Beyond food as fuel: Women athletes' relationship to food, sporting cultures, and body ideals

by

Marina Khonina

B.A., American University of Central Asia, 2008

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Abstract

This thesis examines women athletes' relationship to food through a critical feminist lens to reveal how the ideal athletic female body is constructed at the intersection of race, class, and sexuality. Although body ideals vary across sporting cultures, idealized bodies are generally unattainable, with their pursuit emphasizing individual effort, dietary discipline, and bodily control. Interviews with nine women athletes from a variety of sports and two coaches of women's teams at a NCAA Division II university provide the data for the thesis which centres the voices of athletes in the conversation about disordered eating and women's health in sport. An emphasis on food as "fuel" for the body, a focus on eating for health, and the resonant silences around disordered eating in the interviews demonstrate that food and nutrition become instruments for controlling the (unruly) athletic body. At the same time, women athletes' counter-narratives of agency demonstrate their resistance to hegemonic bodily control in sport.

Keywords: women athletes; disordered eating; body ideals; sporting cultures; RED-S

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List of Acronyms

DST	Dynamic systems theory
IOC	The International Olympic Committee
LEA	Low energy availability
NCAA	The National Collegiate Athletic Association
RED-S	Relative energy deficiency in sport
Triad	The Female Athlete Triad

Chapter 1.

Introduction

1.1. Background

My interest in athletes' relationship with food grew out of my own experience as a track and field athlete. When I started training as a sprinter in my mid-thirties, I quickly internalized the idea that eating and nutrition would play a big part in my athletic development and performance. In the process, I discovered that eating for an athlete can become an exercise in control and discipline. The expectation was that I would practice self-control in my training, eating, and nearly every other aspect of my sporting life. However, I noticed that for me, just like for many other athletes, the line between athletic self-control and self-restraint or self-deprivation can be almost imperceptible. Similarly blurred is the distinction between an athlete controlling their body, on the one hand, and coaches, sporting organizations, and sporting cultures seeking control over the athlete, on the other.

A 2019 opinion piece in *The New York Times* by Mary Cain (2019), a track and field athlete on the Nike team, drew widespread public attention to the problem of disordered eating in sport, where coaches (often, male) pressure women athletes to lose weight in order to perform and win. It was a rare case of an athlete speaking out about how authority figures in sport contribute to eating disorders, mental health challenges, and injuries in women athletes. My friends and colleagues, who forwarded the story to me, expressed their astonishment at the story. As an athlete myself, I was saddened to hear it but not at all surprised. I also noticed that the focus of public consternation was not the larger sporting environment but, rather, Mary Cain's coach, Alberto Salazar: in fact an update to the article (Cain, 2019) reads that Salazar was temporarily banned by the United States Center for SafeSport a few months after Mary Cain's video was published.[1] Although Cain (2019) explained that the problem to which she was trying to

[1] As another story in the New York Times (Minsberg, 2020) explains, the ban by SafeSport was specifically due to athletes' allegations of verbal abuse by the coach. This ban appears to be unconnected to (although had the potential to exacerbate the repercussions of) Salazar's ban by the United States Anti-Doping Agency in connection with his alleged use of illegal performance enhancement substances with his athletes.

bring attention was widespread in sport and her statement was instrumental to opening a conversation about women athletes and eating, the ensuing discussion continued to emphasize individual experiences and coaching relationships. Very little was said about the role that the larger sporting culture plays in shaping women athletes' relationship with food. Even when they work with supportive and well-meaning coaches, women in sport are disproportionately affected by eating restriction and disordered eating.

While I navigated my own, often complicated, relationship with food as an athlete, I became interested in the role that sporting cultures play in shaping (and, often, complicating) women athletes' relationship with food and with their bodies. I wondered how women athletes navigate this relationship and how they exercise their agency in an often controlling sporting environment. Finally, as sporting organizations are beginning to pay closer attention to eating disorders in sport, I was curious about how this may influence the way athletes and coaches talk about nutrition, eating, and athletic bodies.

1.2. Women athletes, sporting cultures, and disordered eating

In sport, food and eating are often framed as a tool or technology used to shape the athletic body and enhance athletic performance. Although we typically associate good nutrition with health, the way in which sporting cultures approach food and the athletic body can cause harm, especially for women athletes. The prevailing "diet culture" of the western world defines women's relationship with food by rules and restriction that are meant to produce an "ideal" slim body, and the idealization of leanness is also not uncommon in sport. Meanwhile, despite the significant strides made in recent decades toward increased participation and opportunities for women athletes, women in sport continue to be marginalized and experience significant obstacles compared to men. This is evidenced especially by the pervasive sex segregation in sport and practices such as of sex testing (Pieper, 2016), which I will discuss in more detail later in this chapter.

Competitive sports in western cultures are steeped in a tradition of male hegemony. The modern-day Olympic movement was born, at least in part, out of a moral panic about the de-masculinization of (white, upper class) men and was designed as a "celebration of male athleticism" (Smith & Wrynn, 2014, p. 57). Over the course of the

late 19th and 20th centuries, women made inroads into Olympic and other competitive sports, with some athletic events seeing significant women's participation and media coverage. In Canada and the United States, girls' and women's access to organized sport saw a dramatic increase in last several decades of the 20th century, with the passing of *Title IX* in the United States in 1972 and a wider push for more equity in sport. Yet, inequality and discrimination are still widespread in women's sports. Gender is certainly not the only dimension along which athletes are excluded and marginalized, with sexuality, class, race, and ethnicity also often being used as reasons to deny or limit sport participation (Lenskyj, 2013). Further, organized sports actively (re-)create inequality through sex segregation and the taken-for-granted idea that men are better athletes than women (McDonagh & Pappano, 2007). This happens not just on the playing field but also through the ways in which women and men athletes are represented in popular culture.

In examining media portrayals of women athletes and popular discourses on women's sport participation, critical feminist sport scholars have repeatedly noted a juxtaposition between athleticism and femininity. The prevailing ideals of the fit and athletic body in western cultures largely centre on white, middle-class, hetero-patriarchal norms (Dworkin & Wachs, 2009), which for women emphasize a small, slim, and, often, weak body. In cultural representations of women's athleticism, the "beauty and grace" ideal for women athletes persisted, in various forms, throughout the 20th century (Lenskyj, 2013). It is not therefore uncommon for the media, popular culture, and even fitness and sporting cultures to emphasize—or critique—women athletes' appearance while downplaying their athletic performance (Daniels, 2009). As a result, critical feminist approaches suggest that women athletes are likely to experience "dual" or conflicting identities (Krane et al., 2004) or find themselves negotiating the "female-athlete paradox" of staying both slim and powerful (Pereira Vargas & Winter, 2021).

While helpful to understand women athletes' experiences, this dualistic approach to femininity and athleticism disregards ways in which ideals and identities for women athletes transmute and combine in new and complex ways (Heywood, 2018), both in cultural representations and athletes' self-representations. It would be overly simplistic to see women's athleticism as a contradiction in terms. At the same time, women in sport still find themselves negotiating significant tensions between the requirements of their athletic training and the norms of femininity (Thorpe et al., 2019), which leave an imprint

on women's athletic bodies, their appearances, as well as their athletic ability and performance.

It is not surprising, therefore, that women athletes' relationship to food and their bodies is complicated. Women in sport are considerably more likely than men to experience disordered eating, which can range from clinical eating disorders that are typically medicalized and often stigmatized, to more socially normalized behaviours like dieting or eating restraint (Torstveit et al., 2007). Definitions of disordered eating usually include two elements: unhelpful or problematic thoughts, emotions and behaviours around food and an extreme concern with one's body weight, shape, or body image (Bratland-Sanda & Sundgot-Borgen, 2013). How women athletes relate to food and to their bodies is therefore critical to understanding disordered eating.

According to some estimates, 20% to 47% of elite female athletes across sports have clinical symptoms of eating disorders (Torstveit et al., 2007). Disordered eating and weight control behaviours are particularly common in sports that emphasize leanness or a low body weight, such as running or gymnastics. An overview of prevalence rates across sports indicates that in some sports nearly all participants experience low energy availability (LEA), indicating that many athletes consume less energy with food than they need to stay healthy while maintaining their training intensity (Logue et al., 2018). LEA in athletes can be a result of disordered eating behaviours, as well as inadvertent under-eating (Mountjoy et al., 2018). This suggests that even in contexts where disordered eating is discouraged, the culture of eating restraint or "weight management" in the interest of sport performance puts athletes at risk of under-eating.

It is worth noting that men in sport also experience disordered eating and LEA, particularly in leanness-based and endurance sports, such as long-distance running. While the number of men affected by eating disorders tend to be considerably lower than those of women, men are also less likely to discuss the challenges of their relationship with food and academic literature is largely silent on the topic (Papathomas, 2015). The issue of athletes' relationship with food is, therefore, inherently gendered and this gendering of eating and athletic bodies impacts both women and men in a multiplicity of ways.

For women, sport can be a source of empowerment, and some studies link sport participation with a positive body image (Petrie et al., 2009). At the same time, the high prevalence of disordered eating in sporting women, compared to their peers outside of sport, suggests that sporting cultures may contribute to—and even normalize—disordered eating and body dissatisfaction. Studies of women athletes in the social sciences point to a link between disordered eating and the social and cultural pressures on women to conform to binary gender norms and white, heterosexual ideals of a slender female body (Lenskyj, 2013; Dworkin & Wachs, 2009, Krane et al., 2004; Pape, 2019). These body ideals manifest themselves not only in individual athletes' perceptions, but also in the sporting cultures in which women athletes train and compete. Coupled with the pressure to perform, as well as the image of the performing body as a malleable—and, often, lean—body, this creates an environment that values and normalizes restrictive and controlling eating practices. Yet, the prevalent sporting discourse around athletes' relationship with food mainly focuses on individual vulnerability while overlooking the role that sporting cultures play in cultivating and normalizing disordered eating (Papathomas, 2018).

Here, I define sporting cultures as the varied combinations of explicit and implicit rules, beliefs, and practices of sport. Some of these are formal and institutionalized, either in individual sports (such as track and field or wrestling) or sporting institutions (such as the NCAA or university athletics departments). Other elements of sporting cultures are informal and are reproduced by coaches, various sport professionals (physiotherapists, sport medicine practitioners, dieticians), and by athletes themselves—both individually and as teams or groups. In recent years, some researchers have looked at sporting cultures as a factor in disordered eating and women athletes' health (Pereira Vargas & Winter, 2021; Thorpe et al., 2019). In this thesis, I build on this research, as well as on Papathomas' (2018) examination of how sporting cultures normalize disordered eating while simultaneously silencing the athletes who choose to speak about their experiences.

Very little of sport science literature on disordered eating examines the experiences of athletes themselves, instead addressing or speaking on behalf of coaches, sport medicine practitioners, psychologists, and other sport professionals. The conversation around nutrition and eating in sport, just like conversations on other forms of sport technology (e.g., athletic implements or performance-enhancing substances),

happens “mostly by collaborations between bureaucratic athletic bodies such as the IOC, and ‘experts’ who consistently debate over the heads of most people.” (Butryn, 2003, p. 33). Some researchers, especially in the last decade, are choosing to focus on athletes’ perspectives on disordered eating (Busanich et al., 2012; McMahon et al., 2017; Papathomas & Lavallee, 2014; Thorpe, 2016), although these qualitative and interpretative studies of sport participants’ experiences remain outside the mainstream in sport science. Giving a voice to athletes, as Pereira Vargas & Winter (2021) point out, allows for a more nuanced understanding of disordered eating in sport, and especially the social and cultural factors that may contribute to it. Centring athletes’ perspectives in the conversation around disordered eating in sport is crucial to understanding athletes’ experiences with food and eating. It can also help shed light on how sporting cultures shape athletes’ relationship to food (Pereira Vargas & Winter, 2021), athletes’ perceptions of selves and their bodies (McMahon et al., 2017), and even athletes’ biology (Thorpe et al., 2019).

1.3. The medicalization of eating in sport: The Female Athlete Triad and RED-S

In sport, disordered eating among women athletes is a widely recognized issue. In fact, modern-day western sporting cultures, at least in public discourse, place a considerable emphasis on eating disorder prevention. At the same time, in many sports, restricted eating is inherent in the culture of sport itself. One example of this is “making weight” to compete in a specific weight class in sports such as wrestling or weightlifting. In sports where leanness or low body weight are thought to offer athletes a competitive advantage, such as in middle-distance running, gymnastics, and many endurance sports, an athlete may be encouraged and even feel pressured to lose or maintain a certain (usually, low) bodyweight. It is not surprising then that sports that emphasize a low body weight or a lean appearance have high rates of disordered eating (Bratland-Sanda & Sundgot-Borgen, 2013). More generally, however, the culture of sport encourages a dysfunctional relationship with food (see, for example, the discussion of the “inevitability” of eating disorders in elite and sub-elite sports in Williams, 2012). At the core of this is the perceived (and rarely questioned) relationship between an athlete’s bodyweight and body composition—the proportion of lean body mass, including muscle, to fat tissue—on the one hand and athletic performance on the other.

The way in which gendered body norms intersect with sporting body ideals and expectations around eating and food is particularly complicated for women athletes, who experience the added pressure of being socialized into a culture that equates attractiveness with a slender body and makes under-eating normalized, even desirable, in women. As a result, women athletes are likely to experience the pressure to restrain their food intake not only to meet gendered ideals of appearance but also to be good at their sport. From a sport performance standpoint, however, insufficient energy intake, which is almost inevitable with continued dieting or restricted eating, is associated with numerous negative consequences for an athlete. LEA can increase an athletes' risk of injury, hamper their ability to recover from training, decrease sport performance, and have an overall negative impact on their health (Logue et al, 2018). In other words, a runner may be encouraged to decrease her bodyweight by dieting so that she can run faster but may find running performance deteriorate and suffer injuries as a result. In women, specifically, low body fat and LEA can cause changes that range from amenorrhea, or the cessation of menstrual periods (for menstruating athletes), to the loss of bone density with associated stress fractures. Amenorrhea and chronic eating restraint were once considered normal for women in sport, especially at highly competitive levels. This shows how sporting cultures can normalize and even institutionalize behaviours that may be harmful to women athletes and—quite literally, in the form of brittle bones—make them more fragile.

In sports medicine, a condition most often associated with disordered eating and, more specifically, restricted eating and anorexia, is the Female Athlete Triad, also known in literature as the Triad, or FAT.[2] First described in the 1990's, the Triad comprises three core symptoms: amenorrhea, restriction-oriented disordered eating behaviours, including anorexia, and loss of bone density, or osteoporosis (De Souza et al., 2017). More recently, a new concept, relative energy deficiency in sport (RED-S) has gained prominence in the sport science community. Put forward by the International Olympic Committee (the IOC) in its 2014 Consensus Statement (Mountjoy et al., 2014) and its subsequent update (Mountjoy, Sundgot-Borgen, et al., 2018), RED-S expands on the Female Athlete Triad in several crucial ways. Where the Triad primarily focuses on

[2] One cannot help to ask why FAT was chosen as an abbreviation to represent a condition driven by the desire—or pressure—to attain a lean body and low body weight. In this thesis, I will refer to the condition as "the Triad" rather than FAT, using the convention used by De Souza et al. (2017) and some other researchers.

women athletes as the affected population, disordered eating as the cause, and low bone density as the outcome, RED-S includes men, para-athletes, and non-athlete performance professionals, such as dancers, among populations affected by the condition; attributes the causes to LEA, which can be both deliberate and inadvertent; and lists a wide range of physical and psychological conditions as potential negative outcomes for individuals affected by RED-S. Over the last several years, RED-S has become a prominent topic in sports, with multiple athlete- and coach-oriented articles, educational events, and conferences on the subject. The backing of the world's most influential sports organization, the IOC, lent a powerful air of credibility and urgency to RED-S, and some researchers compared RED-S to concussion in sport, arguing that it merits the same level of concern (Mountjoy, Burke, Stellingwerff, & Sundgot-Borgen, 2018).

At first glance, the emergence of RED-S and the awareness-building around it may seem like a positive development. RED-S focuses on diverse populations of athletes, includes non-clinical (but also potentially harmful) restrictive eating scenarios, some of which may be promoted and normalized by sporting cultures, and potentially eliminates the stigma of disordered eating by emphasizing that athletes with LEA may be "under-fuelling" unintentionally. It is hard to say, however, whether increased recognition of RED-S will improve athletes' experiences and outcomes. In fact, some researchers of women's health in sport (De Souza et al., 2014) argue that the concept of RED-S may harm women athletes by shifting the focus away from the Triad, a well-researched condition that is largely specific to women. RED-S describes a wide range of physical and mental symptoms that affect multiple populations in addition to female athletes, and De Souza and colleagues criticized RED-S as misleading and "based on faulty science" (De Souza et al., 2014, p. 1461). Just as importantly, RED-S does very little to address the impact that sporting cultures have on athletes' eating and relationship with food. For the athlete or their coach, RED-S introduces a new perceived threat without offering much by way of prevention strategies. RED-S prevention recommendations hinge on finding a delicate balance between ensuring sufficient nutrient and energy intake with food on the one hand while maintaining high athletic performance on the other. Meanwhile, many sporting cultures associate performance with specific body types, leanness or "weight management" standards that are nearly impossible to obtain without some form of dietary manipulation. In fact, RED-S prevention strategies can add an

additional level of discipline and regimentation to the way athletes manage their nutrition and body composition (see, for example, recommendations in Robertson & Mountjoy, 2008, p. 379).

As a result, athletes' already complicated relationship with food is further compounded by the conflicting messages that they hear from their coaches and other sports professionals about needing to ensure they are "fuelling enough" to prevent RED-S and the associated decline in health and sports performance, while meeting their sport's expectations around leanness or a specific body appearance. Finally, although RED-S ostensibly is a condition that is not specific only to women or athletes, public discourse and academic literature on RED-S continue to focus on women in sport (see, for example the feminist overview of RED-S in literature and athletes' discourse in Thorpe and Clark, 2020).

