Journal of Athlete Development and Experience

Volume 2 | Issue 3 Article 3

November 2020

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Recommended Citation

Dowling, Mathew; Mills, Joseph; and Stodter, Anna (2020) "Problematizing the Adoption and Implementation of Athlete Development 'Models': A Foucauldian-Inspired Analysis of the Long-Term Athlete Development Framework," *Journal of Athlete Development and Experience*: Vol. 2: Iss. 3, Article 3.
DOI: https://doi.org/10.25035/jade.02.03.03
Available at: https://scholarworks.bgsu.edu/jade/vol2/iss3/3



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Journal of Athlete Development and Experience

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ISSUE 3

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Volume 2, Issue 3, 2020
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Problematizing the Adoption and Implementation of Athlete Development 'Models': A Foucauldian-Inspired Analysis of the Long-Term Athlete Development Framework

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Abstract

The purpose of this paper is to problematize the continued adoption and implementation of Long-Term Athlete Development (LTAD) framework (Balyi et al., 2005; 2014) as an increasingly orthodox conception of the athlete development process and for underpinning and designing sport coaching practice. In adopting a post-structuralist, Foucauldian perspective and drawing upon empirical interview data with Balyi and colleagues, senior government officials, and sport administrators, our analysis examines some of the potential limitations for adopting and implementing LTAD as a conception of the athlete development process. In particular, we highlight the potential issues and contradictions linked to adopting such conceptions, namely their (mis)use as mechanisms of social control (i.e., governmentality), delimiting the ability of athletes and sport practitioners to think otherwise (i.e., disciplining and docility), and the potential to marginalize alternative ways of thinking. We conclude with a discussion of the implications for managerial and coaching practice

Keywords: *Athlete Development, Foucault, Governmentality, Long Term Athlete Development, National Sport Organizations*

The Long-Term Athlete Development (LTAD) framework (Balyi et al., 2005; 2014) is a multi-stage competition, training, and recovery athlete development pathway adopted by sporting governing bodies and practitioners worldwide as a structure guiding the development and preparation of athletes. Commonly accredited as the 'brain-child' of the Hungarian-born, Canadian-residing sport scientist Istvan Balyi (Banack et al., 2012; Ford et al., 2011; Norris, 2010; Stafford, 2005), the LTAD framework developed out of dissatisfaction with the superimposition of adult training and competition structures on children aged 6-16 (Balyi & Hamilton, 2004; Balyi & Way, 1995). This dissatisfaction led Balyi and colleagues to conduct small-scale physiology, periodization, and motor learning research to support several of their own theses, which fundamentally questioned traditional approaches to athlete development. Originally conceived as four stages (Balyi, 1990) but later expanded to seven (Balyi et al., 2005), Balyi and colleagues published their research through the 1990s/early 2000s across a number of non-peer reviewed coaching outlets including *BC Coach Perspective* and *Coaching Report* (e.g., Balyi, 1990, 1995; Balyi & Way, 1995; Robertson & Way, 2005) Since then, the LTAD framework has been published as a textbook (Balyi, Way, & Higgs, 2014) and as a coaching resource to inform the planning and implementation of training for young athletes (e.g. Balyi & Williams, 2009; Stafford, 2005).

Despite widespread adoption, the LTAD framework remains under-researched, with only a handful of scholars having scrutinized the LTAD framework (e.g., Banack et al., 2012; Black & Holt, 2009; Collins & Bailey, 2013; Ford et al., 2011; Lang & Light, 2010; Millar et al., 2020). These studies have predominantly focused on conceptual elements such as the 'windows of opportunity' or 'sensitive periods'

(Ford et al., 2011) or examined sport-specific issues relating to implementation of the framework within community sport organizations (Millar et al., 2020) and coaching practice (Black & Holt, 2009; Lang & Light, 2010). These previous studies overlook the original intention of creating the LTAD framework, which stemmed from a pragmatic desire to overcome systematic shortcomings and offer more useful guidelines to sport practitioners. Many scholars have assumed that the LTAD framework is a model of athlete development that can be empirically tested (e.g., Ford et al., 2011; Treffene, 2010). We disagree with this assumption for two interrelated reasons. First, it ignores the socially constructed and continually evolving nature of the LTAD framework itself and the broader socio-cultural and historical context in which it was developed (see Dowling & Washington, 2016, 2019). A clear example of this social construction is the evolution of the framework from: LTAD (2005), to LTAD 2.0 (2013), LTAD 2.1 (2017) and more recently LTD 3.0 (2019). The generic framework also has been adapted into sport-specific frameworks by several sport organizations to suit their specific needs. From a post-structuralist perspective, therefore, we view the LTAD framework as both contextual and subjectively produced through power relations (Markula & Silk, 2011). Second, the LTAD framework represents a depiction of the athlete development process that is underpinned by a series of loosely connected, under-researched coaching principles (specialization, periodization, excellence takes time, etc.) and so is not a model that can be empirically tested. It is for this reason that we use the term *framework* rather than *model* throughout this paper. Seen in this manner, the focus shifts from empirical testing of the framework toward questions of why it was created, why it continues to be adopted and implemented by many sport organizations, and related consequences or outcomes.

