PROFILES OF BRITISH EQUESTRIAN OLYMPIANS: EVALUATING HISTORICAL, SOCIO-CULTURAL AND SPORTING INFLUENCES AND HOW THEY COULD INFORM EQUESTRIANISM IN THE FUTURE

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The pos	Chapters	
-	Have conducted enquiry leading to the creation and interpretation of new knowledge through original research or other advanced scholarship, shown by satisfying scholarly review by accomplished and recognised scholars in the field;	3, 4, 5, 6, 7
-	Can demonstrate a critical understanding of the current state of knowledge in that field of theory and/or practice;	5,6,7
-	Show the ability to conceptualise, design and implement a project for the generation of new knowledge at the forefront of the discipline or field or practice including the capacity to adjust the project design in the light of emergent issues and understandings;	4, 5, 8
-	Can demonstrate a critical understanding of the methodology of enquiry;	2, 5, 6, 8
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Abstract

Horse riding is a unique context for a human-animal study. It is both a leisure activity and the only Olympic sport where athletes compete against one another without having to declare their sex. Horse riding relies on rider and horse establishing a partnership based on communication and trust. Rider and horse both utilise their own generalised rider-horse relationships, based on their previous experiences of rider-horse interactions, to navigate new situations and enable communication. To improve wellbeing, establishing evidence-based principles to support rider and horse in establishing and maintaining functional generalised rider-horse relationships, and enable individualised rider-horse relationships to form, is vital for the future.

Twenty-first century UK equestrian Olympians, coaches and decision-makers were profiled utilising five publications, to inform sample selection and study design in future research. The complex interaction of historical, socio-cultural and sporting influences on these people and how they may affect future generations as role-models are explored. Contrary to historical stereotypes, UK equestrian Olympians display many features indicating that equestrian sport is unusually inclusive, including a similar proportion of men and women riders over a wide range of ages and physicality who typically do not own the horses they partner. UK riders are supported by coaches and decision-makers, whose profiles suggest that sex-integration has moved beyond 'tokenism' towards a true sex-integrated sport. There is evidence of unequal progression through levels for UK men and women riders and coaches and separate sub-cultures for riding disciplines. Rider ethnicity, responses to commercialisation, and socio-economic background, require further research to inform actions to improve equality in the future. These findings can inform policy and research studies in the future to enable horse riding and equestrian sport to optimise the unique human-animal relationship at its heart to address government, sporting body and society's strategic priorities.

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Chapter One Introduction

Despite horse riding being a popular UK leisure activity (British Equestrian Trade Association, 2019), and competitive sports involving horses and humans featuring in both the modern and ancient Olympic Games (De Haan and Dumbell, 2016), there is little published research about the horse rider (the equestrian). This thesis provides profiles of elite British horse riders at Olympic level. It is recognised that someone taking part in a sport at an elite level is the result of a complex interaction between multiple factors (Biddle et al., 2005; Van Tuyckom et al., 2010; Rees et al., 2016; Oliveira-Brochado et al., 2017, Gullich et al., 2019). This thesis explores some historical, socio-cultural and sporting factors, including influential figures, that have influenced the profiles of recent British equestrian Olympians and will continue to influence the new generation of leisure and competitive horse riders in the UK.

1.1 Myself as a researcher

At the time of starting this body of research I worked as both an equestrian coach and a Higher Education educator at the time of starting this body of research. I wished to contribute to establishing evidence-based approaches to improve the effectiveness of coaching horse-riding for both horse and rider. In order to inform coaching horse-riding, progressing the understanding of how to train horses, how to ride and interact with already trained horses and also how to interact with horse riders are all required. This meant my research was initially intended to align with researchers in the field of equitation science and broader equestrian principles.

Consistent with my early training in positivism and postpositivism (Phillips and Burbules, 2000) identifying the riding population, with the goal of identifying a random sample, was attempted. When it became evident that it was not possible to identify the riding population then I tried to identify the key demographic characteristics of the population to enable representative sampling. The key demographic characteristics of the riding population, and in particular the characteristics of expert riders, were not available and this meant that it was not possible to design experimental style research with known external validity (ability to generalise results beyond the study sample and to a wider 'real world' population) (Steckler and McLeroy, 2008). As I wished to conduct research whose findings could be applied to practice (applied research) then

this meant that that research could not be reliably designed (the issue of applicability) (Murad et al., 2017).

I realised it was very important to have evidence-based profiles of horse riders, and to understand whether a single profile applies to all horse riders or whether there are different groups within the horse riding population that have different characteristics. When investigating how to generate evidence-based profiles of horse riders I came across studies that had used various methodologies and approaches (e.g. Dashper, 2010a; Hedenborg, 2007), none of which fitted with the positivist experimental methodology that I was familiar with. As such I started to explore research approaches more commonly adopted within the social sciences and the literature that surrounded forming demographic profiles of athletes in other sports. This introduced me to techniques that I felt I needed to understand more fully and I embarked on certificated training in social science research approaches to inform my personal research.

The studies included within this thesis adopt a range of methods pragmatically suited to investigate and profile who horse riders are. I have retained my connection with equitation science, supervising and undertaking research into aspects of equitation science, alongside my exploration of the social sciences, particularly in the arena of sport and physical activity. My current research identity directly contrasts to the quantitative positivist who upheld the superiority of an experiment and emerged from my initial education to level 7 on the National Qualifications Framework. Increasingly I have come to regard myself as a pragmatic researcher utilising a broad range of research techniques to answer questions of interest, and as such identify with the cross-disciplinary area of human-animal studies of which equitation science is a branch. This breadth of approach has directly informed this thesis and also my identity as a researcher, which can now be characterised by my pragmatic openness to consider any research approach if it is appropriate to answer a research question.

1.2 Equestrian Activities and Horses in the United Kingdom

An activity that involves a human and a member of the equid family (usually the domestic horse, *E. caballus*), can be described as an equestrian activity. In the UK a wide variety of equestrian activities are undertaken.

At the time of the National Equestrian Survey 2019, 42 % of the resident population of GB¹ were estimated to have some interest in equestrian activities (British Equestrian

¹ The Great Britain population mid-year estimate for 2018 (when the National Equestrian Survey started data collection) was 64,435,600 people. This estimate is of the 'usually resident

Trade Association, 2019). This survey covers GB and therefore when considering the larger population of the UK the figures provide a conservative estimate. The United Kingdom of Great Britain and Northern Ireland (UK) is a sovereign state of four nations that are also countries in their own right: England, Wales, Scotland and Northern Ireland (Ordnance Survey, 2011). Whilst the name Great Britain (GB) is sometimes used interchangeably with the UK, Great Britain is 'the official collective name of England, Scotland and Wales and their associated islands' and does not include Northern Ireland (Ordnance Survey, 2011). The people who live in the UK are termed 'British' and this word refers to 'of the UK', e.g. British government (GOV.UK, 2021a), Unfortunately this is the common term used to describe both things of the UK and GB. This thesis will focus on the UK and will not use the UK and GB terms interchangeably. It will try to make it clear if it knowingly presents information based on GB and not UK.

The most popular area of equestrian activities, during the twelve months prior to the National Equestrian Survey 2019, was watching events involving horses on television or online. Watching horse racing on television was the most popular activity (18 million people), however non-horse racing television programmes attracted 7.1 million people and 3.9 million people watched events involving horses online or streamed live during the twelve months before the survey (British Equestrian Trade Association, 2019). These large numbers of people support reports from other sources of the popularity of watching equestrian events as a leisure activity, with 7.5 million paid ticketed attendances at sporting events in the UK involving horses (horseracing and other sports) in 2018 (Cutler, 2018). These figures show that equestrian activities are a UK mass consumer sector, with particular focus being on the use of the horse in sport.

As well as having mass public appeal equestrian activities also contribute to the UK economy with equestrian related spending during 2018 over £8 billion (Equine Sector Council, 2017). This figure is believed to be conservative with horseracing contributing an estimated £3.5 billion and non-racing equestrian related activities a further £4.7 billion² (British Equestrian Trade Association, 2019). Utilising different research methodologies and consultancy firms two reports into the economic impact of Great Britain's horseracing estimate it to contribute £3.5 billion in 2017 (PriceWaterhouseCoopers LLP, 2018) and £3.45 billion in 2013 (British Horseracing Authority, 2013, utilising Deloitte).

population' of all ages and includes people who change their country of usual residence for 12 months or more, but not shorter-term migrants (Office for National Statistics, 2020).

² This £4.7 billion includes £3.51 billion of spending required to own or care for horses, a further £742 million spent by those riding at least once a month on associated items and £465 million spent on coaching to improve riding ability (BETA, 2019).

In the UK all domestic horses (*E. caballus*, henceforth referred to as horse) have an owner (someone with financial and ultimate care responsibility, although this may be delegated to someone else, for them). A horse owner is required to have a passport for the horse that states they are the owner (GOV.UK, n.d.). UK horses are commonly kept for a wide range of purposes including:

- agricultural, where they are used to farm agricultural land or are farmed for meat or hides (GOV.UK, 2015);
- scientific, where they are used for experimental or other scientific purposes in procedures (GOV.UK, 2020a); and;
- as pets, when they are not used for agricultural or scientific purposes (National Equine Welfare Council, 2021).

The UK government defines a pet as

"... any animal belonging to a species normally nourished and kept, but not consumed, by humans for purposes other than farming' and refers to 'pet horses' (Gov.UK, 2021).

The Oxford English Dictionary (Oxford Languages, 2010) defines pet as 'any animal that is domesticated or tamed and kept as a favourite, or treated with indulgence and fondness'.

A pet can be kept by its owner for many different purposes (see Table 1).

Table 1 The purposes for which pet horses may be kept

Ownership purpose	Definition	Source
Entertainment	Used in sporting and recreational activities	Council for Science & Society, 1988
Working	Animals whose primary function is a practical or economic role; with social support or other purpose secondary or incidental	Council for Science & Society, 1988; Serpell, 2019
Companion	Captive or domesticated animals with primary function to provide their owners with social support or 'companionship', with any practical or economic roles a subsidiary of this	Serpell, 2019
Hobbies	Animals of special interest to hobbyist collectors, breeders	Council for Science & Society, 1988
Status symbols	Animals acquired to increase or signal achievement of an elite place in society	Council for Science & Society, 1988; Hirschman, 1994

In the UK the majority of horses are considered to be pets (see Figure 1) despite a large proportion of the world's horses being considered working animals (estimated 122,908,622 in 2019 by the Food and Agriculture Organization (FAO), 2021) (Society for the Protection of Animals Abroad, 2021). The domestic horse is unusual in that it is commonly kept for a wide range of purposes (see Table 1).

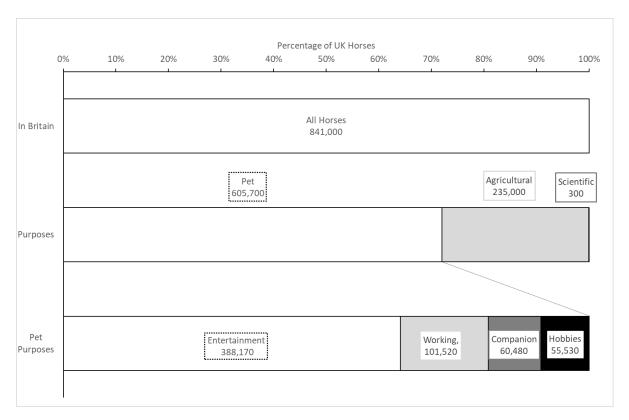


Figure 1 The numbers of horses in the UK kept for the ownership purposes based on the UK government's system of classification (data from British Equestrian Trade Association, 2019; Gov.uk, 2015; Gov.uk, 2020a, 2020b³)

Despite contributing to the UK economy and the government recognising the horse's multiple roles in society the equine industry has been described as 'hidden in plain sight' (Equine Business Association, nd). Increasing the understanding of UK equestrian activities, from an evidence-based perspective, would benefit people directly interacting with the horse, and those watching horse events as a leisure activity and indeed the whole population as they make an important contribution to the economy.

1.3 Horse riding and equestrian sport

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³ Due to the UK government's longstanding requirement for all horses to have a passport and to be registered to an owner, whilst the data presented are unlikely to be exact the error should be relatively small.

A common form of equestrian activity is horse riding (from this point referred to as riding), which involves the human sitting upon the horse's back and using cues that signal to the horse which behaviours, from a repertoire of both trained and untrained behaviours, the rider wishes the horse to perform at a particular time, and the rider responding and adjusting to the horse's responses and cues in return (Blokhuis, 2019). Riding is considered to be a leisure activity in the majority of European countries (Mukherjee, 2020) and in the UK is a popular leisure activity, with more than 3 million people estimated to having ridden in the last 12 months and 1.8 million regular riders (ridden at least once per month for past 12 months) (British Equestrian Trade Association, 2019). Seventy seven percent of horses in GB are estimated to be kept for purposes involving riding (see Table 2). Additionally the 11% of horses kept for showing (a competitive activity in which 'the best-bred and best-presented horses and ponies are judged against each other' (British Equestrian, 2021c)) are likely to include ridden and non-ridden showing, so this number could be as high as 88% (BETA, 2019).

Table 2: The main reasons for keeping horses in Great Britain⁴(adapted from National Equestrian Surveys (BETA 1999, 2006, 2019))

	Average 1999- 2019	2019	2015	2011	2006	1999
No. of horses	988,200	841,000	944,000	988,000	1,200,000	968,000
Leisure Riding	55%	44%	53%	60%	65%	53%
Eventing	11.6%	15%	15%	13%	7%	8%
Dressage	9.6%	23%	12%	3%	7%	3%
Showjumping	8.4%	16%	8%	6%	7%	5%
Companion Horse	12%	12%	n/a	n/a	n/a	n/a
Riding Club Activities	12%	12%	n/a	n/a	n/a	n/a
Showing	4.6%	11%	2%	2%	3%	5%
Riding Lessons	3%	10%	1%	1%	2%	1%

Riding can be undertaken for leisure or competitive sport. Whilst the most popular form of riding in the UK is leisure riding, competitive sport is also very popular (British

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⁴ The data collection enabled a horse to be kept for up to 3 main reasons and therefore percentages do not add up to 100%

Equestrian Trade Association, 2019). The most popular horse sport disciplines all involve riding (e.g. dressage, eventing and showjumping, Table 2) (British Equestrian Trade Association, 2019). Sports can be defined as:

"... well-established, officially governed competitive physical activities in which participants are motivated by internal and external rewards." (Coakley, 2009, p.6).

Sports involving humans and horses are usually separated into two categories: horse racing and equestrian sport.

Horseracing is defined as

'the sport in which horses and their riders take part in races, either on a flat course or over hurdles or fences, typically with substantial betting on the outcome' (Lexico, 2021).

Horseracing may be the most popular leisure activity involving horses, due to the large numbers of spectators it attracts, however fewer people engage in riding in horseracing than in other equestrian activities. Horseracing requires a license due to its professionalised nature. There are currently 667 licensed jockeys listed on the British Horseracing Authority's search (BHA, 2022) although British horseracing employs over 6000 people to care for racehorses (BHA, 2021a).

Equestrian sport refers to sporting disciplines other than horseracing. The international governing body of equestrian sport, the Fédération Equestre Internationale (FEI) recognises seven disciplines which involve the human riding on the horse, vaulting on a horse and driving horses from a horse-drawn carriage, with 2 disciplines including disability sport⁵ (Fédération Equestre Internationale, 2021). FEI governed disciplines, all involving the human riding on the horse, have consistently appeared in the summer Olympic Games since 1912 (Dressage, Eventing and Showjumping) and in the summer Paralympic Games (Para-equestrian Dressage) since 1996 (International Olympic Committee, 2021c; International Paralympic Committee, 2021).

It is important that the characteristics of equestrian Olympians are understood, not least because part of the mission of the International Olympic Committee (IOC) is to

'encourage the regular practice of sport by all people in society, regardless of sex, age, social background or economic status...' (IOC, 2021b).

Whilst the terms 'sex' and 'gender' are often used interchangeably (Council of Europe Portal, 2021) elite sport participation is based on sex, and therefore this thesis will predominantly use the term 'sex'.

In 2018, the IOC stated that a single sex sport could not join the Olympic Games (IOC, 2018). All international federations at Tokyo 2020 governed competition for both men

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⁵ Jumping, Dressage and Para Dressage, Eventing, Driving and Para Driving, Endurance, Vaulting, and Reining

and women, but 95% of the medal events were sex-segregated, open to either men or women (IOC, 2021e). Twelve medal events (4%) were mixed-sex at Tokyo 2020. Mixed-sex events have a quota controlling how many men and women athletes form one team, e.g. one man and one woman in mixed doubles tennis and two men and two women in triathlon's mixed-team relay (IOC, 2021e). Equestrian sport is the only Olympic sport that is sex-integrated, with six medals available in individual and team events. Sex-integrated means that men and women athletes compete directly against one another, without the restrictions of a quota (IOC, 2021d). In a sex-integrated sport if the best performers were always men or always women then it is possible that all athletes would be a single sex. However, if a single sex were to consistently win, it is unlikely that the sex-integrated format would have remained the dominant format for over a century, as it has done both inside and outside the Olympic Games (Channon et al., 2016).

Equestrian sport being included in the Olympic programme has far-reaching consequences. The audience for a sport at the Olympic Games contains many spectators who would not otherwise be exposed to that sport, through watching whole performances, highlights and following media announcements (Guerin and Naraine, 2020). Media coverage of the Olympic Games can have

'... profound impacts on citizens' views of topics such as gender, nationality, and the perceived importance of some sports over others' (Eagleman et al., 2014, p.457).

UK Sport is responsible for investing National Lottery and UK Government funds and providing strategic leadership of the UK's 'high-performance sporting system'. UK Sport (2021) states that their primary role is

'to maximise the performance of UK athletes in the Olympic and Paralympic Games and other major championship events'

through four year awards within a twelve year plan. The funding supports current athletes (Podium investment) and infrastructure to ensure preparation of athletes (Academy investment) and changes in a sport's performance development system and high performance culture (Progression investment) (UK Sport, 2021). As such an Olympic sport is likely to be better funded than a non-Olympic sport, to be able to engage with government initiatives.

UK men report more regular sporting activity and more are physically active than women. This trend extends to those aged 5-16 years, for example Figure 2 (NHS Digital, 2017; Statistics for Wales, 2019; Scottish Government, 2020; McCallion, 2021). 40% of English women were not active enough to improve their health prior to 2015 (Sport England, 2021). People select to play and specialise in a sport due to a

complex interaction between many different factors (Jayanthi et al., 2013). Changing these trends requires different policy responses aimed at young adult women (Tuycken et al, 2010).

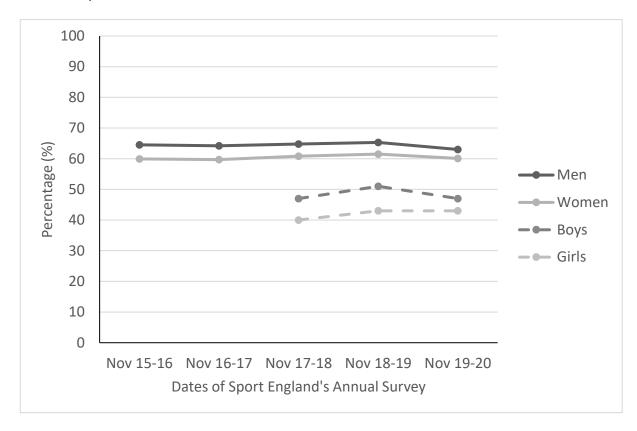


Figure 2. The percentage of English population who are predicted as physically active from Sport England's surveys of physical activity. Men and women have to do at least 150 minutes a week, boys and girls at least 60 minutes a day, of moderate level physical activity to be classed as physically active (Sport England, 2021)

In 2015, Sport England launched the 'This Girl Can' campaign to celebrate 'active women who are doing their thing no matter how they do it, how they look or even how sweaty they get' (Sport England, nd).

The 'This Girl Can' campaign reviewed published research to collate data and was characterised by tackling directly some of the issues deterring women from physical activity, e.g. sweating. The 'This Girl Can' website states that the campaign has encouraged nearly three million women to be more active (Sport England, 2020). This is an example of how evidence-based information can provide data to affect change.

Demonstrating the range of people participating in horse riding can support monitoring and evaluation of participation initiatives (as summarised in HM Government, 2015). Increased understanding of the characteristics of riders at different levels, including competition levels can support informed policy formation and governance of horse riding as both a leisure activity and as a sport.

1.4 Human-Animal Studies, Relationships and Interactions, and Riding

Human-animal studies have 'a sustained interest in understanding and analysing how humans relate to and make sense of other species' (Birke and Hockenhull, 2012). Human-animal studies are part of the field of Anthrozoology, 'the scientific study of human-animal interaction' (de Mello, 2012). Human-animal studies frequently adopt a multi-disciplinary approach. For example, Bekoff (1994)'s review of human-animal studies talks about utilising aspects of psychology, social behaviour, animal cognition, animal welfare and science, anthrozoology, ethics, and language studies. This multi-disciplinary approach is due to the complex nature of the area and its far-reaching consequences and in order to understand it fully taking many views is frequently helpful (Hosey and Melfi, 2019).

Human-animal interactions tend to be investigated with a bias towards focussing on either the human or the animal (Hosey and Melfi, 2019). Human-horse and rider-horse interactions are no different to this. When efforts to establish empirical knowledge about riding began investigators in the mid twentieth century investigated this human-animal interaction focussing on the animal, the horse. Only a few of these early studies looked at rider-horse interactions directly. Most of them focussed on the horse only (Hobbs et al., 2020). This is, in part, due to the complexity of investigating rider-horse interactions and the generalised rider-horse relationships⁶ that underpin many of them (Hausberger et al., 2008).