Similarly to disordered eating in athletes, the Triad and RED-S medicalize women athletes' experiences with food and their bodies. This medicalization has several consequences for women in sport. Like other medical diagnoses and terms, the Triad and RED-S, are one way in which patriarchal institutions attempt to control ways in which women relate to their bodies (Thorpe, 2016, p. 4, citing Hird, 2004, p. 225). Secondly, sport medicine and sport psychology overwhelmingly focus on individual risk factors and vulnerabilities (Papathomas, 2018), placing the responsibility for disordered eating prevention on the athlete. This shifts the focus away from the role of sporting cultures and organizations in shaping athletes' relationship with food and their bodies. Finally, framing disordered eating as a mental illness stigmatizes athletes (Papathomas, 2018) and conceals eating practices, as well as beliefs about food and women's bodies, that sporting cultures often normalize and encourage (Thorpe, 2020; Pereira Vargas & Winter, 2021).

Furthermore, relying on medically diagnosable conditions and clinical eating disorders in examining athletes' relationship with food encourages a binary approach to athletes as either affected by an eating disorder or "healthy". It may be more helpful instead to view athletes' eating on a spectrum that includes non-clinical forms of disordered eating as well as more conventional (and socially acceptable) forms of eating restraint, including various forms of dieting and "clean eating", otherwise known as orthorexia, or a preoccupation with food that is perceived as especially healthy or high-

quality (Segura-García et al., 2012). Notably, some researchers (Vescovi et al., 2008) have hypothesized that cognitive dietary restraint, or the perceived need to restrict food intake to attain a desired body weight, can lead to measurable changes in menstrual patterns and bone density in physically active women even when they do not explicitly engage in dieting. This may be due to the increased levels of stress around food and eating—something that many women, both within and outside of sport, are likely to experience.

1.4. Theoretical Framework

In this thesis, I apply critical feminist analysis to examining how the ideal athletic female body is constructed at the intersection of race, class, and sexuality (Dworkin & Wachs, 2009). Critical feminist sport scholarship looks at ways in which sport reproduces gender inequality, as well as other social inequalities (Hargreaves, 1985; Heywood, 2018; Kane, 1995; Lenskyj, 2013). As a social and cultural construct, sport relies on constant and systematic reproduction and reinforcement of the ideologies that underpin it. At the core of these is the oppositional gender binary and the resulting sex segregation in sport. Both of these have been challenged by feminist scholars. For example, Kane (1995) has argued that the binary sex model is culturally constructed, casting doubt on the widespread assumption that men consistently outperform women in sport and offering a continuum-based model for sport performance. Similarly, sex segregation and other ways in which sport polices sexed bodies have been critiqued as problematic, especially for women, trans and gender nonconforming individuals (McDonagh & Pappano, 2007; Pape, 2019; Pieper, 2016; Travers, 2009).

Although my thesis does not specifically deal with representations of women athletes in the media and popular culture, I draw on the feminist critique of these representations and, in particular, ways in which they idealize bodily characteristics that align with the ideals of white, middle-class, heterosexual femininity (Dworkin & Wachs, 2009) while downplaying women's athleticism and physical accomplishments (Thorpe, 2019). Cultural ideals of femininity and attributes associated with sport often stand in stark contrast with each other. However, rather than viewing them as contradictory or in conflict with each other (as suggested by Krane et al., 2001), I look at representations of women's sporting bodies as existing on a continuum (Heywood, 2018), similarly to the athletic performance continuum suggested by Kane (1995).

While using gender as my central category of analysis, I recognize that the experiences of women athletes, including athletes in my study, cannot be reduced to gender alone. The intersectional nature of oppression, power, and privilege in sport determines who gets to play and on what terms (Lenskyj, 2013). Similarly to corporeal culture at large (Dworkin & Wachs, 2009), in sport only some bodies are accorded value and significance. Despite sporting cultures' emphasis on athletic performance, it is not only the highest performing bodies that are valued in sport, especially among women. White, heterosexual, middle-class ideals of thinness proliferate across sporting cultures, even those that do not clearly associate leanness with a performance advantage (which is now being questioned even in leanness-based sports).

There is a wide diversity of bodily characteristics that contribute to athletic success across different sports. Yet for many athletes "leanness equals performance" and this widespread assumption is overlaid with the cultural message that "leanness equals beauty and even morality" (Heywood, 2011, p. 128). As a result, in the hierarchy of sport athletes are ranked on the basis of both their sporting performance and their body composition. In other words, leaner athletes attain a higher status than athletes who have equivalent performances but do not meet idealized sporting body standards. Women athletes are particularly likely to make "heroic" efforts in pursuit of this athletic ideal because, unlike men, they need to prove that they belong in sport (Heywood, 2011). If sport associates leanness with athleticism and performance, in popular culture leaner bodies are seen as healthier bodies. Just like popular culture uses the idea of health to promote the image of the ideal fit body (Dworkin & Wachs, 2009), the ideal athletic body is portrayed—both by popular culture and within sporting cultures—as the epitome of athletic health. In actuality, the pursuit of the athletic body—along with many other established sporting practices—is pervasively anti-health, with physical injury, disruptions to hormonal cycles, and eating disorders being exceptionally common in sport.

In promoting gendered, classed, and raced athletic bodies, sporting cultures employ the notion of healthism to shift the responsibility for attaining health to the individual while overlooking social inequalities and structural challenges (Crawford, 1980). By associating the inability to attain idealized health and fitness with lack of discipline or moral failure (Dworkin & Wachs, 2009), healthism helps maintain existing power imbalances in sport. This emphasis on individual responsibility for health is

consistent with how eating disorders, the Triad, and RED-S are framed as being caused by individual athletes' behaviours or personality traits, rather than by sporting cultures that encourage under-eating, over-training, and a "win at all costs" mentality. The ideology of healthism makes organized sport impervious to any criticism or change, "which would threaten those who benefit from the malaise, misery, and death of others" (Crawford, 1980, p. 369).

The healthy body idealized in sport is presumed to be a "natural" body.[3] Yet, through their use of science and technology, of which nutrition is just one facet, athletes cross the threshold between natural and non-natural worlds, a binary that is foundationally meaningless (Haraway, 1991). Across sporting cultures, the athletic body is commonly represented as a machine that can be "fuelled", "enhanced", and "improved". As a result, we can conceptualize athletes as cyborgs (Butryn, 2003), drawing on the cyborg theory of Donna Haraway (1991). Although cyborg theory does not apply to athletes alone, it can be particularly helpful to analyzing athletes' entanglements with nutrition and food. In fact, in a 1997 interview, Haraway used the example of sporting technologies, including nutrition, to illustrate cyborg theory, explaining that sporting success, especially at higher levels of performance, stems from "the interaction of medicine, diet, training practices, clothing and equipment manufacture, visualization and timekeeping" (Kunzru, 1997, cited in Thorpe et al., 2020, p. 101). On the one hand, the cyborgification of the athletic body carries within itself a promise of liberation: Haraway (1991) talks about cyborgs as entities that transcend and transgress dualisms. In sport, this can mean questioning the ideal of the "natural", unmodified athletic body and the notion of binary sex/gender (Henne, 2019). On the other hand, the common trope of the athletic body as a machine, which many athletes internalize, also suggests the desire to discipline, control, and rationalize the body (Hargreaves, 1985).

Because athletes' biological bodies are necessarily technologically modified, "the athletic body is always already a suspicious body" (Cole, 1993, p. 90). The bodies of women athletes are doubly suspicious: both because they are read as "masculinized"

[3] This romanticized idea of the natural athlete becomes particularly evident in the contempt with which which athletes revealed to be using (banned) performance enhancing substances are viewed in the media, as well as by their peers (see Henne, 2019, as well as the discussion of athletes and technology in Butryn, 2003).

and because they straddle the imagined boundary between the traditional norms of femininity and masculinity (Cole, 1993). This suspicion of women's bodies in sport played out in a variety of ways throughout the history of women's participation in organized sport in the west. From the early presumptions that competitive sport would harm women's reproductive capacity (which is echoed in the concerns over amenorrhea in contemporary discourse on the Triad and RED-S) to the assumption of homosexuality in women athletes, these suspicions inevitably question the femininity of women athletes, as well as their moral qualities.

The most conspicuous way in which western standards of white, heterosexual femininity are enforced in sport is through the practice of sex testing, which was introduced in the 1930's by the International Olympic Committee and which continues in various forms to this day. Spurred by social anxieties about the increasing participation of women in competitive sports, sex testing was both a response to the assumed contradiction between sporting success and being female and a tool for policing nonconforming bodies (Pieper, 2016). Institutional regulation of sexed bodies in sport is not restricted to sex segregation and the enforcement of a binary gender model, where women athletes are accorded a secondary place in relation to men. When institutions take it upon themselves to decide whether some athletes can compete in women's sport, it "exposes the intersectional effects of race, class and nation on decisions about gendered bodies" (Pape, 2019, p. 19).

Women's sport participation saw a dramatic growth in the last several decades in both competitive and recreational sports. In the United States, *Title IX* is often credited with creating unprecedented opportunities for women in sport, particularly at high school and university levels. Yet, sex segregation in sport remains pervasive and, largely, unquestioned. Based on the idea of two biological sexes and a hierarchical relationship between them, sex segregation reinforces the assumption that men's athletic performance is superior to that of women. As a result, it devalues and marginalizes women and gender non-conforming people in sport and promotes gender injustice (Travers, 2009). For this reason, it is particularly important that my analysis of issues relating to food and eating in women athletes move beyond the dualistic view of sex/gender that is dominant across a lot of sport science literature. In fact, while inhabiting the binary, sex-segregated space of sport, athletes themselves perform and

negotiate gender in a wide variety of ways that go beyond the traditional gender binary (Lenskyj, 2013).

When examining sex and gender in sport, I draw on the work of Fausto-Sterling (2000) to conceptualize sex and gender as non-binary and existing on a continuum. Dynamic systems theory (DST) views both sex and gender as socially and biologically constructed, with cultural experiences leaving an imprint on biological bodies. As Fausto-Sterling (2000), writes, “components of our political, social, and moral struggles become, quite literally, embodied, incorporated into our very physiological being” (p. 5). This perspective allows us to move beyond the nature/culture dichotomy to imagine athletic bodies as both shaped by their environments and actively involved in re-creating these environments. In using this approach, I enter a dialogue with sociologists of sport (Thorpe et al., 2019) who use feminist new materialist approaches, including Samantha Frost’s concept of biocultural creatures (2016) to examine the relationship between women athletes’ biological bodies and sporting cultures. Frost (2016) writes: “Biocultural creatures are constantly composing, decomposing, and recomposing in response to their engagement with their habitats.” (p. 149) The habitats of women athletes in this study are shaped by the vast social inequalities in modern-day sport, and I look at ways in which these inequalities shape athletes’ relationship with their body and the way athletes “recompose” their bodies through food or eating restriction.

Drawing on Mills’ “sociological imagination” (1959), I look to uncover connections between the individual (and often intimate) relationship between the athlete and their body through food and sport nutrition and the social forces that shape this experience. The way in which many sport scholars, medical practitioners, and coaches place responsibility for eating disorders and RED-S prevention with athletes themselves disregards the structural issues in sport that make athletes, and especially women athletes, particularly vulnerable to these conditions. In so doing, sporting cultures turn what Mills (1959) calls “public issues of social structure” into “personal troubles” (p. 9). At the same time, I hope to shed light onto instances of athletic agency within sporting cultures, which are often characterized by discipline and control over athletes and athletic bodies, and which can be particularly oppressive to women athletes. Rather than seeing athletes as merely hapless victims of sporting cultures that may deliberately or inadvertently encourage dysfunctional eating and attitudes toward food, I am interested in how women in sport build their relationship to food and how they exercise agency and

even resist dominant discourses about women's eating and their bodies in and outside of sport.

In this thesis, I use the method of "reading sport critically" (McDonald & Birrell, 1999) to shed light onto "the complex interrelated and fluid character of power relations as they are constituted along the axes of ability, class, gender and nationality" (p. 284). By reading athletes' stories as cultural texts (McDonald & Birrell, 1999), I critically examine how these athletes negotiate social forces that seek to construct their bodies, how their bodies exist as sites of social reproduction, and how women in sport negotiate their embodiment within the context of sport and gender, which often place conflicting demands on women athletes. Specifically, I look at how sporting practices and sporting cultures may influence athletes' ideas about eating and the female athletic body; how athletes navigate the very complex world of being female-bodied and athletic, both within and outside their sporting practices; how gendered and athletic body ideals shape the experiences of female-identified athletes; and finally, what forms of resistance and agency—particularly embodied resistance—athletes employ in challenging the hegemonic notion of the ideal athletic body. By making a distinction between athletes' symbolic and agentive bodies (Lenskyj, 2013), I look at ways in which athletes not only conform but resist and challenge the hegemonic notion of the ideal athletic body.

Sporting cultures are not a monolithic entity, and their manifestations can be very diverse and sometimes contradictory. Body ideals, as well as the extent to which sporting cultures embrace conventional gender roles and ideals of femininity, can vary greatly across different sports, institutions, and teams. While many sport organizations profess that they want to prevent and address disordered eating and RED-S among their athletes, individual teams may have established practices that directly increase the risk of eating disorders, such as coaches publicly weighing athletes and commenting on their weight[4]. It is just as important to recognize that the "woman athlete" is not a uniform category. Not only do athletes differ in terms of race, age, class, and other demographic categories, but there is a wide range of individual ideals and practices among women athletes and across sports. It is in this diversity of experiences—and reactions to the tensions inherent in being a female athlete—that we can find acts of resistance.

[4] This practice was described in my interviews by one of the athletes and one of the coaches, both of whom were speaking about teams outside of the university where the interviews took place.

Meanwhile, the discourse around disordered eating in sport and, more recently, RED-S, focuses overwhelmingly on coaches' and sports professionals' perspectives, with little consideration for athletes' voices and experience. My purpose in this research is to amplify athletes' voices and bring them into the conversation around eating in sport while recognizing the diversity of athletes' experiences with food and eating.

Ultimately, it is my hope that this thesis can help contribute to better understanding the complex entanglements between athletic bodies, science, technology, and culture and the ways in which they transcend the socially constructed dualisms relating to natural/technological, biological/cultural, and male/female that remain entrenched in sport.

1.5. Research questions

In my research, I explore the following questions:

1. How do women athletes and coaches of women's teams talk about food and eating? What is said and what is left unsaid about eating restraint, dieting, and weight loss? How do athletes' knowledge and taken-for-granted beliefs translate into eating practices and embodied experiences?
2. How is the ideal athletic body constructed, both materially (as in shaping the body through training, nutrition, and other sport technologies and practices) and in the athletic imagination? How do ideal bodies differ across sport, what do they have in common, and what does it reveal about sporting cultures and expectations of women in sport?
3. Finally, what do women athletes' stories reveal about the dynamics of power in sport and athletes' agency and resistance?

1.6. Methods

For this study, I conducted semi-structured interviews with 9 female-identified athletes and 2 head coaches of women's teams at an NCAA Division II university. The athletes represented a variety of team and individual sports, including basketball, football, swimming, track and field, volleyball, and wrestling. Some of these sports traditionally emphasize leanness (track and field, swimming) or weight classes

(wrestling) and are therefore likely to place more emphasis on athletes' weight management, while others (basketball, volleyball) tend to place less emphasis on athletes' weight. One of the athlete participants had recently moved from the track and field team to the (otherwise all-male) American football team. Although I did not collect demographic information about my participants in the interviews, the athletes can be expected to be between 18 and 24 years of age, which is the typical age range for NCAA Division II athletes.[5]

The athletes I interviewed were mostly from Canada or the United States and "read" as white. The experiences of athletes of colour are not reflected in my participants' stories, with the only—striking—exception to this being Coach L's comment (quoted in Section 3.1) about a Black athlete that falls in line with stereotypical understandings of racialized bodies. However, the fact that white, middle-class, heteronormative body ideals are taken for granted by my participants, even when they openly challenge these ideals, is just as important.

The interviews were conducted in person in February and March 2020, before universities in the location where the interviews took place suspended in-person instruction and research due to the COVID-19 pandemic. Each participant met with me for an in-depth, semi-structured interview. The interviews lasted for approximately one hour on average and covered three key areas: (1) individuals' eating practices, beliefs, and knowledge, (2) women athletes' relationship to food, and (3) sporting cultures.

With athletes, we first discussed their athletic background and current training practices. The conversations then turned to the athletes' experiences with food and eating, their sources of knowledge about sport nutrition, and what they believed about food and eating. In the second part of the interviews, athletes shared stories—either their own or involving their peers, coaches, or other teams—that illustrated different aspects of women athletes' relationship to food. Finally, athletes talked about their experiences within their particular team or sporting culture. Here, participants discussed their relationships with coaches, teammates, parents, and peers, and reflected on their own athletic identities.

[5] See, for example, Judge et al. (2012) and Karpinski & Milliner (2016).

Interviews with coaches followed a similar three-part structure. First, we discussed the coach's experience working with female athletes and how they viewed the relationship between food and sport performance. Second, we discussed the challenges that female athletes may encounter around food and eating and, finally, how sporting or team culture may influence athletes' relationship with food. I deliberately avoided asking specific questions about body image or disordered eating. However, the topic came up in most interviews with athletes and coaches.

Several participants joined the study after seeing a poster about the study in locker rooms, with most participants finding out about the study by word of mouth, mostly from peers, and two participants hearing about the study from their coach. Coaches were invited to participate by email. For athletes who chose to participate after hearing about the study from their coaches or other athletes, I took additional steps to ensure that their coaches or peers would not become aware of their participation unless athletes themselves chose to disclose it.

