living in Lockeport: 17	Competed in high school soccer and basketball. Competed nationally on provincial team. Father was a coach in Lockeport.

Interviews

A semi-structured interview guide was utilized to allow informants to reflect in an open manner while still attending to pre-selected themes. This interview guide contained 35 questions relating to 14 themes. Twelve of these themes were adapted from previous research that utilized Bronfenbrenner's (2005) multilevel framework (Henriksen, et al., 2010a, 2010b). These twelve themes generated 25 questions concerning athletes' developmental experiences (direct influences) and how those experiences were enabled by community influences (indirect influences). The other two themes were adopted from a systems framework for understanding resources and how they are organized within social settings (Tseng & Seidman, 2007). These themes led to the generation of 10 questions concerning physical, economic, human, and temporal resources within the community, and how they were organized in relation to sport.

To accommodate the different perspectives participants held, five variations of one interview guide template were created for: athletes, coaches, parents and grandparent, recreation director, and the mayor. Each interview guide contained generally the same questions, however these questions were altered to address each participant's perspective. For example, if athletes were asked, "Was safety ever an issue for you or other athletes growing up in Lockeport?" parents would be asked "Was safety ever an issue for your children or other young athletes growing up in Lockeport?" The variations of the interview guide created for the community recreation director and mayor included several additional questions that the other interview guides did not contain. These questions concerned the specific role each participant held within the community. For example, the mayor was asked, "Being an influential part of the town council, what is the relationship between the council and local sport organizations in the community?" and "What decisions, if any, has the town council made that influence sport in Lockeport?"

Each interview guide (see Appendix A) was divided into five sections: introduction, microsystem, macrosystem, resources, and closing. The initial *introduction* section aimed to initiate the interview in an open manner by giving informants the opportunity to describe their involvement with sport and their overall perception of Lockeport's sporting success. The second section, the *microsystem*, gathered information pertaining to athletes' developmental experiences (e.g., structured sport participation, influence of coach). The third section, the *macrosystem*, aimed to gather information related to larger systems within the community and how they may have influenced sport (e.g., school, culture, community leaders). The fourth section, *resources*, gathered information pertaining to resources in Lockeport and how they were related to sport (e.g., financial constraints, time constraints). The final section, *closing*, aimed to close the

interview by giving each participant an opportunity to provide his or her own personal folk-theory of why Lockeport has or has not been successful.

The overall interview guide was structured to facilitate a logical flow from one topic to the next to increase the ease of informant recollection (Rubin & Rubin, 2005). To aid authenticity and depth, Rubin and Rubin's (2005) guidelines for in-depth interviews were followed. Main questions driving the interview were complemented with probe and follow up questions. Specifically, follow-up questions were used to further engage with topics that emerged during the interview, and probe questions were used to clarify informants' responses. All interviews were digitally recorded, transcribed verbatim, and proofread for accuracy.

Archives

Archival data was collected prior to community selection and used to establish Lockeport as a suitable case study. After Lockeport had been selected, archives then served as a source of information on Lockeport's physical geography and possible participants that were involved in sport during the ten-year time frame bounding the case. In total, four types of archival data were used: (1) news clippings from local and provincial newspapers, (2) public governmental data, including census data, (3) formal studies concerning the community, including technical reports, and finally, (4) maps, and photographs of the community. In all, 18 news articles, two public government documents, two technical reports, one map of municipal boundaries, and 14 photographs of artifacts and local signage were collected.

Procedure

I collected data within Lockeport from July 28th to August 30th 2010. However, before entering Lockeport I generated a list of potential participants to interview. Drawing on archival data collected up to that point, along with my own personal knowledge of the community, I

created a list of participants who I believed would best align with the aims of this study. Once in the community I enlisted the help of a long time resident who has over 35 years experience coaching sport within the community, including the first eight years of the ten-year time span bounding this case. After I explained the aims of this study, the coach and I engaged in a discussion that refined the list of potential participants.

All 22 participants, who were contacted either by phone or in person, agreed to participate in the study. Before beginning each interview, participants were verbally informed of the aims of the study, and were also given a one-page information sheet that provided greater detail of the aims and scope of the study. Participants were then verbally informed of the implications of consenting to participate, and were given another one-page information sheet which outlined the implications of consenting to participate. Once participants verbally agreed to participate and gave written informed consent, the interviewing process began. Each interview was digitally recorded for later transcription. A context that was both natural to the participant and unlikely of being interrupted was chosen for each interview. For all interviews, both the informant and I decided on the ideal location for the interview, most frequently the informant's home or the institution at which they worked. Sixteen of the twenty-two interviews occurred within Lockeport; the others occurred in a nearby city where the informants were then living. Interviews ranged between 19 and 82 minutes, and lasted 40 minutes on average.

Data Analysis

Transcribing all 22 digitally recorded interviews produced 346 pages of interview transcripts (double spaced, 12 point font) that were then compiled and analyzed following previously established guidelines (Côté, Salmela, Baria, & Russell, 1993; Tesch, 1990), closely aligning with the thematic analysis approach (Boyatzis, 1998). First, interview transcripts were

meticulously separated into “meaning units” that is, manageable pieces of text containing one unique point or theme (Côté & Salmela, 1994; Tesch, 1990). To categorize each meaning unit, “tags” were generated (Côté & Salmela, 1994). A new tag was generated anytime a meaning unit was identified and could not be aligned with already created tags. Separating text into meaning units was a highly iterative process in which the transcripts were read and re-read several times to code and re-code text with tags that were created later in the coding process. The text continued to be coded until data saturation was reached, that is, no new meaning units could be identified or existing meaning units could not be separated into multiple meaning units.

The interview transcripts generated 982 meaning units, each aligning with one of 70 different tags. Tags were then subjected to the process of “creating categories” which entails grouping related tags into categories. Throughout this process I regularly consulted the meaning units that corresponded to each tag to ensure I accurately represented tags when merging them into categories. The 70 tags were then condensed into 10 categories, which in turn, were analyzed for content. Analyzing the content of categories emerged several corresponding dimensions. The process of creating categories and the corresponding dimensions utilized four decision making heuristics derived from Côté and Salmela’s (1994) guide for analyzing unstructured qualitative data: (1) “What are the similarities in the context of each category?” (2) “What is the uniqueness in the content of each category?” (3) “Is there confusion or contradiction in the content of each category?” (4) “How is the content of a category relevant to the research project?”

Trustworthiness

Four strategies to enhance the trustworthiness of this study were undertaken. First, an on-the-spot member checking was employed. This process consisted of clarifying or confirming interpretations that I, the interviewer, had during the interview by stating them back to the

interviewee. In addition, throughout the on going dialogue I asked probe questions to explore certain topics that emerged in previous interviews. For example, if an athlete in the previous interview placed emphasis on financial support from local businesses, then, throughout the following interviews I would attempt to verify this information, while at the same time, trying not to impede on the natural flow of the interview. This technique aided the triangulation process by giving emerging themes a greater chance to be supported or contradicted. Second, at the end of each interview I gave each informant the opportunity to provide their own speculation on how athletic talent development occurred in the community and why the community does or does not produce successful athletes and/or teams. These speculations, which I classify as folk-theories, were employed in two distinct ways. Used as content, valued equally with the respondents other responses, they formed an integral part of my findings. These folk theories also served as a point of contrast for my findings, insofar as my own work is informed by scholarly literature. This process resembles the strategy of consensual validation (Schwandt, 1997).

Third, participants reviewed their interview transcript for the accuracy of their intended communications (Miles & Huberman, 1994). This activity gave participants the opportunity to add, delete, or re-work any aspect of their transcript. This process resulted in one of the 22 interviews being returned. The corrections on this transcript pertained to (perceived) grammatical errors in the transcribed interview dialogue. No corrections were made to any meaningful content in the returned transcript. After three weeks had passed and it was assumed that all of the transcripts that were going to be returned had been, the coding process began. Finally, to assess inter-rater reliability of the coding process, a research assistant familiar with qualitative analysis coded a random selection of 15 percent of the meaning units and attempted to place them within their appropriate categories and higher level themes. Comparing my own coding decisions with

the research assistant's yielded high agreements at the category level (111 out of 147 meaning unit; 75.5 % agreement) and at the theme level (137 out of 147 meaning unit; 93.2 % agreement).