A human-animal interaction (HAI) is

'a dyadic event...it's an event between two individuals, one an animal the other a human' (Hosey and Melfi, 2018, p3).

Over a course of HAIs Hinde (1987) describes a relationship forming, a human-animal relationship, between a single human and an animal. Following interactions with different individuals the human or animal might generalise the responses of the other species, and apply this generalisation to future interactions so they 'gradually come to respond to them in a fairly consistent way' (Sankey, 2011; Hosey and Melfi, 2019, p4). In this way a generalised human-animal relationship is formed, with the HAI the basic unit of the relationship. A generalised human-animal relationship can arise around any HAI, intentional (for example when a human is training an animal) (Hausberger et al., 2008; Gee et al., 2017) or non-intentional (for example when an animal comes into a human environment) (Nyhus, 2016).

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⁶ As this thesis is framed by Human-Animal Studies it will refer to rider-horse interactions, relationships and partnerships (human then animal). Other studies use either rider-horse or horse-rider, but are typically all referring to the same concept.

Riding is widely considered a high-risk leisure activity, with a high incidence of injury (Thompson et al., 2015; Kruger et al., 2018). The idea of a generalised human-animal relationship is useful to understand this. Interactants may not discern, or may perceive differently, external stimuli which might impact the dyadic interaction (Lilley, 2020). Differences in perception can lead to confusion and affect confidence and success in the future (Hausberger et al., 2008; Thompson et al., 2015). Following a negative experience a rider may stop riding and a horse may react by changing its future reactions to humans (British Equestrian Trade Association, 2019; Lilley, 2020). This is particularly high risk for the horse as undesirable horse behaviours are well-recognised as being a key reason for horse abandonment and even euthanasia (Holcomb et al., 2010; Crossman, 2018).

Riding exposes riders to intermittent and prolonged isometric muscle work and requires them to tolerate high heart rates (Douglas, 2017). Riders isolate muscles (use muscle groups singly) and perform complex muscle activities (utilising multiple muscle groups) that they may not typically do in other activities (Alfredson et al., 1998). Learning to horse ride can be physically fatiguing and requires the rider to learn and commit to memory specialised language at the same time as establishing the generalised rider-horse relationship from numerous rider-horse interactions (Brandt, 2004). It is recognised that fatigue negatively affects overall learning, and may impair later motor learning (Branscheidt et al, 2019; Kriswanto et al., 2019). The input from experts (equestrian coaches) during this important, but challenging, stage of learning to horse ride, is acknowledged to reduce the risk of injury and frightening experiences for both rider and horse (Sinclair-Williams and Sinclair-Williams, 2015; Thompson et al, 2015; Chapman and Thompson, 2016; Camargo, 2018).

During riding activities (for sport and leisure) the overall performance is judged based on both the horse and the rider (e.g. British Dressage, 2019). Whilst there is a long tradition of riding and coaching riding skills it has been written about from the basis of accumulated personal experience by riding masters (e.g. classic texts Xenophon BC (Morgan translated, 2006) and Podhajsky, 1967). Knowledge transfer has centred around authoritative epistemological methods (Molander, 2015). Riding is not alone in relying on current practice, and therefore myth and tradition, rather than evidence-based approaches (Melfi et al., 2007; Melfi, 2009). This phenomenon is reported in other sports such as soccer and other human-animal interactions (such as in zoos), with limited published, evidence-based information about challenges that practitioners experience and have to make decisions about (Williams and Hodges, 2005; Melfi, 2009). A practitioner therefore makes personal judgements which may perpetuate this practice.

The acceptance of tradition, and the inherent complexity of studying rider-horse interactions has meant that these have been under-investigated. When evidence-based principles were available they were slow to gain support and be adopted into practice (Douglas et al. 2012; Williams and Tabor, 2017). It is unclear exactly why the equine industry seems to be resistant to adopting evidence-based practice, but it is likely to be multifactorial. Research has explored the lag surrounding practitioners adopting the findings of research, and refers to this as 'knowledge translation' or just 'translation' (e.g. Baumbusch et al., 2008 and Morris et al., 2011 in medicine and Dumbell and Lewis, 2016 in equestrian coaching). Equestrian coaches have limited requirements to undertake regular updating training, although this is recognised good practice (British Horse Society, 2021). This could result in a lengthy interval (e.g. six decades) between training and stopping coaching.

Equestrian activity has long been considered an art form (International Olympic Committee, 2021f; Fédération Equestre Internationale, 2021b) and riding is described in published literature as an art as well as a science (e.g. Blokhuis, 2019; SaddleBox, 2020). Arts tend to emphasise creativity, and the importance of novel approaches, whereas sciences tend to emphasise the importance of knowledge being based on systematic research conducted by others. The belief that riding is both (or even more) art than science may mean that the 'culture' of riding is not open to change and the incumbents (those with power and standing in equestrianism) probably achieved this through personal experience. In such a complex area as coaching a sport based on a human-animal interaction, it is difficult to demonstrate an advantage of one specific approach (Williams and Hodges, 2015). However quite recently there has been an explicit call for equestrianism and riding to be underpinned by evidence-based principles established through the application of scientific enquiry (Randle and Waran, 2017).

1.5 Researching horse riding

By the advent of the twenty-first century research in riding was gaining recognition, and its inclusion within academic journals was well established (Williams, 2013). When research began to acknowledge both the role of the horse and rider in this complex human-animal interaction, little was understood about the rider population (Powers and Kavanagh, 2005; Pummell et al. 2008). Evidence-based descriptions of demographic profiles of riding populations were lacking in the early twenty-first century. Whilst it was assumed that there were differences between riders who participated in different riding activities this acknowledgement was largely based on personal observation and very limited evidence-based data (Williams and Tabor, 2017). Understanding the

demographic characteristics (e.g. sex, age) of a riding population is however key information required to influence sample selection for many methodological designs. Early studies into the characteristics of riders tended to focus on equestrian sports in history (e.g. Hedenborg, 2007) or provided valuable insights into rider case studies (Pummell et al. 2008; Dashper, 2010b) utilising methods that did not reveal or require current population level data and were not aimed at representing a wider population. For example, Dashper (2010b, p.87) actively states in their study into the experiences of elite para-dressage riders that 'These riders may not be representative of disabled people more generally'.

It is important that we understand characteristics of equestrian Olympians, as demonstrated by the mission of the International Olympic Committee is

'to not only ensure the celebration of the Olympic Games, but to also encourage the regular practice of sport by all people in society, regardless of sex, age, social background or economic status...' (IOC, 2021b).

If equestrian sport wishes to continue its high-profile inclusion in the Olympic Games then it needs to be able to demonstrate that it conforms to the Olympic ideals.

When empirically investigating a novel area of study, one common approach is to understand the characteristics of an expert performance in the area, which is believed to have distinct perceptual, cognitive and strategic behaviours as well as physiological and biomechanical characteristics to distinguish it (Eklund and Tenenbaum, 2014; Swann et al., 2015). In a sport involving two species, ideally performance would be investigated as a partnership, however in order to understand the rider-horse partnership understanding both parties as well as their cumulative effect is required. This thesis focuses on the rider's role in this performance.

Investigating expert performance can help to identify variables that differ between an expert and a mediocre or novice performance, and therefore enables investigation as to how those variables manifest, how they can be selected for and developed through training (Ericsson, 2006 Hobbs et al., 2020). In highly specialist and complex areas how these variables combine with other characteristics of the expert performer affects the extent to which this knowledge can be applied to other sample populations. To support this, understanding characteristics of expert performers, and how these compare to the characteristics of other performers is important (Williams, 2013).

Accumulating and preserving knowledge and skills, and producing methods to train people to reproduce these skills enables the next generation to learn more rapidly and improve the methods of practice still further (Ericsson, 2006; Blokhuis, 2019). For example the speed of learning in mathematics has increased, to where the knowledge only possessed by a few experts in the thirteenth century can now be taught in school

(Ericsson, 2006). Equestrian sport has not seen the same trends as, for example, amateur swimmers who can now perform at a much higher level than the medallists at the early Olympic Games (International Olympic Committee, 2019). The athletics throwing discipline of javelin, saw ever-improving throwing producing distances longer than the arenas athletes were competing within, to the extent that the javelin itself was redesigned to reduce the distance it could be thrown in competition. The first men's javelin world record ratified in 1912 was 62.32m, which had increased to 104.8m by April 1986 and then dropped to 87.66m post the redesign (World Athletics, 2021).

To investigate expert performance ideally agreement would be reached as to who is an expert performer. Hodges et al. (2006, p.482) stated that

'It is very important in sport research to be specific and define the level of expertise/performance one is studying, both in terms of years of experience and also in level of competition and performance attained'.

There are no widely agreed performance levels in equestrian sport. Sports and authors use different characteristics of athletic superiority when measuring elite/expert performance in sport (Swann et al., 2015). Williams and Tabor (2017) proposed a taxonomy of rider categories for equestrian sport, to enable comparison of groups. Whilst this taxonomy provides a useful basis for communication it contains terms that actually refer to different characteristics of that demonstration without making this explicit (as explored in Swann et al., 2015). For the purposes of this thesis the terminology summarised in Table 2 will be used, to describe different levels of rider, whilst attempting to differentiate between some of the common characteristics used to define athletic superiority as recommended by Swann et al. (2015).

Table 2. Terms ascribed to differentiate between levels of horse riding, according to characteristics used to define athletic superiority and performance ability (Swann et al., 2015; HM Treasury, 2016; Williams and Tabor, 2017)

	Characteristics			
	Competition	Experience	Professionalism	Performance
Level	Highest level of competition reached	Hours of practice in the sport	Income earned from sport participation	Demonstration of superior skills
Highest	Elite	Elite Experienced Profes		Expert
	Advanced/Semi- elite	Intermediate	Semi- professional	Competent

	Grass-roots			
		Beginner	Amateur	Novice
Lowest	Recreational			

Studies that investigate just one variable of an expert performance can struggle to identify defining characteristics (as reported in Swann et al., 2015). This is likely to be due to the complex interaction between variables that characterise expert performance. Whilst studying expert performance to gain insights into a sport does rely on the assumption that the expert performance is based on superior skills, this assumption is not unreasonable and has been used by many authors (e.g. Munz et al., 2014; Olivier et al., 2017). It is recognised that each performer is likely to differ in their approach, and therefore a sufficiently large sample has to be constructed to enable individual variation to be accounted for and general trends to be identified (a similar concept to statistical power (Dorey, 2011). Hobbs et al. (2020) performed a meta-analysis to identify objective measurements of horse and rider performance and noted that whilst there were studies that had looked at biomechanical or physiological aspects none had considered both, and how to predict superior riding performance.

Identifying a group of riders who are expert performers is challenging, when there is not agreement on the characteristics of expert performance. Super-elite performers not only compete at elite levels, but also demonstrate success at that level, either through being rated in the world top-ten athletes, being medallists at major international championships or being selected elite competitors representing nations that have a high-level of national performance and are consistently competitive for medals (Rees et al., 2016; Gullich et al., 2019). As such super-elite performance is a measure that combines competition and performance characteristics of athletic superiority and performance ability (see Table 2) (Swann et al., 2015).

Systematic research of the characteristics of expert performance in riding could serve to support more effective knowledge transfer of methods of training horses and coaching riders (Blokhuis, 2019), and ultimately improve the wellbeing of both interactants in the rider-horse interactions that inform this unique human-animal sporting partnership (Horseman et al., 2016). In highly specialist and complex areas, variables combine with other characteristics of the expert performers and therefore affect the extent to which this knowledge can be applied to other sample populations. To support quantifying the extent to which, and the limitations on, this knowledge can be applied to a sample, understanding the characteristics of super-elite performers,

and how these compare to the characteristics of other performers is important (Williams, 2013).

1.6 Aims and objectives of this thesis

At any particular point of time whoever is participating in a physical activity and/or a sport is influenced by the historical influences on the sport and culture, the political, cultural and societal influences on people as well as the central organisation of the national sports system and rules and structure of a sport (Biddle et al., 2005; Van Tuyckom et al., 2010; Oliveira-Brochado et al., 2017). Riding and equestrian sport involves a partnership between two species and when conducting a human-animal study it is recognised that typically the study focusses on either the human or the animal or the interaction between the two. This thesis focusses on the human, the rider, in the rider-horse partnership. Analyses of influences on rider participation in equestrian sport have been neglected and the use of demographic profiling in equestrian sports is limited, and this could be improved to protect the future of equestrian sport.

The aim of this human-animal study was to profile British expert performers in the Olympic equestrian sporting disciplines and explore the historical, socio-cultural and sporting influences that have influenced their demographic makeup, to inform current and future research and policy.

The objectives of this body of work (mapped in Appendix 1) were:

- to explore historical influences, including military and male influences, on Olympic equestrian sporting disciplines, their rules, format and the establishment of the sport's lead body;
- to profile UK expert performers in the Olympic equestrian sporting disciplines, at elite and super-elite competition level;
- to compare the profiles of expert performers from successful Olympic equestrian nations and across different Olympic sports, to investigate sociocultural and sporting influences;
- to discuss how the gender profiles of leaders in equestrian disciplines and UK equestrian coaches may compare to, and influence, the profiles of expert performers;
- 5. to better enable future researchers to perform equestrian research that is externally valid;

- 6. to better understand how sex-integrated sport and human-animal partnerships may affect participation and remove some barriers to participation and facilitate extending knowledge beyond the equine sector about the worth of studying Olympic equestrian sporting disciplines; and;
- 7. to identify future research directions from considering the profiles of elite performers, and the influence of historical, socio-cultural and sporting factors.

Chapter Two Methodology

Epistemology is 'the part of philosophy that deals with knowledge' (Oxford Learner's Dictionary, 2021). Epistemology asks how we know something, and how knowledge is transferred between individuals and communities. The fundamental epistemological premise of this thesis is that transfer of knowledge, upon which decisions and policy will be based, should be by empiricism. Empiricism says that knowledge is dependent on sensory experience, on observations and/or experiences made by the senses (Oxford Reference, 2021). I particularly value knowledge when supported by empirical experience, rather than relying on authoritative transfer (taking the word of authority figures) (Dormandy, 2018) or intuition (a belief or opinion without rational analysis, based on feelings or facts) (Cambridge Dictionary, 2021b).

Ontology is the 'branch of philosophy that deals with the nature of existence' (Oxford Learner's Dictionary, 2021b), the study of what constitutes a fact. Ontology asks how we individually and collectively construct and understand reality (Dudovskiy, 2018). The fundamental ontological philosophy underpinning this thesis is pragmatism, which advocates that 'reality' is the practical consequence of ideas (Saunders and Bristow, 2016). Pragmatism also epitomises the axiology within this thesis. Axiology is 'the study of values' (Oxford Reference, 2021b) and within research how the researcher deals with their own values and the values of their research participants (Saunders and Bristow, 2016). Pragmatism embodies an axiological approach where the research is initiated and sustained by the researcher's doubts and beliefs and the researcher is reflexive (Saunders and Bristow, 2016). Pragmatism has been described as bridging the gap between the approaches embodying objectivism and the approaches embodying subjectivism, with its focus on the issue being researched (Kaushik and Walsh, 2019). As such the pragmatist researcher adopts the approaches to research that enable the research question to be answered the most fully (Creswell and Creswell, 2018).

'For a pragmatist, research starts with a problem, and aims to contribute practical solutions that inform future practice. Researcher values drive the reflexive process of inquiry, which is initiated by doubt and a sense that something is wrong or out of place, and which recreates belief when the problem has been resolved' (Saunders and Bristow, 2016, pp. 143).

This thesis is the product of a pragmatic approach to studying the research area, that emerged from my desire to understand the characteristics of an expert performance in horse riding. My research background was in empirical techniques of enquiry with an emphasis on positivism and initially it was from this position that I attempted to address this aim.

A fundamental principle of positivistic empirical techniques is to establish the population that is being studied and then identify a suitable sample to study further, with a random sample usually held to be the most preferable (Dudovskiy, 2020). A random sample is one in which every member of a population has an equal chance of being within the sample, thus requiring that every member of the population can be identified. Stratified random sampling where sampling is random, but also has to fulfil known characteristics of the population to avoid large sampling errors is generally considered to be the preferred random sampling method, however the population has to be well understood (Bell et al., 2018). Where random sampling is not possible then a non-probability quota sample is frequently believed to be the next best choice, where a sample is selected based on modelling important characteristics of a population (e.g. 50% men, 50% women). Every member of the population does not have to be identified in this sampling approach, however understanding profiles of important characteristics is required (Lavrakas, 2008; Acharya et al., 2013).

Within many methods not embodying positivism, but focussing on investigations of society the emphasis on understanding what the chosen sample can reveal about the population of interest is just as important, if not more so. Without knowledge of the riding population, the validity of findings from research studies cannot be completely understood. This does not mean that such studies have no worth, but it does mean that they reveal insights rather than findings from samples that can be extrapolated on the basis of evidence to the population (Barratt et al., 2014). The lack of knowledge about the riding population has been recognised by some authors (e.g. Douglas et al., 2012; Williams and Tabor, 2017). The initial intention of this thesis was therefore to address this lack of knowledge, using a range of methods as appropriate, a key characteristic of pragmatism (Saunders and Bristow, 2016).

2.1 Data types

The majority of data presented within these studies are publicly available, meaning that the data can be 'found readily and accessed easily and for free' (Cooper and Coetzee, 2020). Specifically, these data were typically open data as they were freely reusable without restrictions (Cooper and Coetzee, 2020) and due to the potential ethical issues with using publicly-available data ethical consent was gained for each study as required. The analysis conducted is therefore described by the term 'secondary analysis of existing data' meaning that existing data were used to answer a question different from the initial work (Tripathy, 2013).

The research studies do include primary data collected to present accompanying case studies to illustrate richer descriptions of the people in equestrian sports (for example Study 2). There is debate as to whether case study is a methodology or a method or output (Crowe et al., 2011; Hyett et al., 2014). A large number of well-respected qualitative researchers do describe case study as a methodology, (e.g. Stake, 1995; Denzin and Lincoln, 2011), whilst other researchers have highlighted the limitations of case studies (e.g. Thomas, 2010; Tight, 2010). In keeping with the pragmatist approach underpinning this thesis this debate has not been engaged with, as the case study approach can be used without considering whether it is a methodology or a method or output.

With its roots in pragmatism, it is perhaps fitting that this thesis utilises different research approaches within its different studies (Kaushik and Walsh, 2019). Each study outlines the approach, and in particular the methodology, adopted to attempt to answer the aim(s) presented.

2.2 Research Ethics

The publicly-available data in this thesis were published having gained the consent of the people involved, however although privacy is voluntarily sacrificed it is not always done so from a position of being fully informed about the possible uses of the data (Cooper and Coetzee, 2020; Information Commissioner's Office, 2021a). This is both because providing the data may be a gateway towards a desired purpose (e.g. a requirement for data about athletes to be public if the athletes wish to compete at international competitions) and also because with data available on the internet it is very difficult to determine how that data may be used (Hand, 2018). It would be preferable if declarations allowing personal data, information that is related to an identifiable individual (Information Commissioner's Office, 2021b), to be publicly available on the internet stated that how that data may be used in the future cannot be predicted. These concepts centre around the issue of information privacy which is the 'right to have some control over how your personal information is collected and used' (International Association of Privacy Professionals, 2021).

Some of the data utilised may have been made publicly available without fully informed consent (Information Commissioner's Office, 2021a); not least because data have been used from the nineteenth century. I endeavoured to only use publicly available, personal data in a way which could have been reasonably expected. For example, if an athlete is asked to provide their sex as part of a publicly available data set it is not

unreasonable to think that in the future someone might reflect on whether they were a man or woman as in several chapters of this thesis. However, if an athlete is asked for a photograph for identification purposes at an event and this is then published on the internet and later on is analysed to look at acceptable dress for athletes, then this is a re-use that is likely to be further removed from the initial, and most obvious, reason why the photograph was provided. This is a challenging ethical area and whilst the law may be the lowest requirement, research integrity requires a more detailed and nuanced consideration of the use of publicly available data, particularly from the internet (Markham and Buchanan, 2012).

Vanclay et al. (2013) present eighteen good practice principles that they have constructed for social research. Whilst not all of them apply to the chapters in this thesis (e.g. full disclosure of funding sources) the research approaches adopted align with these overarching principles. No deception was used to gather data presented within any of the chapters and where direct quotes were made, these were checked for accuracy and were presented anonymously. When data were gathered prospectively, for the purposes of the research chapters then approval from the institutional ethics committee was sought.

Chapter Three - Study 1: Equestrian Sport at the Olympic Games from 1900 to 1948

3.1 Rationale for Study 1: De Haan and Dumbell, 2016

3.1.1 Objectives addressed by this chapter: 1, 5

3.1.2 Reason for inclusion:

Historical influences on a sport and its culture influence the characteristics of the people who participate in that sport at a given time (Biddle et al., 2005; Van Tuyckom et al., 2010). The form and rules of the 3 current Olympic equestrian disciplines are still strongly based on the rules written by the Swedish Organising Committee of the 1912 Stockholm Olympics (Fédération Equestre Internationale, 2016). Internationally approved rules were needed for international competition and led to the formation of the FEI, which still provides leadership and governance to equestrian sport today (Fédération Equestre Internationale, 2021c). As such the early influences on equestrian sport, still influence the sport's rules, format and people's participation, through influencing the cultural perception and stereotypes that surround equestrian sport today (Biddle et al., 2005; Van Tuyckom et al., 2010; Oliveira-Brochado et al., 2017).