Coaches participated in the study in their official capacity and are therefore identifiable. Athlete participants could choose to be identified, use a pseudonym, or be anonymized. When asked about their preference on the day of the interview, only one athlete participant requested to be anonymized, while all others consented to the use of their names. When participants reviewed quotes and stories from the interviews that I planned to use in my analysis, three additional participants chose to be referred to as "Anonymous", while giving consent for me to explicitly identify the sport in which they participated. All other participants chose to use their names or initials. One of the athletes participating in the study could be easily identified from the description of their sport (American football, where this athlete was the only woman on an otherwise all-men's team). This athlete gave their consent to be named and to have their sport identified in the study.

Interviews were recorded and transcribed using a process of reflexive transcription (Bucholtz, 2000). While conducting interviews, I also kept a field journal, in which I recorded notes on the interviewing experience, emerging themes, challenges, and personal reflections. I then performed a thematic analysis of the transcriptions (Braun & Clarke, 2019), using themes from existing critical feminist sport scholarship with a focus on juxtapositions between womanhood/femininity and sport participation,

sporting technologies and notions of the body as a machine, discussions of idealized bodies, as well as health and healthy eating as a personal responsibility. I also noted themes relating to control (both by sporting cultures over athletes and by athletes over their bodies) and instances of athletes' agency or resistance described by the participants.

After completing the analysis, I offered each participant the opportunity to review the portions of my analysis that contained stories and quotes from that participant and gave them the chance to provide comments on or edit the material from the interviews. All participants, except one (the athlete who had chosen to be anonymized during the interview) responded to the review request. Of the athletes who responded, all participants and one coach (Coach S) were satisfied with the ways their quotes and stories were presented. During the interviews and in their responses to review requests, several participants emphasized that they felt that the topic of my research was important. In his emailed response to the request to review quotes, the second coach I interviewed (Coach L) commented that his responses to the interview questions were represented inaccurately in the quotes and paraphrases. Following that feedback, I re-checked the quotes and the corresponding sections of the interview transcript. In addition, I re-transcribed a segment of the audio recording where Coach L showed photos of athletes on a poster. That segment of the recording had low sound quality due to movement and paper rustling in the background, which resulted in an error in the transcription. As a result, I revised my analysis of that segment. I provided Coach L with the revised segment, along with full segments of transcripts from which the quotes or paraphrases had been taken to give him an opportunity to engage further but did not receive any additional comments from him. As a result, my analysis includes some of the initial, condensed versions of the quotes and paraphrases, as well as longer extracts from the transcripts of the interview.

1.7. Methodology

Having interviewed both coaches and athletes for this study, in my analysis I chose to centre the voices of athletes while using coaches' responses to supplement the discussion. I have long been frustrated by the top-down approach to "righting" athletes' relationship to food, framed as prevention of disordered eating in sport (see, for example, recommendations for prevention based on several sports organizations'

position stands in Bratland-Sanda & Sundgot-Borgen, 2013). This perspective focuses on everything that is “wrong” with the athlete, often overlooking how the practice of sport itself often encourages a complicated, if not dysfunctional, relationship with food. Coaches, even when well-intentioned, often replicate and enforce these explicit and implicit rules and practices of sport (Petrie & Greenleaf, 2012).

For this reason, I felt it was important to shift the focus to athletes’ voices and to look more closely at athletes’ experiences within sporting cultures that tend to emphasize athletic performance, moulding the ideally performing body, and cultivating ‘coachability’ in its members. In their book on eating disorders in sport, Thomson and Sherman (1999) define coachability in sport as “the athlete doing what the coach wants” (p. 186) and relate it to personality traits that psychologists associate with anorexia, such as compliance and approval-seeking. Interestingly, they conclude that a “coachable” athlete is both unlikely to be seen by coaches as a “problem athlete” and as “an athlete with a problem” (e.g., an eating disorder) (p. 187).

In analyzing athletes’ experiences, I explored the following questions: What are the messages that athletes receive about food, eating, and their bodies (athletic *and* female)? Just as importantly, how are athletes responding to these messages? What are they incorporating into their practices and in what ways might their practices and their very bodies be acts of resistance against the hegemonic ideal of the lean, high-performing and compliant, female athletic body? Ultimately, by centring the voices of athletes, I wanted to produce a counter-narrative to both reveal and question the dynamics of power in sport and offer possibilities for resistance (McDonald and Birrell, 1999).

Interviews with coaches helped enrich the text of athletes’ narratives in several ways: by providing a counterpoint to athletes’ stories and making more visible the “official” or “coaching” discourse reflected in athletes’ stories and by offering additional insights into sporting cultures from the perspective of non-athletes, who are also ostensibly more powerful participants in these cultures. Additionally, one of the coaches that I interviewed reflected on their own experience as a former athlete and noted how that experience informed their coaching practice and conversations with athletes about eating and body image.

In my conversations with athletes and coaches, I deliberately avoided asking about experiences of disordered eating. My interest as a researcher was primarily in how athletes negotiate their environments, rather than how those environments predispose them to eating disorders. I view eating practices and individuals' relationship to food as something that exists on a continuum, rather than a dichotomy between "health" and a "disorder". By not making disordered eating the focus of my interviews, my goal was not to avoid discussing uncomfortable subjects—the athletes I interviewed raised many uncomfortable topics and showed amazing courage in talking about them—but rather to leave space in the conversation to discover a wider range of meanings that eating and food represent in sport.

In interviews with athletes, my focus was on their individual stories. In interviews with coaches, questions focused on each coach's personal experience training and interacting with female-identified athletes—and, in the case of one coach, their experience as a former female athlete. In the interviews, each participant invariably reflected on the experiences of female athletes as a community, however they imagined it (Anderson, 2006)[6]. Invariably, almost every athlete participant was very interested in what I had found in my interviews—as if this was part of making sense of their own experiences. In analyzing these conversations, I approached athletes' stories as cultural texts that can be read critically to uncover power relations in sport (McDonald & Birrell, 1999). The goal of my research was to move beyond the "preferred reading" of these texts (Dworkin & Wachs, 2009, p. 26), which, in this case, was the dominant discourse of food as fuel, science as authority, and a focus on shaping a controllable ideal athletic body. Instead of taking what I heard in interviews at face value, I tried to stay attuned to the possibility of alternative narratives and explore ways in which athletes negotiate or even resist dominant discourses of sporting cultures.

I embarked on this research, in part, to make sense of my own experience: although I introduced myself to my participants by emphasizing my *difference* from them

[6] Although Anderson's discussion of imagined communities focuses specifically on nationalism, I find that the concept is helpful in making sense of athletes' experiences of belonging in a particular sporting community or culture. A sporting culture can, after all, be conceptualized as a community that is constructed through the imagination of participants, who may never see one another. Although the concept of imagined communities in sport studies has mostly focused on media and fandom, some researchers (Pavlidis & Fullagar, 2012) have used it to examine sporting cultures.

(a masters rather than a varsity athlete who has never experienced training or competing as part of a university team), there was a thread connecting us—an occasional story that would make me shake my head vigorously in recognition or that would resonate in my body with a memory of a particular experience in training. How I bring myself to this research—and how I take myself out of the picture—is equally important. I bring myself as an athlete, as a one-time nutrition coach, and as someone who had delved into the science of sport nutrition and emerged disillusioned by how little it reflected my own embodied experience. I am passionately convinced that athletes' well-being must precede athletic performance; yet, as an athlete, I also recognize how athletic performance has its way of trying to always come first, sometimes regardless of the cost to athletes' health and well-being. At times, in interviews, I briefly shared my experience or reflected on what I was observing, all the while trying to remind myself that my voice was not the centre of the conversation. The way I took myself *out* of these interviews was by asking questions, rather than providing answers, and trying to keep the questions as open-ended as possible.

While I am determined to centre athletes' voices in this thesis, my experience and identity as an athlete means that my voice will also be heard not only in the questions I ask in my study, but also in my analysis. The biggest challenge in analyzing these interviews was finding my voice, which is often critical of the sporting cultures that I set out to describe. At the same time, I struggled with the urge to downplay in my writing those stories or comments that I found particularly worrying, especially if they involved coaches or other authority figures in sport. In the end, I chose to include these crucial pieces, because by leaving them out I would be removing a powerful counterpoint to the voices of athletes who spoke out about their experiences, and I would also be muting my own critical voice. This would be a disservice to everyone involved in this research. These interviews taught me about the power that sport exerts over its participants and the often impossible demands that it places on women in sport. At the same time, my conversations with athletes also revealed courageous acts of resistance and gave me hope.

1.8. Limitations

The use of gender as the main analytical category is perhaps the biggest limitation of this research. As Heywood (2018) writes, "By focusing on gender as the only

axis of identity (“female” athlete instead of “white bisexual transgender economically disempowered athlete” or “biracial heterosexual middle-class female athlete” or any one of a number of intersectional possibilities that exist), the study necessarily triggers a particular kind of thinking (dualistic, binaristic) in the respondents who are the research subjects” (p. 467). I sought to address this, in part, by focusing on individual athletes’ stories in the interviews, rather than their experiences as “women athletes”. I also wish to recognize the limitations of my participant pool and, as a result, of my findings. This was, in part, due to the background of the participants I interviewed, most of whom were white, female-identified athletes from Canada or the United States. This limitation reflects the constraints of my participant recruitment methods as well as the composition of the student-athlete body at the university where the interviews took place. Interviewing a more diverse group of participants, as well as collecting more information on participants’ backgrounds during the interviews, could further enrich my analysis. At the same time, the background of my participants does not preclude an intersectional analysis, which I sought to incorporate into this thesis.

It is also important to point out that this study does not seek to provide a comprehensive overview of women athletes’ experiences. The environment in which my athlete research participants train and compete and the resources available (or not available) to them will mean that my findings will be somewhat specific to women student athletes at this particular university. For example, unlike athletes on some other teams or universities, my athlete participants did not report having regular access to nutritionists or mental health professionals with expertise in sport and eating disorders. Further, sporting cultures can vary greatly across sports and from team to team and can have a significant impact on an athlete’s relationship to food. This is corroborated by the stories of those participants who had changed teams during their university careers or reflected on their friends’ experiences on other teams. Finally, in my interviews I focused on athletes’ personal stories and experiences, and conversations with coaches included many stories of individual athletes. This was consistent with my emphasis on athletes’ voices and stories, but it also means that my findings are hardly generalizable to the larger women athlete population.

While my analysis and conclusions cannot be generalized to all athletes, they nonetheless provide insights into individual student athletes’ experiences. They also highlight potential areas for further study in examining women athletes’ relationship with

food. For example, exploring athletes' sources of knowledge about eating and athletic bodies, as well as what athletes and coaches consider authoritative sources, can help shed light onto taken-for-granted ideas about eating and bodies and sport—and potentially help shift sporting cultures' discourse about women athletes' eating and bodies. My focus on the voices of women athletes and the bringing of these voices into an imagined dialogue with women's coaches is another contribution of my research.

Chapter 2.

Fuelling the body: Food and meaning-making in sporting cultures

2.1. The language of food

One theme that consistently emerged across interviews with athletes and coaches was that they all defined food as "fuel" for the body. While the idea of food as fuel is common in sport, the regularity with which athletes used this term was remarkable. It was as if "fuel" and "fuelling" were a standardized way of referring to food, nutrition, and eating in this athletic community.

In my first interview with an athlete, when I asked a basketball player (Anonymous), about the role that food plays in her life as an athlete, she responded: "For me, [food] is critical. Like I could never go a day without eating breakfast, for instance, like some people <…> No, I get out of bed because I need to eat because my body needs that fuel." A little later, she added, "obviously, as athletes like we need the right kind of fuel going into our bodies" suggesting that it was *what* athletes consumed as well as *when* they consumed it that was important, and this importance was presented as unquestionable.

While most athletes began their conversations about food by describing it in functional terms— as fuel for performance—they also spoke about other meanings of food: emotional, sensory, and social. Many athletes talked about their enjoyment of food; yet few discussed food in terms of pleasure. It was as if taste and the sensory experience of food existed outside the realm of appropriate eating for sport, at least for the small group of individuals that I interviewed. Similarly, ways in which food and eating existed within athletes' social and family connections sometimes ran counter to the goal of fuelling for sport. For example, TM, a swimmer, talked about the tension between her athletic performance and weight management goals and the role that food—and eating in abundance—played in her family's traditions. She described having a conversation with a family member, as a teenager, about having to "watch what I eat". TM said that it was "very hard to hear", but she also described the conversation as helpful, "[b]ecause up until that point, I never really even thought about my body or like thought about what I

was eating or how much I was eating." At the same time, the family tradition of having Sunday meals at TM's grandmother's house came with an abundance of food and encouragements to eat more. TM described how she tried to avoid overeating without hurting her grandmother's feelings and concluded that the situation was "definitely conflicted".

When discussing the challenges they experienced with eating around others, participants often talked about negotiating the consumption of foods that they defined as unhealthy (for example, eating burgers or French fries when going out with friends while generally looking to avoid these foods) or worrying about consuming calories that these athletes perceived as excessive. Some women, however, felt like they stood out from their non-athletic peers because of the "extra fuelling" they had to do or the amount of food they consumed to meet the demands of their athletic training. A track and field athlete (Anonymous 2) talked about how she felt like she stood out in high school because of the sheer amount of snacks and the "huge lunch bag" she used to bring to school. With her peers having "a bagel and maybe a coffee" for lunch, she explained that it was "hard to not feel self-conscious about that." Although the "bagel and maybe a coffee" may hardly be seen as a "diet food" in today's western culture, especially with its recent emphasis on low carb eating, the restriction inherent in the description (a bagel rather than a full meal) serves as a powerful illustration of western "diet culture".

In subsequent chapters, I will show how social interactions around food often shine light onto messages around food both in culture at large and within sporting cultures. In this chapter, however, I want to focus on the idea of "food as fuel", which, being specific to sport, is crucial to understanding athletes' beliefs and practices around food and eating. My conversation with Coach S, the head coach of the women's volleyball team, illustrates how the idea of food as fuel is central to athletes' relationship to food—often long after they stop practicing their sport:

> Coach S: I mean, it's funny, even though I retired [from sport] a long time ago, I still kind of feel like I still lump food into that category [food as fuel], even though it also can be like a social experience. And I mean, I hate cooking. But… so for me, I don't— it takes too long to cook. So it's like, what can I just get in? I'm hungry. What do I put in me that's fast? But… you know what's so interesting? You know… I just—
>
> MK: So you don't think about the taste as much?

> Coach S: I mean, it would be something I like, but… I could make a tuna sandwich or I could also just open up this can of tuna and just eat it out of the can because that's faster and I like the taste of tuna. I might put in whatever. Eat it with a pickle. Right... I just— it's faster that way. <…> And I— I certainly appreciate a well cooked meal. But for me, it's just… the time it takes to like, put it… to cook, an hour when I can just… if I'm hungry now I want to eat now. My body's telling me I'm hungry.

Athlete participants' descriptions of fuelling were infused with a variety of meanings. "Fuelling" was more than a mere synonym for "eating". Instead, the idea of fuel seemed to have three meanings, or dimensions. The first and the most apparent was the use of food as a *technology* shaping the athletic body, a body that is conceptualized as a performance-oriented machine. Here, fuelling is linked with athletic performance, such as when MC, a swimmer, talked about "how to fuel my body in the way that, you know, makes me feel good and is going to help me perform." Secondly, athletes also used the idea of fuelling to describe their *energy intake*, or the amount of food they consumed. Here, participants used the term "fuel" as an opposite of "dieting" and potential food restriction. Finally, athletes used "fuelling well" to refer to general *healthy eating* practices, which, although associated with athletic performance, were not specific to athletes: "Obviously <…> whatever you eat [plays] a huge, huge role in how you perform… even if you're not an athlete, what you put into your body is what fuels you, right?" (Kristie, Football).

The last two ways of conceptualizing food as fuel for the athletic body are consistent with the observations of Busanich, McGannon, & Schinke (2012) whose analysis of distance runners' narratives brings forward two meanings of food as fuel: as a source of energy for the body and a tool for exercising control over one's health. Meanwhile, fuelling as a sport technology reflects the sport science view of sport nutrition. I will examine each of these three meanings of "food as fuel" in turn, discussing what they communicate about eating and bodily ideals for women in sport. Before doing so, however, I want to first look at the sources of knowledge about food and sport nutrition for athletes.

2.2. The epistemology of sport nutrition

When talking about fuelling for sport, avoiding dietary restraint, or eating for health, an important question to explore is how athletes and coaches know what they

know about nutrition and sport performance. Sporting cultures tend to regard scientific authority as the most appropriate source of knowledge about food and nutrition, although research also shows that athletes are frequently unfamiliar with science-based information in sport nutrition (Trakman et al., 2016).

Although in my interviews athletes and coaches rarely mentioned science as a source of knowledge explicitly, their discussions of eating for athletes suggested that good nutrition rested on scientifically demonstrated evidence. At least some of my participants seemed to view me as knowledgeable about sport nutrition—an impression most probably conveyed by my position as a researcher rather than an athlete. As a result, I felt an unspoken expectation by some participants that I agree with certain "nutrition facts". When discussing foods or eating behaviours they consider healthy or beneficial to athletic performance, some athletes talked these foods and behaviours using words like "obviously" and "of course", implying a consensus around the subject. For example, a track and field athlete reflected on her thinking about the cause-and-effect relationship between food and athletic performance:

> if I eat healthy and I train well— the process would work, I will perform well, and *obviously* if I eat— a lot more, like, healthier foods and stay away from processed foods and stuff, I won't carry as much body fat. And I do— I think about that. I would prefer to carry less body fat and more muscle, to be like, stronger, more efficient, move faster and stuff. So I think that— my relationship with food is definitely complicated. (Anonymous 2, Track and field) [my emphasis]

While some sports science researchers have suggested that athletes' lived dietary and nutrition practices can be effective in informing research (Burke & Hawley, 2018), the athletes participating in my study did not see themselves as an authoritative source of knowledge about nutrition. Instead, when I asked athletes where they obtained their nutrition knowledge, they most frequently mentioned talks by registered dieticians or other authorities in nutrition, as well as human nutrition courses at their university. Given how infrequent these formal education opportunities were, it would be reasonable to expect that most athletes learn about nutrition in day-to-day life, from multiple sources, often unconsciously. It is telling that athletes nonetheless saw formal education as their primary source of knowledge, suggesting that they associate scientific knowledge with authority and prioritize it over other sources of knowledge about food and nutrition, including learning from peers or self-knowledge.