Diverging from previous LTAD literature, the purpose of this study is to problematize the adoption and implementation of Long-Term Athlete Development (LTAD) framework by exploring its potential consequences and effects. According to Seidman (1995), uncritically accepted practices result more from the workings of power than any inherent qualities of truthfulness. For these power-based reasons, engaging with post-structural social theory is critical. Such an approach reveals a more nuanced understanding of power as relational—something always existing between people, their groups and institutions to produce their realities—to achieve a deeper understanding of social-cultural-political contexts. Within the post-structural paradigm, Michel Foucault's theoretical framework affords a valuable way to interrogate the athlete development process for two reasons. Firstly, Foucault's work was centrally focussed on the body, or more specifically, the production of ideal bodies, which is precisely what the LTAD aims to do. Secondly, Foucault developed a series of complex, intricate and *practical* understanding of power to make people more aware of their behaviours, thoughts and actions (Markula & Pringle 2007; Mills, Denison & Gearity, 2020; Pringle & Crocket, 2013).

Specifically, exploring LTAD through a Foucauldian lens enables us to move beyond surface rhetoric and think critically about the consequences of how power relations operate through athlete development frameworks (Avner et al. 2017). Markula and Silk (2011) articulated post-structural research as having three aims: mapping, critique, and change. Our intention is deliberately broad and pragmatic, in that we seek to deploy Foucault's notions of power, discourse, discipline, and governmentality to *critique* the adoption and implementation of the LTAD framework. To this end, in an attempt to move beyond descriptive accounts and 'armchair criticism of LTAD' (Holt, 2010, p. 422), we adopt a post-hoc analytical approach to apply Foucault's theoretical concepts–or tools–to explore empirical interview data from Balyi and colleagues, senior government officials, and sport administrators to critique the ongoing adoption and implementation of the LTAD framework.

Theoretical Framework

Michel Foucault's work has had considerable impact across a number of academic disciplines. In sport, Shogan (1999, 2007) was one of the first scholars to note how Foucault's theories mapped almost perfectly to coaching. Since then, a growing body of work in sport coaching has used Foucault to develop coaching practice and education (e.g., Avner et al., 2017; Cushion, 2016; Denison, 2007, 2019; Denison & Avner, 2011; Denison, Mills & Jones, 2013; Denison, Mills & Konoval, 2015; Gearity & Mills, 2012; Mills & Denison, 2013, 2016; Mills, Denison & Gearity, 2020). The recurring themes in this body of work show how many of sports coaching and science's assumptions, knowledges, and practices unintentionally produce a host of undermining, maladaptive outcomes. For example, coaches' rigid, hyper-control of as many aspects of athletes' development and performance as possible, assumed as central to 'good' coaching, means there can be little for athletes to think about. Athletes moving through carefully structured training programs are therefore rendered docile, a (likely) problematic performance state (Mills et al, 2020).

Extending Foucault's work to the management of the athlete development process makes intuitive sense. As previously noted, Foucault's main interest was in discovering how humans acquire knowledge about themselves and their practices in order to demonstrate the arbitrariness, not the universalities, of institutions and what resulting changes could be made (Foucault, 1983). The LTAD framework is especially interesting because many of its creators claimed the system as arbitrary at the same time that many key stakeholders were systematically adopting it as 'truth' (Dowling & Washington, 2019). Exploring the LTAD, its adoption, implementation, and consequences through a Foucauldian lens may therefore bring a much needed broader and deeper critical perspective that can articulate some accepted beliefs and practices as problematic while illuminating the potential of others. It enables a re-thinking of what has become universal, and can illustrate to sports practitioners the importance of developing broader ways of thinking about the ethical, healthy, and long-term development of athletes. In particular, the analysis below draws upon Foucault's main ideas surrounding power, discourse, discipline, and governmentality.

Power

To gain a better sense of a Foucauldian theoretical framework requires the reader to first understand Foucault's unique conception of power. For Foucault, trying to distance himself from traditional understandings of power as something that an individual or institution has over others—such as government over National Sport Organization (NSO), NSO over coach, coach over athlete—power is relational, a strategy, and a verb not a noun. Athletes also have power over their coaches, coaches also have power over their NSOs, and NSOs also have power over their governments. Constantly performed, power is omnipresent. In particular, Foucault (1978) argued:

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

In the move from ancient to modern society, the workings of power changed. Modern power was unique, it branched out, "penetrating further into reality" (Foucault, 1978, p. 42) or into every social institution via a series of subtle, complex, and overlooked organizational "disciplinary" techniques and instruments that infused the body with a specific series of habits such as training in the same specific times, spaces, and ways, or the same number of repeat 400m running repetitions at the same track, the same time, and the same effort. These instilled techniques or processes enabled society to run smoothly, yet also had profound and at times problematic effects on the body, such as a body experiencing few, if any, novel situations and activites simply "going through

the motions" in every*thing* it does. Of these broader processes of power, two that stand out as important for our analysis are discourse (knowledge) and the disciplinary framework (practice).