Chapter 4: Results

Each of the 982 meaning units was aligned with one of 70 different tags. In turn, tags were contrasted and compared and eventually merged into ten categories with corresponding dimensions. Each category fell into one of three distinct themes. The first two themes—*community influences* and *developmental experiences*—represent publicly verifiable occurrences within the community, such as the youth gathering on a local outdoor basketball court after school, or a soccer tournament held in the community. Specifically, *community influences* concern distal processes that occurred throughout the community that either enabled or constrained athletes' developmental experiences and *developmental experiences* concern proximal processes that the athletes engaged in. The third theme, *socio-cultural influences*, represent subjective information expressed by participants, such as a feeling of rivalry with a neighboring village, or admiration for elder coaches and athletes.

These three themes align with Bronfenbrenner's (2005) multi-level model of the developmentally relevant environment. *Community influences* correspond to Bronfenbrenner's conception of the exosystem that concerns indirect influences—distal processes—on athletic development. *Developmental experiences* correspond to Bronfenbrenner's conception of the microsystem and mesosystem that concerns direct influences—proximal processes—on athletic development. *Socio-cultural influences* correspond to the macrosystem level—the overarching societal and cultural blueprint of the general habitat of the developing individual. These three themes were not termed in accordance with Bronfenbrenner (2005) because the currently used terms (See Table 2) reflect a more practical and human level understanding of how communities are multi-level nested systems.

The following is a description of this project's results, beginning with community influences, moving onto developmental experiences, and finishing with socio-cultural influences. This order was chosen to increase the ease of interpretation of the ten categories and dimensions, and potential interrelationships between them. All identifying information within participants' quotes concerning either people or places was substituted with pseudonyms.

Community Influences

Built and Natural Environment

All participants described that the majority of Lockeport's youth lived within walking distance to outdoor recreational areas where they would gather on a daily basis, weather permitting. Participants also described that youth had access to the indoor gym at the local high school because coaches within the community, most of which were also teachers at either the local high school or elementary school, would open up the gym when it was requested. The indoor gymnasium at the local high school was the only one of its kind in the community, thus, all indoor organized sport and many community gatherings occurred in this gym. However, while participants described that they had ample recreational areas, the quality of these areas, such as the gymnasium, soccer field, and tennis courts, was not agreed upon. Six of the participants described that the quality of the recreational areas as poor and required significant improvement, while eleven felt the quality of these recreational areas were above average. Nonetheless, all participants were in agreement that these areas were highly accessible to community residents, especially to youth.

Table 2. Results displayed as themes, categories, and dimensions.

Community Influences	Developmental Experiences	Socio-cultural Influences
<p>Built & Natural Environment (92)</p> <ul style="list-style-type: none"> Accessible recreational areas Communal focus on high school Integration of school and community 	<p>Youth-led Play & Practice (88)</p> <ul style="list-style-type: none"> Outdoor mixed-age pickup games Indoor mixed-age scrimmage Self-directed training 	<p>Sporting Traditions (44)</p> <ul style="list-style-type: none"> Sport celebrations Sporting events
<p>Social Relations (115)</p> <ul style="list-style-type: none"> Interconnection of social relationships Tradition of family sport participation Stable peer and coach relationships 	<p>Adult-led Training (120)</p> <ul style="list-style-type: none"> Early age participation in organized sport Sampling sports Training with older age groups Annual sport camps 	<p>Role modeling (76)</p> <ul style="list-style-type: none"> Mixed-age play and training Observing peer training and competition
<p>Coaching (162)</p> <ul style="list-style-type: none"> Coach same group throughout development Making recreational areas accessible Scheduling high quality competition Bringing guest coaches into community Organizing sporting events within community 	<p>Adult-led Competition (36)</p> <ul style="list-style-type: none"> Competing against quality opponents Participating in adult-led sport 	<p>Community pride (175)</p> <ul style="list-style-type: none"> Sense of community Respect for elder coach and athletes Civic engagement <p>Community rivalry (74)</p> <ul style="list-style-type: none"> Strong in-group – out-group distinction Early development of rivalry

Note: Numbers in parentheses represents the number of corresponding meaning units.

Participants described the relationship between the local schools and community as symbiotic. The town of Lockeport owned the soccer field and baseball diamond yet permitted the school to openly use them. Similarly, the school owned the gymnasium and allowed the town to use it for various purposes (e.g., town gatherings, recreational leagues, community concerts). It was apparent from the interviews that due to the widespread use of the high school's gymnasium for community gatherings, the high school became a focal point in the community. Indeed, when asked to describe the relationship between the community and school, participants were hesitant to differentiate them. Eighteen of the participants stressed the interconnection between the two as a vital part of the functioning of the community.

Social Relations

Five interviewed athletes and three coaches described that family networks in Lockeport were quite large, which led to a high degree of kinship throughout the community and sport. This high degree of kinship throughout sport was also supported by archival data. Along with having deep family roots in the community, participants reported very stable relationships throughout their development. Participants described that the stability of relationships throughout the community and within sport was not only an enjoyable and comforting aspect of living in Lockeport, but was also a contributing factor to their success. Athletes and coaches explained that the composition of a sports team in elementary school (8-10 years of age) would likely not change until members of the team graduated from high school (17 years of age). For example, athletes, coaches, and parents all described the athlete-coach relationship as strong, even familial, which was literally the case for several athletes. Three of the seven interviewed coaches had experience coaching their sons or daughters. However, for those athletes who were not coached by their parents, they described a very close relationship with their coach, as if the coach was indeed a family member. In describing their relationships with the coach, several athletes

differentiated their experiences from that which they believed would be found in a large city.

Participant 5, an athlete, explained:

Most places you go, like up in [a city], you see coaches that kids don't even know, but in Lockeport we always had a relationship with our coaches from the minute we were little, like I knew [Participant 1] before he was my coach. ... There's also that respect aspect of it because we knew them and where they came from and everything they did. It was respect knowing that [Participant 1] won so many provincials [championship tournaments] with my mother and stuff, that there was a kind of bond there. I think that the coaches were the reason that we ended up where we were. The community was a big thing.

Participants also emphasized the sporting histories of elder family and community members. Fourteen of the participants described an intense joy when discussing the sporting histories of athletes from Lockeport, especially their family relatives. Participants openly acknowledged their affinity to historical sporting stories, and described them as examples of Lockeport's sporting "legacies." Five of the participants converged on two stories in particular. The first concerned a grandmother in the community who won a women's provincial basketball championship in 1955, then her daughter did the same in 1982, and finally her grandson won a men's provincial championship in 2002. The second story, supported by archival data, concerned a female athlete who in 1965 was the lone female representing the local high school at the provincial track and field championships. She single handedly won the women's provincial track and field championship for Lockeport. Then in 1984, her son along with one other athlete won the men's provincial track and field championship for Lockeport. The mother later competed in the 1976 Olympics and her son played in the Canadian Football league (CFL).

Coaching

There was a consensus among participants that coaching played a vital role in Lockeport's sporting system. Specifically, participants converged on five important actions

coaches performed. First, it was rare for a coach in the community to coach one age group for their entire career. Rather, coaches would begin coaching a group of young athletes, usually in elementary school, and continue with that same group throughout development until the athletes graduated from high school. Second, coaches made deliberate attempts to increase the accessibility of recreational areas, in particular the local school gymnasium. On a daily basis coaches opened the school gym before the school day began and would often open the gym after school hours. Third, coaches regularly scheduled games against more talented teams. Participants described that, beginning in elementary school, coaches were keen to travel to other communities to compete with talented teams, or to invite these teams into Lockeport. All coaches stressed the importance of developing young athletes' abilities so that they would be able to compete against teams external to the community at an early age. However, this training that occurred at an early age was not heavy in technical or tactical instruction, rather, coaches stressed that it was about high rates of participation and developing fundamental skills. Participant 10, a coach in Lockeport, explained:

As a child I used to love coming in the gym and there was nothing more, and the thing is there always seemed to be someone willing to open the gym, and now if I can be that somebody, so be it! Like you know what I mean, if I can put the smile on the kids faces the way that [Participant 1] or [Participant 9] or these people use to put the smiles on my face when I was a kid, well, I'm going to do it you know what I mean! I heard a quote one time and I'm not sure where it came from but perhaps you've heard of it. Somebody was getting an award, a basketball coach was getting an award somewhere and he was up in front of a bunch of people and somebody asked him a question, they asked "what's your secret" and he said "well actually I have my secret right here in my pocket" and he reached into his pocket and pulled out the key to the gym and he said "that's the secret, open up the gym let the kids play" you know what I mean, it's not playbooks! It's not x's and o's! It's the time that it takes to put into the programs right, you know, x's and o's, yes, you need to have your offense sets and this and that, but that doesn't come in until you're at a different level, at

this level here that were talking about, it's all about the keys to the gym in my mind, yup, definitely.