Despite the frequent mentions of formal nutrition education, my study participants did not consider it particularly helpful for improving athletes' eating or relationship with food. For example, TM, a swimmer, said that her home swim club, outside the university where she is now training, had offered frequent talks by a nutritionist. She described these talks as "vague", suggesting that she saw little practical value in this education. The anonymous basketball player expressed a similar sentiment:

> in our nutritional speaker talk, she would talk about like macros[7] and stuff. But for people who are not in the sciences or whatever realm, it can just go like over your head because you're like, I'm not counting that kind of stuff. Like, just tell me, what are some quick and easy, low budget recipes I can make that are healthy for me?

These comments by athletes point to a discrepancy between the resources offered to athletes and athletes' needs. Formal education tends to focus on sport, or performance-oriented, nutrition, while athletes said that their biggest challenges were more practical: athletes wanted to make sure they eat well while being physically active. Several athletes had mentioned time constraints, limited ability to cook, and the high cost of groceries as factors limiting their access to good nutrition. Yet, these practical considerations remain unaddressed or under-addressed in nutrition talks and other educational opportunities offered to athletes by their teams.

Coach L said that the basketball team had tried organizing practical activities, such as grocery store tours or cooking classes for athletes, but found them unhelpful. The coach explained: "I've always felt that although those things appear to be really good, the ones [athletes] that get it are the ones who'll want to go do it. The ones who don't get it and don't do, they're just like [imitating blabbering] What am I doing in a freaking supermarket?" He then added: "it was more the girls got it and the guys kind of didn't." The team discontinued offering these educational opportunities, while continuing formal nutrition talks and recommending that athletes take the nutrition class offered by the university. This example reinforces the idea that science is the most authoritative

[7] Macros, or macronutrients, refers to the three core nutrient categories in nutrition (carbohydrates, fats, and proteins). Some approaches to sport nutrition focus on combining foods rich in a specific macronutrient in pre-determined ratios to enhance athletic performance or manipulate body composition.

source of knowledge on nutrition while placing responsibility for good nutrition on individual athletes.

The assumptions that athletes discussed when talking about their frustrations and challenges with “eating well” echo these two themes of scientific authority and individual responsibility. The first assumption was that scientific nutrition knowledge can be universally applied and can produce consistently positive results, for as long as athletes follow its recommendations. The second assumption, one reflected in sports science literature on the topic (Trakman et al., 2016) was that a “good athlete” is interested in both practicing and furthering their knowledge of good nutrition.

Despite this primacy of science, most athlete participants drew their knowledge about sport nutrition and healthy eating from informal sources, including conversations with peers, parents, and coaches. Athletes also learned about eating from sport by observing their peers and by modeling others’ behaviours, especially those of coaches and senior teammates. For example, a player on the basketball team (Anonymous), told me about the team’s food rules, which included avoiding “white sauces” with pasta while travelling with the team. Although the player did not explain the rationale for this rule, one way of interpreting this prescription could be viewing it as a way to discourage athletes from eating foods with higher fat content, like “white” pasta sauces with cream and cheese. These foods are more calorie dense and are therefore associated with weight gain or preventing weight loss. While reflecting on her team’s food rules, this athlete provided a different rationale, however. She said that she avoided certain foods because they made her feel uncomfortable during practices or games. As a result, she concluded that these foods had a negative effect on her athletic performance. In other words, she used self-observation to make an externally introduced food rule relevant to her. She also extrapolated from that observation to decide what other eating strategies (for example, what foods to eat or to avoid before practices) worked best for her.

Self-awareness was also a strategy that Coach S, who coaches volleyball, discussed in her interview with me. Coach S acknowledged that education in eating and nutrition is important but emphasized the need to encourage athletes to observe what changes in eating, recovery, or training lead to desired outcomes: “So I think teaching them about their own bodies [is important] because, again, everybody's gonna be different.” Coach S emphasized that the language of eating—or how athletes and

coaches talk about food and bodies—is also crucial to building a positive team culture. To accomplish that, she said that when talking to athletes she tried to focus on their performance, rather than on the way their bodies look:

> We actually had a player that came back after a break or summer having lost quite a bit of weight. And I almost intentionally did not say anything about it. <…> I think there was a little bit of, you know, kind of a real effort put towards <…> losing weight. And again, it's like not a bad thing, but, you know, why— why is that? Right. So *it's almost like intentionally not saying something about it.*
>
> But but I think there's also <…> that culture, you know, having a coach that has like that, you're weighing in and having a "fat table".[8] I can see that probably, you know, provoking some issues. Right. So I think *it's the culture that you also create on your team and how you talk about food and bodies.* And are you are you celebrating just strong, healthy people versus like, oh, we need to be this just certain look or body type.
>
> So I think focusing on the performance aspect, and if we're not performing well, okay, what do we need more? Like, if you're not playing like you want to, what are some reasons why? Are you eating enough? Are you [unclear] well enough? You know when? You know how? So I think focusing on that also will— can help. [my emphasis]

Shifting the attention from an athlete's appearance to their performance is similar to moving the focus from eating as restraint to fuelling for performance or health. On the one hand, this shift may signal a change toward a more athlete-oriented, body-positive sporting culture. On the other hand, this approach can potentially reduce the athlete to performance, which comes with its own negative consequences. In addition, this change in discourse does not address the belief that there is a cause-and-effect relationship between an athlete's appearance or what an athlete puts in their body and athletic performance. This relationship hinges on the idea of control—by an athlete over their body and by sporting cultures over the athlete's body. As I show in the following sections, control is instrumental to the relationship that sporting cultures foster in athletes with their bodies and food.

[8] A "fat table" refers to the practice on some teams of having a table in a common dining area where athletes whose weight the coach considers to be excessive are seated with the purpose of restricting their food intake as well as publicly shaming them. s.

2.3. Food as a sport technology

In speaking about eating as "fuelling the body", athletes and coaches framed athletes' relationship with food as a tool used to optimize athletic performance[9]. The idea of food as fuel implies that the athletic body is a machine that can be made to "run better" when fed the right kind of substances at correct intervals. What athletes eat, when they eat, and how much, can help them recover from training, gain or lose weight, change how much muscle or fat they carry on their bodies, make their bones stronger or weaker, and change how their bodies function, down to the cellular level. How an athlete eats can shape how their body looks and how fast they run, how high they jump, or how much weight they can lift. *Eating, in other words, is a powerful sporting technology.*

This technology exists on a par with other athletic technologies, such as training plans, athletic equipment, performance analysis, sports medicine, or sport supplements. Unlike the so-called "implement technologies" (Butryn, 2003) that exist outside athletes' bodies, food and nutrition directly shape the athletic body and represent a form of a "self technology", along with training regimens and the various supplements and non-food substances that athletes may ingest. Unlike other "self technologies"[10], such as performance-enhancing substances that carry within them the potential to "artificially" and permanently modify athletic bodies and therefore run counter to the idea that sport performance is a combination of natural ability and hard work (Butryn, 2003), food is a seemingly "natural" intervention into an athlete's development. While "natural", food is nonetheless used to mould athletic bodies to a desired shape, and eating practices are thought to impart athletic prowess (or take away from it).

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[9] A joint statement by the American College of Sport Medicine, the Academy of Nutrition and Dietetics, and Dieticians of Canada defines nutrition for athletic performance as "guidelines for the appropriate type, amount, and timing of intake of food, fluids, and supplements to promote optimal health and performance across different scenarios of training and competitive sport" (Thomas, Burke, and Erdman, 2016, 543)

[10] Butryn (2003) writes: "As I have argued previously, self technologies represent the most obvious, and for many sport scholars the most disturbing, form of cyborgification, for these technologies have the potential to fundamentally alter an athletes' physical and/or psychological makeup (Butryn, 2000, 2002)."

For example, contrasting her experience as hurdler on the track and field team to her current position as a kicker on the American football team, Kristie describes how her eating practices changed in the process:

> I'm not necessarily trying to get any faster. I'm just trying to get stronger and build more muscle, which involves me to eat more meat and like have protein shakes all time… Like if I, for example, was a linebacker, I wouldn't be eating like a runner would, right? You'd obviously be eating more like [some]one trying to bulk up your body compared to… a hurdler… It just depends on like what your goal is for your body.

She then adds:

> since I'm not running anymore. I just I don't I think I'm just not slacking off, but I'm having more variety of foods now and I'm not afraid to go in and eat a burger because I don't have to worry about my [running] times.

The idea of "natural eating" or "eating for health" that regularly emerged in interviews, especially when athletes discussed their aspirations and goals in sport nutrition, reflects the emphasis on "natural" performance in sporting cultures. Yet, neither the athletes nor the coaches spoke of the body as a living organism (which, by definition, is outside direct control), instead discussing ways in which the body could be shaped and moulded—and at times disciplined and controlled—for specific goals, athletic or otherwise. This instrumental view of the body was very prominent and consistent across interviews.

It is worth noting here that self-reports of eating practices and attitudes—particularly in sports where idealized eating behaviours are fused with the notion of the "good athlete"—are likely to be, at least in part, performative. Many athlete participants came across as very genuine in exploring the complexity of their relationship with food; yet I also recognize an element of performativity in these interviews, where the athletes' responses may have been tinged by what they felt their practices and relationship to food *should* be—or, perhaps, what I expected to hear. In fact, this is not uncommon in nutrition research, where self-reports of dietary intake are more likely to reflect what participants see as the "norm" than their actual food practices (Schoeller, 1990).

The use of food to shape the athletic body was a key theme in athletes' discussion of nutrition as sporting technology. In these interviews, shaping and "managing" the body usually referred to either changing (most commonly, decreasing) one's body weight or altering body composition (usually, by reducing body fat). The

desirability of these interventions appears to assume that a lighter or leaner, but more muscular body, may impart a performance advantage in sport. While athletic performance is the seeming end goal of this practice, upon closer look, athletes' and coaches' references to weight loss or increased leanness often read as a stand-in, a euphemism of sorts, for eating restraint, or dieting to lose weight. What emerges at the centre of this discourse about fuelling for sport is not food or eating, but rather the body of the athlete as a mouldable, controllable entity.

Chapter 3.

Idealized bodies and women in sport

3.1. The lean body ideal

Although my research primarily focused on athletes' relationship to food, the athletic body emerged as a topic that was closely connected to the idea of food and eating for both athletes and coaches. Many participants described a strong association between particular kinds of bodies and athletic performance. A good athlete must look a certain way: a look that predicts high athletic performance and is reflective of the athlete's discipline. For women athletes, the idealized appearance is often one of leanness, although the extent of that leanness varied by sport.

A powerful illustration of this connection emerged when, during our interview, Coach L showed me his team's promotional poster featuring photos of the athletes in action poses. Pointing to individual athletes, Coach L commented on their appearance and whether he saw their bodies as fit for their sport:

> Coach L: Look at that body. Very serious, very focused. Very— whatever the world brings to me, it brings to me. North America is way better than the jungles of Africa were. Right? But I've got by there with whatever, I'll get by here with whatever the day brings, whatever it brings. <…> Oh, there it is. Nothing's the matter with a good meal now and again. Oh. Yes. [pauses] She's actually very slim there compared to right now. She's a little bigger right now than when she was there. So these two are two with what I would say need to watch what they're eating. This one [unclear]. Would you please eat more? [pauses] Had huge iron issues and is a 4.16 GPA who doesn't read. [laughs]
>
> MK: So I'm getting a sense that you as a coach, you can look at an athlete and see how their body is going to impact performance.
>
> Coach L: Yeah.

Following this exchange, Coach L explained that basketball players, unlike track and field athletes, for example, are "not ectomorphic <…> but we're longer and leaner". About one athlete that the coach deemed especially successful in the sport, he said, "She is a fit, fit athlete with what you think an athletic body should look like." Coach L concluded that "there's no perfect body" and athletes "can get by in a lot of variety of

ways". He then clarified that "in basketball, you don't have football fat bodies. You can't get by— if you can't run the floor." At the same time, he explained that basketball players, unlike runners or wrestlers, are unlikely to seek dramatic weight loss and experience a drop in performance as a result. Coach L said that a bigger challenge for basketball players was "maintaining our strength through the season" and doing sufficient training in the weight room, rather than weight management.

Although many features of an athlete's body are predetermined and unchangeable, body weight can potentially be manipulated or controlled. For women athletes, especially, this means a drive for leanness and the cultivation of a lean body ideal (Petrie & Greenleaf, 2012). Citing the classic work on eating disorders for sport practitioners by Thompson and Sherman (2010), Petrie and Greenleaf (2012) conclude: "Unfortunately, many coaches and many athletes/performers themselves, believe that a direct, and even magical, connection exists between weight change and improved performance" (p. 650).

When asked about athletic body ideals, my athlete participants emphasized that there is no single ideal body in sport, although one may exist in the popular imagination. Many participants pointed out that the shapes of athletic bodies vary depending on sport and that different sports favour specific kinds of athletic bodies. This was consistent with the idea of sport-specific specialization based on bodily appearances and "types", which Lenskyj (2013) describes as a recent phenomenon and one that can shape athletes' self-perception, as well as embodiment in sport (p. 20). For example, athlete participants described slim body ideals in track and field (particularly, in middle- and long-distance running) and swimming. At the same time, it was clear that idealized body shapes and attributes differed even across leanness- or weight-focused sports. For example, one of the swimmers I interviewed described having broader shoulders as a common feature and a performance advantage in her sport (while also describing it as a disadvantage when dressing for social occasions). Wrestlers, on the other hand, described an idealized body that reads as powerful and "tough" (bearing the marks of this sport), and yet compliant and disciplined when it comes to "cutting weight" for competition. Although neither of the basketball players that I interviewed described idealized bodies in terms of

appearance, both spoke at length about athletes needing to have good "fitness"[11] and energy. Athletes described these qualities as key to sporting performance and, notably, as attributes that can be shaped through food and eating. Several participants said that these "ideal bodies" are personified by elite athletes in their sport and that some athletes may compare their bodies to these ideals in their quest to be better at their sport. At other times, athletes may compare their bodies to their teammates, with some bodies "fitting in" with the team more than others. As Coach S explained:

> There's certainly… more of a body type that one would expect as a volleyball player. Probably tall and lean, right? But you certainly see a variety. Because there are certain specialized positions where you can be a little bit smaller. But. I think I think there's a little bit of— that— kind of wanting to— be like your teammates or look, you know, *to not be the one that doesn't fit in*. You know, so I would say that there would be some pressure probably around that. [my emphasis]

The construction of the ideal athletic body often happens in relation to others—most significantly, athletes' teammates and coaches. What others in sport communicate explicitly or implicitly about athletes' appearance contributes shaping this ideal. Institutional norms and practices in sport (such as sex testing, the exclusion of non-conforming bodies from competition, and persistent racist stereotypes) reinforce the idea that, for women especially, idealized athletic bodies must conform to white, middle-class, heteronormative norms (Lenskyj, 2013). As I show in the discussion on women athletes and health below, sporting cultures make the attainment of an idealized body the responsibility of the individual (Dworkin & Wachs, 2009). At the same time, they disregard the social inequalities (including those inequalities that sport institutions themselves perpetuate) that become manifested on these individuals' bodies (Fausto-Sterling, 2000). Despite sporting cultures' emphasis on athletic performance, it is not the highest performing bodies that are valued, but only those performing bodies that fit the prevailing bodily ideals.

Several athletes pointed out that a focus on a particular body shape or bodyweight can be problematic for athletes, especially for women and girls. Yet even for those participants who disagreed with the notion of the athletic body ideal or even saw it

[11] As I discuss in Section 5.1, "fitness" in this context appears to be connected to the image of a leaner body, similarly to the use of the term described in media coverage of swimmers' bodies by McMahon et al. (2017).

as harmful, the idea of athletic success had an idealized embodied representation. The idealization of certain bodily characteristics, especially those representing leanness, appears to be endemic in sport. During an interview with one of the track and field athletes, when we talked about the different kinds of athletic bodies, the athlete observed: “I think that it's hard as distance runners, because instantly what came to my mind as a distance runner was the word ’skinny’. Like you just think they're skinny and they're thin and that if you are not thin, then maybe you don’t— then you don't look like a distance runner.” (Anonymous 2, Track and field). Similarly, the swimmers that I interviewed discussed how “extra weight” prevents athletes’ bodies from being streamlined and does not allow them to pull themselves through the water efficiently. The athletic body ideal that athlete participants described or alluded to was reminiscent of the “unrealistic ideal body” described by Krane et al. (2001) in their study of women athletes and exercisers. This body was both toned or moderately muscular and had “minimal fat” (p. 17).

The paradox of this ideal body, one that is both lean and strong, is that it drives the athlete to success while remaining controllable. In this, it becomes linked to the contradictory notions of “fuelling well” while staying slim or chronically restricting food intake while avoiding the negative health effects of this restriction. Perpetuated by sporting cultures, this tension feeds the unattainable ideal of the very lean and exceptionally powerful body, one attained through discipline and careful dietary manipulation. Few of the women interviewed felt that their male counterparts experience similar pressures around bodyweight and appearance—or scrutiny over their eating habits. While acknowledging that men in sport have a complex relationship with their bodies, my participants often emphasized how appearance standards for men in sport are different from those experienced by women. Participants generally attributed this to physiological differences (several athletes I interviewed expressed puzzlement over how men can seemingly eat more without gaining “excess” weight), with very few noting the very different ways in which women’s and men’s bodies are looked at and assessed, both within and outside of sport (Dworkin & Wachs, 2009; Petrie & Greenleaf, 2012).