Discourse

For Foucault (1983), the precisions in science and the dividing practices that resulted made humans the objects of knowledge—measured, classified, categorized, ranked, *known*—that subjected them to that knowledge and then made them the subject of that knowledge: imposing a law of truth. The analyzable unit of knowledge was discourse–unwritten rules and structures (relations or operations of power) that allow only particular statements about specific topics and not others (Markula-Denison & Pringle, 2007). Indeed, Foucault (1972, 1978, 1981, 1995) outlined a whole series of formal and informal discursive structures, processes or procedures that frame and shape meaning. For example, in most sport settings it is unusual for coaches to describe soft, gentle, calm, quiet training techniques because they do not fit with sports' work, effort, and strength-based assumptions. Clearly then, coaches are expected to talk in certain ways related to society's expectations about what 'good' coaches should be. For Foucault, discourse was a 'system' that structured the way people come to perceive reality by preventing alternative ideas from circulating. In other words, people within a given community, to remain acceptable to that community, have no choice but to speak in the acceptable ways established by that community, even if alternative ideas are perfectly reasonable (Mills & Denison, 2016). And so discourse or ways of knowing is always related to power because in defining what cannot be said, it marginalizes or restricts other meanings or ways of being from taking place.

Anatamo-political power: control of the body

Foucault's theoretical framework also focused on how relations of power produced the ideal body (practice) for a modern society with new ambitious profit-driven aims. This ideal body was produced by a whole series of disciplining technologies, or organizational techniques and instruments–Foucault listed and described more than 20 functions where specific spaces have specific functions; timetabled where time is divided into small units; analytical where development was re-organized into tasks of increasing complexity–that were used in the design of the modern prison and spread to all other social institutions such as workplaces, hospitals, schools, the army, and so on. Through this series of highly structured, systematic, controlled organizational techniques, or specific movements at specific times in specific places, the convict's body was invested with a particular pattern of behaviors, beliefs, and habits requiring little thought and little chance of opting out. Thus, the subject becomes conforming, self-surveilling, and 'docile' as it transforms and improves to its ideal production (Foucault, 1995). A number of scholars (e.g., Denison, 2007; Denison & Avner, 2011; Denison, Mills & Jones, 2013; Denison, Mills & Konoval, 2015; Gearity & Mills, 2012; Mills & Denison, 2016) have shown how these subtle organizational techniques map onto contemporary coaching practices, leading to potentially problematic athlete docility in performance. After all, the sporting arena requires exquisite, elite, maximal performances while the workplace requires day-in, day-out average or "good-enough" performances. The job of the disciplinary framework was to combine knowledge and power to drive the transformation of the ideal hard-working, unquestioning, and docile body for a capitalist and neo-liberal society chasing profit—very much not the aim of sport.

Governmentality: managing whole populations

For Foucault (1978), one aspect unique to modern power was its disciplinary, meticulous, subtle, insidious nature that meant it was able to penetrate and branch out into every aspect of society. Governments, safe in the knowledge that discipline con-

trolled every aspect of society, now had the legitimacy and ironic 'freedom' to govern whole societies. The technologies of discipline can be understood within larger governing forces dispersed to all areas of life, macro to micro. Adopting a post-structuralist lens, and a Foucauldian theoretical framework along with his notions of power, discourse, disciplining, and governmentality in particular, offers a robust theoretical account by which to examine the potential consequences of adopting and implementing the LTAD framework.

Method

Operating within a post-structural paradigm means we recognize that knowledge is contextual and 'reality' or 'truth' is multiple, subjective, and produced through dynamic and fluid (albeit non-egalitarian) power relations. Post-structural research is distinct from other paradigms due to three assumptions: scepticism of the promises of society's grand narratives (e.g., capitalism promises wealth but not everyone is rich); relational articulations of power (e.g., power is not something that someone has over another); and the continuous shaping of the self (e.g., power relations cannot be escaped so each individual is always in a process of being formed by the ways those power relations work) (Markula & Silk, 2011).

The analysis below is a post-hoc exploration informed by a series of semi-structured, in-depth interviews with senior governmental officials (n=4), Sport for Life (S4L) members (n=17), and senior staff within five NSO's (n=5) selected on the basis of their in-depth knowledge and understanding of how the LTAD framework had been adopted and implemented within Canadian sport. Interview data were supplemented by organizational (e.g., LTAD plans, supplementary materials, strategic reports) and policy documentation (e.g., Canadian Sport Policy and Collaborative Action Plans) relating to the creation, development, and subsequent adoption and implementation of LTAD in Canada. In-depth interviews focused upon the creation and development of the framework, the nature of the relationship between Balyi and colleagues and government agencies, how and why the LTAD framework was adopted by government and NSOs, and how the LTAD framework has enabled and constrained NSO policies and practices.