The British Olympic Association (BOA) is the UK National Olympic Committee (Great Britain and Northern Ireland). It refers to its selected athletes collectively as Team GB and is officially referred to in Olympic terms as representing Great Britain. Therefore Study 1 uses Great Britain and Britain, when talking about the UK at the Olympics (Ordnance Survey, 2011; Team GB, 2021c).

3.1.3 Published as:

I - De Haan, D. and Dumbell, L. (2016) 'Equestrian Sport at the Olympic Games from 1900 to 1948', *The International Journal of the History of Sport*, 33 (6-7), pp. 648-665. Doi: 10.1080/09523367.2016.1195373

3.1.4 Why this journal was chosen:

The International Journal of the History of Sport was established more than thirty years ago and had published papers about equestrian sport previously. It

'publishes research on the history of sport, focusing on global and region-specific issues and exploring the culture of sport, modernization and more' (Taylor & Francis Online, 2021a).

It is an international, peer-reviewed journal, whose editorial board contains many well-respected academics. Indexed in a range of databases, articles are accessible for prospective readers, which was very important to the authors.

3.1.5 Author's Contribution:

	Lucy Dumbell	Donna de Haan
Conceptualisation	50%	50%
Developing the research idea	50%	50%
Methodology	40%	60%
Data collection and curation	50%	50%
Performing the analysis	50%	50%
Writing the paper	50%	50%

3.2 'Equestrian Sport at the Olympic Games from 1900 to 1948' as published

3.2.1 Abstract

Olympic equestrian sport has to date evolved through three distinct phases of development. The genesis of equestrian sport in the modern Olympics began in 1900 and was predominantly shaped by military influences until 1948. Pre-1900 equestrian sport existed in various forms around the world primarily to develop and practice skills of hunting and warfare. At this time, equestrian sport lacked governance and internationally standardized rules. This paper's aim is to explore the influence of the military on the first phase of equestrian sport development in the Olympic Games between 1900 and 1948 with regards to their format and rules. Through thematic analysis of the narratives evident in the literature, we highlight influential military developments/changes that occurred outside the confines of sport, and place the sociocultural development of equestrianism within this framework. This reconstructive approach has enabled us to highlight the relevance of the military influence on the development of equestrian sport. Through the identification and analysis of perceptions of Olympic equestrianism, which are centred upon the Eurocentric, military-influenced development of the sport, the paper also discusses implicit and explicit references to, and the relevance of, masculinity elitism and social class, along with issues of amateurism and professionalism.

3.2.2 Introduction

The analysis presented in this paper is based on a review of major published sources, drawn from the principal English language sport history and sport policy-focused journals, wider literature, documentary material, including official Olympic reports, and internet sources such as those associated with the sport governing bodies. Review of the available literature shows that, despite the fact that equestrian sports have had a presence at the summer Olympic Games since 1900, to date they have been largely overlooked by sports historians in academic literature (Kay, 2008). Secondary analysis of the literature has led us to identify three distinct phases in the historical development of equestrian sport at the Olympics. The genesis of equestrian sport in the modern Olympics began in 1900 and was predominantly shaped by military influence until 1948. The second period of development began in 1952 and was characterized by the inclusion of non-military and female riders. More recently, the amount of scholarship in the field of gender relations in equestrian sports during the second half of the twentieth century has grown and shed valuable light upon the gendered distribution patterns both within and outside Olympic Equestrian competition. (For example, Dashper, 2012, De Haan et al., 2015; Hedenborg, 2015, Hellborg and Hedenborg, 2015, Thorell and Hedenborg, 2015, Hedenborg and White, 2012, Adelman and Knijnik, 2013). Finally, the Barcelona Games of 1992 triggered a tremendous increase in sport-specific research focused on performance and welfare concerns of horse and riders alike and consequently heralded the third phase in the development of equestrian sport at the Olympics as changes were made to the format and structure of the sport (De Haan and Johnson, 2010).

There are many aspects of equestrian sport which make it unique, for example, the relationship between athlete and animal, and the combination of individual and team dynamics⁷. Within equestrian sports, the fact that men and women can compete on an equal footing across a very wide age range is a prima facie example of equality rarely found in other sporting discipline (De Haan et al., 2015). Despite this, equestrian sports have been cited as contexts that epitomize social inequality, elitism, and overreliance on expensive tools (i.e. the horses) that many feel contribute more to competitive success than the skills and competences of the human athlete (Krishna and Haglund, 2008). However, there is little evidence of a sustained effort to understand the development of, and participation in, equestrian sport, and of the social context of equestrian sporting disciplines (Kay, 2008).

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⁷ Although equestrian sport is commonly used for all disciplines that involve horse and human (e.g. carriage driving, reining, horse racing), for the purposes of this article equestrian sport will be used for Olympic disciplines (currently dressage, showjumping and eventing) only unless otherwise specified.

To understand the modern context of this sport, it is important to first examine their historical evolution, acknowledging that the shape of contemporary Olympic equestrian sport has been influenced by events and decisions in the earlier development of the sport. This paper therefore aims first to review the socio-historical context of the development of Olympic equestrian sport, with a particular reference to the significance of warfare, and subsequently to explain the changing nature of equestrian sports at the Olympics, with a specific focus on the recognized but underexamined military influence on the format and rules of these Olympic sports between 1900 and 1948.

Due to the fact that relatively little has been written on the subject of Olympic equestrian sport, one is reliant on stakeholders within the system including members of organizations such as national and international governing bodies to provide detail and background information and invariably these will produce selective accounts which reflect particular interests as individuals construct the history of the sport.

Acknowledgement of such factors is reflected in the methodological underpinning of the study reported here. This paper draws in methodological terms on the distinction developed by Munslow (1997) and promoted in relation to sports history by Booth (2004), which distinguishes three types of approach to historical analysis. The first, and most consistently deployed within this paper, is described as reconstruction in which the primary aim of the historian is to reconstruct the 'facts' of history. This implies an objectivist ontology, in which a positivist approach in epistemological terms is adopted to acquire knowledge of the underlying reality. The second approach is constructivist in which the historian seeks to construct explanation from a particular perspective or set of perspectives. This is associated with a subjectivist ontological approach seeking to understand how particular world views construct, and are constructed by, the subjective understandings and constructions of historical actors and commentators, and thus an interpretive epistemological strategy is associated with this approach. The third approach identified by Munslow (1997) he terms deconstruction in which the approach adopted is to analyze the ways in which particular representations of 'what has happened' are constructed discursively and rhetorically, and carry implications for the promotion of the interests of some groups and the suppression of others.

This paper draws on aspects of all three of these approaches in acknowledging and analyzing themes identified in the literature. We identify ways in which accounts of reality are reconstructed, and wish to draw our own realist conclusions about which events have occurred, and their proximate causes. Nevertheless, we are also seeking, in drawing on the literature, to consider ways in which different commentators construct the world through their own accounts of events and of their significance. Finally, we wish also to engage in deconstruction, in the sense of identifying ways in which

particular accounts constitute the privileging of the interests of one or more groups over others. The account which follows thus identifies key events, highlights how these key events are reported and interpreted by different types of actor, and seeks where appropriate to draw conclusions about the largely tacit promotion of interests within different types of historical account of the development of equestrian sport. Within this philosophical framework, we aim, in particular, to unpack explanations of the influence of the military on the early development of equestrian sport at the Olympic Games from 1900 to 1948.

3.2.3 The Socio-Historical Context of Equestrian Sport and Warfare at the Turn of the Nineteenth Century

Analysis of the literature indicates that the only equestrian sport to have received significant attention by sports historians is horse racing. Horse racing is often used to epitomize highclass social ideals, with the horse as a symbol of strength, power, wealth, and even masculine identity (Moore-Colyer and Simpson, 2004). These issues have been addressed within the literature and whilst this does facilitate wider discourse about equestrian sport, it is important to note that horse racing has never appeared in the modern Olympic programme. However, the socio-historical framing of horse racing does provide some context for discussion on other equestrian sports.

Outside of horse racing, other forms of equestrian sport have been somewhat neglected from a sport history perspective, indeed Kay (2008) conducted a survey of all major English language sports history journals over the previous 25 years which revealed literature only pertaining to horse racing, (for example, Vamplew and Kay, 2006; Hedenborg, 2007; Pinfold, 2008) with no reference to other equestrian sports. Due to the lack of discourse surrounding the historical development of equestrian sports outside of horse racing, it is pertinent to provide a descriptive and chronological overview of the development of equestrian sport within the Olympics. However, our aim is to register but also move beyond this descriptive analysis, to engage in a thematic analysis as we place the development of equestrian sport within the broader framework of changes to warfare and the military at the turn of the nineteenth century.

The traditional use of horses in hunting and warfare has been well documented throughout history. The historical relationship between man and horse in warfare has, however, undoubtedly emerged from a male-dominated landscape and this is reflected in the gendered nature of the history of some equestrian sports. Indeed, even today the required clothing for equestrian sport competition symbolize formality and masculinity in reference to the strong historical links to the military and the hunting fields (Dashper

and St John, 2015). Sport, especially modern sport, in its ideal form as a cultural artefact and social institution, celebrates the supremacy of a particular culture through the representation of the ideal human, as manifested in the athletic competitor engaging in ritualized combat (Messner, 1992). The principal weapon of combat with which the 'warrior' vanquishes his opponent is the athlete's body. The greater the reliance on the athlete's body for victory and the more interactive the game activity, the higher the status of the sport and its competitors. Hence, traditional 'male' contact sports, such as rugby, football, or field hockey, are, according to Merlini (2004), considered 'real' sports in ways that motor racing, sailing, and equestrian sports, such as polo, are not. It is interesting to note at this point that the terminology used to support the definition of 'real' sport, such as 'warrior', 'combat', and 'male', are indeed synonymous with the military, the root of equestrian sports (De Haan, 2015).

Equestrian sport requires equipment, and most fundamentally this is the horse. Whilst a horse cannot be designed or manufactured in the same way as a boat, equestrian sports require the breeding of quality horses, a lengthy process of selection, maturation, and testing. In the nineteenth century, breeding horses for sport and military purposes was regarded as one of the patriotic duties of an English gentleman and certainly the development of the English Thoroughbred had relied on English aristocracy to import the foundation stock. In the nineteenth-century sport, horse breeding also provided a gateway to enter the highest echelons of British society, although it could be a high-risk enterprise (Moore-Colyer and Simpson, 2004). The risk associated with breeding sport horses, with high financial investment required and a relatively low chance of return by production of a superior equine athlete, led to horse breeding being regarded as a leisure activity, even a sport, in its own right. Today many of these points still resonate with people joining syndicates to allow breeding and/or ownership of sport horses in order to join the elitist world of the 'race horse or competition horse owner. The upper-class obsession with sport, as seen in literature in the nineteenth and early twentieth century also led to as many divisions and rivalries as it did at times allow people to cross social boundaries (Huggins, 2008). For example, Vamplew (1998) explores how sports used definitions of amateurism to exclude working men, with the Amateur Rowing Association providing an extreme example. They debarred from amateur status anyone 'who is or has been by trade or employment for wages a mechanic, artisan, or labourer, or engaged in any menial duty' (Rowe and Pitman, 1898).

Upper-class life in the nineteenth century was dominated by country or field sports, some involving horses, with literary celebrations of 'the good rider to hounds or the top racehorse breeder'. Rivalries between hunts and even between traditional sports, such

as polo, and new sports such as yachting or motor racing were often marked and bitter (Huggins,2008). As with horse racing, the socio-historical context of hunting has received academic attention, with many pointing out the apparent contradictions of a rural stewardship ideal welcoming in farmers and the rural community, however at the same time requiring ownership of substantial areas of land and considerable financial investment to support hunts (for example Huggins (2008), Moore-Colyer and Simpson, (2004), and Vamplew and Kay (2006)).

With sport horse breeding being dominated by the upper classes and the persistence in European sport of a Victorian ideal of amateurism into the mid-twentieth century, it is perhaps unsurprising that equestrian sport in particular has been identified as an example of a sport governed by the Corinthian ideal. The characteristics synonymous with the 'gentleman amateur or Corinthian' of sport, seen as individuality, stoicism, or courage, together with the preparedness to stand or fall by one's own judgement and an unwillingness to attribute personal misfortunes to the actions of others are characteristics seen to mirror the old military virtues of obedience, loyalty, manners, and selflessness (Moore-Colyer and Simpson, 2004). Whilst in the nineteenth century, many gentleman amateurs were skilful enough horsemen to compete against professionals, with the deaths of many officers in the Boer Wars and the abandonment of the hunters' flat race in the early twentieth century, the numbers and levels of skill exhibited by amateurs waned. The high risk of serious injury or death and the increasing commercialization of racing, with large funds for prizemoney, led to owners wanting only the best riders and increasingly these were full-time professionals (Vamplew, 1988). It is interesting to note that this trend is at odds with the experiences of athletes in other sports during this time where their amateur status was ruthlessly and religiously policed.

Understanding the socio-historical context of sports in the nineteenth century provides a lens through which one can appreciate the nature and significance of sport and its relationship to social values at this time. Indeed, the emerging themes of 'manliness' of equestrian sport as epitomized by the required dominance over the horse, the influential presence of the upper classes, and the fact that equestrian sport has been identified as an example of a sport governed by the Corinthian ideal, are themes synonymous with the sociohistoric context of European military at that time. Military training has always demanded physical fitness, the capacity for quick decisive action and, for many centuries, the ability to ride horses. The need to develop riding skills and maintain a cavalry in a state of readiness has shaped the evolution of horse-based sports. The horse-back pursuit of fox-hunting, for example, was valued by the Victorian military hierarchy and was an integral part of officer training in many European

countries, for the cavalry regiments were most highly regarded in terms of an upperclass military career (Huggins, 2008).

Despite efforts to maintain cavalry readiness through equestrian sport, with the British Government subsidizing horse racing in the nineteenth century (Vamplew, 1988), in the early 1900s the disappointing performance of the British military in the Boer War led to a plethora of committees of inquiry and in many of these the cavalry was found wanting (Mallinson, 1992). At this time, horses were still a major combat force and in the second Boer War (1899–1902), the British forces alone lost over 300,000 horses (Holmes, 2001). Lord Roberts, an artillery-man and by the end of the second Boer War the Commander-in-Chief, called for a change in cavalry training and better management of the horses:

'It is not sufficient that (they) should be able to ride, but they must know how to get the best from their horses by good treatment and never-failing consideration of their wants ... A man should be taught to ride as an individual, and, not as one of a squad, and the same with horse management'. (Mallinson, 1992).

In 1903, Major-General (later Lieutenant-General the Lord) Robert Baden-Powell became Inspector General of Cavalry and chose to visit the French Cavalry School at Saumur and the Kaiser's at Hanover. These visits led to a programme of vigorous British reforms culminating with the foundation of a Cavalry School at Netheravon in Wiltshire in 1904 (Mallinson, 1992). Here officer training lasted eight months and covered all aspects of equitation and cavalry duties; the pre-eminence of the formal riding school diminished and a more practical approach to training was applied through more frequent manoeuvres in the field (Mallinson, 1992). Hunting further honed the skills developed at Netheravon and required of the cavalry skills such as riding at speed over difficult terrain and negotiating natural obstacles.

Following the invention of gunpowder, many armies had artillery batteries which required approximately 200 horses for six guns. This included riding horses for officers, surgeons, and other support staff, as well as draft horses. Horse artillery was also used as a rapid response force, as at Waterloo, repulsing attacks and assisting the infantry (Holmes, 2001). This role not only required great skill from the riders and a partnership with a well-trained mount to enable the negotiation of difficult terrain at speed, but also demanding patience and stealth when on reconnaissance. These skills had to be practised, by both mount and rider, in order that they could be deployed in the highly demanded and stressful environment of the battlefield. To this end, cavalry (and other mounted) units practised drills and to increase the motivation to gain these skills competitions were held in the new wave of equestrian sports that had started to appear in the nineteenth century. One form of competition encompassed all three aspects: a demonstration of obedience and athleticism, dressage; a test of stamina, endurance,

and speed across varied terrain, the cross country; and a demonstration that the horse was still fit and agile after the exertions, jumping. This competition took place over three days and acquired the name 'The Military', and would later be referred to as Eventing (Wathen, 1989).

During the twentieth century, equestrian sport developed due to the training needs of the military and mirrored the aristocratic, upper-class, Eurocentric, male-dominated zeitgeist of the Olympic Games (Real, 1996)⁸. Indeed, the equestrian events chosen for inclusion in the modern Games were European riding disciplines with roots in classical horsemanship, fox hunting, and tests of cavalry skills complementing the European Military influence seen elsewhere in the Olympic movement. Having reviewed the socio-historical context of warfare and the relationship between the military and equestrian sport, we now move on to further unpack the influence of the military on the first phase of development of equestrian sport within the context of the Olympics.

3.2.4 Military Influences on the Format and Rules of Equestrian Sport at the Olympic Games from 1900 to 1948

The strong influence of the military milieu, which had a distinctive masculine culture, undoubtedly shaped not only the male homogeneity between the institutional boundaries of the armed forces and associated sports, but also the innate class structure of such institutions. Indeed, this male homogeneity was clearly evident throughout the development of the Modern Games. From a governance and administrative perspective, the International Olympic Committee (IOC) evolved as a male-dominated institute. Between 1896 and 1948, the IOC had an all-male membership (International Olympic Committee, 2015). It is interesting to note however that the 13 founding members, whilst all male, represented 11 countries including the non-European countries of Russia, New Zealand, Argentina, and America. They did not all have military backgrounds and the majority of members did not come from the upper classes. This male dominance transcended governance and was reflected in the restrictions placed on participation. The creator of the modern Olympics, De Coubertin himself, was opposed to female participation in public sport:

'I personally do not approve of the participation of women in public competitions, which is not to say that they must abstain from practising a great number of sports, provided they do not make a public spectacle of themselves. In the Olympic Games, as in the contests of former times, their primary role should be to crown the victors' (De Coubertin, 1935).

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⁸ Real reviews the Olympic ideals of the first decades of the modern games with reference to aristocratic privilege and Eurocentric ideals.

3.2.5 The Establishment of Equestrian Sports in the Modern Olympic Games

Whilst 1896 was historic as the first Modern Olympics, it was not to be a memorable milestone for equestrian sport. The Greek organizers rejected plans to include equestrian sports in the programme of the I Olympiad owing to concerns regarding transporting horses, facilities, and the preparations of competition sites (Fédération Equestre Internationale, 2012a). The Games of the II Olympiad held in Paris in 1900 were a landmark in Olympic history for many reasons. Over a thousand competitors, from 24 nations, took part in 19 different sports (Fédération Equestre Internationale, 2015f). Equestrianism as a sport made its debut at the summer Olympics in 1900 with competitors representing five nations (three European, Russia, and the United States); Great Britain did not however compete in the three equestrian individual disciplines officially represented in the 1900 Games in Paris (Fédération Equestre Internationale, 2015f). They were not the same disciplines as in the current competition. Showjumping, as we refer to it today was split into 'jumping', 'high jump', and 'long jump' and formed the first three recognized equestrian Olympic disciplines. The Italian rider Giovanni Giorgio Trissino won gold in 'high jump' and silver in 'long jump'. Competing with two different horses in the high jump, he narrowly missed making Olympic history by winning two medals in the same event having won the gold medal and finishing in fourth place on his second horse (Olympic.org, 2015).

Despite the male domination described above, women took part in the Games for the first time in selected events. For example, Charlotte Cooper from Middlesex, England, became the first female Olympic champion in the sport of tennis. Although Elvira Guerra from France competed in the equestrian discipline of 'Hacks and Hunters combined' (Hedenborg and Pfister, 2012), it is important to note that the latter event was part of the World Exhibition of 1900 and was not therefore an event officially recognized as being formally part of the Olympic Games (Daniels and Tedder, 2000).

Polo was also introduced to the 1900 Olympics, but according to IOC records was classified separately from the other equestrian disciplines (Merillon, 1900). Eight separate polo tournaments were held in this year, but only the Grand Prix Internationale de l'Exposition was counted as an official medal event. Entries for this event were from clubs rather than countries and the winning Foxhunters Club comprised English, Irish, and American players (all male) (Fédération Equestre Internationale, 2015f). Polo also appeared at the 1908 Olympics, and here teams represented nations and the Hurlingham Club team from Great Britain won the gold medal. Whilst records do not state if the riders were military officers, the official report

of these Games shows all polo officials were high-ranking military officers (Cook, 1908). The next appearance of polo was at the 1920 Olympics in Antwerp where Great Britain retained the gold medal title (Belgium Olympic Committee, 1920). However, in the two further appearances of polo at the Olympics, this honour would be claimed consecutively by Argentina, although Britain did gain bronze in 1924 and silver in 1936 (Ave, 1924). The discipline of polo was therefore only contested in five Olympiads (although not consistently) before being removed from the official programme after the 1936 Games in Berlin (The Organising Committee of the XI Olympiad, 1937). Polo is therefore known as a 'discontinued sport' or 'past Olympic sport'.

The Swedish cavalry officer, Master of the Horse to the King of Sweden, and IOC member Count Clarence von Rosen had long argued that, by the inclusion of military representatives, the Olympic Games would be strengthened and the various governments would show more interest. Baron de Coubertin and many IOC members were supportive and asked von Rosen to present a proposal for horse competitions (Fédération Equestre Internationale, 2015b). During the years leading up to the First World War, the links between sport and the preparedness to perform in military fields were socially accepted, and indeed promoted as proof of national superiority. Horseriding in particular was regarded as a military discipline (Heck, 2011). The organizers of the 1908 Olympic Games in London were responsive and agreed to place horse-riding competitions on the programme. However, the British Olympic Council was not able to arrange the horse-riding competitions in the stadium. Consequently, the newly created Olympia Horse Show was contacted and agreed to hold the competitions in the Olympia Hall. Unfortunately, when eight nations entered a total of 88 competitors, the Olympia board found itself unable to carry out the programme due to the unexpectedly large number of entries (The Swedish Olympic Committee for the Olympic Games of Stockholm 1912, 1913). However, Swedish influence prevailed. The Games of the V Olympiad were awarded to Stockholm; their bid contained a proposal to hold equestrian events and, as a result, these Games would prove to be a milestone in the continuing development of equestrian sport at the Olympics.