3.2. Bulking up: The weight room as an antithesis of femininity

Another major tension that women athletes experience is the conflicting expectation of muscularity and strength on the one hand and femininity and fragility on the other (Dowling, 2000). The manner in which this tension emerged in my interviews, however, surprised me. Having grown up in an environment where strength training for women was considered unhealthy or masculinizing, I thought I had witnessed a cultural shift where weight training became more accessible to women and was no longer seen as unfeminine. This was perhaps where my personal bias came into play: as an athlete, I spend a lot of time in the weight room and strongly believe in the health and performance benefits of weightlifting. My inner circle of like-minded athletes and coaches clearly does not represent the larger population, and so I was taken by surprise when, in interview after interview, my participants mentioned how some women athletes avoiding the weight room for fear of "bulking up". TM, a swimmer, observed: "I know a lot of girls will just not want to get into weightlifting for, like, a fear that they will start to look like a man. So it's kind of sad I think." This anxiety over perceived masculinization is reflective of heteronormative body ideals both within and outside of sport. It is echoed in the remark by the basketball coach that some of the team's athletes sought to avoid weight training. In fact, Coach L saw it as a bigger concern in athletes than eating: "I think we've had some eating issues [on the team], but more pronounced [were] 'I don't want to get too big and muscular' issues than eating issues."

Strength and conditioning training is part of a standard athlete's regimen. However, one of the track and field athletes (Anonymous 1), explained that some runners on the team were reluctant to lift heavy weights, and "there is space for them to basically lift less. Nobody forces them." She added: "I personally love going in the gym and lifting heavy. <…> It's never made me big." In the words of another track and field athlete, "There's a lot of different ideas about [weight training]. Like, a lot of girls still are paralyzed with the idea of, like, I don't want to bulk up by weight training. But I don't know. Most of us do weights and most of us benefit really greatly from it because we're

doing enough running on the side to obviously not bulk up and we're not consuming large— protein— like weight gainers[12] to bulk up." (Anonymous 2, Track and field).

What is notable here is the athletes' emphasis on how weight training does not make women "big" or "bulky" while improving sports performance. This implies that bulking up, even to improve one's athleticism, is undesirable for women. Here, I see a conflict between two sets of expectations: athletic performance and hetero-patriarchal gendered ideals, where "bulkiness", or increased body and muscle mass, are associated with masculinity and are therefore antithetical to being a woman. For example, TM, a swimmer, described how during the part of the training season when athletes on the team lift heavier weights, "I was looking at myself in the mirror and I was, like, I'm looking massive, like my biceps are massive [emphatically], just incredibly, kind of, like, *manly almost* [my emphasis]. But it all helps, you know. You have to be super strong if you want to swim [well]— It kind of gets frustrating <…> like [I'm] pretty manly, I've got pretty huge arms or legs, you know, but it helps me swim faster." This is another example of how the pursuit of leanness in sport, although often portrayed in terms of athletic performance, has a strong gendered component. As Dworkin & Wachs (2009) write in *Body Panic*, so-called "natural gender difference" is in fact carefully fashioned through bodily practices and presentations of the body. "Physical size and sexuality were two key areas in which men and women were exhorted to work to achieve their 'true' natures." (p. 161)

In fact, as TM's story illustrates, the avoidance of "bulking up" and the presumed masculinizing effects of heavy strength training run in direct opposition to the pursuit of athletic performance. Just as women athletes are repeatedly shown that they would never be as athletically capable as men, they are at the same time cautioned against getting too strong and powerful. The experience of another athlete participant vividly illustrates this contrast. Kristie described her experiences in the weight room after joining the football team:

> And for me, training with the guys, I also feel like because I am like I'm lifting with the linebackers and others… And I'm getting so much stronger because they're pushing me to… it's cool to see how much I've improved. Being with those guys, looking up to them and wanting to become stronger

[12] Here, the athlete refers to the practice of consuming protein supplements or protein-carbohydrate supplements ("weight gainers") with the goal of increasing muscle mass.

> compared to what I was like just lifting on the track team… Like I felt like I wasn't pushing myself to my max. (Kristie, Football)

While Coach L bemoans the “issues around girls not wanting to push themselves in the weight room”, Kristie’s story demonstrates that some sporting cultures have strong disincentives for women to push themselves in the weight room. The weight room becomes the site where gendered power relations play out “in a multiplicity of ways to structure the limits and opportunities of bodies” (Dworkin & Wachs, 2009, p. 24).

In popular culture, women’s health and fitness are equated with the slim body, often unattainably so (Dworkin & Wachs, 2009). In sport, women face an even deeper conundrum. Their bodies are expected to fit in with social gender ideals wherein being a woman is equated with thinness. At the same time, their pursuit of sport requires women athletes to embody qualities like strength, size, and muscularity that are perceived as un-feminine. In fact, some athletes may adopt exaggerated displays of femininity as if to compensate for the perceived effects of sport participation (see Daniels, 2009). A less visible, but arguably more impactful way in which women athletes perform gender is by avoiding those training and eating practices that may compromise the appearance of femininity. As Dworkin (2001) writes, “When using the naked eye, it appears that absolute, biological difference between women and men is the sole culprit in explaining the bodies we see. What is left out of this equation is women’s conscious negotiation with a historically produced upper limit on strength and size.” (p. 345).

3.3. Appearance versus performance

Just like the unattainable fit white, heteronormative body ideal for women (Dworkin & Wachs, 2009), the myth of the perfect athletic body shifts the focus from doing (athletic performance) to being (looking fit). The way in which ideal athletic bodies are described illustrates this emphasis on appearance over performance. While discussing her experience on a different team, outside the university where the interviews took place, a track and field athlete talked about the comments that the team’s coach made to women athletes:

> …he would say things like, ‘Oh, if you want to run faster, like you need to lose like 10 pounds, you need to lose some weight.’ ‘Oh, our girls don't necessarily have cross-country bodies. We don't look like cross-country runners. And so that's why we're not running these certain times.’ And just

> little things about little comments like we should be less concerned where we're gonna be finding food, what restaurant we're going to and more about running a good race, just little things like these snide comments about food that kind of set everyone to not feel good about themselves. Previously, I know the seniors would say, how the coach at this university was like, '*Oh, if you looked like this athlete, then maybe you would be running faster.*' [my emphasis] And like was referring to the way skinnier, slimmer, different body type athletes. (Anonymous 2, Track and field)

Coach L similarly suggested that there is a link between the appearance of athletic bodies and their ability to perform specific roles in the game. Although the coach had explicitly stated that there was no such thing as the perfect body, his use of a visual aid (a team poster) to describe athletes' physical characteristics in response to a question about differences in athletes, suggests a strong perceived link between athletic appearance and performance.

In their description of the recent shift in media portrayals of sporting women, Heywood (2018) argues that "athletic performance, in the case of athletes is a large part of their physical appearance. <…> Physical appearance and athletic performance are not opposed to each other but completely intertwined." (p. 469) Where this link becomes problematic is when appearance becomes a stand-in for performance—or a shortcut to performance, one subject to discipline and control. In addition to conflating the diversity of athletic bodies into a unified (and unreachable) ideal, not unlike the idealized fit body in popular culture, the perfect athletic body "is paradoxically presumed to be natural and the result of individual effort. Failure to properly invest in the body is viewed as a failure to make the most of the natural. In other words, underneath it all, a 'natural' exists, and bodies must work hard to maximize the 'natural' while minimizing other unnatural manifestations" (Dworkin & Wachs, 2009, 177).

The athletic body is technologically mediated (Butryn, 2003) and is not as easily shaped as sporting cultures and sport science would make us believe. Bodies will respond differently to similar inputs, and athletes' lived experience introduces a complexity that sporting cultures are clearly uncomfortable with. As Pape (2019) writes, "the body can be understood as both the product of expertise and the *unruly material* that aspiring experts must contend with to lay claim to epistemological ascendancy" (p. 5, my emphasis). Both coaches and athletes talked about the difficulty of controlling the athletic body through food, training, or behavioural interventions. As I show in the

next sections, these attempts to control the body are at the centre of eating practices and discourses where dietary restraint and discipline become conflated with health.

Chapter 4.

What the discourse of fuelling conceals: Eating restriction and disordered eating in sport

4.1. Technologies of leanness and weight loss

In my interviews, athletes rarely mentioned weight loss for aesthetic purposes: in fact, dieting—especially dieting in pursuit of a slim appearance—was one of the biggest silences in these conversations. This is surprising given the pervasiveness of dieting for women in western culture and the emphasis on closely managing one's body and body weight in sport. When athletes did speak about dieting or eating restriction, most times it was to emphasize what they would *not* do: "I wouldn't say I'm on a diet. It's just how I eat. I just know what I need to eat." (Anonymous, Basketball) The same athlete described how her team had specific food rules, which included avoiding "rich" or "white" sauces (i.e., sauces high in fat), chips, candy, and other foods deemed unhealthy. This athlete briefly mentioned some foods that were encouraged, such as the practice of eating pasta with meat or grilled chicken before a game and spending food allowance when travelling on "nutritious snacks". She also described how these eating practices were encouraged by both coaches and other athletes on the team. Eating rules are "never strictly enforced. It's [pauses] like your teammates kind of hold you all accountable." Later, this participant gave an example of how new athletes were introduced to the team's eating practices:

> "So we always have like our rookies [ask], 'Is it okay if I get this?' 'Yeah, yeah, that's fine.' Like if you get— I don't know— something [that] could come with fries versus like, you know, a salad option, well we're gonna get the salad option <…> you just start to learn it— you see what other people are ordering. Everyone's always asking like, 'Oh, what are you getting?' <…> But I think it's a good thing that we're, like, checking in, because you don't want to be that person— that people'd be like, "Oh— why did you order that?" (Anonymous, Basketball).

The declared goal of these eating practices was to improve or retain athletic fitness, which the basketball player described as the ability to last through a game or have sufficient energy. Yet, it was uncanny how foods typically perceived as "fattening" became conflated with foods that could detract from fitness and athletic performance.

Instead, it was as if athletes' bodily appearance ("managed" by a careful choice of foods) could be read as an indicator of their athletic performance.

Many of the athletes I interviewed discussed the benefits of increased muscle and strength, and yet the idea of leanness as desirable for performance ran as a strong undercurrent, especially in conversations with athletes competing in swimming and running—both sports characterized by an emphasis on a body that is lean and light. MC, a swimmer, verbalized this expectation of leanness and low body weight when she said:

> …in pretty much all sports, your body size and weight is very important. And so I think there's a pressure from, you know, the environment you're in to fit the image and also do your best, but then also from within because you want to get better [at your sport]. I guess there's a lot of that surrounding sport just innately, like that's just the way it is.

She added that, "if you take on that pressure in a negative way, you know, you can go down the bad, bad path of an eating disorder or just a bad mindset". The reference to an athlete's mindset is notable here, especially as some other athlete participants mentioned it in connection to athletic performance, as well as food and eating. For example, a track and field athlete described a mindset that she viewed as problematic in some of her peers who may be drawn to equate leanness with performance:

> they see [that] the top athletes on our team are small, skinny, and lean, and they're having so much success. So they look at them and say, "Wow, do I need to look like that to have success? And, like, even though they've hurt their bodies in the process and they've suffered through like an eating disorder. Is that what it takes to be fast?" <…> They know that it's not the step to take, but they also are questioning, "Is that what it takes to be a good athlete?" (Anonymous 1, Track & field).

When weight loss becomes linked to performance, the idea of food as a sporting technology (with its connotations of increased strength, performance, high energy, and health) in a surprising sleight of hand makes "fuelling" strategies stand in for dieting, frailty, and eating restraint. This turns the discourse about food as fuel in sporting cultures into a perverse (and confusing!) Mobius strip[13]. The athlete starts at fuelling in pursuit of performance, which is inextricably linked to leanness and weight loss, and

[13] The Mobius strip metaphor is taken from Elizabeth Grosz' *Volatile bodies*: *Toward a corporeal feminism.* Grosz (1994) conceptualizes the mind and the body as parts of a Mobius strip, where one can travel from the "outside" to the "inside" without leaving the surface.

then, fantastically, circles around to fuelling as an antidote to dieting. This is one of the many tensions with which women athletes must grapple.

4.2. Fuelling to counter dieting and eating restraint

As I described above, one of the biggest silences in athletes' discussion of food and eating was eating restraint and dieting. It was as if the subject was taboo, despite the implicit focus on leanness both in sport and, more broadly, for women in western culture. Instead, the explicit message of sporting cultures that all participants reiterated was that athletes need to "fuel well" and eat enough to compensate for their intensive training. In this discourse, the notion of food as fuel serves the purpose of countering the culture of eating restraint and discipline in sport. Athletes are encouraged to "fuel" so that they eat enough to compensate for the demands of athletic training and avoid negative consequences to their athletic performance and health. Correspondingly, most athletes defined "fuelling their bodies" as eating enough or not under-eating, especially when training hard.

> "No one on our team is judged for eating too much. You would almost be like, you know, like, are you eating? It would be almost the reverse. Like, are you eating enough?" (Coach S, Volleyball)

In fact, when athletes discussed food amounts, it was usually to emphasize the increased quantity of food they consumed:

> it's important to actually eat, you know, and a lot of times I find… I almost have to force myself to eat sometimes. <…> but I think it's always important to like eat, to recover and eat to fuel. Eating is really important. You know, probably, like, almost like training itself because you have to make sure that your body's, like, fuelled. Or else you can't train as well. (TM, Swimming)

Several athletes pointed out that fuelling should ideally be done using healthy foods. The inverse of eating the "right" foods for health and performance, therefore, is avoiding the "wrong" foods ("junk food" or "empty calories"), an approach that can easily translate into eating restriction under the guise of health and sport performance, which I will address in the following chapter.

When I asked athlete participants about the cultural expectation that women need to stay slim, a common response was that dieting or meeting cultural expectations of slimness were not a particular concern for athletes. Or, as one participant put it:

> People in the sport, they always know you're going to want more food. There's not like "be slim", it's like "eat" [laughs]. 'Cause if you're not doing sport, you have to, like, be careful... I mean, you still have to be very careful with eating tons of carbs unless you're in a sport that's not too much... If it's not a sport where you're just standing around. (Erica, basketball)

In other words, athletes can eat more than other women because they are active; however, the type and the amount of activity determine how much one can eat. In fact, athletes described dynamically adjusting their eating practices depending on their activity levels and performance goals. When Kristie was training on the track team, she says, “I had a more stricter diet just because you have to be quick and fast, so you have to eat less and more healthy foods.” (Kristie, Football)

This compensatory function of food, where increased exercise made it possible for athletes to generally eat more, was something that athletes mentioned frequently. In fact, it was as if eating more than their non-athletic female peers was part of one’s athletic identity. Yet, some interviews indicated that food consumption for women athletes may be more complicated than a simple “energy in” vs. “energy out” equation. For example, TM, a swimmer, said that one reason she enjoys her sport is that the heavy training allows her to consume food without restraining herself:

> I feel like the reason I like to swim, one of the main reasons is because it allows me to eat kind of a lot, you know, like I never have to necessarily, like, restrict because we swim so much and it burns so many calories. So I feel like that's a big part of also why I like swimming…

Athletes spoke about eating large amounts of food as an acceptable and even encouraged practice. Meanwhile, eating too little, dieting, or deliberately restraining one’s eating were described as behaviours to be avoided, if they were mentioned at all. The only exception to this were my conversations with wrestlers. In wrestling, “cutting weight”, or the practice of rapid weight loss ahead of a competition to compete in a desired weight class, is common and is also deeply entrenched in the sport’s culture. Rapid weight loss is typically achieved by restricting food and fluids. Unlike chronic

dieting, restriction in wrestling is occasional, albeit considerable.[14] According to one of the wrestlers I interviewed:

> Everyone does it differently. I think it— it depends on how much you're cutting and how much— Like how you want to do it. So mostly you'll restrict your calorie intake a lot and eat— Yeah, like honestly, it's restricting your calorie intake for maybe weeks out or depending on how much you need to lose, like a week or a month. And then the week of the competition, you start cutting your water weight and losing the water weight, so, you know, stay hydrated, stay hydrated and then like one or two days out, you start throwing on your sweats, throwing on like your sauna suit and just trying to sweat out all the [weight]. (Anonymous, Wrestling)

The two wrestlers that I interviewed were also the only athletes to describe body weight and body shape in terms of specific numbers: the pounds or kilograms of bodyweight that they gained, lost, or tried to maintain. While other athletes shared stories of their peers being weighed by coaches (on other teams, outside the university where the interviews took place), discussions of athletes weighing themselves or mentions of specific body weight were another subject on which the interviews were largely silent. This does not mean that athletes do not measure or discuss body weight. The university women's changing room that athletes share with other users of the fitness facilities, is equipped with body weight scales at one of the entrances, and I often observed athletes weighing themselves, either individually or in groups. While I was unable to overhear conversations among athletes during these moments (and would also be unable to report on them in this thesis), the observation suggests that talking about body weight, as well as weight gain and loss, is part of athletes' experiences. It may be that silences around bodyweight, eating restraint, and disordered eating reflect a sense of shame and secrecy, where weight management and dieting are part of women athletes' realities but are also taboo subjects, at least when talking with a researcher who is not part of their peer group or their sporting culture.

4.3. Silences around disordered eating in sport

As I mentioned above, I deliberately omitted questions about disordered eating in the interviews. The purpose of doing this was to give my participants a choice to

[14] Rapid weight loss, common in wrestling and other weight class-based sports, has been associated with short-term and long-term health risks. For a discussion of health consequences of rapid weight loss, see Khodaee et al. (2015).

include or exclude this subject from the conversation. I wanted to be sensitive to the subject of disordered eating being difficult for some participants. At the same time, I wanted to open the possibility for conversations about food in sport that did not centre on eating disorders as the defining characteristic of women athletes' relationship with food: an approach that is common in literature on the subject but which I see as limiting of athletes' breadth of experiences. If I had asked specific questions about dieting and disordered eating, this would have also steered the conversation toward a dualistic notion of eating as "healthy" (in the absence of eating disorders) or "unhealthy" and in need of "fixing". Most importantly, this would have prevented me from exploring the complexity of women athletes' relationship with food.