As qualitative research moves further away from the post-positivist paradigm, there is a decreasing expectation that researchers engage in detailed or specific analytical techniques (Markula & Silk, 2011). Rather than provide a detailed verification of the data gathering process to ensure objectivity, post-structural researchers need to draw on their adopted theoretical framework to analyze their empirical material. A Foucauldian analytical approach involves an ongoing iterative process, constantly moving back and forth between theory and data. Thus, the analysis involves selecting key extracts from the empirical material related to Foucault's theoretical concepts, and subsequently developing themes to tell the research story (Markula & Silk, 2011).

For this study, the first author, who collected all empirical material, identified a number of instances that demonstrated evidence of and directly related to Foucault's notions of governmentality, disciplining, and power relations. Consequently, all empirical data were re-analysed post-hoc by the first and second author through the Foucaldian framework articulated above. In this way, the analytic foci employed across interviews and observations developed alongside, and as a result of each other. The outcome of this ongoing analytical process was a number of issues relating to the adoption and implementation of the LTAD framework, coalescing around three themes: governmentality, docility, and marginalization. These themes will now be explored using empirical data to illustrate the first theme, while the remaining two themes were more implicit and consequential.

Governmentality

The adoption and implementation of LTAD can be viewed as a mechanism of social control that disciplines sport practitioners and reinforces sports'

pre-existing and underlying relational power dynamics at multiple levels of governance. This first theme stems from the manner in which the LTAD framework has been adopted and implemented by government agencies and sport practitioners. The underlying rationale and motivation behind the LTAD's widespread adoption, and its consequences for organizational and individual decision-making, can be understood as a specific form of governmentality. One of a series of tools (or technologies) used by government and various other stakeholders as subtle forms of control that align sport organizations and practitioners to objectives determined by and therefore desirable to the state. Most notably, it was apparent that the LTAD framework has been adopted by governments and key governing agencies as a useful technology for enhancing strategic planning processes. For example, one official stated that LTAD "gives us a framework to be able to think about sport" (Sport Canada Official 1). Another Senior Sport Canada Official described LTAD as the

> center piece around which we build most of our work…it's been a fundamental and pivotal element of how we provide support to sport and we're basing a lot of our funding decisions and post orientations using LTAD as a framework.

The LTAD framework was adopted as a tool by which to rationalize, make sense of, and simplify the inevitably complex athlete development process. Just as Foucault argued, governing is made easy when hyper-structured rationalities–a burgeoning disciplining or linear, structured, and systematic logic–capture *every* aspect of society and defines specific roles and responsibilities of actors within the sporting landscape. For example, Sport Canada formally adopted the LTAD framework in 2009 through its *Long-Term Athlete Development Strategic Framework* (Canadian Heritage, 2009). The strategic plan identified two overarching priorities: "the full implementation of sport-specific LTAD models and the broadening of the base of people who can speak to and actively engage on LTAD related initiatives" (Canadian Heritage, 2009, p. 4). The adoption of the LTAD framework by key government agencies as an 'organizing framework' with such a clearly outlined linear, structured, and systematic logic for strategic planning led to these agencies, who are themselves attempting to make sense of the athlete development process, enforcing the general principles of the LTAD framework as well as adopting LTAD as the *defacto* approach to conceiving and delivering athlete development. This transition from arbitrarily constructed ideas to cast-iron 'truth' was one of Foucault's main points:

> It is one of my targets to show people that a lot of things that are a part of their landscape—that people think are universal—are the result of some very precise historical change. All of my analyses are against the idea of universal necessities in human existence. They show the arbitrariness of institutions and show which space of freedom we can still enjoy and how many changes can be made. (Foucault, 1988a, p. 11)

As fact, truth, and law—rather than manufactured, quasi-true, and flexible—the LTAD has a clearly outlined logic. Governments can use this to hold the institutions charged with responsibility for athlete development to account. Unsurprisingly then, NSOs/MSOs are required, through various funding mechanisms, such as the Sport Funding Accountability Framework (SFAF), to formally adopt the LTAD framework in order to receive government funding. In discussing the requirements placed on NSO's, a Sport Canada official stated that:

> In this last round of the SFAF we were starting to ask people, 'Do you have a model? Are you on track with your model?' Increasingly we are going to be moving towards, 'You need to have these things in place, and if you don't have these things in place and you are a new sport, i.e., who haven't been funded through the SFAF previously, we would expect that you have certain things in certain equivalence or that you would have a commitment to getting up to speed with that within a certain number of years.' So there are increasingly things that we

> are building into our funding framework, certainly on the eligibility and assessment side. We are trying to send some very clear signals that way, to be able to say that we expect these kinds of things (Sport Canada Official 1).