3.2.6 1912: The Pivotal Games

One military-influenced legacy still prevalent today is related to the actual events which athletes participate in. The Swedish Organising Committee realized that only a few international federations existed, without universally accepted rules. It therefore adopted the following procedure: if there were rules of an international sports federation or if there were rules adopted internationally, they would be used, such as

for cycling, football, tennis, swimming, or yachting. If such universally accepted rules did not exist, such as in equestrian sport and modern pentathlon, the Swedish Organising Committee would draw up the rules for the Games of 1912 (Fédération Equestre Internationale, 2012; MPAGB, 2012). For example, in Modern Pentathlon, there were no rules stating that women could not compete but when a young British athlete, Helen Preece (described by de Coubertin, the then President of the IOC, as a 'neo-Amazonian') applied to compete in the Stockholm Games, the Swedish Olympic Committee chose to reject her registration (Daniels and Tedder, 2000).

Consequently, cavalryman Count Von Rosen came up with the three discipline set-up which is the Olympic equestrian programme still in force today: Eventing (the Military) Dressage (Prize Riding), and Showjumping (Prize Jumping) (The Swedish Olympic Committee for the Olympic Games of Stockholm 1912, 1913). Von Rosen's influence is such that he is often referred to as the 'Father of Modern Olympic Equestrian Competition' (International Museum of the Horse, 2011). He discarded the then popular 'high-jump' competition because it was mostly professional not military riders who were involved. With reference to this differentiation between military and 'professional' riders, Von Rosen's disregard for professional disciplines mirrors the wider changes across the Olympic movement between 1908 and 1912. During a meeting of the IOC in Luxemburg on 11 June 1910, it had been determined that only medals and no money prizes were to be awarded during all Olympic competitions. Therefore, the 1912 Olympic Games were the first international equestrian competition with no money prizes, although three of the four Olympic Challenge Prizes were awarded in the equestrian disciplines from the monarchs of Germany, Austria, and Italy (The Swedish Olympic Committee for the Olympic Games of Stockholm 1912, 1913).

The equestrian organizing committee in Stockholm consisted entirely of military officers or members of the aristocracy. The military influence on these games is further evident in Von Rosen's rules for Eventing in which it clearly states that competitors must be actively serving officers. Eventing is the equestrian equivalent of the triathlon, incorporating three disciplines designed to mirror the challenges faced by the cavalry (Silver and Prior-Palmer, 1976). Cavalry horses had to be all-round performers, agile over obstacles and all kinds of terrain, highly responsive and obedient. To test these skills, Eventing included a non-jumping endurance test (road and tracks), a speed test (the individual steeplechase), a cross-country jumping course, a stadium jumping course, and a dressage test. Eventing was originally only open to active duty military officers, and their mounts had to belong to the competitors themselves or to their respective branch of service. Military-owned school horses were ineligible for competition (Bryant, 2008). This characteristic of equestrian sports was reinforced in

discussions leading up to the introduction of the modern pentathlon to the Olympic programme in 1912. There was extensive debate as to whether competitors in the modern pentathlon would ride their own horses or be provided with them, and this centred around a difference of opinion around increasing participation to all social classes. The IOC session in Luxembourg in June 1910 agreed that saddled horses would be provided in support of de Coubertin's vision of modern pentathlon being a combined sport which happened to feature an equestrian element, open to all. However, the Swedish Olympic Committee overturned this decision in 1911 requesting that all competitors bring their own horses, with von Rosen promoting modern pentathlon as primarily an equestrian sport. In the end, competitors could choose to either bring their own horse or have one provided. This was soon revised to everyone having one provided in the pursuit of parity and since this time modern pentathlon has not been considered an equestrian sport, although its promotion of a masculine and military ideal was a key reason for its introduction and continued place within the Olympic programme (Heck, 2014).

The 'officer only' rule seen in Eventing did not apply to the other equestrian disciplines, however it is interesting to note that the official report from these games makes it clear that all equestrian competitors were military officers (The Swedish Olympic Committee for the Olympic Games of Stockholm 1912, 1913). The three-discipline format has been consistent, apart from the 1920 Olympics in Antwerp which saw the introduction and only appearance of Equestrian Vaulting. In 1920, this was known as 'Artistic Riding' and was open to non-commissioned cavalry officers. The gold medal was won by the Belgian team, followed by France and Sweden (Belgium Olympic Committee, 1920). Equestrian Vaulting was utilized by many military training schools to improve their riders and Sweden was obviously very accomplished at this sport. It is therefore not clear why von Rosen elected not to include Equestrian Vaulting in the 1912 Games, or indeed why it failed to appear again.

In 1911, invitations were sent out to National Olympic Committees and interestingly also to their military departments. As mentioned, Von Rosen had shaped and endorsed the new format of the equestrian programme with an upper-class touch, in which only military officers on active duty were allowed to compete in the Eventing competition (The Swedish Olympic Committee for the Olympic Games of Stockholm 1912, 1913). The fact that the competing athletes were officers on active duty meant they had little time to prepare for competition. For example, the USA's preparations began on 20 January 1912 when the war department published Special Order No. 20 detailing selected officers to constitute an equestrian team to compete in that summer's

Olympiad in Stockholm (Findling and Pelle, 2004). The team had just six months to prepare before setting sail to Sweden in June.

In preparation for the Stockholm Olympics, the American team based themselves at the US Army Mounted Service School at Fort Riley, Kansas (so named from 1905 to 1920 and then known as the Cavalry School from 1920 to 1947) (Findling and Pelle, 2004). DiMarco (2015), a modern US armoured cavalry man and military historian, explains that during this time about 55 officers a year attended Fort Riley, and for them horses were not just about the military or sport but were an integral part of their lifestyle:

'It was not uncommon for them to be in the saddle for eight or twelve hours a day for weeks at a time if they were in the field or doing some kind of mounted training. On weekends they did foxhunts, horse shows, drag hunts, polo. Their kids rode; their wives rode. Most of the cavalry officers owned one or two horses privately, in addition to their Army-provided troop horses' (Di Marco, 2015).

From the 50 or more officers, five were selected to train for the Olympics alongside 18 horses. Time for competition was not the only challenge the American team faced. They had only 90 minutes a day in which to train outside of their regular military duties and obligations, they were in the middle of a severe Midwestern winter and whilst the officers had competition experience in Showjumping they had no experience of the European sports of Dressage and Eventing (Bryant, 2008). Despite their familiarity with horses, their lack of experience with the demands of Olympic-style competition would have made preparation very difficult for the American team.

Ten nations and 62 horse and rider partnerships took part in the equestrian programme at the 1912 Games. Seven European countries, Russia, Chile, and the United States were represented. Whilst Great Britain entered teams and individuals for all equestrian medal competitions, they only actually competed in Eventing, withdrawing from the other disciplines (The Swedish Olympic Committee for the Olympic Games of Stockholm 1912, 1913). The host nation Sweden dominated the medal table, taking all three medals in the individual dressage, individual and team gold in Eventing, and team gold in Showjumping. Germany and France also performed well with Germany taking three silvers and a bronze and France securing a gold, silver, and bronze across the different disciplines.

For the first time, the Olympic Games had athletic representation from all five continents, however the European dominance within the medals, seen in the equestrian sports, was to some extent mirrored across the Stockholm Games in general. The anomaly was the USA who gained the most gold medals of all nations and won the team bronze medal in the 1912 Eventing competition. Whilst other non-European countries, such as Russia, had a strong and active cavalry during this time,

their failure to medal reflected their lack of experience with the Eurocentric style of competition introduced at the 1912 Olympic Games, particularly in Dressage (Fédération Equestre Internationale, 2015b).

Seven nations were represented in the 1912 team Eventing competition, with each team represented by four officers; the competition included a 50-kilometre distance ride and a cross-country ride with obstacles (Findling and Pelle, 2004). The team from Great Britain consisted of one Colonel and three Lieutenants from the 4th Hussars. 16th Lancers, and the 18th Hussars (The Swedish Olympic Committee for the Olympic Games of Stockholm 1912, 1913). Considering their lack of preparation and experience in Eventing combined with their extensive travel requirements (a 15-day journey from New York to Stockholm), the US team took home a very respectable team bronze medal. Whilst competitors were similar in gender, rank, and active service, the European distinctive riding style and quality of horse differentiated the teams. Lieutenant Colonel F.S. Fontz, the general staff officer responsible for overseeing the American team effort, stated that the quality of the US horses was a national embarrassment and that Captain Henry (Team Captain) and his men were physically exhausted by the pace of training while simultaneously continuing to perform their assigned military duties (Di Marco, 2015). The Swedish performance, however, received high praise. The German sporting advocate Carl Diem was so impressed by the Swedish performance, he wrote, 'What Swedish officers showed was representative of military riding, an honorable work' (Findling and Pelle, 2004). Diem, however, went on to question whether equestrianism should be an Olympic sport because, in his view, only a person and his or her achievements and capabilities should be evaluated.

The 1916 scheduled Games were cancelled due to the onset of the First World War in 1914. During this break in competition, changes within the military, such as the increase in mechanized and armoured vehicles and the trench conditions experienced during the First World War, would prove to have a lasting effect on the military's influence over equestrian sport at the Olympics. The 'Great Cavalry Debate' which had been brewing since the Boer War had continued to gain momentum. There was criticism within the British military that mechanization did not occur soon enough due to the 'cavalry's irrational attachment to their horses' (French, 2003). The questionable quality and reliability of early tanks during the First World War gave horses a revised reconnaissance role. One of the main driving forces behind the mechanization of the cavalry was the Chancellor of the Exchequer Winston Churchill, who himself had been a cavalry officer (French, 2003). Churchill called for the cavalry to be abolished or mechanized, and subsequently the War Office began mechanizing the regular cavalry

in 1928 (Bond, 1980). However, although the phasing out of the formal mounted cavalry began during the early part of the twentieth century, military influence on equestrian sport would continue.

3.2.7 Olympic Equestrian Sport Between the World Wars

The Games continued after the First World War and the European dominance of equestrian events at the Olympics continued. The only non-European countries to gain a medal in the equestrian sports between 1920 and 1928 were Chile (officers based at the German cavalry school in Hannover), USA, Argentina, Japan, and Mexico. Because of the end to the First World War in 1918, Antwerp was only awarded the Games a year prior to the start of competition. The short-term allocation of the Games to Antwerp obviously left little time for preparation. Just eight nations entered the equestrian competitions at the 1920 Games in Antwerp and Great Britain was represented only in the Polo competition. The Swedish team picked up more than half the 15 medals at stake, and confirmed their dominance of the sport. Team USA was at first unable to gain a passage to Europe at such a late stage, but again military influence came to the fore as they were able to secure the help of the military to transport the team. However, the proposed steamer was damaged at the last minute and the team finally sailed in a much smaller ship which arrived one week later, on 8 August, barely a week before competition began (Fédération Equestre Internationale, 2015c). The US team, perhaps unsurprisingly, were unable to repeat the success of the Stockholm Games finishing outside the medals.

Military influence continued to shape equestrian sport beyond the Olympics. Following the 1920 Olympics, the IOC called for an extraordinary meeting in 1921 in Lausanne. As a result, several international federations were founded, including the worldwide Federation Equestrian Internationale (FEI) (Fédération Equestre Internationale, 2015g). The FEI, although with only 14 member National Federations, had in the two years since its founding drawn up the Olympic programme. This task was helped by the fact that the FEI's Secretary General, Commandant Georges Hector, was also the Secretary General of the French Federation and became the president of the technical committee for the equestrian events at the 1924 Games (Fédération Equestre Internationale, 2015a). Today, the FEI is the sole controlling authority for eight equestrian disciplines and is the only international federation to govern and regulate a sport for both able-bodied and disabled athletes.

At this point, it is interesting to note that the three equestrian disciplines of Eventing, Dressage, and Showjumping under the guidance of the FEI had different rules

regarding the participation of female riders. Women were not permitted to compete in any equestrian sport at the Olympics until 1952 when they were allowed to compete only in Dressage; in 1956, Showjumping was opened to female competitors; and in 1964, they were finally allowed to compete in the military-dominated Eventing competition (Hedenborg, 2009). However, outside of the Olympics, women were successfully competing in equestrian events alongside male competitors. Under the 1938 FEI rules, Dressage was open to military officers and amateurs, under which category women could compete, however Rule 214 stated that Amazons (women riders) could not participate in the equestrian events at the Olympic Games (Burke, 1997). If they qualified, women could however compete in all other international competitions recognized by the FEI and in order to strengthen the male-only Olympic national teams, successful female riders were asked to lend the 'team' their horses.

In 1924, the Games were hosted in Paris, the home city of Pierre de Coubertin. These Games are commonly regarded as the Games that established the Olympics as a 'spectacle', with a closing ceremony, an athlete village, and over one thousand journalists in attendance. Forty-four nations and over 3,000 athletes competed in Paris; 17 nations competed in the equestrian programme and the medals were distributed across nine different nations, including for the first time medals for the Netherlands, Denmark, Switzerland, Poland, and Portugal (International Olympic Committee, 2015). Great Britain competed in Eventing, Show Jumping, and Polo; whilst a bronze medal was secured in polo, they narrowly missed out, coming fourth, in both the Showjumping and Eventing team competitions (Ave, 1924).

The 1928 Games held in Amsterdam saw three additional nations compete in the equestrian programme and Czechoslovakia and Spain medalled for the first time. Twenty nations were represented within the equestrian events; including for the first time Japan. Although Great Britain entered the Olympics, they did not field a team for the equestrian events. Major Sloan Doak, a veteran of the 1920 and 1924 US Olympic teams, received orders to prepare a US equestrian team just eight months before the Games, although the team was only assembled to start training just three months before they set sail to Holland (Bryant, 2008). The US failed to medal at the 1928 Games and their poor performance resulted in a shake-up of how the Army selected, trained, and fielded Olympic equestrian teams. Doak's observations of the European model of training and success prompted him to make recommendations that the cavalry begin planning for the 1932 Games immediately after the conclusion of the Amsterdam Olympics. For the first time since the 1904 Games in St Louis, the Games of the X Olympiad (1932) were held outside Europe, in Los Angeles, California. These Games would prove to be a milestone for the USA in relation to their participation in

equestrian sport at the Olympics. The effect of hosting the Games is reflected in the USA equestrian teams' preparation for the competition, which for the first time began four years before competition with training starting two years out (Di Marco, 2004). The military's involvement in the equestrian competition went beyond individual competitors as the US Army, in particular the cavalry, was also responsible for organizing and operating the equestrian events.

Between 1928 and 1932, other changes also occurred in the US Army which would serve to improve the quality and subsequent results for the host nation's equestrian Olympic team. Changes to their horse-breeding programme, the formation of a Cavalry School at Fort Riley, and the introduction of a one-year advanced course in equitation helped focus training and preparation for Olympic competition. The captain of the 1912 USA Olympic team, General Henry, was appointed as Chief of Cavalry; he was also a member of the IOC and in 1931 became President of the FEI (Fédération Equestre Internationale, 2015b).

Location of the Games outside of Europe, coupled with the fact that the 1932 Olympics were held in the middle of the Great Depression resulted in only half as many athletes taking part as had done so in 1928. The great absentees in equestrian sport at Los Angeles were Germany, Italy, Spain, Switzerland, Poland, and Czechoslovakia (Fédération Equestre Internationale, 2015d). In total, 37 nations competed in the 1932 Olympics, but only six nations (not including Great Britain) competed in equestrian events. France only sent a Dressage team; Netherlands only sent Eventers and, whilst Sweden was fully represented, to save money, the Eventing riders also had to do the Showjumping competition. In addition, there were Mexicans – who had the shortest journey and an Eventer and Showjumping rider from Japan. The US had full representation. As a result of this concerted effort, the host nation secured five medals. This was a feat which remained unmatched for over 50 years, until the Games returned to Los Angeles in 1984 (Urwin, 1983). Military influence continued to be evident in the 1936 Games where all the judges in the equestrian and polo competitions were military officers (Fédération Equestre Internationale, 2015d). Despite a cultural tradition of equestrian sports and a strong cavalry presence, Great Britain failed to make an impact on equestrian sport in the Olympics, until the 1936 Games in Berlin where they medalled for the first time, taking home a bronze in the team Eventing: 'The English horses had not yet had enough dressage training, but distinguished themselves on the terrain through their tremendous galloping and jumping ability. For this reason they were able to take third place in the team contest. The English officers rode wonderfully on the terrain' (Bryant, 2008).

As the Games had returned to Europe, America was unable to retain their success gaining only a silver medal in the individual Eventing competition. Whilst the rest of the Berlin Games was marred by political unrest, there was also disquiet within the equestrian community as for the first and only time in Olympic history, one country, the host country Germany, captured all six equestrian gold medals, despite the fact that 21 nations competed across all disciplines. In his official post-Olympic report for the US equestrian team, to Major General Guy Henry, Captain Hiram Tuttle wrote, 'I had been advised by the German team coach that to win in dressage required European-bred horses, European competition experience, and political clout in the host country; and that, having none of these, the Americans likely wouldn't fare well' (Hansard, in French, 2003).

Between the two World Wars, the 'Great Cavalry Debate' continued with passionate support on both sides. Again, it was the anthro-zoological relationship between man and horse which divided the debate. In the House of Commons in March 1935, Brigadier H. Clifton-Brown, a pre-war commander of the 12th Lancers, lamented that 'I am sorry that we cannot go on clinging to the horse, but I hope we shall cling to him as long as we can' (Holmes, 2001). During the Second World War, the Games again lapsed while people and horses were deployed. Although horses still had military uses during the early part of the Second World War, their role in warfare had been irrevocably altered. Many of these new roles utilized the mobility of mounted divisions, over difficult terrain, which increased the requirement for skilled and practised riders and horses. These roles made equestrian sport competitions for military participants more important than ever before, and particularly the cross-country element of eventing (Heck, 2013).

All British Army cavalry regiments were mechanized by 1 March 1942 when the Queen's Own Yorkshire Dragoons (Yeomanry) were converted to a motorized role, following mounted service against the Vichy French in Syria the previous year. The final cavalry charge by British Empire forces occurred on 21 March 1942 when a 60 strong patrol of the Burma Frontier Force encountered Japanese infantry near Toungoo airfield in central Burma. The US Army's last horse cavalry actions were also fought during the Second World War. Two years after the British Cavalry was mechanized, the last horsed US Cavalry (the Second Cavalry Division) were dismounted. The last substantive and successful classical cavalry charge of the war – and the final such confirmed charge in history – was probably that made in August 1942 by a cavalry unit of the Italian Expeditionary Corps in Russia (Corpo di Spedizione Italiano in Russia, or CSIR) on the Eastern Front (Holmes, 2001). As the role of the horse in warfare

diminished, this was echoed by the twilight of military dominance over equestrian sports at the Olympic Games.

3.2.8 The 1948 Controversy

The 1948 Olympics in London was organized with less than two years' notice and took place when rations were still in place and London was still recovering from the scars of the Second World War. The FEI held a view that some of the nations involved in the recent World War may still have been recovering and consequently their cavalry mounts may have had insufficient training in the Olympic Equestrian disciplines to engage successfully in challenges comparable to those of 1936. Therefore, the dressage test was modified to remove the Piaffe and Passage (the most complicated required moves of dressage) and the endurance test was shortened. For the first time at any Olympic Games, Great Britain fielded a Dressage team, although they failed to medal in either individual or team competition. Great Britain did however medal in both team Eventing and Showjumping competitions with bronze medals in both (The Organising Committee of the Olympic Games of 1948, 1948).

Whilst the equestrian organizing committee was predominantly composed of military officers, these were the last Games to accommodate male-only cavalry officers in equestrian disciplines, including the pentathlon. The military dominance over the sport was to end in a flourish of controversy. In order to abide by the IOC ruling relating to amateur competition (at that time), equestrian competitors had to be recognized by a national body as 'gentlemen' or they had to be a 'professional officers actively serving' (The Organising Committee of the Olympic Games of 1948, 1948). In the build-up to the 1948 Games, a sergeant in the Swedish Army, Gehnäll Persson, was a top contender for the Swedish Dressage team; unfortunately, at the time, however, he was a non-commissioned officer. Sergeant Persson was, on 20 July 1948 (barely three weeks before the Olympic Grand Prix de Dressage), promoted to Lieutenant and, as expected, Sweden won the Dressage gold medal. Shockingly, however, merely two and half weeks later, Persson was demoted. In retrospect, it seems unbelievable that the Swedish military authorities naively thought that such a scandal would not become known internationally. When it was discovered, the FEI, with the approval of the IOC, disgualified Persson. This meant that Sweden was also disgualified from the team event and lost its gold medal. This shameful incident was a clear demonstration that times had changed and commissioned officers were no less likely to be professional equestrian athletes than non-commissioned officers. Following this incident, the FEI acted quickly and, from 1952, allowed non-commissioned officers in the Olympics

(Fédération Equestre Internationale, 2015e). The time of military dominance over Olympic equestrian events was over, ushering in the second period of development for equestrian sport at the Olympics, characterized by the inclusion of non-military and female riders.

3.2.9 Conclusion

Pre-1900 equestrian sport existed in various forms around the world primarily to develop and practise skills of hunting and warfare. At this time, equestrian sport lacked clear governance and rules, was certainly not internationally standardized and was across the board male dominated. However, the inclusion of this sport within the Olympic programme from 1900 significantly influenced the regulation of equestrian disciplines, the legacy of which is still evident today. Despite the relevance of this period with regard to the development of equestrian sport, it has to date been overlooked by sport historians and academic literature. This paper therefore contributes to filling this recognized gap in the literature by evaluating the influence of the military on the first phase of development of equestrian sport in the Olympic Games.