I was nonetheless surprised by the empty space that emerged around the subject of eating disorders in my interviews with both athletes and coaches. This emptiness was especially conspicuous because, at the start of the interviews, many of my participants appeared to have the assumption that eating disorders would be a key theme of my research. Yet, when participants volunteered stories of eating disorders or behaviours associated with disordered eating, they often described these stories as exceptional—as existing outside their immediate circle or at least outside their current experiences. In all conversations about disordered eating, there was a semblance of a distance between the athlete and what they described.

Some athletes suggested that there was something in sporting cultures that encouraged a complicated relationship with food in athletes, especially in endurance and weight class-based sports. When I asked one of the athletes on the track and field team about her experience with food, she first noted that eating disorders or body image issues were not very common in her particular athletic discipline (reflective of the distancing that I described earlier). She went on to explain that, more generally, among runners:

> there's a prevalence of eating disorders and, like, a negative relationship [with food]. And I feel like the older I get and the more I'm involved with the sport, the more I see it. And I was kind of blinded before and didn't realize how much it was a part of the sport. But then you learn to pick up on little signs in your friends and your teammates and see patterns. (Anonymous 1, Track and field)

When I asked her to explain, she elaborated:

> One thing I noticed is like a mood change. So I've had a few friends who have struggled with it. And they— Because they're not fuelling properly, their blood sugar is low, they're irritable, they cry easily, they're easily upset, they're sensitive. And that's one thing I notice. <…> I notice when people are like that constantly, that they're not fuelling themselves enough. And then injuries start showing up, like, bone-related injuries [and] their body is just not able to repair themselves because they're not fuelling themselves properly. When you're on team dinners, people are uncomfortable ordering food or they order something weird and they're self-conscious or they won't eat publicly and that's how [I] pick [up] on the changes. <…> *But it's like they want to eat the least amounts possible, but also to be able to like still fuel themselves.* [my emphasis]. (Anonymous 1, Track and field)

What I found interesting was the frequency with which this athlete mentioned the word "fuel", using it as antithesis to restriction or disordered eating. What she seemed to describe is a contradictory ideal of an athlete who fuels herself while eating as little as possible. This idea, along with the instrumental view of food, permeated many of my interviews. Another thing worth noting in the passage above is how the conversation briefly turns to disordered eating and then, just as quickly, returns to the idea (or the ideal) of fuelling.

This shift in focus from eating disorders and restriction to fuelling for sport and health happened frequently in interviews. Most interviews with athletes painted a picture of a sporting culture that had apparently moved past the assumption that being an athlete required eating restraint or discipline. Eating disorders or dieting were clearly undesirable and thought to have a negative impact on sport performance. This stood in stark contrast to the casual conversations I had with friends and peers who had been athletes in the 1980s or 1990s. Many of these friends shared stories of disordered eating, indicating that the culture of sport at that time made eating restraint and amenorrhea (the two of the three symptoms of the Triad) nearly inevitable for a competitive woman athlete. In fact, I remember my experience of being asked, two years into my training as a track and field athlete, whether "I had already lost my periods," as if amenorrhea was a rite of passage that would allow me to call myself a "real athlete".

The silences around disordered eating, weight loss, and eating restraint in my interviews could also reflect the intensity of training and competition that athletes experienced on their teams at this university. For example, Coach S suggested that "elite athletes" at more competitive levels of sport may aspire to a higher level of

leanness (and, by extension, be at higher risk of disordered eating and amenorrhea) than university-level athletes. MC, a swimmer who described herself as someone with a healthy relationship with food said: “I count myself as very lucky for always having a healthy relationship and positive mindset with food and what I'm eating. And I attribute a lot of that to my mom and my environment coaching growing up.” And yet, at another point in the interview, she said: “It's still difficult. I struggle with it sometimes. I feel hungry and still think, oh I shouldn't eat though… I’ve already had dinner.” MC adds that this form of thinking about food was relatively new to her. According to her, when she was a high school athlete, MC did not contemplate whether she should eat when she felt hungry: “I wouldn't even think about it.” A possible explanation for this is that athletes may experience more pressure to restrain their eating as training intensity and pressure to compete increase. Eating restraint also becomes more likely as girls move into adolescence and young adulthood. For women athletes the hetero-patriarchal ideal of the slim, feminine body is compounded by the changes their bodies experience in adolescence, with the perceived “dip” in girls’ athletic performance, or rather a divergence between girls’ and boys’ performance around the onset of puberty.[15] This is especially evident in sports like running and swimming (Wohlgemuth et al., 2021), which also—perhaps unsurprisingly—see a higher drive for leanness among women.

At face value, my interviews with athletes and coaches suggest that we are in a new era in women’s sport, a more health-promoting and empowering one. And yet, the language my participants used to talk about athletes’ eating practices and athletes’ *idealized* relationship to food contained vast silences. These silences obscured major tensions inherent in female athletes’ relationship with food and their bodies. They may also point to a shift in sporting cultures away from the normalization of eating restraint and the ideal of low body weight in athletes. An exchange with the volleyball coach certainly suggests a change in the way coaches approach eating in athletes:

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[15] Medical and sport science literature attributes this difference between sporting women and men to circulating testosterone levels. In fact, the article by Wohlgemuth et al. (2021) cited here begins with the phrase, “It is well known that men's athletic performance exceeds that of women” (p. 68). While it is not the purpose of this thesis to address this assumption of sex difference in athletic performance, it is worth pointing out that the assumption of women’s “lesser” capacity for athletic performance, the division of athletes into two distinct categories of male and female, as well as the performance advantages presumed to be accorded by endogenous testosterone have been challenged by researchers (see, for example, Kane, 1995; Fausto-Sterling, 2000; Karkazis et al., 2012)

> Coach S: Having gone through university where we had some disordered eating on the team is to try to, like, not get that started to be a thing here. So, you know, I've heard stories of my assistant coach when she was in college. <…> And you're just like, OK. Like, how does that not just, like, scar people? So, yeah, that just seems like insane to me.
>
> MK: So how do you prevent that?
>
> Coach S: Right. And that's the thing. I don't— even though it's like a balance of… talk. And I think that's why people talk about food, food as fuel, as coaches because it's a *safe zone*. [my emphasis] Because that's true. Like where your body is, your athletic tool. And if the food is the fuel, then you can talk about that in that aspect versus necessarily getting into "Well, this is bad. Food's gonna make you fat." Right? …that's a different— maybe because then that's into what your body looks like versus what you're how you can perform. And so I think that's why there's so much talk about how how we're fuelling for performance, because that puts out or kind of stays away of getting to body image issues.

Coach S suggests that the idea of food as fuel can help redefine athletes' relationship with food by moving the focus away from labelling foods as "good" or "bad", "healthy" or "fattening". The way in which many of my athlete participants employed the term "fuel" shows that they, too, associate this term with a more positive and less restriction-oriented relationship with food. At the same time, conceptualizing food as fuel can go hand-in hand with the view of the athletic body as the "tool" of athletic performance, to use Coach S's analogy. This has two implications: first, that the athlete can all too easily find themselves reduced to their body, and because this body is seen as an instrument or a machine, it also creates a distance between the athlete and their body. Secondly, it suggests that an athlete's appearance, health, and performance can be directly controlled, and that this control can, at least in part, occur through food.

Chapter 5.

Food as health in athletes

5.1. Maintaining thinness while fuelling for athleticism

One of the key tensions experienced by women in sport is that between needing to eat sufficiently, or "fuel enough", while staying within specific (but often unspecified) parameters of bodyweight, size, and athletic appearance. In their feminist analysis of Relative Energy Deficiency in Sport (RED-S) and women athletes' embodied experiences, Thorpe and Clarke (2020) noted that, for the athletes they studied, "despite physical indicators that they may not be fuelling adequately for their training, this physiological feedback was in tension with the desire and perceived need for leanness." (p. 9) While being especially prominent in sports that emphasize a lean body, this tension permeates the culture of sport at large. For example, Coach L pointed out that some of the athletes on the women's basketball team were lacking energy, which he attributed to under-fuelling. At the same time, however, he repeatedly spoke about weight gain or perceived excess bodyweight in athletes as a problem.

> In most cases, I would say we have two eating concerns on our team, from an eating too much standpoint <…> and we have, we have an issue with that end of are you eating enough and— are you eating enough, getting enough iron[16] and that kind of thing.

When discussing conversations with athletes about eating, Coach L explained:

> We have two kids that I think need to watch their weight. And we're careful how we do that, because I think a male commenting on a female's physical piece is a touchy area. And so we try to make sure we are encouraging that you need to be fit. You need to be more fit or your fitness seems to be going a little bit this way.
>
> MK: So when you say that. What do they— How do they understand that?
>
> Coach L: You could ask them. But I think I think they— I think they get they need to be more fit. And I think they get that food might be a concern in that variable. And certainly [when we're] on the road, when they order their meals. We discourage white sauces and different kinds of things. And I

[16] I discuss iron deficiency in more detail in Section 6.1.

> think *the team kind of polices that a little bit*. You know, some of the veterans a little bit. [my emphasis]

What is notable in this conversation is the use of the word “fit” and “fitness” to refer to leanness or lower bodyweight. Imbuing a word that is typically used to describe athletic ability or a state of health (“fit”) with meanings describing an athlete’s appearance or weight is reflective of the tension between appearance and performance for women athletes that I discuss in Chapter 3.

Another tension that athletes across various sports described was that between eating enough and avoiding “underfuelling” while not gaining “excess” bodyweight. For example, TM, a swimmer, says:

> It's eating enough, but not too much. I feel that's my main relationship with food is like I definitely don't want to eat too little. Like, I don't want to not get my iron and not get my stuff in and then pass out and feel dizzy. You know, all this stuff. But I don't— I want to really try and [cut out] eating too much. So that's kind of like where and how I try and lose weight.

The expectation is that athletes find a delicate balance between eating enough and not eating too much. It is not clear, however, how an athlete might achieve that elusive goal. What this normative goal may also conceal is the expectation that an athlete lose weight or maintain a low body weight when required. Coaches will rarely verbalize the expectation, while some may implicitly communicate it to athletes. As TM puts it, “I feel like a lot of times coaches would like tell athletes to lose weight, but they won't really say how.”

The “how” of weight loss that does not cause a decrease in athletic performance is the subject of the following story where one of the wrestlers I interviewed describes a talk delivered to their team by an invited specialist. The athlete describes this conversation as a transformative moment in her relationship with food.

> Athlete: We had like a two-hour conversation with this guy and he heard what we were eating and heard how much we’re restricting our diets and was like, “What are you, people, doing?!” Everyone was talking openly about the stuff that we all do to cut [weight] and everything, and he was just like, “Are you listening to yourselves? You're athletes. You need these things!”
>
> MK: But you’re also athletes who need to cut weight, right?

> Athlete: Yeah, exactly. But the way we could cut weight. It was like he was changing it <…> And then— I'd seen a total cultural change with the girls on the team. And I think that maybe— It's hard. Your parents can't really tell you. I don't think you're gonna see much changes with the coaches, the rules [of the sport]. <…> But having someone make us realize, holy crap, we can change this and we can still, you know, make weight or still sit around our weight and still have a positive relationship with food. If someone could come in and offer that answer, I think that's the biggest [thing]. (Anonymous, Wrestling).

While this story is a powerful illustration of how authority figures in sport can shape and transform athletes' relationship with food, the focus of this athlete's narrative was on how she and her teammates discovered that they were doing something wrong with their eating. Notably, the specialist speaking to athletes seemed unaware of the specific dietary and weight loss practices in wrestling—or the pressures to restrict food intake and to pursue thinness that women in sport routinely experience. When describing what appeared to be the same episode, LM, another interview participant from the wrestling team, called it "a very big, eye-opening <…> experience for a lot of our teammates." She described how the nutrition speaker told athletes that their restrictive eating was harming their bodies instead of helping them. "Imagine how much better you'll be competing if your body's fully fuelled," the speaker concludes in LM's retelling. However, in both renditions of the story, the challenge of meeting athletes' weight goals while "fuelling well" (and, one should hope, maintaining a positive relationship with food) remains unresolved. As she reflected on wrestlers' relationship with food, the wrestler who chose to remain anonymous said:

> It's a love-hate relationship. I think we put a lot of power in food. And *I think there's a really negative culture that we've created ourselves with it* [my emphasis]. I think we've set up this mindset where it's like, OK, for like two weeks, I'm going to cut weight, I'm going to restrict my calorie intake and then I'm going to make weight and I'm going to eat whatever I want and I'm going to like have— be as happy as I want.
>
> And we associate, like, the terribleness of cutting weight, like that negative emotion with the lack of food and then our happiness and relief after a tournament and everything that's paid off, we associate that with more food. So I think we have— we've developed a really, really negative relationship [where] a lot of wrestlers kind of base their happiness on food. (Anonymous, Wrestling)

Here, again, the focus shifts from the sporting environment to the athlete. On the one hand, this focus can empower athletes and create space for agency and resistance,

which I will discuss in a later section. On the other hand, making athletes solely responsible for their relationship with food conceals the powerful and potentially harmful role of sporting cultures in shaping athletes' relationship to food and their bodies as well as the overall hetero-patriarchal culture that rewards girls and women who do not take up physical space.

5.2. Healthism and individual responsibility in sport

When athlete participants described how they managed the challenges of "fuelling well", they often voiced their frustration with not being able to "eat well" or eat for health. In this context, fuelling had less to do with eating enough (a central message for women in sport that I discuss in earlier chapters) and more with the types of foods consumed and healthy eating. In the interviews, my participants often described food and eating practices as either good and desirable (more vegetables, more protein, "carb-loading" before a game, or drinking a carbohydrate drink after a game or practice) or bad and undesirable ("junk foods", emotional eating, consuming sugar and sugary drinks). Some eating practices, such as consuming sugar, which is present in both desserts and sports drinks, fell into both categories. Eating practices for general health (avoiding refined sugars) may, in fact, go against sport nutrition advice, which may call for targeted consumption of sugar. Yet, in their discussion of "healthy eating", athletes rarely described the "goodness" of food as contextual, instead associating it with specific practices and foods.

Attributing moral qualities to specific foods or eating practices is not new (Douglas, 2002). Doing this in women's sport achieves two purposes. The first is that it grants legitimacy to sporting cultures and sporting practices that are fundamentally unhealthy—from athletic training that can cause injuries to eating restraint and weight management efforts that damage athletes' physical and mental health (see Beals & Manore, 2000; Torstveit, Rosenvinge, & Sundot-Borgen, 2007). Indeed, it is not uncommon for me, as an athlete, to hear from non-athletes that I am probably healthier than most individuals because I exercise so much and I am very deliberate about my eating—although, as an athlete, I see these practices as risk factors rather than health-promoting behaviours. The second purpose of "eating for health" in women's sport is that it gives eating practices a veneer of "healthism" (Dworkin & Wachs, 2009). It makes the athlete personally responsible for maintaining good health, shifting the focus away from

the inequalities and injustices within sporting cultures that make attaining the goals of health and performance nearly impossible for athletes, especially women athletes.

5.3. Eating for health as discipline

When athletes described their challenge of “eating well” in sport, they frequently talked about struggling with nutrition skills, such as meal planning, consuming minimally processed foods, or incorporating more vegetables into their diets. Rather than being specific to athletes and sport nutrition, these practices are typically associated with eating for general health and well-being. My participants often discussed eating for health *as* eating for sport performance, conflating the two. For example, LM, a wrestler, described two aspects of eating: fuelling the body as an athlete and healthy eating, which she defined as eating “whole foods, and plants and vegetables”. She linked the two, saying that as an athlete she feels and performs better when she eats healthier foods. LM also described a change in sporting culture, with athletes no longer associating an interest in nutrition with losing weight and dieting (“trying to get skinnier”), focusing instead on eating healthier and fuelling the body. LM sees this as a positive change, saying that she personally became interested in nutrition “because it can make a huge difference in like how we perform and how we feel in general”.

Athletes in my study rarely explained why or how they classified foods into healthy and unhealthy; instead, these classifications were based on taken-for-granted assumptions and beliefs. One of the participants, a basketball player, put it this way:

> I think people understand generally what's healthy and what's not. <…> I think, like, people know: fast food—generally not that good for you. Like healthy salad, dressing, that kind of stuff, probably a better choice. I think there's kind of a common sense there. (Anonymous, Basketball)

The most common healthy eating practices that athletes reported aspiring to included eating vegetables and salad, as well as other minimally processed foods associated with health. Participants contrasted these with foods deemed unhealthy, of which burgers and fries were the more frequent examples. Several athletes emphasized how they can occasionally eat burgers or other “unhealthy foods” without harming their overall nutrition:

> …I tried my best to eat super healthy. And like other people would be going out and eating burgers or all that stuff. And I was [eating] like kale salad, you know? … that part of it kind of sucked. But then, you know, I just… I learned more… to love my body. Like it's OK to have a burger sometimes, [something] fried sometimes, too. Like it's not the only habit, in proportion, and not all the time. And you balance it with other foods." (Kristie, Football)

The symbolic juxtaposition of the burger as the "unhealthy food" and kale as the prototypical "healthy food" was characteristic of athletes' discourse around healthy eating in sport in interviews. Earlier, I described my participants emphasizing how much they eat, as if to counter the assumption that women in sport restrict their eating. Similarly, athletes' stories of eating burgers with friends and practicing what they described as a more balanced approach to food functioned as a counter to the idea that salads and other "diet foods" are the only acceptable and healthy foods.