Sport Canada invested millions of dollars over the past decade to enable NSO's to produce sport-specific LTAD plans and to align NSO policies and practices to the LTAD framework. This reliance on LTAD to support funding decisions is exemplified in the following excerpt:

> LTAD is a huge part of how we deliver our mandate to the extent that it helps guide exactly where we invest in the system. We use it every day in all of our decision making and understanding what sports we are supporting, how deeply to go…I guess it is a part of the furniture now. It is a part of the way that we think, and the how we stratify the system, and how we understand the various levels of the system, and where the various funders and other policy makers engage in supporting sport development. I think it is really an important part of our lens that we look at when delivering our mandate (Senior Sport Canada Official 2).

This hyper-systematic structuring of athlete development transitioned from being just one *perspective of* athlete development, as was intended by LTAD's authors, to the *reality for* athlete development, and by extension, coach education for everyone else. This reality becomes the framework from which all other developments, problems, innovations, and progressions take place.

Returning to Foucault's theoretical tool-box, one consequence of this assumption is that Balyi and colleagues, as LTAD 'experts' despite their pseudo-scientific research, are the only people able to speak about athlete development. As Foucault (1972) reminded us, one informal discursive structure is that all discourses operate according to specifically prescribed rules of function: that is, who is and who is not allowed to speak. It is unsurprising, then, that many Canadian NSO's chose to utilize their LTAD-related funding to co-opt the help and support of the Sport for Life (S4L) leadership team as consultants to help support and develop their structures and align policies and practices. Reflecting on these consultation roles, one NSO stated:

> They [S4L leadership team] have been good, they've been there to help you and explain things and do presentations and done some work with them on some different work groups. They have been very helpful, obviously very knowledgeable in the area. We have utilized three or four of them pretty extensively…The competition restructuring components have been huge. The materials that they have created on how to assess where you are at, and where some changes and adaptions that need to be made (NSO Athlete Development Officer 1).

In response to this ongoing demand for support, the ever-growing branches of governmentality and disciplinary power, the S4L leadership team produced a number of supplementary documents designed to support the integration and alignment of LTAD principles into sport organizations. These documents are socially constructed forms of discourse generated by the S4L leadership team who also are subject to, and reproducing of, existing power relations. For Foucault (1981, p. 52) "in every society the production of discourse is at once controlled, selected, organised and redistributed by a certain number of procedures whose role is to ward off its powers and dangers, to gain mastery over its chance events, to evade its ponderous, formidable materiality." Critically, discourse does not oppress but gives life to certain topics, but in specific ways those topics proliferate, develop, and expand according to their prescribed rules of function, ironically constraining while proliferating. S4L publications then, while providing further support for the LTAD framework itself, additionally provide specific ways of practicing athlete development knowledge for all actors to promote the adoption of prescribed techniques and practices. The documents, therefore, act to reinforce continued power relations between key stakeholders, including the power dynamics of government agencies over sport organizations (e.g., Sport Canada-NSOs) and key stakeholders over sport

organizations (e.g., LTAD consultants and NSOs).

A specific example of how the deployment of LTAD-related discourse has influenced power relations is the publication of "*Shaping the Ideal NSO*" (CS4L, 2013), a document produced as a "resource to help NSOs to determine the next steps in the implementation of the long-term development of the participant/athlete." (S4L, n.d.). The document itself outlines four steps (foundations, restructuring and redesign, advanced program support, and sector activation) for NSO's to follow in order to integrate the LTAD framework into their core operations. Foucault would explain the valuing of the recommendations outlined within this supplementary document by NSOs as inevitable because of the workings of power relations, with their adoption having far-reaching implications as athlete development can only operate according to hyper-linear, structured, systematic procedural ways. The consequences of a hyper-structuring of Canada's LTAD athlete development, traversed with hierarchies, surveillance, observation, and writing as a disciplinary framework is developed in the next section. As Foucault (cited in Dreyfus & Rabinow, 1983, p. 187) noted, the expression of power could be never ending: "People know what they do; frequently they know why they do what they do; but what they don't know is what they do does." Consequently, the S4L leadership team and the documents they produce can be viewed as a form of governmentality and discourse that acts as a form of power to reinforce existing power relations.

Disciplining and Docility

The adoption and implementation of the LTAD framework can be viewed as a form of disciplining that creates and/or reinforces docility amongst athletes, coaches, and sport administrators. A second theme relates to the way in which the LTAD framework has been adopted and implemented as a disciplining framework with potential to reinforce docility amongst athletes, coaches, and sports administrators. In this disciplinary manner, the LTAD framework meticulously controls as many operations of the athletic body as possible. The athlete becomes a classified and categorised object, constantly subjected to the LTAD framework's specific and strict controls. For Foucault (1995), "discipline was a general formula of domination… an uninterrupted, constant coercion…, a political anatomy of detail" (p. 139). Through the LTAD framework then, all aspects of their athletic development is planned, prescribed, and controlled by someone or something other than the athlete.