The fourth coaching behavior described by participants was inviting expert coaches from outside the community to coach or speak to athletes in Lockeport. Several coaches in the community had established relationships with other coaches and sport organizations throughout Canada, which enabled the coaches to invite guest coaches into the community, in particular for summer basketball camps. Participants described these guest coaches as highly educated, having coached at the university level, and four of them had experience with the National Basketball Association (NBA). Interviewed athletes and coaches placed a great emphasis on these experiences with prestigious coaches.

Fifth, coaches created large community gatherings surrounding sport. For example, within Nova Scotia, the highest level of men's basketball competition, with the exception of Canadian Interuniversity Sport (CIS), is Basketball Nova Scotia's men's competitive league. The championship for these provincials has historically rotated between different communities throughout the province. Although no teams from Lockeport competed in this league, one coach in the community attracted the championship tournament to Lockeport, where it stayed for eight years, all of which occurred during the ten year time span bounding this case. This tournament was highly regarded by all of the interviewed participants, who described that many community residents would attend these games and were disappointed that Lockeport had stopped hosting it in the very recent past.

Developmental Experiences

Youth-led Play and Practice

Participants described that young athletes in Lockeport spent a considerable amount of time in youth-led sporting activities that occurred in outdoor recreational areas and in the local gymnasium. It was apparent from interviews that, with the exception of the winter months, youth in Lockeport would gather daily, for upwards of 2-3 hours, on outdoor recreational grounds located in the middle of town. Athletes described these youth-led activities consisted primarily of sport, usually soccer or basketball, sometimes baseball. In addition, athletes described that these youth-led activities were regularly mixed-age. When parents were asked whether the safety of their children playing in these unsupervised areas was a concern, parents displayed a sense of surprise, describing that safety has not been an issue, except for travelling to and from sporting competitions during the winter months. When asked about safety, participants described that recreational areas where youth would gather were centralized on the island and visible to many community residents. Interviewed parents went on to describe that they strongly encouraged their children to play with the other youth in these recreational areas. When athletes were asked about safety they were similarly confident that safety was simply not an issue.

Along with the availability of outdoor recreational areas, the local school's gymnasium was also available throughout the year for basketball scrimmages. Having access to the gymnasium was highly emphasized by athletes, coaches, and parents as a vital component of athlete development. Although older athletes in the community would primarily organize these indoor scrimmages, younger athletes would often ask, or be asked, to participate. Interviewed athletes described these scrimmages as unsupervised, mixed-age, and quite competitive. Participant 22, an athlete, explained:

I remember watching like [older athletes] and those guys play and I mean there wasn't a huge age gap between us but it was, we wanted to be better than they were, we wanted to be the team that everyone remembered forever ... we learn from them but we also wanted to be better than them, so like even growing up watching ... you wanted a chance to be them someday so there was that, there was that role model aspect of it that I think that was huge, absolutely huge for us, I mean, you heard the stories and like everybody knows and everyone in the community always hears the stories of like when [our parents] and those guys won back in the day soccer things right so, you wanted to, there's that pride.

A recurring theme throughout the interviews with athletes and coaches was time spent in self-directed training. Although the amount of self-directed training varied among athletes, participants described that those who had specialized in basketball or soccer often practiced for an hour before the school day started, nearly every weekday. Several coaches in the community, who were also teachers at the local high school, regularly arrived early and opened the gym up for the athletes. A larger group of athletes would also scrimmage for 45 minutes during the school's designated lunchtime. Athletes and coaches described that both coaches and athletes emphasized solitary practice. In addition, three of the interviewed athletes described it was common for coaches to light-heartedly tease the athletes they were coaching by remarking "gym time" after they would fall short on a sport related task, which was interpreted by interviewed athletes as a suggestion to spend more time practicing.

Adult-led Training

Interviewed athletes described that they began participating in organized basketball, soccer, and baseball between the ages of 8-10 years, however, baseball dissipated for most youth around the age of 11. These youth sport teams were seasonal, usually lasting three to four months, were non-overlapping, and were structured by adults to include formal practices and competitions with surrounding communities. All sport teams representing the community wore the same colors

(green, silver, and white), which were the official colors of the local high school. The four sports offered by the local junior and high schools—soccer, basketball, baseball/softball, and track and field—were the only organized sports available to youth in the community. In particular, soccer and basketball were the most popular among both youth and adults.

Interviewed coaches described that they tried to provide all youth the opportunity to play sport. Participant 19, a long time coach, described:

To be socially involved in something that's beneficial, I think that's probably the most important thing. We didn't, I mean we went out and tried to get every kid to try it at this grade 7 level, when we started doing the Junior program. We grabbed everybody. We had 80 kids and 40 boys at the junior high level that one year, I think we had 28 of the 40 kids involved either as a manager, trainer, somebody to help with stuff. Not necessarily all played, but a couple years we could've had two teams. I think the value part of it is trying to offer something that is rewarding and socially beneficial because of the community, giving back to your home.

However, those youth in Lockeport who did not have the opportunity to play sport, or chose not to participate were not interviewed during this project. Doing so may have provided important perspectives of the functioning of sport in Lockeport. However, the purpose of this project was to understand ATD in Lockeport, thus these perspectives, although valuable, were not directly related to the purpose of this project.

Although athletes tended to specialize in one sport, either soccer or basketball, all but one of the interviewed athletes participated in at least both soccer and basketball every year of their junior and high school education (12 -17 years of age). Although less common, athletes also participated in adult softball and soccer leagues, which were held during the summer months and were not associated with the local high school. Due to the relatively low number of youth in the community, there were not enough athletes to have more than one team at any time, thus sport seasons simply did not overlap.

Talented athletes were often invited to participate on older, more competitive teams. For example, several of the interviewed athletes were asked to practice and in some cases, compete on junior high sport teams when they were still in their final year of elementary school (grade 6). Similarly, several athletes in their final year of junior high education were invited to participate on the senior high soccer and basketball teams. Coaches and athletes generally described “playing up” as a mutually beneficial process and reasoned that because of the low number of the athletes, teams were not very “deep” and thus they benefited from having a talented younger athlete on the team. In return, the athlete that moved up had the opportunity to train and compete with better competition, which was regarded by many participants as a vital process for developing skill. Interviewed coaches supported “playing up”, and in fact, stated they tried to facilitate it as much as possible. For instance, Participant one explained that when the senior high basketball team was travelling to championship tournaments held in other communities in the province, he generally invited several (3-5) of the better players of the junior high basketball team to join the senior team for the tournament, and perhaps compete if the team had a comfortable lead. Interviewed coaches described this “playing up” even if only a one-time experience, as an important part of athletes’ development.

Another recurring theme throughout the athlete interviews was the importance of both basketball and soccer camps that were held throughout the summer months. In particular, emphasis was placed on basketball camps and the guest coaches from outside the community who were brought in to direct the camps. Interviewed athletes described an intense affinity for participating in camps, especially the opportunity to interact with these prestigious coaches.

Adult-led Competition

Coaches within Lockeport actively sought out “quality” competition from other communities. This meant that for athletes, competing against other communities began at approximately 8-11 years of age. Participants described that the rate of competition increased throughout junior high and high school. Coaches and athletes emphasized the importance of competing against talented teams and described it as a precondition for later talent development, in that, training and playing better opponents at earlier ages enabled athletes to compete with higher quality opponents at later ages. However, coaches stressed that while this competition and training began at early ages, it wasn’t necessarily about winning, rather, it was about development. For example, Participant 1, a coach, explained:

All the kids we have down here for basketball camp this week, they have all the potential in the world but it wouldn’t be possible if it wasn’t for somebody taking that little head start and getting them in the gym at 9, 10, years old, and I think that’s where it really starts. A few years where we have had weak programs we weren’t getting to the kids young enough and I think that’s all the importance in the world, to get to them at a young age before they hit high school... we have to start them off in elementary school so when the coaches get the students in grade 7 their not starting from scratch, everybody’s gotta work together to achieve a common goal, you know what I mean, and the goal isn’t necessarily winning provincial championships, it’s participating that’s the important thing, you know what I mean, winning will come later after years of participation, then you will win.

In addition, athletes in Lockeport regularly competed with adults in various adult recreational leagues, including a competitive summer soccer league, weekly recreational basketball scrimmages, a competitive summer softball league, and a competitive floor ball league.