Athletes mentioned specific foods and nutrients that they try to consume in greater (protein, vegetables, carbs) or lesser quantities (foods with higher fat content, "junk food"). Yet, just like when discussing "fuelling for sport", they did not specify food amounts, with perhaps the exception of an athlete talking about her goal of vegetables taking up "half the plate" or when athletes described food amounts relative to each other (such as eating less sugar or fewer "unhealthy foods"). At the same time, in athletes' descriptions, healthy eating often implied eating restraint. For example, Kristie described her earlier eating both in terms of health and restriction: "with track… I had a more stricter diet just because you have to be quick and fast, so you have to *eat less and more healthy foods*." [my emphasis]

Another thing worth noting is the discrepancy between idealized eating, or what athletes believe they *should* eat, and what athletes actually eat. Several athletes said they followed Instagram accounts focused on healthy or "clean" eating, and many athlete participants expressed frustration with not being able to reach this level of idealized eating to which they aspired. This perceived failure concentrated mostly on the types of foods athletes were not eating (vegetables or other foods associated with health) rather than amounts ("fuelling enough"). The performance of healthy eating to peers and teammates exacerbates the unattainability of healthy eating. In a poignant description of this performance, a wrestler who chose to remain anonymous, recalled how her peer complimented her, saying, "'I never see you eat unhealthy, You're a pretty healthy person,' and I'm like, 'It's because you don't see me unhealthy. I'm up in my room eating

unhealthily.'" Coupled with the implicit association between healthy eating and restriction, eating for health for women in sport is an exercise in athletic discipline. Meanwhile, the allusion to surveillance around eating is a reminder that a lot of "disordered eating" is done alone, while "healthy eating" can be performative.

One of the track and field athletes that I interviewed said that she sometimes thinks about eating and the body "in a very simplistic way". She explained:

> if I eat healthy and I train well— then the process would work. I will perform well, and obviously if I eat like a lot more like healthier foods and stay away from processed foods and stuff, I won't carry as much body fat, and I do— I think about that. I would prefer to carry less body fat and more muscle, to be like, a stronger, more efficient, move faster and stuff. So I think that— my relationship with food is definitely complicated" (Anonymous 2, Track and field).

In athletes' imagination, a woman who "eats healthy" is lean; it is as if healthy eating is an automatic precursor to thinness while, paradoxically, allowing the athlete to consume all the calories she needs to fuel for performance. Healthy eating becomes (an almost magical) determinant of athletic performance and the idealized athletic body, one shaped by disciplined practice.

Chapter 6.

Women athletes' bodies as the site of control and resistance

6.1. Bodies as a site of control

Across the various themes that emerged in the interviews runs a core idea that reflects a pervasive belief in sporting cultures. This idea assumes a direct relationship between eating, athletic performance, and appearance. In other words, how the athlete eats and trains determines how their body will look and perform. Several memorable examples of this come from my interview with Coach L, who linked athletes' behaviour and choices with what he saw as negative health and performance outcomes. While discussing iron deficiency in women athletes on his team,[17] the coach attributed this condition to issues with the athletes' eating, which he described as ranging from vegetarian diets to generally not eating enough. At the same time, Coach L described as problematic athletes' weight gain after transitioning from high school to university, which he called "the freshman five" or "the freshman fifteen". The coach indicated that this "extra weight" impeded athletic performance and that some athletes deliberately worked on reversing their weight gain: "We've had several kids come in and gain a little bit of weight and then watch that weight and get that under control very quickly."

The combined appearance of iron deficiency (portrayed primarily as a food deficiency) and weight gain in this discussion is not surprising. Iron deficiency is common in menstruating women and is especially prevalent in women athletes (McClung, 2012). While dietary choices, such as the amount of red meat consumed, may play a role, it would be overly simplistic to attribute a complex health outcome to a single cause, which, as it happens, is also ostensibly within an athlete's realm of control. Just as with eating disorders, sport participation can be a risk factor for iron deficiency (Sim et al., 2019). It is therefore especially notable how the two intersect in Coach L's

[17] I asked Coach L whether the team regularly tests athletes' iron levels, and he responded, "We don't test regularly, but of course we're going to doctors if needed." He mentioned an athlete who the coaches "encouraged… repeatedly to get an iron test" and another athlete that undergoes regular testing and reports to the head coach with their results.

narrative—and how the athlete is held responsible for both causing and resolving the issue.

When I asked Coach L about what good nutrition looks like for an athlete, he explained:

> Well, I think it's more of an outcome than a process from my perspective, in terms of I want to see a *healthy looking* [my emphasis] athlete with energy every day. If I don't see energy, and I see the ups and downs in energy… And I see I'm— I'm pretty good at weight. Like I can look at her and she's gone for five days and say, oh, you've gained a pound right or you've lost a pound or two. So I think it's it's looking at what I see as opposed to what did you eat today?

While it was not apparent whether male athletes would be subject to the same kind of scrutiny, the expectation of leanness or low body weight here has a specifically gendered component that I examined in my discussion of the ideal athletic body.

This coach's description of having an eye for a "healthy looking" body illustrates a common belief in sport that if an athlete is willing to follow a certain prescription or a set of steps, they will be able to shape—or control—their body as desired. Another assumption is that this control (or lack thereof) will be readily visible to an observer. Importantly, it is others, not the athlete herself, that determine ways of controlling and shaping the body and evaluate compliance as demonstrated by the athlete's performance and appearance. Sporting cultures communicate the message that athletes must make an effort to shape their body in a way that will improve their performance and, ultimately, benefit the sport. While this message ostensibly applies to all athletes, it is clearly gendered, with women in sport expected to exercise more control over their eating and the shape of their bodies (Dworkin & Wachs, 2009). Meanwhile, there is little evidence to suggest that dietary restriction measurably improves athletic performance. On the contrary, considerable evidence indicates that such restriction has a negative impact (see, for example, Logue et al., 2018).

Kristie described a change in her relationship with food as a significant aspect of switching from the track and field to the football team. She pointed out that, once she started to play football, she no longer had to worry about maintaining a certain weight. While Kristie described this as a welcome development, other athlete participants used the example of their male friends in American football to describe how expectations

around eating can also be harmful to men, reporting that these friends complained about feeling like they are forced to eat more. Control over the athletic body is a common element across genders in sport, and the focus of this control can vary from eating restraint to increased food consumption. Both extremes, however, rest on the assumption that an athlete who eats as prescribed will perform better, and the shape of their body will reflect this improved eating and performance. In other words, “good” (i.e., controllable) athletes, look and perform the part, and what constitutes these external attributes of a “good athlete” are largely culturally determined.

Even while my interview participants rarely questioned the responsibility assigned to athletes for controlling and shaping their bodies, several athletes voiced frustration in connection with managing their eating and weight. Wrestlers, for example, discussed the specific rituals and practices that they followed to help them reduce or manipulate their body weight ahead of “weigh-ins”, as well as strategies they used to regain strength and energy after this rapid weight loss to perform well in competition. One wrestler described “cutting” as a tiring experience: “I have to lose weight again. And you're just like— I just don't want to do this. I just can’t— Like, I'm just exhausted by the thought of it.” (Anonymous, Wrestling) Reflecting on what makes her and other athletes “cut weight” despite the negative mental and physical effects of the practice (Khodaee et al., 2015), this athlete explains:

> I think a lot of athletes put the pressure on themselves because it is like that— that shame of the other athletes and that kind of shame inside yourself that you need to be doing it [cutting weight]. And <…> I think sometimes the coaches, like in clubs in high school, they're not supposed to be making you cut, right? *So they're kind of active bystanders in it. So they're not making you but they're like they're not stopping… you.*
>
> But for for university. It almost— The best way I can describe it <…> it's like it's sneaky. It's like no one's making you or telling you. But there's just this like, *culture*, [no one] that's like forcing you into it and… like making that expectation of you, like your coaches saying, “You don't look good at this weight. You're not wrestling well. You’re not strong enough.” [my emphasis] (Anonymous, Wrestling)

One area where control over the athletic body becomes most apparent is the practice of coaches publicly weighing athletes. None of the athletes or coaches I interviewed reported experiencing this at their university. Those that described this

practice said that they witnessed, experienced, or heard of it elsewhere. For example, according to MC, an athlete on the swimming team:

> I have heard of other teams that have had a lot more challenges with their coaches being very harsh on the women, and like one team, for example, the coach would have all the women weigh themselves in front of him and the rest of the team and then tell them to look at the number on the scale and say, "Are you happy with that? Because I'm not."

These stories emerged frequently in the interviews and provided a powerful illustration to how sport links athletes' bodyweight to feelings of shame, making me wonder about what athletes had left unspoken when it comes to how they view their bodies and the weight of these bodies. The interviews made it clear that athletes' relationship with their body weight is complicated, as shown in the following excerpt from a conversation with TM, a swimmer:

> I feel like all sports are kind of like, have to, like watch what you're eating [for] your body type type <…> the coaches, not to me, personally, but coaches will tell you, like you're fat, you need to lose weight and there's like horror stories of other schools or coaches make [athletes] stand on scales <…> I feel it'd be kind of weird to like weigh <…> stand on a scale. My coach, who's a male, you know, just kind of being like that, "the number is too high".
>
> I don't think it's out of line for a coach to say that an athlete is too fat. I think the way they say it should be like very— it shouldn't be like "You are fat". *But it should be more like "You are heavy in the water" because, like, you know, we have to pull ourselves through the water. Right. So it's like if you weigh more, that's more you have to pull.* That's more— you have to be stronger. <…>
>
> So it's like sometimes you have to hear constructive kind of like criticism. And while that is very, very hard to hear. I feel like— it kind of is what you need to hear, you know? [my emphasis]

It is not only coaches but also fellow athletes that can foster a control-oriented relationship with one's body and bodyweight. Coach S described her experience as an athlete on a volleyball team where athletes routinely compared their appearance to that of their peers. "I never once thought about my body image until I was part of that team," Coach S said as she described that team's culture: "it's almost—not like a competition, but it's almost like—oh, I'm this much percent body fat, like, I should— I should be lower. Until you're at the point where you're not having a period."

The theme of control has long been associated with eating disorders, and especially anorexia (Lawrence, 1979). Researchers working with eating disorders have put forward various models for how control manifests itself through eating restraint or body weight management (Surgenor et al., 2002). Sociologists have linked eating disorders and the quest for thinness with gendered and raced bodily ideals, as well as social control of the female body (Dworkin & Wachs, 2009). Meanwhile, sport science is beginning to recognize how sporting cultures, with their drive for athletic performance and lean body ideals, may contribute to eating disorders in athletes (Petrie & Greenleaf, 2012), but it still overlooks how sport-mediated control over the athlete and the athletic body is actively harming athletes.

It was the social standard of thinness rather than the pressures and expectations of sport that Coach L linked to eating restriction in women athletes. Coach L said that social media or wanting to be liked by "boyfriends" drove some women athletes to remain thin, despite being encouraged to "fuel well". He also repeatedly mentioned excess bodyweight as a problem for athletes, noting that some athletes could benefit from losing weight to improve their sport performance. He attributed what he saw as excess bodyweight to poor eating habits and, ultimately, lack of self-control. The following excerpt from the interview with Coach L emphasizes athletes' individual responsibility for body management and sport performance:

> MK: So in your opinion, what would help support athletes in eating healthy and having a healthy relationship with food?
>
> Coach L: Well, I think *committed* athletes do. So what would help— What would help a program is to commit— is to *recruit committed athletes and don't recruit fringe*.
>
> I think— I think the environment they come into is important. So I think that if you have a culture that's pretty good, I think it will— it can continue. I think the individual that comes along. <…> *it's the person who is hiding from the world what they really believe and feel that you've got to worry about. And that's the that's the place where the trouble is.* And I think it's just being observant and recognizing what you see. [my emphasis]

While recognizing the role of the environment or team culture, Coach L emphasized that it takes a particular kind of individual ("committed athletes") to have a healthy relationship with food. This viewpoint is not very dissimilar from the idea found in sport science literature that personality traits may predispose athletes to disordered

eating (Beals & Manore, 2000; Bardone-Cone et al., 2007). Interestingly, some researchers (most notably, Thompson and Sherman, 1999) have suggested that individuals with a propensity toward disordered eating may have the personality characteristics of prototypical "good athletes". This athlete is someone who, in sporting terms, would have good "coachability", someone, in other words, who does what they are told, who follows instructions and achieves desired outcomes. While desirable from a coach's standpoint, this quality—along with other "good athlete" traits, like perfectionism and striving for excellence—can harm the athlete. This creates a curious conundrum: good athletes are those who have a healthy relationship with food, but being a compliant, "coachable" athlete predisposes one to eating disorders and to abusive coaching.

With all their emphasis on performance, sporting cultures create an environment that can easily reduce an athlete to a body that can produce desired (or undesired) performance. Attempts to influence or manipulate this performance by pursuing a training or an eating regimen can be viewed as an act of subduing the uncontrollable body and may result in injuries or eating disorders. These poor outcomes, though very common in sport, are typically seen as an inherently good process (athletic training and nutrition) gone wrong. Manipulating an athlete's training load or schedule, the timing of their meals or the choice of foods, is a common practice, but its rationale is problematic because it hinges on the idea of controlling an individual by moulding and shaping their body in a way desirable to the sport. Embedded in this idea are the notions of control and discipline: by the athlete over their body and by the sport over the athlete. Sporting cultures, like society at large, seek to control, mould, and shape "the unruly body" (Dworkin & Wachs, 2009, p. 38) and this "body surveillance and discipline" are particularly characteristic of high-performance athleticism (Lenskyj, 2013, p. 22).

6.2. Embodied resistance in sport

When I began my research, my primary interest was in ways gendered body ideals are reproduced in sport. I was interested in how the experience of living in women's bodies and being socialized as girls and then women shaped athletes' thoughts and practices around food and eating. As I conducted my research, I became convinced that the idea of "fuelling for performance" does not exist in opposition to the "diet culture" outside of sport. Instead, the two ideas intersect, with the women's athletic

bodies at their centre. Just as sporting cultures shape athletes' experiences of food and ideas about the perfect athletic body, athletes themselves influence sporting discourse and practices around eating, similarly to other ways in which personal agency can enact change on broader social forces (Mills, 1959). In organized sport, where power hierarchies are particularly prominent, it can be especially helpful to shine light onto athletic agency, especially among the more disenfranchised groups of athletes.

This is not to say that athletes do not internalize or reproduce western, hetero-patriarchal norms around eating and women's bodies. Yet, seeing athletes as uncritical of sporting cultures denies athletes their agency and disregards their role in shaping these cultures. This position is also not unlike the paternalistic approach toward athletes exhibited by sporting organizations and sport science, as I describe in earlier chapters. The idea of women athletes' agency and resistance in medicalized contexts, where athletes are typically seen as devoid of power, has been put forward by other researchers. For example, in their investigation of sportswomen with amenorrhea, Thorpe (2016) concludes: "The women in this project diagnosed with amenorrhea demonstrated their agency and resistance to medical knowledges and technologies in a plethora of ways, some of which may not be anticipated by those delivering such advice or utilizing such technologies." (p. 10) Notably, in sport especially this resistance can take on embodied forms, through the different ways in which athletes engage with their bodies and change their physicality. Finally, although this is beyond the scope of this research, one may also want to consider the agency of the body itself, as a biological entity (Frost, 2016), and include non-human[18] forms of agency (Henne, 2019).

Athletes employ a variety of strategies to resist attempts by sport to dictate "acceptable" ways of being in one's body, as well as hegemonic notions of hetero-patriarchal femininity. Some of these practices were articulated by my participants in interviews, while other forms of resistance and agency appeared to be more subtle. One way in which athletes exercised agency was in using self-knowledge and self-exploration to shape their eating practices and their relationship to food. This stands in stark contrast to the authority that sport accords to scientific knowledge and taken-for-granted ideas

[18] These can include, among others, technologies, built environments, and non-human organisms. Feminist technoscience and new materialist approaches to human/non-human entanglements can be particularly interesting in the context of sporting bodies (see Thorpe et al., 2000).

about eating and women's bodies. Several athletes described how they used self-discovery and self-observation to develop eating practices that they felt suited them as individuals instead of relying on "common knowledge" of what comprises good nutrition in sport. Many athletes emphasized that they balanced eating for sport or health with eating for pleasure or social connection, showing that they rejected the idea that an athletic body is merely a machine that needs to be fuelled.[19] Some of the most powerful were the stories of runners, swimmers, and wrestlers: participants in sports where ideas of "weight management" are especially pervasive.

> MK: Do you think it's a goal to not eat unhealthy?
>
> Athlete: Yeah, I think that's what we're all trying to [do]. Because we all have that shame attached to when we eat and worry—
>
> MK: What if you got rid of this shame?
>
> Athlete: That would be amazing (laughs). And I think it's possible. <…> I think I'm slowly starting to get there because I can't eat all the time unhealthy, but having little things that make me happy. Like, for instance, when I was cutting weight, I was like, okay, no juice, no milk, but those are things that I loved. And, you know, if I realized if cutting makes me that miserable <…> So I was like, OK, if I want something like that, I'm going to allow myself to have it. But I just need to, you know, just change a couple of things or not have a huge amount of it. And I started building a way better relationship with food that way.
>
> MK: So it sounds like it's about balance.
>
> Athlete: Yeah. It's honestly it's about balancing and just not like restricting and then purging, I think, was the big deal. (Anonymous, Wrestling)

Athletes also practice resistance by rejecting the idea of the "perfect" athletic body and separating bodily appearance from performance. Several participants provided examples of athletes who performed well in their sport despite not having the "ideal body" for that sport. For example, TM, a swimmer, questioned the idea that an athlete's weight correlates to their performance by describing an athlete on another swimming

[19] In his study of Ethiopian runners, Michael Crawley (2018) notes that in the runners he studied he never encountered the view of the body as a "machine", so common among western scientists and sports commentators. He writes, "In fact when coach Messeret warned about the dangers of overtraining he did so by warning the runners that 'there is no garage for human beings'" (p. 180) indicating that an athletic body is very distinct from a machine, or a car. Crawley also points out that the athletes' expertise in running preceded—and, in fact, made possible—that of the western scientists and "experts" who studied their running and commented on it.

team “who was like one of the best swimmers they ever had. And she was like probably pretty heavy, like maybe one hundred— I don't actually know. But she was like definitely like a double or triple me.” Similarly, Kristie described an athlete against whom she competed in track and field. This athlete was successful in the sport despite not having a body that people typically associate with being a good runner:

> People would say, oh, look, she's going to win. She's got long legs. You can't just assume that, because there's some other factors that come into play… it's how you your body moves… (Kristie, Football)

Reflecting on how some athletes’ bodies may look different from the stereotypical appearance for an athlete in their sport, participants questioned the relationship between an athlete’s appearance and their sporting performance. For example, MC observed:

> …it's a big misconception that you think you can— judge a person's strength or their endurance or their, you know, even mental determination by just looking at them. (MC, swimming)

Some athletes also indicated that body ideals in sport may also be experiencing a change. For example, a track and field athlete talked about “the stigma shifting from not wanting to <…> always be like a stick-thin distance runner who doesn't eat. Same goes with a stick-thin distance runner that doesn't train in the gym…” (Anonymous 2, Track & field).