When Foucault (1995) articulated the organization of genesis as the third set of disciplinary techniques, he could have been referring to the LTAD framework. For it was these techniques that, in combination with the others, enabled an efficient organizational hierarchy–or a prescribed 'blue-print' of structured athlete development. In passively following the LTAD framework and organizing all athletes' development into the same prescribed *successive or parallel segments*, athletes come to be understood in only certain ways. Athletes move from stage-to-stage-to-stage and so on (e.g., 'Learn to Train' to 'Training to Train' to 'Active 4 Life'), moving linearly 'one bit at a time' until the athlete can move no more. A clear analytical plan for life, whereby athlete development is re-organized according to segments of increasing complexity, linked to a *series of series of exercises* as determined by the LTAD framework. Consequently, athletes become disciplined, hardworking, compliant, and docile: performance characteristics contrasting sharply with the creative, flexible, problem-solving, independent leaders that athletes are required to be (Denison, 2007; Denison, Mills & Konoval, 2015; Mills & Denison 2013, 2016). For example, the fifth-ranked endurance runner in a training group holding back from leading a race because she never experiences 'being in the front' in a race; the basketball athlete needing to move in a complex myriad of ways on court who struggles because his conditioning involves linear, prescriptive machine-like movements; or the winger in the soccer team whose performances are never as good as her training because she's used to dribbling the ball around static cones, not moving

opponenets. Coaches locked into such prescribed developments are moved further away from the athlete-centered, holistic, reflective, and innovative practitioners that they aspire to be. Indeed, obeying the LTAD's prescriptions while also placing athletes' unique, idiosyncratic needs at the centre of the coaching process represents an ironic tension that remains to be adequately addressed by sport organizations.

There are notable implications for power relations between governing bodies, coaches, and athletes if they choose to accept the LTAD framework. The implicit assumption by those that adopt the framework is that it offers an 'ideal' conception of how athlete development should occur. Development is informed by seven pre-defined, step-by-step 'guiding' stages and underpinned by 'bio-scientific' knowledge and discourse—sport physiology and medicine—that is stronger than anything else in the education and development of 'effective' coaches (Avner et al., 2017). Yet this singular, rational conception of athlete development, formed in a laboratory, is at odds with the 'real' world in which the athlete lives, their everyday experiences, and their messy social realities (Avner et al., 2017). It is this world, alongside understandings of coaching as a complex, non-linear sociocultural-political activity that coaches come to know less, if anything, about (Jones et al., 2016).

The resulting set of prescribed athlete development routes and practices limits alternative paths and opportunities for coaches to integrate their contextualized professional, interpersonal, and intrapersonal knowledge for the broader improvement of athletes' competence, confidence, connection, and character (Côté & Gilbert, 2009). For instance, the prescription of LTAD framework by governing bodies through coach education courses creates the understanding that the pseudo-science producing the LTAD, and by extension, the comprehension of what is 'good' for athletes is not only *best*, it's the *only* way. Thus when problems arise, as they often do given the complexities of coaching and developing athletes, these likely will be framed as problems of the athletes themselves. Rather than locating the problem with the prescribed framework creating understanding of what issues are (Denison & Avner, 2011), athletes internalize themselves as *problems* in need of fixing from additional specialists. Equally, what a coach should or should not be doing within the athlete's stage at any given level is prescribed. This risks advancing docility of both athletes and coaches, constraining development and alternative practices.

A potential consequence of the above is comprehensive normalization and legitimization of the LTAD framework and its associated language, alongisde the widely held belief that athletes develop through a hyper-staged process into the sport administration and coaching lexicon. Not only is the LTAD framework conceivably viewed by administrators and coaches as *the* standard approach for developing athletes, but knowing and employing the framework and its associated terminology (FUNdamental stage, Learning to Train, Physical Literacy etc.) becomes an essential part of being perceived by others as a 'legitimate' practitioner.

Marginalization

The adoption and implementation of the LTAD framework can potentially inhibit the ability of coaches and sport practitioners to think otherwise about how the athlete development process works. A final theme with the adoption and implementation of the LTAD framework by sport organizations and practitioners is the potential marginalization of alternative athlete development frameworks/models and perspectives. This is important due to the ways discourse and power work together (Denison, 2010; Mills & Denison, 2016; Mills, Denison & Gearity, 2020). Through a series of formal and informal discursive structures, processes, and procedures, what can be known and by extension, *what cannot be known* about various topics, is established. As Foucault (1978) explained, with importance for athlete development, "what is inexistent has no right to show itself" (p. 226). While alternative ways of knowing and being rarely occur, once established, relations of power cement meanings

(Mills & Denison, 2016).