Within a thematic analysis, we have been able to highlight influential military developments/changes that occurred outside of the confines of sport, and we have placed the sociocultural development of equestrianism within this framework.

Developing the analysis using a reconstructive approach has enabled us to highlight the relevance of the military influence on the development of Olympic equestrian sport. And through the identification and analysis of perceptions of equestrianism which, within the context of the Olympics, are centred upon the Eurocentric, military-influenced development of the sport, we have also been able to discuss implicit and explicit references to, and relevance of, masculinity elitism and social class, along with issues of amateurism and professionalism.

Understanding the socio-historical context of sports in the nineteenth century provides a lens through which one can appreciate the historical landscape of sport and society at this time. Key themes emerging from the review of the socio-historical context of equestrian sport are the 'manliness' of the sport as epitomized in the dominance over the horse, and the changing face of the influence of the upper classes. Through the influence of the military, these themes continued to shape equestrian sport defining its regulation, organization, and participation. We believe analysis of this original equestrian-focused discourse contributes to wider sport history debates by providing a sport-specific narrative for a sport which has developed ironically from a hyper-

masculine, military context to one which would come to manifest unique characteristics of competition across gender and age-based divisions.

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3.3 Study 1: De Haan and Dumbell, 2016: Strengths and Limitations

Study 1 is a mixed studies review where a literature review is combined with historical analysis (Munslow, 1997a; Grant and Booth, 2009). This structure is a strength, enabling the reconstruction of connections between historical events, utilising a wide breadth of published information. Study 1 includes both creation of new knowledge and interpretation of existing knowledge to promote advanced scholarship.

Study 1 involves a non-systematic review of published literature and wider sources (including official Olympic reports) and as such whilst some of the findings are the results of primary analysis they are based on secondary evidence. Literature reviews are open to bias as they do not, necessarily, include all published literature on a topic (Winchester and Salji, 2016). Sources are selected due to whether they are recognised as being in the same group as the researcher (in-group bias), are already known to the researcher (availability bias) or because more attention is paid to sources with key words of interest (or other particular features) due to the area of interest (selection bias). Confirmation bias is also possible, where sections of the literature are omitted, the validity of the statements made may be questioned (or not) and only sources may be selected that align with their world view and research paradigm may only be selected (Grant and Booth, 2009).

Both authors of Study 1 are 'insiders' to equestrian sport (Hammersley and Atkinson, 2019), both being qualified women equestrian coaches who have competed in equestrian sport and neither are from a military background. Within Study 1, the researchers 'insider' perspective has not been explicitly stated, and therefore limits the ability of a reader to critically evaluate it (Aymard, 2004). The authors' similarities increase the likelihood of in-group, selection and confirmation bias, as we were less likely to question each other. Whilst Study 1 was written being mindful of avoiding bias and involved utilising a wide range of sources (including organisational accounts and the official Olympic reports), we did select the sources chosen and in this way were undoubtedly biased (Winchester and Salji, 2016).

The historical analysis incorporates all three of Munslow's (1997a) approaches to historical analysis: reconstruction, construction and deconstruction. A weakness of historical analysis is that the historian has,

'to understand, and explain, in writing, the connections between events and occurrences in the past – working out a relationship between knowledge and explanation' (Munslow, 1997b, p.1).

The historian therefore reconstructs history and constructs it from their own (or an adopted) perspective, and similarly to a literature review the transparency of what perspective they have adopted depends on how reflexive they are as a researcher

(Munslow, 1997b). A strength of Study 1 is that it does contain elements of deconstruction, such as where it acknowledges that official Olympic reports are written by the organising committee (or on behalf of) and therefore prone to putting emphasis on positive messages. Deconstruction, discussing how representations of what has happened have been constructed, is unusual in Olympic history researchers (Booth, 2004). Deconstruction is the least employed of the three approaches and if expanded, to include more evaluation of why the authors cited had written about this topic, would have strengthened this study.

3.4 Study 1: De Haan and Dumbell, 2016: Contribution to the overall aims and objectives

Understanding the historical influences on equestrian sport, including the formation of its lead body, the formulation of international rules and disciplines and some of the individuals that shaped the sport, helps to frame the context within which riders, past and present, have competed within. Study 1 presents a view of equestrian sport at the Olympic Games, and the formalisation of rules and regulations and the formation of its International Federation that complements the papers published that provided historical insights into equestrian activities and sports (e.g. Huggins, 2008; Dashper, 2012; Hedenborg, 2015). The literature previously published had not had the development equestrian sport at the Olympics as its primary focus and as the only Olympic sport that is sex-integrated and involves both human and animal competing in partnership to represent a nation it should not be assumed that equestrian sport followed the same progression as other sports. Study one therefore reconstructed and constructed the story behind the first period of equestrian Olympic sport.

The dominant historical influence on equestrian sport, and in particular the three Olympic disciplines, was eurocentric, male, military and aristocratic with the international federation for equestrian sport formed and established within this socio-cultural landscape (De Haan and Dumbell, 2016). This first period of Olympic equestrian sport lasted until 1948, and then a second period began when, in 1952, non-military personnel could compete in the Olympic equestrian disciplines and gradually women were allowed until all three disciplines were sex-integrated at Tokyo 1964 (Fédération Equestre Internationale, 2015e; Olympic Studies Centre, 2015). Equestrian athletes can compete for many decades, as in Tokyo 2020 (Dashper, 2012; Dumbell et al., 2018; Belam, 2021). As such the role models and successful sporting figures who inspired the twenty-first century UK Olympians would have included athletes competing in these first and second periods. It is easy to see how seemingly

historical influences, in a sport with the longevity of equestrian athletes can actually be direct influences.

Whilst equestrian sport, and particularly the Olympic equestrian disciplines, has undoubtedly been shaped by military and male influences there are other factors at work too. There was a strong eurocentric influence on the rules, structure and identity of equestrian sport and the formation of the Fédération Equestre Internationale lead body of equestrian sport. These historical and socio-cultural influences have influenced where many riders focus their skill development if they wish competitive success, the choices of which elements of equestrian performance will be studied and researched, and the role models and influential figures that have emerged from Olympic equestrian sporting disciplines.

An Olympian, must be an expert performer and has to be selected (International Olympic Committee, 2021g). In equestrian sport, athletes can compete as part of a team as well as an individual (British Equestrian, 2021e). As such selection for team fit, role, and the ability to perform at an Olympic Games is an important factor. Only a very small number of athletes can be selected for an Olympic Games, by each nation (British Equestrian, 2021f). It is therefore possible that Olympic equestrians have different demographic profiles to riders competing outside the Olympics at super-elite and elite levels.

Chapter Four - Study 2: Demographic profiling of elite dressage riders.

4.1 Rationale for Study 2: Dumbell et al., 2010

4.1.1 Objectives addressed by this chapter: 2,5,6

4.1.2 Reason for inclusion:

The profiles at non-selective elite competition level offer insights into a broad population of expert performers. Personality profiling across competition levels (e.g. Kirkcaldy, 1982; Mahoney et al., 1987) including in equestrian sport (Meyers et al., 1999; Wolframm et al., 2015) and comparisons of physiological variables (e.g. Edwards et al., 2020) have taken place, however rider research in equestrian sport is lacking and demographic evidence-based profiles and broader socio-cultural variables are not well established (Williams, 2013). Comparing expert performers' profiles across competition levels in equestrian sporting disciplines will increase the information available to researchers and policy makers of the effects that socio-cultural and sporting, and also historical, factors have on sporting participation and success (Lamperd et al., 2016).

4.1.3 Published as:

II - Dumbell, L., Johnson, J-L and de Haan, D. (2010) Demographic profiling of elite dressage riders. *The International Journal of Sport and Society* 1 (3) 15-24 b

4.1.4 Why this journal was chosen:

The International Journal of Sport and Society was established in 2010 with strong links to an international conference. 'Exploring the cultural, political, and economic relationships of sport to society' it established a network of interested scholars, the Sport & Society Research Network. It was indexed in SPORTDiscus with Full Text (EBSCO) and although originally less accessible to people outside the network, the combination of conference, presentation, paper review and publication, and publication of accepted version (pre-formatting and editing) through ResearchGate did make findings accessible.

4.1.5 Author's Contribution:

	Lucy Dumbell	Jenni Johnson	Donna de Haan
Conceptualisation	70%	10%	20%
Developing the research idea	80%	10%	10%
Methodology	80%	10%	10%
Data collection and curation	100%	-	-
Performing the analysis	100%	-	-
Writing the paper	80%	-	20%

4.2 'Demographic profiling of elite dressage riders' as published

4.2.1 Abstract

Although it is commonly believed that equestrian sports differ in the demographic profile of their participants, and certain socio-economic groups may be underrepresented, very little research into equestrian sports exists. The aim of this paper was to provide demographic profiling of participants in elite level dressage and compare profiles across levels of disciplines. Data were collected from 157 competitors, across three levels of competition at one Dressage festival in the UK. Three case studies provided demographic profiling data each representing one level of competition. Across all levels of competition there were more female competitors than males although as the levels of competition increased the proportion of male competitors increased resulting in female: male odds ratios of 8.09 at lower levels of competition to 1.56 at highest levels. As the level of competition increased the likelihood of the rider being the owner decreased; at lower levels of competition 91% were sole owners of the horse which decreased to 63% at the higher levels of competition. Age profiling and sport participation support unique 'early start-late specialisation' Long Term Athlete Development model of equestrian sport. Commentary on equestrian sport is to date based on the absence of empirical data. This paper provides the first demographic profiling of elite level Dressage and demonstrates the unique demographic profiling of those involved in equestrian sport.

4.2.2 Introduction

Demographic profiling is not a new concept in the world of sport. Traditionally used in areas such as marketing and segmentation (Beech and Chadwick, 2007), demographic profiling is now utilised across a range of subject areas within sport including; community sport participation (Sport England, 2010), sport spectatorship (Shank and Beasley, 1998; McDonald et al., 2002) sport tourism (Ritchie et al., 2001) and sport injury (Jackson et al., 2004; Finch et al., 2007). An area which has yet to be reviewed using demographic profiling is elite sport participation. Participation in the top echelons of the sport development continuum is generally determined by the specific codification of the individual sport. Male and female participation in the vast majority of sports is sex segregated and the age profile of participants in the main would fall within a sport specific segment. Gymnastics for example has a lower age limit for participation but the age of participation for most sports will follow the Long Term Athlete Development (LTAD) Model. The LTAD model has been formulated to suit both early specialisation sports such as gymnastics, and late specialisation sports such as track and field (Foreman and Bradshaw, 2009). Within the generic LTAD model athletes' development is based on their biological rather than chronological age, based on this the LTAD provides windows of opportunity for training and performance which will be sport specific. Each sport will therefore adapt the LTAD to suit the physical demands of the sport and although the windows of opportunity may vary between sports they are likely to be an indication of the competitive life span of sport specific athletes. Equestrian sports do not fall within the traditional 'early-' and 'late' specialisation paradigm set out in the generic LTAD model and therefore provide a unique case study for demographic profiling.

There are many aspects of equestrian sport which make it unique: the relationship between athlete and animal, the fact that men and women compete equally against each other and the combination of individual and team dynamics. Some authors cite equestrian sporting disciplines as examples of events that epitomise social inequality, elitism and over-reliance on expensive tools (i.e. the horse) that many feel contribute more to competitive success than the human athlete's effort (Gandelsman and Smirnov, 1970; Guttmann, 2004; Merlini, 2004). However, there is little empirical evidence to support this and there is therefore a need for a sustained research effort to understand the development of equestrian sports, participation and the social context of equestrian sporting disciplines. With sports increasingly competing against one another for financial support and having to demonstrate broad appeal and participation (Bergsgard et al., 2007) the lack of knowledge about equestrian sport participation has implications from grassroots to elite with regards to athlete support, talent identification

and performance analysis. In light of the need for further understanding of the efficacy of equestrianism in the context of sport, this paper sets out to discuss the sporting context of equine sport and the demographic profiles of athletes involved, focussing specifically on the sport of dressage.

There are several unique profiling characteristics of equestrian sport such as gender and age which will form the basis of this paper's discussion. However it is anthrozoological relationship which appears to be a dominant factor when comparing equestrian to other sports. Comparisons between sports can be based on classification criteria. One way to classify sports is based upon the training objectives and the physiological and skill similarities necessary to attain and improve performance (Bompa and Haff, 2009). According to Gandelsman and Smirnov (1970) classification of sports based on skill classification and skill requirement, horseback riding is grouped together with motor sports and water events such as sailing, waterskiing and surfing. The skill classification of these sports is to 'perfect the conduct of different means of travel' and the skills requirements relate to the need for athletes to make quick decisions, develop complex skills through hours of training and awareness that the quality of the equipment (horse, surfboard etc) may influence the outcome of the competition (Gandelsman and Smirnov, 1970). Guttmann (2004) also compares the equestrian sport of horse racing to automobile racing and similar 'motor sports' and questions if they are sufficiently physical enough to warrant the name 'sports'?

Most equestrian sport has derived from the need to practice and develop equestrian (riding) skills and the majority of disciplines have their roots in achieving and demonstrating hunting and/or military prowess. Polo is believed to have first been played in Persia in the 6th century BC and was at first a training game for elite cavalry units. The sport of jousting became popular in 12th Century Europe to perfect the skills required during a heavy cavalry charge. Although this relationship with war undoubtedly emerged from a male dominated landscape, use of the horse in war was not restricted to men as is illustrated by Boudicca's famous chariot charges. Up until the 1952 Olympics in Helsinki, only male riders were permitted to compete in any Olympic equestrian discipline including Dressage. Today however equestrian sport is the only sport represented at the summer Olympics where men and women have the opportunity to share the winning podium. Outside of the Olympics women were competing in equestrian events alongside male competitors. Indeed Patricia Rosemary Smythe (known as Pat Symthe) first joined the British show jumping Team in 1947, the same year she won her first open category. Pat went on to compete in the 1956 Olympics where she won an individual bronze medal and was recognised as an Officer of the Order of the British Empire (OBE) the same year.

Over time sports researchers have produced a large body of work on the agency of culture and gender processes in sport. Much of this work is a reflection of the universality of gender processes and practices that rigidly maintain distinctions between, and separation of, the sexes and naturalise power in the male athlete. Debate seems to focus on 'male' or 'female' sports and the consequence of participating in such a sport on the bodily form. There is no standard phenotype for horse riders, no definable gendered strength or weakness, yet the opportunity and relevance of competing equally in a sport, such as equestrianism, appears to go without discourse from those commentating on gender equality. One reason for this may be the fact that little attention is paid to the physicality of the rider; indeed it is the physical prowess of the horse which is often commented on.

To truly compare the gendered physicality of equestrian sport against other sports we must define the physicality we are referring to. For example, within the Olympic discipline of Dressage, scoring and hence placing are based on the quality of the horse's individual required movements. How horse and rider achieve this is to all intents and purpose irrelevant. The relevance, therefore, of the gender of the rider is negligible, as it is the physical performance of the horse, rather than the human athlete who is judged.

Dressage is a French term meaning 'training' and as stated by the Fédération Equestre Internationale (FEI) dressage is the highest expression of horse training and is used as the ground work for all other disciplines. Dressage is one of the world's oldest sporting activities and can be traced back to times when the military would use it to prepare horses for battle (Fédération Equestre Internationale, 2007). The aim of dressage is to develop a strong partnership between horse and rider whilst encouraging the horse to be harmonious, calm, supple and flexible (Equestrian Federation of Australia, 2010b). The horse and rider work together to progress through the levels, each level building on the previous (Davis, 2005). Dressage is governed by the FEI and is a current Olympic and Paralympic equestrian sporting discipline. There is only a limited amount of research on the discipline specific demands on the equine athlete, however there is even less about the human athlete.

Age is often a characteristic used in demographic profiling. As previously mentioned most sports fall within the LTAD model and as a result tend to have a fairly sport specific age demographic profile especially in relation to elite sport performance. With regards to LTAD model, equestrianism does not fall into either an early or late specialisation framework. Age of specialisation appears to be a key issue for equestrianism because it is an early start sport, but also a sport where riders can go on to enjoy a career well into their 40s and beyond. The youngest athlete competing in the

equestrian events at the Beijing Olympics was Brazilian dressage rider Luiza Tavares de Almeida at just 16 years old and the oldest athlete competing at the Beijing Olympics in any sport was 67-year-old Hiroshi Hoketsu, a dressage rider for the Japanese equestrian team. Hiroshi's first Olympics were in 1964, where he placed 40th in the show jumping competition.

Equestrianism is uniquely classed as an 'early start, late specialisation' sport, with riders starting learning to ride by the age of 6, but only specialising in a specific discipline around the age of 16 (BEF, 2009). That males and females appear to compete on an equal footing in most disciplines also indicates that developmental age may be less of a factor in equestrianism than in other sports. However, the potential life long career of riders means there are certain management issues and considerations which may be specific to the sport such as consequences of overuse injury, burnout and dropout.

The fact that individuals can continue to compete in equestrian sport well into later life provides a unique profile for equestrian sport. However, the sport development continuum also has a wide base. It is estimated that in the UK alone over 4.3 million people ride or drive, making equestrianism a more popular nationwide sport than cricket, rugby or fishing (British Horse Industry Confederation, 2009). Equestrianism as an industry in Britain alone has a turnover of over £4 billion per year and there are an estimated 1.3 million horses in the UK (British Equestrian Trade Association, 2010). The governing body of international equestrian sport, the International Equestrian Federation (FEI), was established in 1921 and today governs seven disciplines: Show Jumping, Dressage (including Para-Equestrian Dressage), Eventing, Endurance, Equestrian Vaulting, Reining and Horse Driving Trials (including Para-Equestrian Driving). The FEI has 134 National Federations and although this is less than the International Amateur Athletics Federation (IAAF), with 213, and the International Federation of Football Association (FIFA), with 208, it exceeds many Olympic sports and represents all the continents. Despite this evidence of the popularity, longevity and economic importance of equestrian sports very little is known about them.

4.2.3 Methods

Demographic data were collected at an international dressage festival in the UK in 2009. The festival comprised of two events, the first being a national competition, Premier League (lowest level of competition at this event). The Premier League is a series of eight major competitions across the UK; the league offers direct qualification for the National Championships and is governed by British Dressage. The second

event held at the festival under direct governance of the FEI was a CDI*** Small Tour and Big Tour (highest level of competition at this event). CDI*** (Concours Dressage Internationale) is an international dressage competition, split into two 'tours' again differentiated by level of competition.

Data on all the competitors were obtained from the schedule, a public document, in which they had given permission for information about themselves to be published. This included the riders' full names and details regarding the ownership of the horse. Gender was confirmed by direct observation during the public competitions. If a rider had entered more than one horse in a level of competition then only one entry was used for the purposes of data collection, however if a rider had entered in different levels of competition then they were included in data analysis at each level.

To complement this use of public information and to collect further demographic data a small-scale questionnaire was administered with the aim of producing case study profiles of competitors representing each major level of competition (Premier League, CDI*** Small Tour and Big Tour). Competitors were first approached through an invitation, within the competitors' information packs they received on arrival. One competitor at each of the three levels was randomly selected from those who agreed to participate to provide case study data.

The descriptive and exploratory nature of this study resulted in largely categorical and frequency data. In international competition the numbers of competitors were small and therefore contingency chi-square tests would not be applicable. However the calculation of odds and odds ratios was suited to enable further understanding of these mutually exclusive categories. Ethical consent for the study was granted by the lead author's Institutional Ethics Committee.

4.2.4 Results

One hundred and eight competitors took part in the Premier League, thirty one in the CDI*** Small Tour and eighteen in the CDI*** Big Tour. Of the eighteen competitors in the CDI*** Big Tour five also took part in the Small Tour, of which one also competed in the Premier League. Just one Big Tour competitor rode two horses within this level of competition. Three other Big Tour competitors also took part in the Premier League competition. Of the thirty one competitors in the CDI*** Small Tour competition, the aforementioned five also competed in Large Tour and eight also competed in the Premier League competition. Two Small Tour competitors rode two horses in this level of competition.

4.2.4.1 Gender

At all levels of competition there were more female competitors than male. However it was noticeable that as the level increased (from Premier League to CDI*** Big Tour) the proportion of male competitors increased. Indeed although in the national level competition (Premier League) the odds of a competitor being male were only 0.11, competitors in the international competition had 0.34 odds of being male. Within the international competition the odds of being male increased from 0.32 at Small Tour level to 0.39 at Big Tour level (see Table 4.1). This increase was especially obvious in the Female: Male odds ratios that decreased from 8.09, at Premier League level, to 2.13 at CDI*** Small Tour level to 1.56 at CDI*** Big Tour level. The over representation of female competitors seen at Premier League levels was therefore much reduced at the CDI*** Big Tour level.

Table 4.1: A Comparison of the Gender Representation in the Different Levels of Competition

	Male		Female		Total	Oddo Dotio
	Odds	Frequency	Odds	Frequency	Number of Competitors	OddsRatio
CDI *** Big Tour	0.39	7	0.61	11	18	1.56
CDI*** Small Tour	0.32	10	0.68	21	31	2.13
Premier League	0.11	12	0.89	96	108	8.09

4.2.4.2 Ownership Status of Horse

At national level (Premier League) and in the lower level international competition (CDI*** Small Tour) the competitors were likely to be the owner of the horse they were riding with odds above 0.6. However in the CDI*** Big Tour the odds of the rider being an owner of the horse had fallen to only 0.44 (see Figure 4.1). The odds ratios of the rider being the horse's owner rose from 0.79 at CDI*** Big Tour level, to 1.56 at CDI*** Small Tour and 1.78 at Premier League. Therefore as the level of competition increased the likelihood of the rider being an owner of the horse decreased. It was also noticeable that of the owner/riders in the Premier League competition 91% of them were sole owners of the horse. In the CDI*** Small Tour competition only 63% of the owner/riders were sole owners of the horse.