Reflecting on idealized bodies in popular culture, one of the wrestlers said about “Instagram influencers” with a “tiny waist”, “I will never look like that. And it’s so funny to look at. Yeah, like the— ideal, like that’s what everyone is supposed to look like. But <…> that’s never attainable, period.” (LM, Wrestling). LM went on to describe a photo of a friend, a wrestler on the US national team, pictured with teammates on a beach. “And it’s so funny. <…> Everyone [on the photo] has an athletic body, like, every single one of them. <…> But there is definitely the physical difference between women’s bodies who are athletes and women’s bodies who are not athletes.” Similarly, LM notes that athletes’ bodies differ across sports:

> cross-country runners here look totally different than we [wrestlers] do. I like it. <…> I think everyone’s body is really beautiful. I think the human body is amazing. Like the things we can do and the abilities like that. We can bend our fingers and be strong enough to do something, but then be more detailed with little things. <…> I think it’s amazing, so I actually really love it and I, like, embrace completely. I’m like a big person— you’ve got to be who you are. Be true to yourself and, like, embrace your body

> because— your body is amazing and it can do these amazing things. (LM, Wrestling)

The ways in which these athletes question taken-for-granted ideas in sport create a possibility of bodily diversity in sport. In the words of one of the athletes, the challenges that women athletes experience in their relationship to food and their bodies can be countered by "reminding athletes that every individual body works differently under different conditions, and it looks differently. You know, there's no ideal look for any sport." (MC, swimming).

She continues by saying:

> There's all different kinds of body types. And I hope that people, all athletes, take pride in their body because it shows the result of your hard work. And I hope that you're working towards a body that you feel comfortable and proud to be in.
>
> I hope that, you know, through more education and just like celebrating the difference in the variety in all athletic bodies, particularly female, that people, you know, hopefully don't feel that pressure to conform. <…>
>
> I hope that everybody, you know, learns to be comfortable in who they are and that we celebrate that through sports, you know, we're trying to be the most athletically fit and perform the best that we can and recognize that there are certain steps to get there. (MC, Swimming)

These reflections on body diversity, and pride in shaping the athletic body can read as a celebration of diverse forms of embodiment. On another reading, they can also potentially reinforce the idea that athletes' bodies are within their direct control and are a result of individual effort, an idea that I challenge in my research. Here, it may be helpful to go beyond the dualistic notion of control and resistance and explore how athletes may experience bodily *mastery* that exists beyond the hegemonic power of sporting cultures or idealized self-restraint of the "good athlete". Rather than being mutually exclusive, athletes' resistance can coexist with the idea of control over the athletic body embedded in sporting cultures.

As I point out earlier, for athletes especially, it is just as important to look at non-verbal and embodied forms of resistance. Examples of these include athletes refusing to take part in pervasive sporting practices that they see as unnecessary or harmful. For example, one of the wrestlers that I interviewed discussed how she experimented with competing in different weight classes, including a weight class that did not require her to

do “cutting”, or rapid weight loss. The goal for this wrestler was to discover what worked best for her. Although she described not having to lose weight before competition as being a positive experience, she observed, “I didn't wrestle very well [in that weight class] because I didn’t— I wasn't in the right weight class. So now I'm back down to sixty-five kilos. And I think I think that's where it’s, like, the best.” (Anonymous, Wrestling). She continued by saying that smaller variations between weight classes would be a welcome development in the sport. The way things currently were in the sport, “[i]t’s like you feel trapped, like you feel— well, I'm too weak for this weight class, but I'd have to kill myself to make the next weight class down.”

Similarly, other athletes reflected on ways in which they would like to see changes in sporting cultures toward practices that centre athletes’ well-being. For example, one athlete described what she saw as a positive team culture:

> I think it's one that— doesn't put a shameful eye upon just [for] eating food or, you know— a larger amount of food. <…> just, like, showing each other, like, it's normal to eat. It's normal to want to have ice cream after you run, and it's not a bad thing. It's not a bad thing if you go out for someone's birthday lunch and we all finish our plates of foods at the restaurant because our food is yummy <…> I think that's what a normal culture looks like. <…> just to encourage each other to listen to our bodies and eat when we’re hungry, honestly. And just, like, obviously fuel our bodies well, too— not eat poorly, but I think we all [should] just encourage to be the best we can be— in all realms of our sport.” (Anonymous 2, Track and field).

An even more common example of embodied resistance for women athletes is their very choice of participating in a sport, which can change both their physical bodies and ways in which these bodies are “read” by others. Several of my participants noted how they or their peers at times experienced discomfort at the ways in which their bodies did not fit the cultural standard of femininity. Yet, these participants also expressed confidence and pride in their identity as an athlete, suggesting that women athletes inhabit a space that both challenges gender norms and contains a potential of a post-gender world, as I will argue in the next chapter.

Importantly, athletes’ acts of resistance, both verbalized and non-verbal, provide an important counter-narrative to the dominant discourse of control in sport. As the experiences of many of the athletes that I interviewed reflect, women’s participation in sport can be positive and empowering. Yet, being a woman in sport is also fraught with risks. Social and cultural messaging about what it means to be a woman combine with power imbalances in sport to create a climate with a high degree of compliance and

control (Markula, 2003). Athletes can both internalize and resist this control, sometimes, at the same time. Even more importantly, bodily ideals for women, both in sporting cultures and in western culture at large, are fundamentally racialized as white. As a result, Black women athletes, as well as Indigenous athletes and athletes of colour, experience this control and surveillance in ways that are particularly damaging. With my interview participants, both athletes and coaches, "reading" as white and talking primarily about the experiences of white women athletes, it is difficult to say what form agency and resistance would take for athletes of colour in the context of these university sporting cultures. In fact, having completed my analysis, I wish that I had more proactively included race and class both as categories of analysis and as criteria for inviting participants. In looking to include underrepresented voices in my research, incorporating the voices of athletes whose voices are less frequently heard, would go a long way toward bringing attention to the voices and experiences that, as Mcdonald & Birrell (1999) write, "have been decentered, obscured, and dismissed by hegemonic forces" (p. 295). Nonetheless, I hope that this attempt to bring sporting counter-narratives into focus can open the possibility for alternative ways of thinking about athletes' bodies and athletic agency within the context of power relationships and control in sport.

Chapter 7.

Conclusion: Beyond “food as fuel”

Despite the prevalence of disordered eating among athletes, sports organizations appear to be trying to dissociate themselves from eating disorders and a culture of dieting and eating restraint. The medicalization of athletes’ eating and nutrition allows sporting cultures to distance themselves from the “problem” of eating in sport, while shifting the responsibility for the problem to individual athletes. This is especially apparent with the recent emergence of relative energy deficiency in sport (RED-S), a diagnosis that seeks to identify and address “under-fuelling” in athletes (perpetuated, presumably, by the athletes themselves). A similar tendency to disconnect sport participation from its risks to athletes’ health and relationship to food is visible in the narratives of my research participants. Their emphasis on fuelling the body, a focus on eating for health, and the resonant silences around disordered eating in these interviews demonstrate that for women athletes food becomes a proxy for health and an instrument of control.

The language that athletes and coaches use in talking about food, especially the discourse of “food as fuel”, frame eating and nutrition as a technology used to create performing athletic bodies. Sport and nutrition science explain how athletic bodies work and what training and eating strategies can provide athletes with a competitive advantage. The notion of food as “fuel” and the athletic body as a “machine” holds both a threat and a promise for athletes. On the one hand, it enables sport as an institution to exercise control over sporting participants and can be ultimately dehumanizing to athletes. An instrumental view of an athlete’s body as a “machine” is not new and can contribute to “externalising the responsibility for controlling the body” (Crawley, 2018, p. 180) while prioritizing scientific knowledge over athletes’ embodied self-expertise. In this thesis, I show how sporting cultures use technologies—and the idea of a “mouldable” athletic body—to demand gendered compliance from athletes and exercise control over them in the name of sport performance.

On the other hand, “food as fuel” and “body as a machine” carry within themselves the potential for athletes to exercise their agency through technological self-enhancement. An athlete that fuels is an enhanced, post-human creature, or a cyborg

(Haraway, 1991). Although any human being living in modern-day technocultures is inevitably intertwined with multiple technologies and is, therefore, cyborgified, in my analysis I focus specifically on the athletic cyborg "self" of my participants (Butryn, 2003) to examine athletes' interactions with the technologies of nutrition and athletic training. Athletes' relationship to food reveals that what is typically seen as "natural" is, in fact, socially constructed and is, therefore, political. Conceptualizing athletes as cyborgs interfaced with sporting technologies, ultimately allows me to examine how women athletes, as actors in sporting cultures, and their relationships to food and their bodies "contribute to the fashioning—and refashioning—of power, politics, difference, and inequality" (Henne, 2019, p. 148).

Although my athlete participants habitually framed food as "fuel", they rarely spoke about food as a performance-oriented sport technology. Instead, they discussed how eating well can help them avoid the perceived dangers of "under-fuelling" and be healthier, both of which they saw as important to being "good athletes". A good athlete is imagined as a healthy athlete, full of energy and unaffected by eating disorders, iron deficiency, or other attributes of not being healthy or fit, many of which both athletes and coaches associate with food intake. Just like the medicalization of athletes' relationship with food, instead of creating healthier athletes, healthism in sport individualizes responsibility for health and athletic performance. At the same time, it overlooks the larger sporting environment that pushes athletes toward eating restriction, along with other widespread and commonly accepted sporting practices that negatively impact athletes' health and well-being.

Paradoxically, the healthy athletic body embodies both scientific and magical thinking. In exploring athletes' sources of knowledge about nutrition, sport performance, and health, I show how sporting cultures invoke scientific authority to control women's athletic bodies while discounting athletes' lived experience and self-knowledge as "non-scientific" and, therefore, non-valid. The idea of "fuelling for health" in sport, with the multiple irresolvable tensions it creates for women athletes, makes healthy eating an almost magical precursor to thinness and high energy. Fuelling for performance becomes an exercise in self-control and discipline, one that is inevitably doomed to failure given the tensions inherent in fuelling for performance while maintaining a lean, light, and "healthy" appearance.

Another notion central to the practice of control over athletic bodies is that of the ideal athletic body. In athletes, appearance is often equated with athletic performance (Heywood, 2018), but for women appearance can take precedence over performance. Some sporting cultures prize leanness and low body weight, allegedly, for the athletic advantages they provide. Yet, the emphasis on the lean body can encourage women to participate in practices that are detrimental to their athleticism and are harmful to health and well-being. As an example, many of my participants described how women athletes try to avoid or reduce strength training in the weight room for fear of looking muscular or gaining weight, despite the performance and health advantages of strength training. This indicates that for women in sport the pursuit of the unattainable body can be prioritized over athletic performance, the enjoyment of sport, or even the discovery of one's athletic potential.

In my analysis, I argue that sporting cultures, with their emphasis on control over the athlete, often via self-control by the athlete, create an environment where a "healthy" relationship with food becomes nearly impossible. Sporting cultures prize a particular kind of body and foster the belief that athletes are capable of shaping these bodies through training, discipline, and, importantly, the consumption of (and restraint from) food. The unattainability of this body manifests itself through several key tensions that my athlete participants described in their relationship and experiences with food in sport.

The first of these tensions becomes apparent in the emphasis that sporting cultures place on sport nutrition or eating as a performance technology. Yet, it was not athletes' inability to implement high-level sport nutrition interventions that was at the core of frustrations voiced by both athletes and coaches, but the day-to-day challenges that athletes faced in planning meals, obtaining food that they saw as compatible with their goals, managing food portions, not skipping meals, and dealing with emotional eating. The way in which sporting cultures emphasize science and technology, rather than day-to-day, often mundane, practices, places athletes in a position of constantly trying to meet impossible standards in their eating.

An even bigger contradiction exists in the way sporting cultures approach the amount of food consumed by women in sport. Athletes face the conflicting goal of both "fuelling well", or eating enough food to support their training load, and avoiding weight gain or reducing their bodyweight—and somehow accomplishing this feat without

excessive dietary restraint. The expectation is that women athletes maintain a very delicate balance between being strong and fragile—without the support or structures[20] to make this balancing act possible.

Finally, in a culture where the body is believed to manifest an athlete's performance potential and, perhaps more importantly, an athlete's commitment and discipline, women experience a tension between bodily appearance and sporting performance. Not only are they expected to build a well-performing body (the proverbial "machine" that needs to be fuelled) and maintain an appearance deemed fitting of their sport (the sport-specific body ideal), but women also experience a pressure to be viewed as (heteronormatively) aesthetically pleasing by people outside their sport. The practice of women athletes reducing their food intake (under-fuelling) or avoiding weight training to prevent weight gain or muscle growth are a powerful illustration of the different standard to which women in sport are held.

Being a woman athlete carries with it tensions, encompassing the qualities of being muscular (but not too muscular), strong (but not too strong), and undeniably intelligible (Butler, 2004) as a girl or a woman. The last two tensions are specifically gendered, with the expectation of fragility and thinness being a specific way of "doing gender" (West & Zimmerman, 1987; Schilt & Westbrook, 2009), as well as meeting the standards of white heteronormativity for women athletes. The lean body ideal is imposed on women in sport, where eating (rather than hunger) and the cultivation of a muscular and powerful body (rather than fragility and thinness) are precursors of strong athletic performance. As a result, women athletes are restricted—by the simple fact of being born female—from the very things that can make them more athletic.

The athletes in my study embody these tensions and feelings of unattainability, particularly when it comes to the idealized athletic body and being a "good athlete". These conflicts and contradictions are not accidental and are a key instrument of control over women's sporting bodies. Given the amount of energy that women athletes devote

[20] Some of the eating- and nutrition-related challenges that the athletes in my study described included unaffordability of food, especially nutritious foods like fresh produce, limited food preparation skills (or inability to prepare own food, for athletes living in student residences), limited choice of available or desirable food for athletes on a university meal plan or when travelling with the team, inability to access dieticians or other nutrition specialists for consultations about food intake and nutrition, and the inability to discuss food, body weight, and disordered eating with the coaching staff.

to navigating and attempting to resolve these tensions, these can also be a significant factor holding women back in sport

Being a woman and an athlete is transgressive because the qualities that western culture associates with womanhood and femininity are often at odds with athletic prowess, while the ideal female athletic body—as repeatedly alluded to by my study participants—is unattainable, like the beauty myth described by Naomi Wolf (1992). Unsurprisingly, Wolf identifies hunger as one of the areas in which women are expected to confirm to unattainable beauty ideals, with eating disorders being one of its manifestations. Just as the beauty myth exerts a firm grip on women's attention and energy, the tensions experienced by women athletes take their energy and attention away from the pursuit of athleticism and represent a very real obstacle to women's breakthroughs in sport.

Exploring ways in which women athletes negotiate these tensions is not only helpful in understanding women's experiences in sport. The effort that sporting cultures put into controlling the female athletic body suggests that the body holds within itself a potential for resistance and agency. In fact, women's athletic participation and performance can be resistant and transformative, as Kane (1995) eloquently argues, by viewing sporting performances on a continuum and challenging the oppositional (and hierarchical) gender binary in sport. Stories of athletes negotiating and resolving tensions that they experience as women in sport give us a glimpse into a world in which being a woman and an athlete does not seem like an impossible feat.

The athletes interviewed in my study offer insights into new ways of speaking about food and bodies and creating spaces in sport that exist outside rigid dualistic notions and hegemonic bodily control in sport. Women athletes' counter-narratives of agency and resistance offer us an insight into the complexity of athletic embodied experiences, showing that the athletic body exists beyond the boundaries of natural and non-natural, human and machine (Butryn, 2003). Recognizing these cyborg qualities in athletes can "suggest a way out of the maze of dualisms in which we have explained our bodies and our tools to ourselves . . . It means both building and destroying machines, identities, categories, relationships, space stories" (Haraway, 1991, p. 181).

Like all cyborgs, athletes contain within themselves the potential of a post-gender world imagined by Haraway (1991). For women in sport, this can mean a way out of the paradox in which female athletes find themselves, in a culture where athleticism is still associated with masculine traits, and where women still find it hard not to have their athleticism or their womanhood questioned (Daniels, 2009). Yet, ways in which athletes negotiate and reconfigure gender beyond the traditional binary, while operating within the highly gendered world of sport, suggests that athletes carry within themselves the capacity to disrupt this world with their very existence. In addition to their biological (and technologically enhanced) bodies, athletes also inhabit a social body, making them "biocultural creatures" (Frost, 2016; cited in Thorpe et al., 2019). Culture can shape bodies in profound ways (Fausto-Sterling, 2000), and women athletes' bodies are enmeshed with and interact with sporting cultures in a variety of ways that encompass athletes' experiences with sport nutrition, eating disorders, and RED-S (Thorpe et al., 2019). Rejecting a binary understanding of social/biological, as well as human/technological offers a new language for speaking about food and bodies in sport. It can help move beyond restrictive and at times damaging notions of food as fuel and the athletic body as a performing machine, while also recognizing the role that technology plays in the athletic experience. At the same time, it opens space for recognizing the ways in which sporting cultures both shape and are shaped by athletes' bodies. Finally, it can help disrupt the role of science as a means of control in sport by creating space for other ways of knowing, including self-exploration and self-knowledge in athletes.

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