Socio-cultural Influences

Sporting Traditions

It was apparent from all interviews that sporting traditions were prevalent throughout Lockeport. For instance, participants often described the presence and intense engagement of community residents at local sporting events. Championship tournaments and games with rival communities drew the largest crowds. Fifteen of the participants described one local event in particular, in which a Lockeport basketball team was playing in the provincial final against a rival community. Participants generally described the event as an important point in their sporting lives, estimating that out of the 650 community residents, more than 300 were in the local gym watching that game. It was also apparent that coaches thrived from the presence and engagement of community members who regularly attended home games. Participant 10, a coach, explains:

83 years old still coming to all of basketball games fresh off the knee replacement, she was there when I played, she was there when you [primary author] played, she was there when you're father coached my mother, know what I mean, the same seat in the gym, people like that, that really, really gives the athletes in the community incentive because they see how much they were supported. And for example my high school boys team, when we were hosting provincials here this year, before the game I gave them a talking to, I said "let's go out there and play the game that we know we can play and let's go give the community a game that they came to watch because you know they've supported you guys all year long and listen to that gym out there", like everybody's going crazy, we're in the locker room ready to run out and man, I get goose-bumps just sitting here talking about it, I do! It's just in me right!

Participants described that the community had several traditions after winning provincial championships, the most prominent being fire trucks from the local volunteer fire department parading the returning caravan of vehicles (carrying the successful athletes) throughout the community. After the parade, the caravan of vehicles would stop at the local high school. Once

inside the gym, the captains of the team would give a speech to the crowd of parents, coaches, and community members who had gathered there.

Role Modeling

All of the interviewed participants were in consensus that role modeling was a vital process of athletic development in Lockeport. Indeed, the information provided by all participants suggested that role modeling was the central mechanism through which learning would take place. Owing to the low number of athletes in Lockeport, outdoor pick-up games and indoor scrimmages were mixed-age. Within this mixed-age environment athletes described a competitive dynamic. Organized sport was usually less mixed-age, however, athletes “playing up” on older and more competitive teams was essentially a mechanism to facilitate a mixed-age learning environment.

Beyond training and competition, all interviewed athletes placed emphasis on various times throughout their development in which they observed sporting activities in the community. Athletes mentioned that they would often observe older athletes performing self-directed training such as solitary soccer practice on the school grounds before school started. Participant 2, an athlete, explained:

If you're in grade 7 and you're in the gym, you see every athlete up to grade 12. Like for me, I was really interested in basketball. I had those boys who are two years older or three years older ... for them, they were always in the gym, ... they would be in the mornings and stuff and working a lot and for me seeing that set an example for me, and not only set an example, it set like, a line and if I can at least get to that line, like how hard they were working and stuff, I think that would be a big deal for me ... This set a very good standard, they set something up that I knew that I could surpass or I could take to a higher level.

Athletes also placed an emphasis on observing older peers representing the community in sporting competitions against other communities. Sport competitions were generally a popular

event in the community, with numerous community residents attending, especially those involved in sport or those who had family involved in the competition. Specifically, interviewed athletes described observing three main types of sporting competitions: high school championship tournaments, games against a rival community, and an annual adult basketball tournament that included competitive teams from outside the community.

Community Pride

All 22 interviewees described Lockeport as a community that displayed an intense pride. Although I label this socio-cultural influence “community pride” participants used many different terms including “a sense of community”, “community spirit”, “that community thing”, “that community feeling”, “a closeness with each other”, “a big family”, and “it’s just that Lockeport thing.” Participants described community pride as a vital contributor to sport in Lockeport so often that several participants felt they were providing redundant information, “I know I’ve already said it several times, but it was the community pride, it really was” remarked participant 5. Being a “Lockeporter” was an important part of athletes’ identity as they described that when they would travel to different communities, they were proud to tell people they were from Lockeport. Coaches, parents, and other adult community members also supported the community pride that existed in Lockeport. Coaches explained that they would try to develop a sense of community in their young athletes. Participant 1, a longtime coach in the Lockeport explained:

Well people have asked me over the years what was the secret to Lockeport and I've got to say it was the sense of community, it was the sense of safety, it was the fact that athletes and other people who grew up here had that feeling, had that inspiration about life, it is such a cultural thing once someone travels away and comes back they understand, now, they wish they had more economic opportunity, but in the essence it was always that the teams represented the community culture and the community culture was that of contact and support with everybody, and I use that word contact because it was a matter of “Hi, how are you”,

all of that, the secret was, was, the whole community spirit thing, it's been here since, well, such a long time... The sense of community was so strong that the grandparents, parents, and everybody always had a major impact on the kids whether it was their family or somebody else's, so if we were to sit here and say it was one factor, it was the sense of community, now what was actually that sense of community? That was that feeling we were talking about, and as a coach I always wanted the players to have that feeling, that feeling when they're playing, when they're practicing, and in the classroom. Well you know when their kids you have to get them there, but that's what it was, it was that sense of spirit in the community and it has always been very, very, high in this community and they only needed someone to come in and do it, and that's what I did for my life.

Along with community pride, participants emphasized respect of elder athletes and coaches. One question on the interview guide asked participants to comment on the values that the coaches possessed. Fourteen participants explicitly described respect, especially for elder athletes and coaches in the community. The coaches and organizers of local sport events in the local gymnasium made sure that the same seats (front-row and centre) were reserved for elder community members that have been coming to competitions at this local gym for many years. Athletes and coaches described that the elders' presence at games was felt and had a motivating effect on them. In addition to elders, long serving custodians at the school were highly respected by the sporting community. In fact, one basketball tournament at the local high school that has been occurring annually for the last 62 years and includes both male and female divisions. These two divisions were named after two long serving custodians that worked at the local high school, one for 28 years and the other for 52.

Participants also described historical stories centered on successful sport performances. Athletes described an attraction to these sport stories, often suggesting that they enjoyed discussing the history of sport with adults in the community. Participants explained that sport has been an integral part of the Lockeport's functioning as far back as they can remember. Interviewed coaches and parents also placed emphasis on sustaining the cultural history of

Lockeport. For example, participant nineteen described, “The one thing we always talked about is having a Lockport sport Hall of Fame... just something that keeps the tradition alive.” It was apparent from the interviews that residents of Lockeport provided an intense support for sport. Foremost, four interviewees described that coaches within Lockeport not only gave their time but also gave financially. Many participants explained that because many families in Lockeport did not have adequate income to fully participate in sport, many of the coaches would pay for registration fees and meals during travel. All interviewed participants were in agreement that finances, although not readily available in Lockeport³, would usually not stop an athlete competing in sport because the coaches and other parents would help by donating money. In fact, participants expressed the responsibility of coaches and community members to financially support youth in need as a duty, in that, they described feeling that it was their function to help those youth that were in financial need. Indeed, several participants described that coaches would put a large amount of their own money (in one case, more than \$5,000 per year) into sport teams and basketball tournaments so that everyone could play/attend and that they traveled to worthwhile tournaments and employed the best coaches for their summer camps.

Whether it was coaching a local team when there was a lack of coaches, or organizing a hospitality suite for an annual tournament, or driving athletes (other than their own children) to games in other communities, it was apparent from the results that community residents heavily supported sport. Residents that had success in sport while growing up in Lockeport explained they felt they had a duty to help the community’s sport system, as they were the individuals most suited to do so. Participant 8, a long time community resident, parent, and current youth sport coach explained her coaching motivation:

³ As measured in 2006, Lockeport’s average family income is 37% lower than the provincial average (Statistics Canada, 2007).

A lot of it was to do with [elder coaches] who I'm sure had someone that was before them, but when [elder coaches] came here they were excellent coaches and they created excellent coaches, [Participant 1] for the last 35 years has been one of the top coaches in the province, so all of that that the [elder coaches] have done has washed through, and now the reason I feel like I have to coach basketball is because I'm probably the only one left in the town that went through [Participant 1's] program that is willing and still playing basketball and doing stuff to pass it on to other kids right, so, that's what I'm doing with my little kids, I've been coaching them since grade two, they're now in grade six, and now I'll go up to the junior level [Grades 7, 8, and 9] and start coaching with them because I feel guilty, if I don't pass it on to them, that I got from [Participant 1] that [Participant 1] got from [elder coaches] it's going to be lost right!?

Community Rivalry

Often in combination with community pride, participants described a community wide presence of an intense rivalry with other communities, in particular one neighboring community (Community X). Indeed, every participant stressed rivalry as an enjoyable and important part of Lockeport's sporting system. Athletes described rivalry as an intense, invigorating, and highly enjoyable experience. Upon being asked about the existence of rivalry between Lockeport and other communities, Participant 4, an athlete, remarked:

Oh Man, of course! I remember being eight or nine years old, my first ever competitive game playing soccer against [Community X] and my mom pulled me aside before the game and going "whatever you do, make sure you always beat [Community X]." ... Whatever sport you played you had to make sure you beat them, and not just beat them one-nothing or whatever, by five, you beat them by as much as you possibly can, and it would last all year long. I love it!