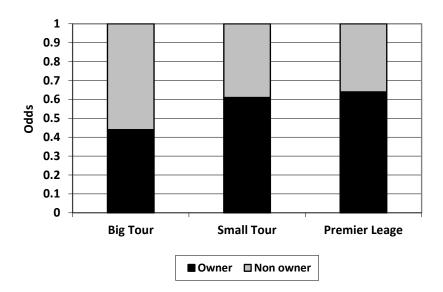


Figure 4.1: A comparison of the odds of competitors being the owner of the horse they rode

5.2.4.3 Case Studies

The randomly chosen case studies were all White British female competitors. As the level increased (from Premier League to CDI***) their ages increased, from the Premier League level competitor being 18-24 years old, to the CDI*** competitor, who was 45-54 years old. The age at which the competitors had first competed in affiliated dressage varied from 18-24 years of age to 25-34 years of age. The Premier League competitor was the only competitor who did not gain their income from the equine industry, and was also the only competitor who did not classify dressage as their main equine sporting discipline and who had competed in other equestrian disciplines apart from dressage in the last twelve months.

Table 4.2: Demographic Data from Case Studies

	Premier League	CDI*** Small Tour	CDI*** Big Tour
Gender	Female	Female	Female
Current age (years)	18-24	35-44	45-54
Age when first competed in affiliated dressage	18-24	25-34	18-24
Horse Ownership	Sole owner	Joint owner	None owner
Ethnicity	White British	White British	White British
Income means	Not from equine industry	As dressage rider	Directly from the equine industry
Main sporting discipline	Eventing	Dressage	Dressage
Equestrian disciplines competed in last 12 months	Eventing, Show Jumping and Dressage	Dressage only	Dressage only

4.2.5 Discussion

The fact the men and women can compete equally against each, the potential age range of competitors and the requirement of an expensive piece of equipment (a horse) and associated stereotype image of elitism are all unique characteristics of equestrian sport. Yet to date none of these profiling characteristics have been investigated.

With regards to gender, in the context of this study there was evidence of male and female competitors at all levels of competition. However, at each level there were more female than male competitors although there was a noticeable increase in the proportion of male competitors as the level of competition increased. From the data set provided it is difficult to draw conclusions as to why there is an increase in the proportion of male competitors. Further investigation into the role of gendered homogenous differentiation within equestrian sport is required to address issues of physical superiority, lifestyle choices, performance pathways etc. (Bourdieu, 1993; Burt, 1995).

The age of the competitor increased with the level of competition, whilst this may also be seen in other sports what is different within this demographic data set is the age range of competitors across levels of competition from between 18-24 years (Premier League) to 45-54 years (CDI*** Big Tour) demonstrating breadth of competitive life. These findings mirror the earlier example of the dressage competitor age range from the Beijing Olympics (Luiza Tavares de Almeida, 16 years old and Hiroshi Hoketsu, 67 years old). The age at which the riders first competed in affiliated dressage ranged

from between 18-24 years old to between 25-34 years old. These data support the discussion that equestrian sport does not fall into the traditional LTAD model. With regards to the case study data, the youngest athlete who was competing at the lowest level reported that she did not gain her income from the equine industry and dressage was not the only equine discipline she had competed in during the last 12 months. This particular case study supports the model of equestrian sport being an early start, late specialisation sport.

When reference is made to equestrian sport being elitist, ownership of a horse is often brought into the discussion. Horses are a requirement of the sport and there is no question that they are expensive assets. Buying and keeping a horse takes substantial financial commitment. As the level of competition increases it is likely that the cost of buying the horse also increases. At the elite level of equestrian sport very few riders compete on horses they own rather they rely on individuals or syndicate 'owners' as seen in horse racing. Results from this study show that at the lower levels of competition the competitors were likely to be the owner of the horse they were riding with odds above 0.6. However as the level of competition increased (and potential cost of the horse increased) the likelihood of the rider being the owner of the horse decreased. Although the results of this study indicate that at higher levels of competition external financial support may be provided through third party 'ownership' of the horse, at the lower levels of competition substantial financial resources are required by the athlete (rider). Lack of suitable resources may well act as a barrier to participation at the lower levels and restrict progression up through the competitive ranks.

It is estimated that there are 4.2 million riders and carriage drivers in Great Britain today (BEF, 2009) and equestrian sports number amongst the most successful Olympic and Paralympic disciplines in Great Britain. Although it is commonly believed that equestrian sports differ in the demographic profile of their participants from other sports, and certain socioeconomic groups may be under-represented, very little research into equestrian sports exists. With sports increasingly competing against one another for financial support and having to demonstrate broad appeal and participation (Bergsgard et al., 2007), the lack of knowledge about equestrian sport participation has significant implications. The implications are not just financial as policy makers will be limited in the effectiveness of the policies and strategies they can implement if the information they have is only partial, or even incorrect.

4.2.6 Conclusion

This paper provides the first demographic profiling of participants in elite level dressage comparing profiles across the different levels of competition. The results of this study show that even though both genders can compete equally against each other in this sport, male and female participation rates differ across levels of competition. The age profile of athletes is somewhat unique in equestrian sport and the case study profiling supports the model of early start, late specialisation sport. Finally ownership of the horse (and related financial responsibility) also differed across the level of competition.

Commentary on equestrian sport is to date based on the absence of empirical data. The lack of clear acceptance of equestrian sport as a 'real' sport may diminish participants' access to symbolic (Bourdieu, 1993) and social capital (Burt, 1995) in the broader sport culture and may force them to seek recognition, opportunity and resources from within their own ranks. Equestrian sport is unique but it is a sport and as such deserves the attention of researchers to provide the evidence to support informed discourse. This paper is just the start and further proposed studies will now provide the baseline data from which further studies can expand.

4.2.7 Acknowledgements

We would like to express thanks to the event's organisers for their kind permission to conduct this study.

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4.3 Study 2: Dumbell et al., 2010: Strengths and Limitations

Study 2 utilises a case study methodology (Saunders et al., 2016), with a survey design to profile elite and semi-elite (advanced) dressage riders. A case study is a

'research strategy that involves the empirical investigation of a particular contemporary phenomenon within its real-life context, using multiple sources of evidence' (Saunders et al., 2016, p.711).

The extent that case study research can 'produce generalisable, reliable and theoretical contributions to knowledge' is contested, however it is recognised that this approach can be designed and used in many meaningful ways, including for description and exploration (Yin, 2014; Saunders et al., 2016). Presenting Study 2 as a case study is a strength as it signposts riders to consider with care the generalisability of its findings.

Study 2 explores a previously under-researched area, generating a description of competitors in an UK international dressage festival (a competitive sport event). The event contained competition at semi-elite level (see Table 2) in classes offering qualification for the National Championships and elite level in FEI governed classes. The event was run under the rules and standardised practice of the lead bodies, and advertised through their standard methods, mitigating the risk that generalisations beyond this occurrence might not be valid (Flyvberg, 2011). The dressage festival is at an established venue, and location, facilities, prestige are well-recognised as influencing competition participation (BBC, 2021). A mitigation is that competitors will travel long-distances to compete in internationally governed events, so commonly that it is part of the training for high level horse management qualifications (The British Horse Society, 2020).

Study 4 was based on an event from 2009, now 12 years ago, however there is no evidence to suggest that the findings are not still current, and more current results are not available. This time delay is a limitation, however the competition level and class structures are still used today (e.g. British Dressage, 2021). Equestrian athletes have such longevity (up to 5 decades even at super-elite level) 12 years is a shorter comparative period in equestrian sport than in many other sports (Dumbell et al., 2018). It is therefore felt that the data produced are still relevant and current.

The survey variables included sex (called gender here) and horse ownership from publicly available data and the vignette case studies were based on responses from a short questionnaire administered for the purposes of the study. The use of multiple sources is a strength as it enabled more variables to be reported, some responses to be verified by utilising more than one source to check them (offsetting constraints of publicly available data (Bryman, 2016).

Vignettes are short constructs about hypothetical cases. They can provide scenarios to which participants have to respond (e.g. Gourlay et al., 2014) or, as here, can also provide a way of presenting data findings as normative responses or accounts (Langer, 2016). This increases accessibility of research results, however the detailed data analysis is not presented alongside, which is a weakness of the study as readers cannot assess the accuracy of data reporting.

4.4 Study 2: Dumbell et al., 2010: Contribution to the overall aims and objectives

This was the first study to present profiles of competitors across different levels of performance enabling the effects of different influences on equestrian sport to be studied holistically (Williams, 2013). Exploring whether there were differences in profiles between riders at different levels was important as it should not be assumed that all riders can progress between levels and profiles are the same. Dressage was chosen as it is the discipline with the most research exploring the rider's role and utilises riding skills that underpin eventing and showjumping (Hobbs et al., 2020).

This case study demonstrates that the profile of dressage riders does change between semi-elite and elite levels. Future studies to model the profile and progression of UK dressage riders at, and through, all competitive levels, would enable this phenomenon to be understood better.

In this case study as the level of competition increased the riders were older and more likely to earn their income from the equine industry. This finding suggests that the rider-horse partnership is a particularly important part of elite performance in dressage. The success of the rider-horse partnership, at least from the rider's perspective, is based on a well-developed generalised rider-horse relationship which is developed through learning from 'patterned interactions' (Sander, 2003) where the more horses a rider has ridden, in more environments and situations then the more developed this generalised rider-horse relationship is. Elite performance as a partnership requires the rider and horse to have adapted their generalised relationship to be able to communicate with one another (Brandt, 2004; Thompson and Nesci, 2016). Brandt (2004) describes rider-horse communication as a 'cyclical and dynamic process, and both species are full participants in the process'. For dressage fine communication is essential, and the ideal is held to be where rider and horse behave 'as one' with imperceptible continuous adjustments made by both partners to enable precise and harmonious performance (Blokhuis and Lundgren, 2017). Based on this it makes intuitive sense that riders at higher levels will have more experiences, and are therefore likely to be older but more challenging is the observation that as level of competition increases the likelihood of owning their horse (wholly or in part) decreases.

At this event elite competitors were likely to be between 35-54 years old. In many sports the physical demands of elite performance are such that with age, despite the athlete's increased experience, continued elite competition is not possible (Allen and Hopkins, 2015). In football elite footballers either retire or continue playing at progressively lower levels after 1-2 decades and the average peak age is around 27 years (Kalén et al., 2019). Endurance sports show that as the event duration increases the athletes' mean age also increases, which is the opposite to explosive power sports (Allen and Hopkins, 2015). Literature suggests that peak physiological function is around 30 years, whereas cognitive skills improve until at least 60 years (Gabbard, 2004; Salthouse, 2012). Therefore peak competitive performance is likely to vary between sports, depending on the balance between physiological and cognitive demands involved, although research in this area in more mixed/ skill-based sports (such as equestrian) is lacking (Allen and Hopkins, 2015).

This study has demonstrated that knowing and stating a rider's level of competition performance precisely is important, as the profiles of riders may differ between those levels, as demonstrated here in dressage. To understand characteristics of the British riders who have emerged through the industry, coaching and development routes and social context that have been influenced by and developed around equestrian sport, to compete as super-elite athletes at the Olympic Games provides useful insights into the continuing legacy of this history.

Chapter Five - Study 3: Demographic profiling of British Olympic equestrian athletes in the twenty-first century.

5.1 Rationale for Study 3 – Dumbell et al., 2018

5.1.1 Objectives addressed by this chapter: 2, 5, 6

5.1.2 Reason for inclusion:

The people participating in a sport reflect historical influences on the sport and culture, political and social influences on people and central organisation of the national sports system, rules and structure of a sport (Biddle et al., 2005; Van Tuyckom et al., 2010; Oliveira-Brochado et al., 2017). Many factors influence whether a person reaches elite performance levels, including physiological and psychological characteristics, social support available and their coach-athlete interactions (Rees et al., 2016; Gullich et al., 2019). Study 3 profiles British super-elite equestrian Olympians at the first five Games of the twenty-first century extending Hedenborg and White's (2012) research. Super-elite competitors not only reflect the complex interactions between multiple factors but themselves become role models for future athletes and may inadvertently perpetuate influences on participation and success (Edgar, 2021). As such understanding the profiles of UK equestrian Olympians (referred to as Team GB (Team GB, 2021c)) in the twenty-first century supports understanding the influences on current and future competitors enable the removal of unnecessary barriers to participation and sporting success.

5.1.3 Published as:

III - Dumbell, L.C., Rowe, L. and Douglas, J.L. (2018) 'Demographic profiling of British Olympic equestrian athletes in the twenty-first century', *Sport in Society*, 21 (9), pp.1337-1350. Doi: 10.1080/17430437.2017.1388786.

5.1.4 Why this journal was chosen:

Sport in Society: Cultures, Commerce, Media, Politics was established in 1998 to 'advance our understanding of key issues in professional and recreational sport, lifestyle and 'alternative' sport, and coaching in a social context' (Taylor & Francis Online, 2021b).

An international, peer-reviewed journal, the editorial board contains many well-respected academics. Double blind peer review by independent, anonymous expert

referees, provides judgement of a work's validity, significance and originality. Importantly, articles are included in widely accessible databases to enable an evidence-based discussion of equestrian Olympians.

5.1.5 Author's Contribution:

	Lucy Dumbell	Lauren Rowe	Jenni Douglas
Conceptualisation	50%	-	50%
Developing the research idea	50%	10%	40%
Methodology	60%	10%	30%
Data collection and curation	90%	10%	
Performing the analysis	100%	-	
Writing the paper	90%	-	10%

5.2 'Demographic profiling of British Olympic equestrian athletes in the twentyfirst century' as published

5.2.1 Abstract

Analyses of the determinants for participation in specific sports have been neglected and the use of demographic profiling in equestrian sports is limited. The aim of this research was to compare demographic profiles of British Olympic equestrian athletes, across and within disciplines, and suggest implications for the national federation's micro-level athlete development strategy. Data were collected about all Team GB equestrian competitors over the last five Olympic Games. Equestrian sports are not organised by sex segregation, however no female showjumping competitors have represented Team GB in the twenty-first century. Competitors range in age over five decades and support the unusual early start late specialisation paradigm, introduced by the national federation in 2007. Horse ownership is unusual amongst competitors, although it is more common amongst male athletes. The inter-athlete variation and inter-discipline variation these athletes show post challenges to the single development strategy currently in use.

5.2.2 Introduction

Demographic profiling is widely recognised as a popular research method within sport. It has been used in a number of areas including: sport spectatorship, injury, tourism and marketing (Finch et al. 2002; Beech and Chadwick 2007). Researchers in sport have investigated to understand the psychological attraction a consumer has to sport and differences based on demographics (James and Ridinger 2012), sporting type (Wann, Schrader, and Wilson 1999) and the developmental process that occur due to sustained participation. Sport participation and physical activity can be viewed from a demographic— economic perspective (Breuer and Wicker 2008) and the determinants of general sport participation have been investigated in previous research (Downward and Riordan 2007; Berger et al. 2008). Analyses of the determinants for participation in specific sports have been sparse and the use of demographic profiling in equestrian sports is particularly limited (Dumbell et al., 2010).

There is limited empirical research that supports previously cited views that equestrian sporting disciplines are examples of events that epitomise social inequality and elitism (Guttmann 2004; Merlini 2004) where most discussion has focussed on ownership of the horse. Great Britain has competed in the modern Olympics since its inception in 1896 and in Olympic equestrian sport since 1900 (De Haan and Dumbell, 2016). Despite this equestrian sport invokes significant social inequality stereotypes amongst the British media (Fletcher and Dashper 2013). Dumbell et al. (2010) reported that it was in fact the lower levels of competition where riders were more likely to own their own horse, and that at the elite level an external partnership (an owner) provides funding. Substantial financial resources (of the rider) are therefore not required at the elite level. The research did however indicate that more riders require ownership to compete at the lower levels. This may present as a barrier to participation in equestrian sports and restrict progression through competitive ranks. This paradox of equality and elitism could be seen in the British media reports of Team GB Equestrian's unprecedented success in the Dressage competition (Fletcher and Dashper 2013).

Sports must demonstrate broad appeal and additionally compete for financial support to complete initiatives and subsidise national representation. A lack of knowledge on sports participation can have implications in terms of identifying requirements for athlete support, funding, talent identification and performance analysis. The British Equestrian Federation, post a successful 2012 Olympics for Team GB Equestrian, have launched specific initiatives to increase participation. 'Hoof' is the equestrian legacy brand and campaign, which aims to encourage more people to participate in equestrian sports (see: http://www.hoofride.co.uk/). Elite athlete success and hosting international events have been purported to generate numerous positive outcomes.

These outcomes include improved national identity, pride, international prestige and diplomatic recognition, individual development of talented people and the capacity to inspire increased mass participation in sport (Houlihan et al., 2008; Wicker et al. 2012). This relationship is captured by the sport pyramid analogy, that suggests that a large base of mass participation provides a positive breeding ground for elite sport and in turn elite athletes are believed to attract young athletes to particular sports, an assumed effect of the demonstration effect (Weed 2009).

An athlete's development in their chosen sport can be broadly understood using several different models, all aimed at revealing factors that determine elite sport success. At a micro-level models include the Long Term Athlete Development model (LTAD) (Bayli et al., 2013) that has been established from sports specific physiological and psychological requirements. The British Equestrian Federation have utilised the LTAD model within their athlete development programme and have published the Long Term Participant Development Framework for Riders, Drivers and Vaulters (British Equestrian Federation, 2015b). Within generic LTAD models, an athlete's development is based on biological rather than chronological age, and windows of opportunity when optimal training and performance can be achieved. As previously established, equestrianism does not appear to fit into the 'early-' and 'late' specialisation paradigm set out by the generic LTAD model and therefore provides a unique case for demographic profiling (Dumbell et al., 2010). Additionally equestrian sport is the only Olympic-level sport not organised around binary sex segregation in any form of official competition. Three equestrian disciplines, dressage, eventing and showjumping, have been included within the summer Olympic programme since the Stockholm Games of 1912 (Fédération Equestre Internationale, 2016a; De Haan and Dumbell, 2016). These disciplines do occasionally offer non-Olympic competitions exclusively for male or female athletes, or young athletes, however that is not usual practice and Olympic representation by both sexes in all three disciplines has been seen since the Tokyo¹² Games of 1964 (Olympic Studies Centre, 2015)¹³.

Equestrian sport does encompass many disciplines that are likely to make different physiological and psychological demands on the athletes involved. The British Equestrian Federation's Long Term Participant Framework recognises this even within its title, which refers to riders, drivers and vaulters (British Equestrian Federation, 2015b). Interestingly other sporting bodies that cover varied disciplines have athlete development programmes that contain specialised and specific models within them.

¹² This paper was published stating 'Helsinki Games of 1964' however this was an error and in this thesis has been replaced by 'Tokyo Games of 1964'

For example UK Athletics has a UKA Generic Athlete Development Model and also four specific models, 'The Sprints and Hurdles Athlete Development Model', 'The Endurance Athlete Development Model', 'The Jumps Athlete Development Model' and 'The Throws Athlete Development Model' (UKA 2010). Currently the British Equestrian Federation has a single, generic framework for all disciplines that does refer to development stages appropriate for different age groups, with differentiation between genders but not disciplines (British Equestrian Federation, 2015b). To ensure the relevance of the Long Term Participant Framework and that it moves beyond a policy document to affecting practice the suitability of this approach to the different disciplines would benefit from regular review.

There is clearly a need to further understand demographic profiles of all levels of equestrian athletes, to enable evidence-based provision of information around social inequality and the impact of different strategies (including development strategies) to be monitored and evaluated. With its long history of participation in equestrian sport, both outside and within the Olympics, Great Britain provides an interesting focus for this investigation. This paper aims to compare the demographic profiles of elite equestrian athletes representing Great Britain across and between Olympic equestrian disciplines since 2000 and assess whether the national federation's micro-level athlete development approach is likely to support high level sporting performance in these equestrian disciplines in the future.

5.2.3 Method

Demographic data were collected for all Dressage, Showjumping, and Event riders representing Great Britain (GB) at the Sydney 2000, Athens 2004, Beijing 2008, London 2012 and Rio 2016 Olympic Games. Data were collated from competition schedules, official reports from Olympic Games, public documents that indicate riders' full names and information and details regarding ownership which are widely available on official Olympic websites. Sex was confirmed by direct observation of competition recordings. Age of competitor at time of the competition in question was noted, and age the rider started riding was taken from official biographies or athlete websites. The descriptive and exploratory nature of this study resulted in categorical and frequency data. Ethical approval was granted via the institutional ethics committee (Hartpury College Ethics Committee).

5.2.4 Results

Team GB Equestrian has sent sixty one national representatives to the Olympics since Sydney 2000 (see Table 5.1). These sixty one national representatives actually equate to thirty four athletes, as thirteen athletes have represented Team GB Equestrian more than once (an odds ratio 0.76), with two athletes representing Team GB Equestrian at four Olympic Games from 2000 to 2012, and indeed earlier Olympic Games as well. Between eleven and thirteen athletes have represented Team GB Equestrian at each Games with team and individual competitions being contested for each discipline, except in 2004 when Team GB Equestrian only entered the individual competition of the showjumping discipline. Eventing has been consistently represented by five athletes until Rio 2016 when only four were allowed to be entered, showjumping by between two and four athletes, and dressage by three or four athletes.