Scepticism of these claims is understandable because developing alternatives, progressions, and innovations are omnipresent in the scientific logic of society. Yet this scepticism is why the nuances within Foucault's (1978) theoretical tools make his work so important. For instance, the linear progression of ideas does not exist. Discursive resistances, challenges, or contradictory examples happen all the time, with contradictory discourses within the same discourses, giving people an illusion of freedom, progression, and personal control. But when such resistances occur, power 're-organizes its forces' and strategically elaborates and distorts meaning back toward dominant themes and values (Mills, Caulfield et al., 2018). Topics are restricted *within* and controlled by discourses while at the same time giving the illusion of freedom, development, and progression. The *overall strategies* in discourses retain any progressions within the established values of the discursive frames—hyper-linear, systematic structuring of athletic development, no matter the arising unintended problems (Mills & Denison, 2016). The continued adoption of the LTAD framework as an increasingly orthodox conception of athlete development is perhaps not surprising as it fits within society's more dominant capitalist, profit-driven, neo-liberal themes of linear, systematic production—but it is worth considering *whom* or *what* is being marginalized as a result.

Marginalization of whom? It should be acknowledged that the LTAD framework is one of many conceptions of athlete development proposed in recent years. Other examples include developmental (Stambulova, 1994); psycho-social (Abbott & Collins, 2004; Côte, 1999), career transition (Wylleman et al., 2004), and PE/school sport curriculum (Bailey & Morley, 2016) focused approaches. Many of these conceptions are alternative, complementary but also competing, perspectives to Balyi and colleagues' physiological, skill-acquisition based, sport-centric athlete development framework (Bruner, Erickson, McFadden, & Côté, 2009; Bruner, Erickson, Wilson & Côté, 2010).

A citation path analysis by Bruner and colleagues demonstrates not only the prominence of alternative conceptions of athlete development, many of which have been generated by empirical data within the academic community, but also their interconnectivity. Several ideas contained within the LTAD framework are not new; some imported from previous research and directly and indirectly translated from former Soviet Union and Eastern Bloc practices (Dowling & Washington, 2019). It is worth considering the appropriateness of uncritically adopting 'second-hand' talent development strategies, which may have an allure of 'scienciness' but are more rhetoric than substance (Collins & Bailey, 2013). Furthermore, the implications also should be considered in relation to the broader national sporting contexts in which the LTAD framework is utilized. If we do choose to adopt elements of previously successful high performance systems, then we should do so cautiously (Collins & Bailey, 2013) and recognize potential limitations, ethical, moral, and cultural implications, as well as the outlined unintended consequences. Nevertheless, our ability to be cautious is limited by power, which works in nuanced ways to retain dominant meanings and inhibit progression.

Marginalization of what? Despite the rhetoric of LTAD and attempts by Balyi and colleagues to align the LTAD framework to the broader social objectives of the state in order to gain prominence, it remains at its core a physiological skill acquisition-based framework designed to produce high performance success on the international stage. Despite continually evolving through various iterations, it is important to recognize the framework was originally designed for, and continues to emphasize, physiological–effort-based–aspects of athlete development including skill-acquisition, fundamental movement skills, periodization, training-competition load, recovery, peak-height velocity, etc. Although LTAD claims to be holistic in its consideration of the wider psycho-social aspects of athlete development such as mental, cognitive, and emotional development

(principle 5), there is little evidence of these in practice. Much of Balyi and colleagues' arguments here are misaligned with current academic or practitioner thinking within these specific domains (Holt, 2010).

A Foucauldian theoretical framework can enable questioning around what a "holistic" athlete is, and how is their development or the social aspects of development are practiced. If indeed "social" is an element for consideration, why is the term "athlete" and associated developments articulated in the singular (e.g., mental, cognitive, emotional)? Do athletes not develop in relation to others, are they not part of a broader culture, are they not immersed in ever-changing environments; or are they isolated in a vacuum or laboratory as implied by the systematic, structured logic driving their development? As one NSO representative suggested when interviewed, "[LTAD] gives parents objective evidence for the decisions we make." Foucault highlighted ranking and examination as disciplining techniques heirarchizing the clear objective stages of the body's development, with the highest ranks achieving the greatest rewards. In athlete development, this has consequences for athletes who 'miss' their stages of development. What additional pressures ensue to move into the 'correct' grouping? How does such a clearly measured and hierarchical system assist the mental health, ethical care, and holistic well-being of the athletes within? How do athletes experience categorisation into 'inferior' groupings, and understand failure or mistakes encountered on their development journeys? And how does ignoring these questions or not being aware they are elements of development in the name of the LTAD's holistic and psycho-social claims benefit or limit athletic development?