Indeed, all participants described rivalry with Community X as a vital part of Lockeport's sport system, and moreover as a part of Lockeport's identity. Even the mayor, recreation director, and the grandmother all embraced the community rivalry and in multiple instances expressed that they were disappointed that some of the current youth in the community displayed a less intense

rivalry than older youth did during those same ages. The mayor, who was not heavily involved in sport competition growing up in Lockeport, also described a strong sense of rivalry. The mayor explained that, even concerning community festivals and concerts, or the deterioration of streets and roads, a competitive rivalry was pervasive throughout Lockeport. Coaches and athletes described intercommunity rivalry occurring at relatively young ages (10 – 12 years of age). Participant 8 gave an example of rivalry that was expressed by a young female basketball team she was coaching:

It was half time and we were up by 20, and I said to the girls [ages 11 and 12] “ok girls, ya know, take it easy, we don’t want to beat a team by a lot, I don’t believe in that” and they go “Man, it’s only Community X, we’re gonna beat’em by a hundred, we got too!” and I go “girls, I don’t want to do that ok!” Well, they wouldn’t stop, so I took my first line off and put my subs on, and my subs kept scoring, we ended up winning by 50 or 60, which I apologized to the Community X coach for.

Chapter 5: Discussion

The purpose of this project was to conduct an integrated case study to systematically gather rich information via diverse sources to effectively understand how one successful sporting community develops athletic talent. The results of this study were summarized into ten categories and corresponding dimensions, which fell into three general themes—community influences, developmental experiences, and socio-cultural influences. This discussion will follow these three themes. The content of these three sections will converge on aspects of the results that participants identified, and which scientific literature supports, as potential mechanisms that may help explain how successful teams and athletes developed in Lockeport.

Community Influences

The organized and unorganized sport activities that athletes in Lockeport engaged in was only possible because both natural and built recreational areas were accessible or made accessible by coaches who possessed the means. In addition, the developmental experiences that accompanied play and practice activities, such as competing against competitive teams and learning from expert coaches during summer sport camps was also enabled by coaches in the community who had, in the participants words “connections” with sport outside the community. Coaches were continually emphasized as the main actors in the creation of opportunities that enabled athletes to acquire developmental experiences. However, the coaches capacity to create these opportunities was in turn enabled by the integration of sport systems, educational systems, and political systems throughout Lockeport, most prominently, the integration of the high school and surrounding community

Coaching

It is apparent from the results that while participants described coaches as vital to Lockeport's success, they did not emphasize any specific strategies or guiding principles that characterized coach-athlete interactions. Specifically, the results centered on five actions coaches performed that enabled athletes to acquire important developmental experiences. The first was that coaches did not coach one specific age group throughout their career, rather, they would begin coaching a young group of athletes and continue with that group throughout development. Playing under the same coach for an extended period of time may influence the coach-athlete relationship through creating a feeling of closeness between coaches and athletes. Closeness has been defined as an affective or emotional interdependence that expresses properties of mutual respect, liking, and trusting (Jowett, 2003; Jowett & Meek, 2000). Research on coach athlete relationships has identified closeness as an important component of successful and enjoyable relations, including coach-athlete relationships at the Olympic level (Jowett & Cockerill, 2003).

Coaches performed four other actions: making recreational areas accessible, scheduling high quality competition, bringing guest coaches into the community, organizing sporting events within the community. Appraising these actions with the scholarly literature concerning coaches perceptions of the scope of their role and responsibilities, it seems that the coaches in Lockeport perceive their roles and responsibilities differently from how they are perceived by six model youth sport coaches interviewed by Gilbert and Trudel (2004). Gilbert and Trudel (2004) conducted a two-year multiple case study with six model youth sport coaches to investigate coaches' "role frame" which acts as a perceptual filter for coaches when defining their professional responsibilities. Gilbert and Trudel (2004) found that the age group and competitive level were prominent parts of the coaching environmental that shaped the coaches personal views of youth sport coaching. The results of this study suggest that coaches in Lockeport and perhaps

other smaller, rural, tight knit communities may possess a broader role frame, including the functioning of sport within the larger community context as part of their role and responsibilities.

Effective coaching has been defined by Côté and Gilbert (2009) as: *The consistent application of integrated professional, interpersonal, and intrapersonal knowledge to improve athletes' competence, confidence, connection, and character in specific coaching contexts.* In line with this definition, it seems the coaches in Lockport may have been motivated to increase young athletes' *connection* to the community of Lockport. In fact, one longtime coach stated this explicitly "That feeling... was the sense of community... and as a coach I always wanted the players to have that feeling, that feeling when they're playing, when they're practicing, and in the classroom." These findings may broaden the conception of this definition of coaching, in so far as the "*application*" of "*integrated professional, interpersonal, and intrapersonal knowledge*" is not limited to proximal processes (specific training sessions) but also distal processes that influence ATD by causing or enabling proximal processes. To increase athletes' connection to the community they are embedded in, coaches may be required to apply their knowledge outside the team setting and take action within the overarching community. Supporting this idea, research suggests that engaging in informal community gatherings and celebrations are indeed viable ways of fostering connection to a community (Haidt, Seder, & Kesibir, 2008; Putnam, 2000).

Integration of School and Community

While past research on ATD has centered on the club or institutional level as an important and distinct intermediary level between the individual and community levels (Henriksen et al., 2010a, 2010b), in the rural village of Lockport, segregation of the institution (school) and the community was not so apparent. In fact, participants stated explicitly that the two were so intertwined that they could not be adequately understood in isolation. Interviews

supported this intertwining as participants suggested that the community of Lockeport, and the local elementary and high school within Lockeport appeared to share an overarching culture.

Results suggested that the local high school's gymnasium was a focal point in the community as the majority of sport gatherings occurred there. Coordinating these gatherings were the coaches of high school sports who had access to the gym. Participants described the coaches as the "go-to people" for obtaining access to the gym. Youth in Lockeport personally knew the coaches and also knew the coaches would open the gym up when requested. The participants explained they would "call up [the coach] to open the gym up" or "ride my bike down to [Main] Street and grab'em up." This laissez-faire control over access to the school gym appeared to be facilitated by the governing political system of the community and the policy of the school. Four participants described that the town of Lockeport partially owns the local high school. The recreational grounds (baseball field and soccer field) that are used by the high school are fully owned by the town. The town has agreed to let the school use the recreational fields and the school has agreed to allow the town to use its gymnasium for community events.

The integration of community and school may have also enabled the school to function as an expressive system for the community, as the community and school appear to have co-created a shared sense of community and collective identity surrounding sport. Research supports this notion, in so far as it suggests that, if there is a communal focus on a shared geographical area, and if there are group-identifying markers that are consistent across a community (school symbols and uniform colors), and if members of that community's "in-group" engage in physical competitions with "out-group" communities, than members of the in-group are more likely to provide material supports to that community, espouse that community's ideology, hierarchy and rituals, and self-identify as a community member (Tooby, Cosmides, & Price, 2006; Van Vugt & Park, 2010; Winegard & Deaner, 2010).

Developmental Experiences

Côté and colleagues (2003) have identified two types of developmental trajectories to conceptualize how athletes develop elite levels of skill. The *elite performance through early specialization trajectory* is characterized by engagement in deliberate practice in one particular sport, while *elite performance through early sampling trajectory* is characterized by athletes engaging in deliberate play and sampling a wide variety of sports and sporting behaviors at early ages, before specializing at a later age. From the results of this study it is apparent that athlete development in Lockeport closely aligned with the elite performance through early sampling trajectory. The majority of youth in Lockeport participated in multiple organized sports, predominately soccer and basketball, for the duration of their junior and high school education. Participation on organized sport teams that held formal practices and competed with neighboring communities began at early ages along with large amounts of outdoor play. Each season lasted approximately 2-3 months and did not overlap. Youth in Lockeport also spent ample amounts of time engaged in outdoor unorganized sport, upwards of three to four hours daily. Importantly however, the content of these organized and unorganized “sampling” activities possessed specific characteristics that help explain how community factors such as social structure, geography, and culture influenced ATD in Lockeport.

Team Stability

Due to the relatively small population of Lockeport, and thus small number of available athletes, each sport season did not overlap and the majority of athletes participated in all available sports—members of the basketball team were also members of the soccer team, were also members of the baseball team. Moreover, the roster of these teams were also quite stable throughout development—a group of young athletes that began playing together on a basketball

or soccer team in elementary school would remain more or less intact until those athletes graduated high school some 8-10 years later. So while, athletes in Lockeport experienced a variety of sports, there was much consistency between these experiences and throughout development.