5.2.4.1 Sex

A total of seventeen female (50%) and seventeen male (50%) athletes competed for Team GB Equestrian at the Olympics in the twenty-first century (see Table 5.1). These athletes collectively represented Team GB Equestrian a total of sixty one times, twenty seven (44%) of which by female athletes and thirty four (56%) by male athletes. The sexes were therefore similarly likely to represent Team GB Equestrian more than once in this period (a 0.70 odds ratio of representing more than once: once for men, compared to a 0.55 odds ratio in women). There was a larger proportion of female athletes representing Team GB Equestrian in eventing, an odds ratio of 3.33, and in dressage an odds ratio of 1.75. However showjumping demonstrated an observable male dominance with all ten athletes being male. When considering the split of national representatives then in eventing females were more likely to represent Team GB Equestrian with an odds ratio of 2.43, in dressage females were more likely to represent Team GB Equestrian with odds ratio of 1.11 and in showjumping all representatives were male.

Table 5.1: The athletes that represented TeamGB Equestrian at the Olympic Games since 2000

Olympics Games	Discipline	Number of Athletes	Frequency		Female : Male odds ratio
			Female	Male	
Sydney 2000	Eventing	5	3	2	1.5
	Showjumping	4	0	4	0
	Dressage	4	1	3	0.33
	Total	13	4	9	0.44
Athens 2004	Eventing	5	3	2	1.5
	Showjumping	2	0	2	0
	Dressage	4	2	2	1
	Total	11	5	6	0.83
Beijing 2008	Eventing	5	4	1	4
	Showjumping	4	0	4	0
	Dressage	3	3	0	∞
	Total	12	7	5	1.4
London 2012	Eventing	5	4	1	4
	Showjumping	4	0	4	0
	Dressage	4	2	2	1
	Total	13	6	7	0.86
Rio 2016	Eventing	4	3	1	3
	Showjumping	4	0	4	0
	Dressage	4	2	2	1
	Total	12	5	7	0.71
Collectively	Eventing	13	10	3	3.33
	Showjumping	10	0	10	0
	Dressage	11	7	4	1.75
	Total	34	17	17	1

5.2.4.2 Age

Dressage representatives had the lowest mean age of 37 years, followed by eventers with mean age of 38 years and showjumpers of 44 years. Table 5.2 indicates that the age of athletes representing Team GB Equestrian were comparable over the last five games.

Table 5.2: Age range demographics of athletes representing Team GB Equestrian at the Olympics since 2000

Games	Mean Age (yrs)	Minimum Age (yrs)	Max Age (yrs)	Range (yrs)
Sydney 2000	38.0	26	46	20
Athens 2004	38.6	29	49	20
Beijing 2008	39.8	23	53	30
London 2012	40.1	27	57	30
Rio 2016	44.1	31	61	30
Collectively	40.1	23	61	38

The time between mean age started horse riding (4 years) and mean age at Team GB Olympic representation (40 years) for all athletes across the five games was 36 years (see Table 5.3).

Table 5.3: Age at which athletes started horse-riding, categorised by Olympic Games.

Games	Mean Age (yrs)	Minimum Age (yrs)	Max Age (yrs)	Range (yrs)
Sydney 2000	6.9	0	16	16
Athens 2004	5.3	3	10	7
Beijing 2008	4.9	0	8	8
London 2012	4.0	0	8	8
Rio 2016	3.4	0	8	8
Collectively	4.4	0	16	16

5.2.4.3 Ownership

The majority of athletes did not own any part of the equine athlete that they were competing in partnership with. Forty one percent of athletes owned at least a share in the horse that they were competing with (an odds ratio of 0.69) (see Table 5.4).

Table 5.4: Ownership (or part-ownership) of horse status between Olympic equestrian disciplines.

	Ownership Status		
	Owner	Non-Owner	Owner : Non-owner Odds Ratio
Eventing	8	16	0.50
Showjumping	8	10	0.8
Dressage	9	10	0.9
Collectively	25	36	0.69

5.2.5 Discussion

The purpose of this study was to characterise demographic profiles of Olympic equestrian athletes. There are many unique features of equestrian sport, such as men and women competing on equal terms, age demographics, a perceived social elitism and the requirement of an expensive 'tool' (the horse) (Dashper, 2014; Dumbell et al., 2010) that have been considered.

5.2.5.1 Sex

Modern sport has its roots in boys' public schools in nineteenth century England (Mangan 2000) and the large influence of the military on the governance and rules of equestrian sport has also been recognised (De Haan and Dumbell 2016; Hedenborg 2009). These influences encouraged a view of sport as primarily for men, with sex-segregation regarded as a largely necessary and natural design. This essentialist view of gender still influences our daily lives and is apparent in many aspects of sport. Schippers (2007) highlighted how this history has led to male sports, and their athletes, being valued above female sports. In many sports there is more evidence to support classification by height and weight than sex. Other sports do not rely on strength and speed for success and therefore the male physiological advantage is not grounds for sex segregation (Kane, 1995). Kane (1995) argues that a 'continuum of difference' exists where some women are faster and stronger than some men.

Within the Olympics it was only from 1952 that females were allowed to compete in equestrian sport as before this it was only male, commissioned officers in the military that could complete. This background still has echoes today in the formal, masculinised dress work by equestrian competitors (Dashper and St John, 2016). It was 1964 before both sexes were represented in all disciplines (Olympic Studies Centre, 2015). However in equestrian sport the Olympics were the exception. Outside the Olympics women had been competing against men in equestrian disciplines for many years despite Western cultures representing the horse-human partnership using predominantly masculine images (Birke and Brandt, 2009). This may be due to the influence of hunting on western equestrian sport, as a woman skilled in riding to hounds was lauded in nineteenth century society. Sex segregation was (and is) the exception, not the rule, in equestrian sport.

There was both male and female representation at all Olympic Games investigated (Sydney 2000; Athens 2004; Beijing 2008; London 2012) and Team GB Equestrian had comparable overall female: male representation (22 females and 27 males). Interestingly both sexes were also similarly likely to represent Team GB Equestrian more than once. Females are recognised as being more likely to participate in equestrian sports than males (Dashper 2012; British Equestrian Federation, 2015a). However Dumbell et al. (2010) found that as level of competition increased the female dominance in dressage participation in England decreased. Dashper (2012) highlights how sporting participation and competitive success are not equal between sexes in all disciplines. More women participate in competitive equestrian sport in Britain but a disproportionately high number of elite performers are men.

Dashper (2012) suggests that as prime child-bearing years coincide with peak competition years for female equestrian riders this may be an important factor in men's disproportionate success in elite equestrian sport. Another factor may be that the support networks necessary for engagement in elite sport (Gustafson and Rhodes, 2006) are perhaps more available to men than women thus enabling success. Dashper (2012) reports a 'lack of participatory parity' as being a potential factor in national selection, where male athletes by their scarcity are more likely to come to the attention of national selectors.

When the sex of Team GB Equestrian Olympic athletes is considered for discipline specific analysis, results are more variable. This reflects Birke and Brandt's (2009) observations, echoed by Dashper (2012), that the equestrian discipline an athlete chooses to engage with differ in how they express gender and perform gender. Within this study the sex of competitors was gathered, however gender information was not. This would be an interesting factor to investigate in the future. Hedenborg (2015)

reinforces the fact that sex order is highly variable between different countries and different disciplines, which makes comparisons difficult and understanding causes a complex task. Eventing and dressage both had multi-sex representation, with females being particularly dominant in dressage. Dressage, especially at lower competitive levels in Great Britain, has a high proportion of female participants and is increasingly suggested in literature to be a feminised terrain (Hedenborg and White, 2012). This social construction of gender challenges to male athletes in how they construct their masculinity in this arena (Anderson 2005). This may be one reason why females are more likely than men to compete in dressage for Team GB Equestrian. However, this theory would not seem to fit eventing as easily, as eventing is the most dangerous of the three disciplines and involves risk-taking behaviours and bravery, traits that would seem to be more masculinised (Hedenborg and White, 2012). Within the BEF's Long Term Participant Development Framework the sexes are differentiated but mainly with reference to biological maturation rather than psychological and sociological factors.

Showjumping had solely male representation from Team GB. From the data set collected it is difficult to draw conclusions as to why there are only male showjumping riders that represent Team GB Equestrian, at the Olympic Games investigated. Further investigation into the homogenous differentiation within equestrian sport is required to address issues of physical superiority, lifestyle choices, the influence of societal expectations etc, to provide more evidence-based findings on this interesting area. Dashper (2012) reports a male showjumper saying that women have 'more to prove than the men' which would suggest that it might be more difficult for a female showjumper to reach elite status, than a male. Coutler (2013) investigated sex, work and wealth in Canadian showjumping. Data suggests that male riders have greater diversity in their attitudes to the business side of equestrian sport and showjumping in particular. They report the emotional and psychological pressures in the discipline of showjumping have been attributed as 'the key' to making a successful Grand Prix showjumping rider and that this is where gendered differences begin to emerge. Processes of gendered socialism typically encourage females to be more emotional and discourage the expression and development of emotion in males (Chaplin et al., 2005). Dashper (2013) reports a male event rider saying that the women were 'much more focussed and determined' in pursuit of their sport than the men, perhaps reflecting that they had to do this in order to succeed and therefore behave closer to Hughes and Coakley's (1991) 'sports ethic' ideal. Consideration of gender, and the social construction of gender, is outside the scope of this study, however continuing the work started in this area (e.g. Dashper 2012) would enhance understanding of this unique sex integrated Olympic sport.

Coutler (2013) also reports inequitable personal support for men and women in Canadian showjumping. Male riders often have a girlfriend or wife who is also in the business. The reverse has been noted as less common, although not absent. Showjumping has developed a culture which Coutler (2013) reports is more compatible with ways that males think and act. It has been reported that males and females respond differently to competition stress and employ different coping strategies (Koch and Tilp 2009). The extent to which this may be in response to essentialist differences between the sexes or the influence of social constructed expectations of gender is difficult to determine. In a study investigating psychological profiles in equestrian riders, Meyers et al. (1997) reported that while male riders displayed lower mood disturbance scores and higher anxiety management and confidence scores, indicating better coping skills, female riders scored higher on scales of motivation. Whitaker et al. (2012) suggest higher levels of motivation in female riders might lead to more thorough and systematic training, which could, in turn, compensate for less developed coping skills during times of stress. Dashper (2012) provides examples of male athletes who have used their increased self-confidence to bring their ambition to the attention of owners, trainers and selectors, when compared to the more modest articulation by women. This observation is interesting and the psychological skills required of equestrian riders warrants further investigation to ascertain the extent to which psychological skills in male and female equestrians differ, and whether these differences confer any advantage or disadvantage to either sex in competition or between equestrian discipline.

The most obvious reason why there may be no female showjumpers is that the best British showjumpers between 2000 and 2012 were men. However Whitaker et al. (2012) reported that performance between males and female showjumpers are equal. Despite the physiological, morphological and psychological differences reported between men and women there is no significant difference in the final rank, number of points won or number of competitions entered. Performance is thought to be comparable but participation and representation at elite level is not, within Team GB Olympic showjumping teams.

5.2.5.2 Age

At the Olympic level, there is a large age range within equestrian athletes (23-61 years, Table 5.2), which demonstrates longevity in competitive lifestyle. The BEF's Long Term Participant Development Framework does refer to longevity of career, with the 'Active for Life' section having information for those of thirty five years and over, although in equestrian sport this can encompass, even at elite level, athletes spanning over three

decades. These findings mirror data reported by Dumbell et al. (2010) where age range of dressage riders was more than three decades (18-57 years). Interestingly the oldest equestrian athlete to compete at the Olympics was 72 year old Arthur von Pongracz of Austria in 1936 and the youngest was 16 year old Luiza Almeida of Brazil in 2008. These data all support the discussion that equestrianism does not fit into a customary LTAD model (Bayli et al., 2013). Additionally, when the age that Olympians started riding is considered, data indicates there is a large period of time training between the age athletes started to ride and achieving Olympic representation. During this time equestrian athletes are practising their sport and exhibit higher levels of self-esteem in adolescent female riders than non-riders (Davies and Collins 2015). This further supports equestrianism not fitting into a traditional LTAD model, a conclusion also reached by De Haan et al. (2015) and De Haan (2017). Furthermore, it supports the 'early start-late specialisation' paradigm that equestrian has been allotted, rather than the more customary early specialisation (e.g. Gymnastics and Swimming) or late specialisation (e.g. Team Sports) paradigms (British Equestrian Federation, 2015b). Long Term Athlete Development models are generic, and require adjustments on a more sport specific basis. The majority of sports are late specialisation. As such, the British Equestrian Federation produced the Long Term Participant Development document where the 'early start, late specialisation' paradigm is introduced and justified. The Long Term Participant Development (British Equestrian Federation, 2015b) document details participants starting 'Learning to Ride' at the age of three years but not deciding on their competitive discipline until the age of sixteen. The discipline specialisation occurring after the age of ten years indicates that latter stages of equestrian athletes' development also fits into the late specialisation model. It is the age of specialisation that is an issue for equestrianism. Participation in the sport starts early, with late specialisation and additionally longevity in competitive career. This is certainly supported by the data presented here, with athletes competing in up to seven Olympic Games and repeated representation being common and frequently valued as experience is seen to benefit the team (De Haan, 2015). As such the potential for overuse injury, burnout and dropout need to be carefully considered. Further studies looking at the amount of variation between equestrian athletes would be worthwhile as Team GB representatives started riding between 0 and 16 years old, a large range. The British Equestrian Federation (2015b) emphasise a multidisciplinary approach until at least the 'Training to Compete' stage which for men is between sixteen and twenty three years and women fifteen and twenty one years. Some athletes competed in their first Olympics at twenty three years of age, whilst others only starting to ride at sixteen years of age and as De Haan (2017) points out this variability means that age guidance

may be difficult to apply. The data in this study are not sufficiently rich to reveal

meaningful implications for equestrian sports when considered through the lens of the Developmental Model of Sport Participation (Côté et al., 2003, 2007). However it does raise interesting questions about how long is spent within the specialising phase as opposed to the investment phase as equestrian athletes commonly practice more than one sporting discipline, even whilst competing at high levels.

In the current British Equestrian Federation Long Term Participant Development Framework the 'Training for Excellence' stage starts at twenty one years for women and twenty three years for men. With athletes competing in their first Olympics at twenty three years of age for some, and over two decades later for others then applying these age guidelines is likely to be extremely challenging. The Olympic disciplines also all belong to only one of the three BEF recognised categories of equestrian athletes, riders, and not vaulters or drivers who compete at the World Equestrian Games but not the Olympics (Fédération Equestre Internationale, 2016b). The differences between these additional disciplines are likely to be even greater than within the riding disciplines. Within these data there are riders of both genders competing in their twenties and also in their fifties so the longevity of elite performance seems to be a feature of both genders. Of equal note however is the variability between the athletes' profiles.

In most sports athletes deal with the challenges of balancing family commitments with elite competition by completing their elite careers before having children. However these data supports Dashper's (2012) reporting of the challenges for equestrian athletes, when they are likely to reach the peak of their career at the same time as prime child raising years. Taniguchi and Shupe (2014) describe how responses to competition between family life and participation in sports differs between the sexes, with men commonly achieving a more compartmentalised pattern than women. This is likely to be particularly challenging for women and Dashper's (2012) participants reported a trend for elite female competitors to withdraw from international level competition to focus on family life. What is also evident from the current study is that an elite equestrian sporting career can span four decades and therefore even with time off prioritising family commitments an athlete could re-enter the international arena. Within the current study the athlete who represented Team GB Equestrian at every Olympic Games was Mary King in eventing. She famously combined family life with international competition but was the victim of media attacks for the choices she made.

5.2.5.3 Ownership of Horse

The BEF has an Equine Pathway to identify horses that have the potential to win medals and help them maximise that potential (British Equestrian Federation, 2014).

Horses are a requirement for equestrian disciplines and there is no arguing that they come with large financial implications (Dumbell et al., 2010). This additional cost has given equestrianism a reputed perception of being an elitist sport. Overall less than half of twenty-first century Team GB Equestrian Olympic athletes owned their equine partner (either in part or wholly). This did vary between disciplines with eventing competitors being least likely to own their horse and Team GB Equestrian showjumpers and dressage riders more likely to own at least part of the equine athlete. At Rio 2016 three riders were part owners of their horses, and they were all men (two dressage riders and one showjumper). This may reflect Coutler's (2013) observations of greater business-like attitudes in males. A horse competing at the Olympics will be very valuable, and if they can be used for breeding then their value will be even greater. An equestrian athlete may therefore have to adopt a more instrumental attitude towards the horse, both to cope with the pressures of increasing commercialisation of sport and also to protect themselves against their lack of control over the partnership essential for their sporting success (Dashper, 2014).

There have also been recent high-profile examples of horses being purchased for multi-million pound sums of money to provide competitive success for other riders and nations. For example Totilas moving from being partnered in dressage by Edward Gal of the Netherlands to Matthias Rath of Germany (Horse and Country TV 2015). This is a not a new phenomenon in a sport where there are two athletes, who both have to be prepared optimally in order to achieve success, but where the expense and therefore the financial pressure on the rider, the owners and the supporting team is very high. Ownership of the horse can not only bring financial rewards but also provide security for the rider. They will have more power to influence the pre-Olympic preparations as owners, and are less likely to have their partnership with the equine athlete broken (Dashper, 2014). This partnership between equine and equestrian athletes is frequently quoted as being essential for success (Keaveney, 2008) and thought to be based on mutual trust and respect, frequently gained over a sustained period of time (Wipper, 2000; Dashper, 2014). The horse has been suggested as so crucial to success that De Haan et al. (2015) suggested that when considering equestrian sport through the Sport Policy factors that lead to International Sporting Success (SPLISS) model (De Bosscher et al., 2006) a dual athlete -horse and rider' talent identification and development system was required when thinking of the processes which may lead to elite sporting success (pillar four of the SPLISS model).

Dashper (2012) raises an interesting point that suggests that female riders may be less likely to gain significant financial investment as men are perceived to be a better investment for sponsors and owners. This is of interest as it conflicts with the idea that

if the sponsor is hoping to gain a role model for youth participants then a female athlete may provide this for a predominantly female youth audience. If however the sponsor wishes to appeal to the female dominated leisure rider market than a male athlete may seem a more attractive investment. Active sportswear has a large global market, but many of the trends that could allow athletes, and particularly female athletes in a female dominated grassroots sport, to gain lucrative sponsorship deals seem to pass equestrianism by (Dashper and St John 2015).

Dumbell et al. (2010) documented that as level of competition increased, the likelihood of equine ownership decreased. Their results indicate at higher levels of competition external financial contribution may be assisted by a third party (syndicate ownership), yet at the lower levels of competition substantial financial commitment is required. The data from this study to some extent supports this observation as less than half of Team GB Equestrian Olympic athletes owned their own horse (either in part or completely). Although a rider may not have to commit a huge amount financially at the elite level, it is likely that at the lower levels of equestrian sport, participation may be affected by socio-economic status and this should be considered in equestrian participation strategies. It would be interesting to explore whether elite equestrian athletes in the different equestrian disciplines do have different attitudes towards the horse, in light of the increase in commercialisation of equestrian sport. Perhaps the male athletes are shrewd business men, or perhaps their increased ownership reflects an acknowledgement of the need to protect themselves against a commercialised ownerathlete relationship where the owner has all the power over that athlete's career.

5.2.6 Conclusion

This paper reports the first data that investigates demographic profiling of Great Britain's Olympic equestrian athletes and additionally is the first research that investigates demographic profiling of multiple equestrian sports providing a comparative framework. Even though male and female representation is evident across Team GB Olympic Equestrians as a whole, equal representation is not evident between disciplines. It would appear that the British Equestrian Federation's athlete development models used to date might not be accounting for gender differences between the disciplines, where Team GB Eventers have been relatively female dominated and Team GB Showjumping has not seen female representation at an Olympic Games in this century. It would be interesting to profile both psychological and demographic data during developmental processes in equestrian athletes within disciplines to understand these differences in more detail. Gender also seems to

influence ownership patterns with the large majority of athletes part owning a horse being male. This research does support the theory that equestrian sports fit into an early start-late specialisation LTAD paradigm, which was first introduced by the British Equestrian Federation in 2007, although considerable variation between athletes was observed, particularly when considering age. As the BEF's LTPD framework relates activities to age groups the importance of their warning to be flexible in their application cannot be overstated (British Equestrian Federation, 2015, p21). These data support De Haan's (2017) recommendation for a paradigm shift moving away from 'the traditional chronological age classification of competition' possibly resulting in sport-specific frameworks.

To support a significant change in the micro-level athlete development model used by British equestrian sporting disciplines further research should be carried out to increase current understanding of social, psychological and physical aspects of equestrian athlete development. The social aspects explored should include the importance of socioeconomic background, early introductions to horse riding and equestrian sport and particularly the influence of friends and family and consideration of the social construction of gender. Other factors likely to be of interest include "place" (growing up in the countryside or in the city) and increasing understanding of how the different disciplines may offer different opportunities for the individual to be an athlete full time. Understanding how equestrian athletes can be supported to maximise their potential for attracting a sponsor and income generation could look to other sports for models to explore and methods of overcoming barriers that an individual athlete may experience. These could then be applied to the equestrian context to promote a sport-wide approach to optimise ethical exploitation of opportunities and an effective education and support programme for developing equestrian athletes. It would also be of interest to explore how many of these themes arising from these data are visible in other nations.

The findings from this study would suggest that there are differences between the demographic profiles of Team GB equestrian athletes competing in different disciplines, and also large differences between athletes. Having one athlete development programme to cover even this small sub-set of equestrian disciplines would seem to have a high risk of not supporting all disciplines effectively to produce the elite equestrian athletes of the future and as such further investigation is warranted.