If we consider Foucault's disciplinary logic that subtle yet hyper-structured and controlled development results in docile athletes, are athletes as engaged human beings also not marginalized? Or as Mills, Denison & Gearity (2020) highlighted in their analysis of the bio-scientifically articulated body, reduced to a series of microscopic parts—hamstring, VO2 max, mitochondria—ignoring that body's socio-cultural habitual, constant patterns of living ironically marginalizes its whole self:

> The body cannot be articulated in its entirety and so cannot be understood in its entirety and as a result, it cannot be practiced in its entirety, and yet it is *in its entirety* that it is expected to perform. (p. 10).

Furthermore, expressed purely as physiological effort-based mechanics, the complexities of athletic movement may marginalize performance concepts such as grace, elegance, smooth, flamboyant, unique, soft, soften, release, gentle, calm, for example. If the physiological aspects of athlete development that lend themselves to a systematic structuring is *the* perspective from which all problems, innovations, and progressions are understood, it follows that the notion of holistic athlete development underpinning the LTAD framework is in danger of being this narrow perspective plus one or two others. With this framework wrapped in power relations, consolidated, reinforced, and cemented as "universal truths," the disconnections between practice and reality are magnified.

Conclusion and Implications

This article sought to problematize the continued adoption and implementation of Long-Term Athlete Development by exploring its potential consequences and effects within sport organizations in general, and as a specific method for underpinning and designing athlete development practice. Rather than critiquing surface aspects of the framework as a scientific model for testing through empirical observation (e.g., Ford et al., 2011), the significance of our contribution is in viewing the LTAD framework as an ongoing pragmatic to produce a technocratic, rationalized, socially-constructed depiction of the athlete development process employed to overcome systemic shortcomings.

A post-structuralist perspective, and Foucauldian notions of power, disciplining, discourse, and governmentality specifically serve to highlight a number of potential issues with how the LTAD framework has

been used. In particular, this analysis emphasises the various ways in which the framework has the potential to be (mis)used as mechanism of social control (i.e., governmentality) by stakeholders–most apparently governmental agencies and NSOs. It is evident that the LTAD framework can be viewed as a specific form of disciplining technique, which not only reinforces pre-existing power relations, but also works to rationalize the roles and responsibilities of key stakeholders and align the sport 'system' with objectives largely determined by the state. In addition, the adoption and implementation of the LTAD framework can be viewed as a form of disciplining technique encouraging docility among athletes, sport practitioners, and coaches. Adopting the LTAD framework along with its discursive practices, we suggest, could have the unintended consequence of restricting athlete development to otherwise arbitrary elements (i.e., stages and principles) based upon pre-determined ways in which athletes 'should' be developed. Our analysis serves to highlight the potential of the LTAD framework to marginalize alternative ways of thinking. As a result, it is important to consider both *who* and *what* is being marginalized or lost as a result of adopting LTAD as an orthodox and taken-for-granted conception of the athlete development process.

In addition to over-emphasizing physiological factors within the athlete development process, the framework remains high performance-centric. Despite Balyi and colleagues' claims that the LTAD framework, at least in theory, produces dual outcomes of participation (active for life) and performance (maximizing potential), it was originally designed to produce high performance success with very little/no recourse to how this focus might increase participation levels or improve physical literacy. Despite recent attempts to expand the LTAD's scope and remit to incorporate participation, or the continued change in nomanclenture from Long-Term Athlete Development to Long-Term Development in an attempt to appeal to a broader audience beyond sport, in practice the framework primarily has been adopted by sport practitioners for the purposes of rationalizing or improving pathways to systematically produce high performance athletes. It may be unsurprising, therefore, that despite nearly two decades of LTAD endorsement, adoption, and implementation, that Canada has made improvements to its global high performance standing but has yet to significantly increase participation and physical activity levels.

In considering implications for managerial and coaching practice, it is important to acknowledge that the LTAD framework was socially constructed primarily for pragmatic reasons, not created as a prescription of how things should be done. In the words of one of the original authors, this

> … was necessary to overcome an obvious inertia to change in the Canadian system, particularly at a time when there was increasing recognition and vocalization of various challenges or negative consequences (i.e., high dropout rates from organized activities and sports, increasing obesity (Norris, 2010, p. 380).

Equally, we should recognize how the LTAD framework is adopted in order to exert control and influence. This paper suggests that the framework should not be applied by sport coaches and managers at 'face value' as so-called 'best practice' (Avner et al., 2017). A more critical adoption does not suggest that the LTAD framework is invalid, but attempts to forefront the potential limitations of such knowledge-claims and potential (mis)uses. The LTAD framework should, therefore, be acknowledged as one of several socially constructed ways in which we can attempt to understand and interpret the complexities of the athlete development process.

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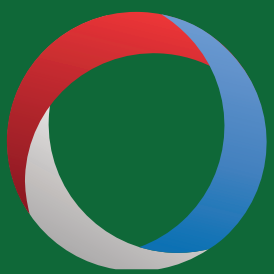
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