In particular, team stability, which is the relative change in the members of a team over time, was often emphasized as an important aspect of athletic development in Lockeport. Participants explained that they had practically the same teammates throughout their whole athletic careers until graduation from high school. High levels of team stability may help explain, in part, the team success apparent in Lockeport as converging evidence suggests team stability increases team performance. Although research on team stability during the early years of athletic development is lacking, in 2002, Berman and colleagues collected performance data and team stability data from the National Basketball Association (NBA). Berman and colleagues (2002) found that, when controlling for a variety of potential confounding factors, team stability significantly increased team performance. More recently in 2008, Van Vugt and colleagues conducted a more in-depth study where they tested the relationship of team stability with the performance of professional football teams in the English Premier League and Italian Serie A. Van Vugt and colleagues (2008) found that more stable teams outperformed less stable teams on a range of indicators including league ranking, aggregate points/goals scored, goals conceded, even when controlling for the past performance of the team, wealth of a team, average contract length, and average player age. These researchers even found that the stability of the club manager exerted an independent, although weaker effect on team performance.

To explain this relationship, both Berman et al. (2002) and Van Vugt et al. (2008) argue that team stability increases group-level tacit knowledge, that is, competencies that are experientially learned and cannot be verbalized, which facilitate group coordination, which in

turn increases team performance. Van Vugt and colleagues (2008) theorize that highly interactive team sports competitions are quite complex and as such “there is no rule book that could depict every possible situation and what to do.” Playing together with the same team members allows those individuals to implicitly learn (acquire tacit knowledge) how to synchronize and coordinate their actions to a level above and beyond that which would be possible solely through explicit learning. Another possible yet underexplored explanation of how team stability may influence team performance is evidence suggesting that players who are members of a team for longer periods of time are more psychologically connected to that team and in turn more willing to engage in activities that benefit the team (Brewer, 1979; De Cremer & Van Vugt, 1999).

Mixed-age Play and Practice

One of the most emphasized and discussed themes throughout all interviews was mixed-age play and practice. Interviewed athletes, coaches, and parents described that during both unorganized and organized sport activities, the composition of the group of athletes was often mixed-age. It was also apparent that coaches in Lockeport emphasized mixed-age activities and in several cases would deliberately facilitate mixed-age learning environments by constructing sport activities that included both young and old athletes. The utility of mixed-age learning environments is an underexplored area within sport psychology literature. Smith (2003) supports this assertion in so far as he highlights that peer relationships (athlete-athlete interactions) is indeed the most neglected relationship in sport, and deserves far more scientific investigation.

This neglect of mixed-age learning environments and its potential utility for skill acquisition may have been spurred by the idea, purported by Ericsson (1999, 2003), that learning only occurs when training activities are deliberately designed for improvement. From this view, because mixed-age learning environments are usually not designed in such a way, they are not

important for skill acquisition. However, Côté and colleagues (2007) have argued that there are in fact many different learning environments that can rival the quality of learning afforded by deliberate constructed training activities. The results of this study suggest that youth-led mixed-age learning environments may be one such environment. Rather than acquiring technical or tactical information that is stored “in the head” of the coach, within a mixed-age environment, information is dispersed throughout the environment; it literally is the surrounding athletes behaviours (Rogoff, 1990). In addition, mixed-age learning environments may enable athletes to engage in activities and tasks that would be out of their reach in an age segregated environment. In a recent observational study of mixed-age learning within a democratically structured school, Gray and Feldman (2000) observed young learners engaging in *scaffolding*—a term established by Wood and colleagues (1979) as a metaphor for the process by which a more competent learner enables a less competent learner to engage in an activity that the latter would be unable to engage in alone. Through the process of scaffolding, less competent learners, likely those younger, gain valuable skills, while those more competent athletes, usually older, have opportunities to refine their skills and engage in mentorship behaviours (Gray & Feldman, 2000).

Socio-cultural Influences

Lockeport differs in important ways from typical urban cities where the majority of sport psychology research is conducted. The results of this project suggest that members of the community who were involved in sport shared a collective identity and a sense of pride in their community. In fact, participants repeatedly stated this explicitly. Community pride was the most emphasized theme throughout all interviews (see Table 2).

In efforts to help explain how people acquire a collective identity and how this identity may influence behavior, it may help to examine work by cultural psychologists who have

proposed a dimension of *sense of self* that runs across different variations of social structure and culture (Fiske & Fiske, 2007). Framing this dimension has been the classic and still widely accepted work of the German sociologist Tönnies (1887/2001) who proposed the dimensions of *Gemeinschaft* (community) and *Gesellschaft* (civil society). *Gemeinschaft* refers to a traditional, small, tight-knit, and (until recently) the most globally prevalent form of social organization where members of a community are bound together by three characteristics (either real or imagined): shared place, shared blood, shared mind or belief (Tönnies, 1887/2001). The prototype model of a *Gemeinschaft* community is the family, where authority and conformity are more salient and relationships are stable and “duty-based.” In contrast, *Gesellschaft* societies are large urban “civil societies” and are characterized by more personal freedom due to weakened social restraints, social networks are wider and less integrated, and relationships are transient and “duty-free” (Fiske & Fiske, 2007). Nesbit, a prominent cultural psychologist, described social interactions in *Gesellschaft* societies as “characterized by a high degree of individualism, impersonality, [and] contractualism, and [they proceed] from volition or sheer interest rather than from the complex of affective states, habits, and traditions that underlie *Gemeinschaft*” (Nesbit, 1993, p. 74).

Although scholars have unearthed numerous behavioral differences between *Gemeinschaft* and *Gesellschaft* communities, *sense of self* is perhaps the most prominent difference between these two modes of social structure (Fiske & Fiske, 2007). As Tönnies (1887/2001) described, in *Gemeinschaft* communities one’s affiliation with any particular group, especially the community, was often for life. Yet in *Gesellschaft* societies, group affiliation was much more transient. The small, tight knit social structure of a *Gemeinschaft* community such as Lockeport increases the propensity for members of that community to develop a mutual and overarching attachment to the community, whereas in *Gesellschaft* societies, the loose and

transient nature of social interactions facilitate a more individualistic sense of self. Indeed, ethnographic, experimental, and case-study evidence has described members of *Gemeinschaft* communities as displaying a sense of self that is deeply “rooted” in the community and who engage in duty-based relationships, whereas members of *Gesellschaft* societies have a more shallow and divergent “rootless” sense of self and engage in a greater quantity of transient relationships (Baumeister, 1986; Taylor, 1989).

Lockeport closely aligns with Tönnies conception of a *gemeinschaft*, rather than a *gesellschaft* community, which supports the view that the social structure and culture, combined with the physical environment of Lockeport, may have nurtured community pride and a community oriented sense of self. In turn, this pride and community oriented sense of self may go a long way in explaining, in part, the developmental experiences that athletes in Lockeport engaged in, and the pro-community behavior of the community members who supported sport in Lockeport.

Proximal Role Models

As described within the results, both interviewed athletes and coaches emphasized that they engaged in role modeling and repeatedly theorized that role modeling was crucial to the development of athletic talent for athletes in Lockeport. This study is not the first to suggest that role modeling may be an important mechanism for athletic development. In discussing evidence of professional athletes being over-represented in less populated communities, MacDonald and colleagues (2009a) hypothesized that “the opportunities to interact with local teams or high-level athletes may provide youth in smaller cities with more visible and effective role models throughout their development” (pp. 222). In addition, Henriksen and colleagues (2010, 2011) conducted three case studies of successful competitive sporting clubs in Sweden and found that

proximal role models were an important component to the functioning of all three clubs. The results of this project supports MacDonald and colleagues' (2009a) hypothesis and extends it by exploring the process of role modeling as a more nuanced process than simply social learning.

Models possess specific attention grabbing cues that, as Barkow (2006) suggests, act to “open up information channels” between individuals. Both children and adults preferentially learn from individuals who display cues of skill or success (Birch, Akmal, & Frampton, 2010; Brosseau-liard & Birch, 2010; Corriveau & Harris, 2009; Rakoczy, Warneken, & Tomasello, 2009), cues of confidence (Birch et al., 2010), cues of age or experience (Rakoczy, Hamann, Warneken, & Tomasello, 2010; Jaswal & Neely, 2006), cues of prestige or attention from others (Henrich & Gil-White, 2001), and most relevant to this study, cues of in-group markers (Efferson, Lalive, & Fehr, 2008; Kinzler, Dupoux, & Spelke, 2007; Kinzler, Shutts, Dejesus, & Spelke, 2009; Shutts, Kinzler, McKee, & Spelke, 2009).

These cues may have been important mechanisms that facilitated role modeling and in turn ATD in Lockeport. For athletes growing up in Lockeport, the commonalities that ran across all athletes such as wearing the same color uniforms and wearing the same symbols may have provided cues of group membership or ethnic markers. The mixed-age groups of athletes that played and practiced together and observed each other may have provided cues related to age. The proximity of talented athletes and coaches would have provided cues of skill or success. Finally, the presence of a communal focus on skilled athletes would have provided cues of prestige or popularity.

Pro-community Behavior and Rivalry

Ranging from the daily efforts by coaches to make recreational areas accessible, to the large and engaged fan attendance at home games, to the local volunteer fire department parading

successful athletes throughout the community, it was apparent from the results that athlete development benefited from the pro-community behavior of Lockeport's residents. In efforts to explain the apparently high levels of pro-community behavior, evidence suggests that the sense of community that emerges from members of *gemeinschaft* communities may be an explanatory mechanism (Stürmer & Synder, 2010).

Small, tight knit, *gemeinschaft* communities are more likely to evoke a shared collective identity (Stürmer & Synder, 2010; Steblay, 1974) which in turn has been demonstrated by laboratory experiments, case-studies, and epidemiological methods, to spur pro-community behavior (Jackson, Bachmeier, Wood, & Craft, 1995; Levine, Martinez, Brase, & Soreson, 1994; Monsma, 2007; Putnam, 2000). Although research on sport is limited, Oishi (2010) has attempted to investigate pro-community behavior at the community level by testing the relationship between residential stability—a factor that aligns with a *gemeinschaft* mode of social structure—and pro-community behavior. Specifically, Oishi and colleagues (2010) examined major league baseball (MLB) fan attendance at home games, and the residential stability of the corresponding cities. Oishi argued that there are two motives for attending a home game: (1) as an expression of one's identification with the home team and community, just as wearing home team apparel is an expression of group identify (Cialdini et al., 1976), or (2) attending a home game can be a reflection of the entertainment value itself (Wann, Schrader, & Wilson, 1999). Oishi (2010) reasoned that if entertainment value is the prevailing motive, then fan attendance should fluctuate with win-loss record, but if group identification is the prevailing motive, then fan attendance should not be contingent on the teams win-loss record, that is, fans should demonstrate unconditional support. Oishi and colleagues (2010) demonstrated statistically that teams whose fan attendance was less contingent on win-loss record (unconditional group identification) were situated in cities who have a lower residential stability than teams whose fan attendance

fluctuated with win-loss record. In Lockeport, the high residential stability and moreover, collective identity likely contributed to pro-community behavior, including the unconditional fan support at sporting competitions described by participants.

The results of this study also suggest that tightly coupled to community pride was an intense inter-community rivalry, in particular with one neighboring community—Community X. Research on intergroup relations in sport support this finding—that in-group pro-sociality is interwoven with out-group enmity. Evidence suggests individuals involved in sport display a strong tendency to make in-group – out-group categorizations and preferentially help in-group members (Wann et al., 2006). Yet, many of those who preferentially help in-group members also report a readiness to engage in aggressive and harmful acts against members of rival teams (Wann, Haynes, Mclean, & Pullen, 2003). Perhaps most relevant to this study, research suggests that when people form a collective identity as a member of a in-group, and that in-group perceives an out-group in a competitive manner, cooperation among the in-group, and enmity for that particular out-group are increased (Stürmer & Synder, 2010; Tooby, Cosmides, & Price, 2006; Winegard & Deaner, 2010). From this view, the rivalry between Lockeport and Community X may have acted as a catalyst to increase pro-community behavior, which in turn may have increased the quality and quantity of developmental experiences for athletes in Lockeport.

Limitations

This study was retrospective, aiming to unearth how community level factors may influence ATD within one successful community during a recent ten-year span. Retrospective research designs are a necessary and thus prevalent approach to studying athletic talent development simply because the capacity to predict who will become experts is poor and the

costs and resources that would be involved with conducting a longitudinal study of a large sample of young athletes would be substantial. While retrospective research designs that have participants recalling sport related knowledge, in some cases from up to 20 years previous, have demonstrated adequate reliability (Côté, Ericsson, & Law, 2005; MacDonald, Horton, Kraemer, Weir, Deakin, & Côté, 2009b) these studies have focused on the recall of quantitative estimates of durations of various sport activities (i.e., “How many hours per week would you play sports outside?”). The information collected in this study differs as it was solely qualitative and not necessarily related to the participants themselves, thus, it could be argued that these broader themes may be more reliable (i.e., “How accessible were recreational areas in Lockeport?”). To increase trustworthiness of the data four reliability checks were used in this study: On-the-sport member checking, folk theories, member-checking, and inter-rater reliability checks (see page 35).

Another limitation to this study was that participants may have only focused on the positive aspects of sport in Lockeport. All participants in this study were involved with sport, with most of them being heavily involved. Interviewing community residents who did not take part in sport may have unearthed important insights on the community. In particular, interviewing community residents who did not take part in sport may have unearthed negative aspects of Lockeport’s sport system. While *gemeinschaft* type communities may be high on sense of community and collective identity, the assimilative and normative forces that come along with this interdependence, such as status hierarchies based on sport, may be quite oppressive for some community residents.

Another likely bias that may have influenced the data being collected was the ethnocentrism that is evoked when individuals are embedded with a tight knit community with shared ideals. Essentially, being in these tight knit groups activates our intergroup psychology where we view “our” group as righteous and ultimately better than “other” groups (Haidt &

Kesebir, 2010). This ethnocentrism likely contributed to a bias in the information reported by participants.

My personal relations with the community and all of the interviewed participants, while benefited this study by unearthing important areas of inquiry that may not be visible to an outsider (Labaree, 2002), may also have detracted from my goals of accurately understanding how the community functioned. Foremost, I also possessed a strong ethnocentrism concerning Lockeport as I was, and still am, as the Mayor described “a Lockeporter and always will be.” While of course I celebrate being a Lockeporter and in no way am I ashamed of being part of this in-group, like the participants, my ethnocentrism may have influenced data collection, analysis, and interpretation. Although I attempted to be very self-reflective, in particular concerning any confirmation bias I may possess, the effectiveness of this is unknown. In addition, my personal relations to participants and the relations between my family and the participants, also may have influenced this project. Specifically, participants may have excluded negative information concerning my family or myself that would have caused tension during the interview.

On the whole, these results may broaden individuals’ perspectives on athletic development. It would be naïve to assume that simply taking one specific finding from this study and trying to implement it in another would cause any predicted effect. However, it would also be naïve to assume that cultures and communities are completely distinct and cannot be contrasted and compared using meta-theories or meta-narratives. There are certain aspects of human functioning, understood at the right level of abstraction, that do run across communities and cultures (Brown, 1991). Ultimately, this study proposed a number of specific parameters that may be differentially expressed in different communities, and ways in which ATD can be studied at the community level.

Finally, the decision to explicitly name the community was weighed by both the benefits and barriers. Naming the community decreased the anonymity of the participants which may increase the likelihood of ethical concerns. Furthermore, naming the community may bring unwanted attention or publicity. However, naming the community benefits this project by dramatically increasing the potential trustworthiness of the study by exposing the data publicly and making the results verifiable by others.

Chapter 6: Summary

This project was a novel attempt to understand how community level factors may influence ATD. To make this attempt, this thesis utilized a holistic approach, which gives analytic priority to both the individual and group levels, rather than relying on one or the other. This approach posits that, ontologically, each level of the environment can be reduced to those lower levels, however, heuristically, there are emergent patterns that must be taken into account and thus cannot be fully reduced to lower levels of explanation. Wedded to the holistic approach, Bronfenbrenner's bioecological framework (2005) enabled research to be situated within one integrated conception of the athletes' environment, which in turn gave direction to the study in so far as how levels that characterize the athletes' environment may be interconnected.

Data collection first consisted of archives that were used to identify and support the selection of Lockeport as the case, identify potential participants, and construct interview questions. I spent one month conducting twenty-two interviews with a variety of Lockeport's residents who were involved with sport. Results were analyzed following previously established guidelines for conducting qualitative research on sport psychology (Côté, Salmela, Baria, & Russell, 1993; Tesch, 1990). The results of this study emerged 10 categories and corresponding dimensions that fell into one of three themes: (1) *development experiences*, referring to what

experiences athletes acquired in Lockeport, (2) *community influences*, referring to processes that enabled athletes to acquire these developmental experiences, and (3) *socio-cultural influences*, referring to cultural norms and socially-oriented concepts expressed by participants.

Results suggested that athletes in Lockeport engaged in large amounts of youth-led unorganized play and adult-led organized practice throughout development. Specifically, participants described athletes' playgroups as heavily mixed-age. Research on mixed-age learning environments is an underexplored and potentially important mechanism for developing talent. Athletes in Lockeport also began sampling several different organized sports at early ages with soccer and basketball being the most popular. Participants described that the members of these teams were stable throughout development. Supporting this finding, recent research has found that team stability does in fact have a significant influence on team performance. Team stability, although vitally dependent on the overarching community, make help explain why Lockeport has accumulated a large number team sport provincial championships.

Regarding community influences, coaches in the community deliberately created a number of sport events and celebrations, made recreational areas accessible, and immersed the young athletes within rich learning environments by brining expert coaches into the community and scheduling games against high quality competition. Results suggested that the ability of coaches to create learning opportunities for athletes was in part, enabled by the integration of the school and community. Participants described that the school and community were interdependent, and moreover integrated so that any type of coordination between the two was welcomed. Coaches were situated in the center of this integration as they either taught at the school, or were given the responsibility to coordinate sport activities, as one participant described, as an "ambassador" of sport. This integration of school and community may have also enabled the collective identity to center on sport as the "the school represented the community culture."

Regarding socio-cultural influences, participants expressed an intense community pride throughout the community. Coupled to this community pride was also an intense rivalry with a neighboring community. A vast amount of research conducted in cultural psychology, sociology, and anthropology suggests the presence of a sense of community and a shared collective community identity is evoked more often in smaller, rural, more “gemenischaft” communities. Along with developing a collective identity comes the propensity to form rivalries with out groups. Somewhat paradoxically, competition with an out-group rival strengthens this sense of community and collective identify. Developing a collective identity with the community one is embedded within may help explain the high levels pro-community behavior apparent in Lockeport.

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Appendix A: Interview Guide Template

- Introduction
 - Tell me about yourself and your association to Lockeport?
 - Tell me about your participation in sport while growing up in Lockeport?
 - Do you think Lockeport is successful or unsuccessful in developing athletic talent?
 - What tells you that it is successful/unsuccessful? Can you give me some examples?
 - (If successful) What do you consider the secrets of Lockeport's success?
- Microsystem
 - In Lockeport, who helps athletes develop talent?
 - Who hinders athletes?
 - How would you describe the coaching within Lockeport?
 - What are the coaches' roles and tasks?
 - What are the coaches' values?
 - Do older athletes influence younger athletes? How So?
 - How about athletes' parents, what was their role in influencing athletes' development?
 - What about grandparents, did they influence athletes' development?
 - How did the local schools influence sport?
 - Was there rivalry within your community? Between your community and others?
- Macrosystem
 - How did the community and schools influence each other?
 - How would you describe your community's sport culture?
 - Has this culture always been the same or has it changed?
 - Could you explain how it has changed?
 - How do you think other communities view Lockeport?
 - Are there persons, inside or outside of sport that athletes look up to?
 - How does your community support athletes?
 - How does the community not support athletes?

- Resources
 - How would you describe your community's _____ resources?
 - Physical resources (Climate? Facilities? Natural areas?)
 - Where did sport occur in your community?
 - How accessible was the gyms, fields, courts, arenas?
 - Was safety ever an issue for you or other athletes growing up in Lockeport?
 - Human resources (Coach education level? Volunteers? Community members?)
 - Were there certain individuals who helped to build sport within this community?
 - Financial resources (Cost of sport programs? Travelling?)
 - Did anyone in the community ever help sport financially? How so?
 - Temporal resources (Was there enough time to do what you want to do in Lockeport? Did a lot of sports overlap?)
 - Did coaches, sport builders or anyone else in the community ever help schedule the sporting programs so they did not overlap with athletes other activities?
- Closing
 - Thank you for allowing me to interview you. Is there anything you want to add to this interview? Something I missed or something important that wasn't mentioned?
 - We have talked a lot about Lockeport's sport system. Do you have a personal theory as to why Lockeport seems to be successful in developing athletes?
 - If you would like I can send you the results of the research project when it is completed?
 - Thank You.

Appendix B: Participant Consent Form



PARTICIPANT CONSENT FORM

The ecological parameters of a successful sporting community

I have read the information letter and understand that this study requires my participation in a one-on-one interview with a researcher that will approximately last one hour. Among the topics that will be discussed in the interview will be my occupation, family relationships, peer relationships, sport, extracurricular activities, access to recreational areas, my experience living in this community, and the history and culture of my community in general.

I have been informed that the researcher will take measures to protect my anonymity and the information I provide, such as withholding identifying information from the publication and presentation of results. However, I also understand that the name and location of my community will be used when this project is published and presented to the public. I understand that by making the name of my community explicitly known, anonymity cannot be guaranteed as my identity may be deduced from the specific nature of the study.

I understand that my participation in this research project is completely voluntary and that I reserve the right not to answer any question(s) I do not feel comfortable with. I also recognize that I may stop participating at any time without explanation or consequence. If I choose to stop participating in this research project, I may also choose to withdraw any information I have provided without explanation.

Finally, any questions I have about this research project and my participation have been answered to my satisfaction. I understand that I am invited to contact the primary researcher, the project supervisors, and/or the General Ethics Review Board should any further questions or ethical concerns about this research project or my participation arise. If I would like the results of the completed research project, I will provide my postal address so that the primary researcher may provide me with the completed document.

Do you wish to consent to participate in this research project? (Answer by checking one box): Yes No

Name of Participant	Signature	Date
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Would like the final report once the research project is complete? Yes No
 If Yes, please provide your mailing address below so that we may send you the report.

Town/ City	Province	Street	P.O. BOX (If applicable)	Postal Code
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Any questions about study participation may be directed to the Shea Balish at Shea.Balish@Queensu.ca or (613) 533-6000 ext. 78207

Any ethical concerns about the study may be directed to the Chair of the General Research Ethics Board at chair.GREB@queensu.ca or 613-533-6081.

Primary Researcher:	Shea M. Balish School of Kinesiology and Health Studies, Queen's University, K7L 3N6 (613) 533-6000 ext. 78207 Shea.Balish@Queensu.ca
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General Ethics Review Board:	Dr. Joan Stevenson (Chair) General Research Ethics Board, Fleming Hall-Jemmett Wing Queen's University, K7L 3N6 (613) 533-6081 Email: chair.greb@queensu.ca

Appendix C: Participant Information Sheet



INFORMATION SHEET

The ecological parameters of a successful sporting community

This study is a master's project being performed by Shea Balish, the primary researcher. Shea Balish is a graduate student in the School of Kinesiology & Health Studies at Queen's University. The purpose of this study is to investigate individual and environmental factors related to the development of athletic talent. Specifically, the goal is to gather information to better understand how resources (i.e., access to recreational space, climate, access to gymnasium's) and social processes (i.e., coaching quality, occupations, peer relationships) support the development of talented athletes and teams within your community.

Participation in this study will pertain to individuals who have lived, at some point in time, within the identified community. Participation in this study is completely voluntary. If you decide not to participate in the study, no repercussions will occur. Should you choose to participate, the study will require you to perform a one-on-one interview with the primary researcher. Interview topics will pertain to a variety of areas including, peer relationships, parental relationships, recreational / leisure activities, sport, the physical environment, occupation, rivalry, and academic activities. The primary research will record information collected during the interview with pen and paper and a digital audio recorder. The interview should take approximately one hour to complete and there are no known or foreseeable risks involved by being in this study. At any point throughout the interview, you may choose to withdraw from the interview without stating why. If you choose to withdraw from this study you may also withdraw any information you provided without explanation.

Should you provide consent for your participation, all personal information and data will be viewed by the primary researcher, and only the primary researcher. Although we may report direct quotations from the observations, each interview participant will be given a pseudonym (false name), and all identifying information will be removed. However, it should be understood that anonymity cannot be guaranteed due to the possibility to deduce an participant's identity from specific information provided in the results of the study. During data collection, analysis and dissemination of results, all data will be held in a secure location by the primary researchers. That is, all items will be maintained in a controlled-access location (e.g., locked file cabinet, password equipped data files) that will only be accessed by Shea Balish and his supervisors. This study has been granted clearance according to the recommended principles of Canadian ethics guidelines, and Queen's University ethics policies.

The nature of this research concerns the information provided by the entire group. While the results of this study may be presented at academic conferences and in relevant academic journals, all measures will be taken to protect the anonymity and confidentiality of all of the participants and the community.

Should you have further questions or concerns regarding this study, you may contact any of the individuals listed below. If you have any ethical concerns please feel free to contact the chair of the General Ethics Review Board listed below.

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