5.2.7 Published references

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5.3 Study 3: Dumbell et al., 2018: Strengths and Limitations

Study 3 utilises a survey research methodology to support a descriptive analysis of British equestrian Olympians competing in the first five Games of the twenty-first century. The study is inductive (Bryman, 2016), encompassing a range of methods to gather information that can be standardised and compared about a given population (Glock, 1967). Study 3 has a descriptive question, which is one of the types of questions that survey research can help answer (Creswell and Creswell, 2018).

Study 3's survey population was known, of manageable size and data were available on all units. Therefore a census of this population of super-elite riders was conducted (Glock, 1967; Bryman, 2016; Saunders et al., 2016). A strength of a census is that it does not suffer from two of the four main errors in survey research: sample error or sampling-related error (Bryman, 2016). The small population size in Study 3 required care to be taken when utilising quantitative analysis approaches to avoid overstating a result based on a single rider (survey unit) (Saunders et al., 2016).

Study 3 used previously existing data (as discussed in Chapter Two), from several sources. Sex and age of participants were chosen, variables commonly presented about samples. To further understand the participants and the unique rider-horse partnership they have, two further variables were chosen, the age the riders had first ridden, and whether they owned the horse they rode (Lamperd et al., 2016). The variables presented were therefore an informed (but potentially biased) selection of data available. If data were to be gathered prospectively for the purposes of this study and access to riders was possible, then other variables could have been included. These demographic variables could have included their riding and competitive riding histories and their horse and riding situation at the time of the Games (e.g. how many horses they care for/own, how many horses they perceive they have a rider-horse relationship with and what form that relationship takes).

As Rawat (2021) states, descriptive analysis 'helps describe, show or summarize data points in a constructive way such that patterns might emerge'. Study 3 identifies and then discusses patterns, based on educated assumptions and other researchers' work in a previously unexplored area. The causes of these patterns have not been directly investigated within Study 3 (Saunders et al., 2016).

Study 3 describes an underexplored population over a stated time period, to inform future research and enable the impact of future policy and societal change to be observed. Due to the date of publication of Study 3, data from the recent Tokyo 2020 Olympics were not included. It is possible that the features and possible patterns

observed may not be replicated when the Tokyo 2020 are data included. Chapter 8 includes reference to Tokyo 2020 data, to offset this potential limitation for the thesis.

5.4 Study 3: Dumbell et al., 2018: Contribution to the overall aim and objectives

Study 3 provides future researchers with data profiles of variables that should be considered when identifying populations and samples for future equestrian research. It supports future critical evaluation of the external validity of research, and allows greater understanding of whether research does represent British expert performers.

UK expert performer profiles at the super-elite competition level of the Olympic Games provide an insight into the effect of the historical, socio-cultural and sporting influences that play an important role in participation in and persistence with an activity (Rees et al., 2016). Whilst these profiles do not allow examination of individual influences, they do allow a holistic effect to be scrutinised. British Olympic riders, in the twenty-first century, started riding as a child (mean age of 4 years), are both men and women, aged across six decades (mean of 40 years) and most commonly are not an owner of the horse they ride. Study 3's results demonstrate that equestrian super-elite competitors have remarkable diversity of sex and age, and frequently do not conform to the media stereotype of a person who has to be able to afford and own a very expensive horse (tool) (Fletcher and Dashper, 2013; Merlini, 2004).

UK super-elite riders are unlikely to own their horse partners however they compete in a sport that relies as much (or perhaps more) on them establishing a rider-horse relationship than them possessing certain physical characteristics (as Dashper, 2012 points out). The super-elite rider therefore has to establish and maintain a rider-horse relationship that they can demonstrate to the horse owner's satisfaction, with all the horses that they ride, regularly or occasionally (a key feature as Lamperd et al (2016) reports). This relies on a well-developed generalised rider-horse relationship that they can quickly adapt to form a partnership with each horse.

Understanding the demographic profiles of UK super-elite riders is important, as they reflect the wider context of equestrian sport in the UK (Jayanthis et al., 2013). However, what is unclear is whether the demographic profiles of UK super-elite riders are similar to those of riders in other Olympic equestrian nations. Are socio-cultural influences, that will differ between nations, having a major effect or are sporting influences likely to be having more impact?

Chapter Six - Study 4: From the Battle Field to the Board Room: The Place of Gender in Sex-Integrated Sport.

6.1 Rationale for Study 4: De Haan and Dumbell, 2019

6.1.1 Objectives addressed by Study 4: 3, 4, 5, 6

6.1.2 Reason for inclusion

Comparing the profiles of Olympic competitors across sports provides a holistic view of the outcomes of historical, socio-cultural and sporting influences on equestrian sport (Jayanthi et al., 2013). Study 4 contains data from the nations who have won the most medals (the inarguably super-elite¹⁴ competitors) in equestrian sport and from other sports. Within a sport comparing the profiles across nations would also enables insight into whether socio-cultural influences (likely to differ between nations) affect participants (similarly to the comparison between Sweden and the UK in Hedenborg and White, 2012). Changing participation and competition profiles within a sport will likely require policy change (van Tuycken et al., 2010). The people influential in deciding policy are those incumbents in the board room (Henry and Robinson, 2010). Profiling the board members of Olympic international federations and the national federations for the four most successful Olympic equestrian nations supports understanding equestrian sport's power structures and the challenges in changing policy (Betzer-Tayar et al., 2015).

6.1.3 Publication details

IV - De Haan, D. and Dumbell, L. (2019) 10. From the Battle Field to the Board Room: The Place of Gender in Sex-Integrated Sport. In: Lough, N and Guerin, A.N. (eds) Routledge Handbook of the Business of Women's Sport. 1st edition. London: Routledge. Doi: 10.4234/9780203702635

6.1.4 Why this publication was chosen

The Routledge Handbook of the Business of Women's Sport contains original chapters, from international authors. It aims to inform 'all those who aspire to work in, or

¹⁴ Super-elite competitors are those that not only compete at the highest levels, as national representatives in international competition, as elite competitors, but are highly successful in doing so, whose nations are world-leaders in the sport and therefore by selection demonstrate an even higher level of competitive performance (e.g. Gullich et al., 2019)

understand, women's sport' (Routledge, 2021a). Through gathering profiles of women's sport's leaders, awareness of this book increased beyond the typical audience for research articles, beyond women's sport into business and sport management. For example, it is recommended reading for some sports management university modules (outside the author's home institution) and therefore facilitates knowledge extension beyond the equine sector (Postlethwaite, 2021).

6.1.5 Author's Contribution

	Lucy Dumbell	Donna de Haan
Conceptualisation	40%	60%
Developing the research idea	50%	50%
Methodology	50%	50%
Data collection and curation	100%	-
Performing the analysis	50%	50%
Writing the paper	40%	60%

6.2 'From the battle field to the board room: the place of gender in sex-integrated sport' as published

6.2.1 Abstract

Most of the advancements in women's sport and gender research in sport management over the last half-century can be characterized as liberal feminism. Supporters of liberalism present the pragmatic point that it is essential for females to have access to participation to have access to power. However, although the current practice of redistributive liberal feminism may increase the number of female participants, it does little to challenge or alter dominant gendered discourses and power structures within sport organizations. In this chapter we aim to explore the evolution of female participation in the sex-integrated sport of equestrian. Using the frameworks of liberal, socialist, and poststructuralist feminism, we discuss the place of gender in the context of participation and governance. We conclude that, although sex-integrated sport provides an opportunity to reframe the place of gender in sport, dominant discourses prevail. For example, although there is evidence of inclusive forms of masculinity, these are still constructed in opposition to a devalued femininity. Specifically, we highlight the constructs of patriarchy, class, elitism, and capitalism, which in particular appear to influence access to the higher echelons of sport governance.

6.2.2 Introduction

For the first time in Olympic history, every participating nation sent at least one female athlete to the 2012 Olympic Games in London. At the Rio Olympics in 2016, 47% of the medal opportunities were open to women, 45% of all athletes were female, and some nations, such as the United States, sent more female than male athletes. In April 2017 the International Olympic Committee (IOC) approved the program for the 2020 Tokyo Olympics which included a net increase of 15 events (many of which were supported because of their female participation rates), and there will be twice as many mixed events as Rio (an increase from nine mixed events to 18). These changes may result in the highest representation of female athletes in Olympic history (Figure 6.1). There is the potential for Tokyo to see 48% of participants being female, a 10% increase since the 2000 Olympics in Sydney.

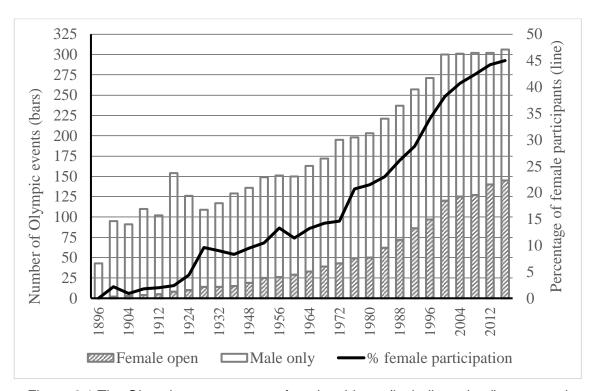


Figure 6.1 The Olympic events open to female athletes (including mixed) compared with the total number of events (bars) and the percentage of female participants in the Olympiad (line)

The policy changes implemented by the IOC to increase female participation are examples of a liberal feminist approach to equality. Indeed, most of the advancements in women's sports over the last 40 years can be characterized as liberal feminism. Fundamentally liberal feminism advocates women's greater involvement in sport by enhancing their opportunities to join existing institutions and structures – such as the

Olympic Movement. For example the passage of Title IX legislation in the United States in 1972 offered women, among many other rights and protections, equal opportunity to participate in athletics (Yiamouyiannis and Osborne, 2012). Since 1972, female participation in U.S. high school sports has increased by more than 900%. The emphasis for equality in sport appears to be focused on participation, with an anecdotal belief that if there are enough women on the playing field there will naturally be enough women willing and able to take up leadership roles such as coaching or positions within governance. However, there is a lack of evidence to show a causational link between participation and representation. For example, although 45% of athletes at the Rio Olympics were female, less than 10% of the coaches were female and only one International Federation (IF) was led by a woman.

As Hovden (2012) explains, liberal feminist discourses have shaped women's fight for equality and helped increase the number of female participants in sport. The practice of redistributive feminism may increase numbers in certain aspects of sport, but does little to challenge or radicalize the gendered culture of sport as an institution. Indeed, critics of liberal feminism point to a lack of critique of basic gender relationships, a focus on state action that links women's interests to those of the powerful, a disregard for the intersection of class or race, and a lack of analysis of ways in which women are different from men. As Burke (2010, p.21) argues

"This acceptance of the maleness of notions of excellence in sport, has resulted in difficulties in females accessing opportunities as coaches to produce different methods of play, as female-run administrative bodies to produce different philosophies of sport and create new sports, and as female players to speak with authority about their experiences in supposedly male sports".

As a consequence of concerns about the shortcomings of liberal feminism as a conceptual frame for research and policy development, scholars and practitioners have looked to other frameworks to provide a lens through which to discuss and understand gender and sport (Shaw and Frisby, 2006). Socialist feminism for example, has responded by looking more closely at the interrelationships of gender, race, and class located within capitalism, patriarchy, and neocolonialism (e.g. Burke, 2001; Hargreaves, 1990; Scraton and Flintoff, 2013). Meanwhile, postructuralist feminists provide conceptual challenges to the macro-analysis of the structural approaches of liberal and socialist feminism (e.g. Markula, 2018; Roth and Basow, 2004; Scraton and Flintoff, 2013). In this chapter we aim to contribute further to this discourse by exploring the place of gender in a sex-integrated sport via three different feminist theories: liberal feminism, socialist feminism, and poststructuralist feminism. The research question driving this inquiry is whether sex-integrated competition in sport can provide a conducive environment for gender equality on the field (participation) and in the

boardroom (decision-making)? To answer this question, we begin by presenting the socio-cultural context of equestrian sport and the Eurocentric military- influenced development of the sport within the Olympic context. We then review the place of gender in this unique sporting context, paying attention to not only participation but also power and representation. Finally, we share the experience of Amanda Bond, the Chair of the Para-Equestrian Committee of the Fédération Equestre Internationale (FEI), the international governing body of equestrian sport. In the conclusion we return to the conflicting discourses of (in)equality in equestrian sport and discuss if this unique sexintegrated sport offers any unique gender-related management insights.

6.2.3 The evolution of equestrian sport: military, men and medals

Much research concerning sport focuses on its place in social life (what it is, where it comes from, what form it takes), and the meaning that sport has for individuals, the community, and culture in general (Birrell, 1981; Blanchard, 1988; Bromberger, 1995). The evolution of equestrian sport primarily centers on the need to practice and develop equestrian (riding) skills, for the purpose of transportation, hunting, warfare or animal husbandry (cattle herding for example) (De Haan, 2015). It is important to acknowledge that 'equestrian sport' is not therefore a homogenous entity with global formulaic characteristics. There are some obvious, as well as often subtle, socio-cultural nuances about the place of equestrian sport in different contexts around the world which should be considered when discussing the place of gender in equestrian sport. For example, in the American West, women readily rode astride for work and transportation, however, in keeping with European modernity, it was deemed at the time inappropriate for women to ride astride because feminine attire was not conducive to this style of riding (Adelman and Knijnik, 2013). The place of gender in the context of equestrian sport cannot therefore simply be explained by class relations and the sexual division of labor (Marxist feminism) or by men's power over women (radical feminism).

Equestrian sport made its debut at the Summer Olympics in 1900, although it failed to appear in the next two Summer Olympics. The evolution of the new equestrian sports in the modern Olympic program could be seen as symbolic of the classical formulations of Olympic ideology which were founded in the worldview of modernism (De Haan, 2015). Real (1996) reviews the Olympic ideals of the first decades of the modern games with reference to aristocratic privilege and Eurocentric ideals. During the twentieth century equestrian sport mirrored the aristocratic, upper-class, Eurocentric, male-dominated zeitgeist of the Olympic Games (De Haan, 2015). Indeed, while discussing capital and gender relations in sport, Hargreaves (1990, p. 295) argues that

"modern sport is a repository for dominant ideology in its celebration of ruthless competition, aggression and violence and in its embodiment of elitism,

nationalism, racism, militarism, imperialism and sexism and... the machismo ethos in sport, by bonding men together, becomes a fundamental expression of male power and domination over women".

The genesis of equestrian sport in the modern Olympics began in 1900 and was predominantly shaped by military influence until 1948. The historical relationship between man and horse in warfare echoes Hargreaves (1990) description of modern sport. The equestrian events chosen for inclusion in the modern Games reflected the European Military influence seen elsewhere in the Olympic movement. The disciplines had roots in European riding, classical horsemanship and foxhunting, and ultimately tested the cavalry skills required at that time (De Haan and Dumbell, 2016). By applying a social feminist lens to the evolution of the equestrian disciplines, it is possible to identify dominant cultural discourses. By looking more closely at the interrelationship of gender, race, and class located within capitalism, patriarchy and neocolonialism, it is possible to identify Eurocentric cultural bias as the dominant framework. For example, although western styles of riding are represented alongside European styles of riding in elite competition such as the World Equestrian Games, it is only the European style that is present in the Olympic Games (De Haan, 2015).

The second period of development of equestrian sport began in 1952 and was characterized by the inclusion of non-military and female riders (De Haan and Dumbell, 2016). In 1952, women were allowed to compete only in dressage; in 1956, showjumping was opened to female competitors; and in 1964, women were finally allowed to compete in the eventing competition (Hedenborg, 2009). Allowing women access to the ubiquitous symbolic system of the gendered hierarchy of equestrian sport could be seen as an opportunity to challenge the dominant discourse of male hegemonic power and masculinity. Indeed Scraton and Flintoff (2013) explain that as a result of exploring the complex interrelationship between capitalism and patriarchal power relations, socialist feminism shifted the emphasis from solely looking at women's experience to looking more critically at gender. In turn this led to the exploration of male power through the concept of hegemonic masculinity (Connell, 1987, 1995, 2008). This body of work then developed into a large area of study (men and masculinities) which created a space for men to engage with feminist theorizing (e.g. Messner, 1992; Sabo, 1985; Sabo and Runfola, 1980). More recently, the amount of scholarship in the field of gender relations in equestrian sports during the second half of the twentieth century has grown and shed valuable light upon the gendered distribution patterns both within and outside Olympic Equestrian competition (De Haan and Dumbell, 2016; Dumbell et al., 2010; Dumbell et al., 2018). There is also a developing body of scholarship that explores how men as a group enjoy privileges

through the construction of unequal gender relations within this sex-integrated sport (Dashper, 2012b; Hedenborg, 2015; Hedenborg and White, 2012). In addition, small but growing body of literature that uses equestrian sport as a site in which to discuss constructs of gender and identity and sexuality (Dashper, 2012a, Dashper, 2013).

6.2.4 Participation is not the same as presence and power

Hargreaves (2002) explains that the historical justification for sex-segregating sport was built around the ideas of sexual difference and the belief in the unsuitability of sport and physical activity for girls and women. Discussions on sport and gender are often focused on the physicality or the performance aspect of sport which highlights the differences between the sexes based on the biological and socially constructed gender order in society. The biological bases for sex-segregation in sport are often contested. Liberal feminists argue that differences in female sports participation are the result of socialization practices carried out by institutions (Scraton and Flintoff, 2013). As Dashper (2012b) explains, in the context of equestrian sport, there are no sex-based biological advantages for either males or females, "masculine sporting abilities such as speed and strength are less significant ... strength of a rider plays a role, but this is limited as within the equestrian partnership the horse will always be the stronger partner" (p. 215). Indeed, to truly compare the gendered physicality of equestrian sport with other sports, we must define the physicality to which we refer. For example, within the Olympic discipline of Dressage, the first of the disciplines to allow female competitors, scoring and hence placing are based on the quality of the horse's individual required movements. Therefore, correct training is rewarded within the scoring system and the gender of the rider is negligible, because it is the physical performance of the horse, rather than the human athlete that is judged (De Haan, 2015).

Since 1964 all three disciplines have been open to female athletes. There are individual and team medals available across the three equestrian disciplines. Countries are free to choose the best riders for individual and team selection, irrespective of gender. For the purpose of this discussion, we therefore describe equestrian sport as sex-integrated. Within the context of Olympic sport we differentiate (a) sex-integrated sport – participation opportunities open to male and female athletes to directly compete against each another; (b) sex-segregated sport – participation opportunities restricted to one sex; and (c) mixed-sex team sports – where there has to be representation from both sexes in a team, usually one male and one female as in sailing, table tennis, and tennis in Rio 2016.

McDonagh and Pappano (2008) adopt a radical feminist position by suggesting the removal of sex-segregation as a way to redress the marginalization and 'othering' of female athletes. They explore the ways that sex-segregation in sport operates as a powerful tool in the ideological and material subordination of women. In their review of how athlete 'identity' is constructed and framed within a sex-integrated sporting experience, De Haan et al. (2015) noted an absence of 'othering'. They found that there was an absence of gender as a construct of identity in the way riders saw themselves and how support staff such as coaches saw the athletes. However, they concluded that this did not mean participants were gender blind. Indeed, a wider review of discourses associated with equestrian sport highlights that sex-integration does not necessarily equate to participatory parity or gender-neutral discourse. As Anderson (2009) explains, sex-desegregation is "a politically charged proposition" (p. 11) and one that many feminist scholars have shied away from considering fully. This chapter attempts to engage in that conversation. In this section we discuss specifically female participation in the sex-integrated sport of equestrian, in the context of the Olympic program of sports that remains predominantly sex-segregated. Having set the scene from a participation perspective, we then discuss the proportional representation of women in decision-making positions on boards of governance.

6.2.5 Participation

The IOC has taken a predominantly liberal feminist approach to gender equality in the context of participation. For example, in 1992 they stated that any new sports included in the Olympic program must be open to male and female participants. Currently all international federations (IFs) offer Olympic events (medal opportunities) to both male and female athletes (Table 6.1). Although there were more events available for male athletes in Rio 2016 than for female ones (see Table 6.1), there were no male-only sports. However, there were two Olympic sports that were open only to female athletes, synchronized swimming and rhythmic gymnastics. At Rio 2016 there was one sex-integrated Olympic sport, Equestrian, with six medal opportunities, three mixed-sex team medal opportunities within three separate sports, and the other 295 medals (97%) were for sex-segregated events. IFs demonstrate variation in the participation of the sexes in their Olympic events, from boxing, where an athlete is nearly seven times more likely to be male than female, to gymnastics (which includes both artistic and rhythmic gymnastics), where there are nearly two female athletes for every male athlete due to rhythmic gymnastics' status as a female-only discipline. As a sexintegrated sport, equestrianism has the potential to show huge bias because there are no inbuilt constraints such as gender quotas, however, as seen in Table 6.1, at Rio 2016 gender representation in equestrian was comparable to other sports.

Table 6.1 Participation and medal opportunities in recognised sports in Rio 2016

International federation	Male medal opportunities	Male participants	Female medal opportunities	Female participants	Participation M:F odds ratio
AIBA: Boxing	10	250	3	36	6.94
ICF: Canoe	11	243	5	114	2.13
UWW: Wrestling	12	236	6	112	2.11
UCI: Cycling	9	323	9	196	1.65
FEI: Equestrian	^{\$} 6	123	^{\$} 6	76	1.62
FISA: Rowing	8	330	6	209	1.58
ISSF: Shooting	9	240	6	154	1.56
IJF: Judo	7	238	7	153	1.56
IWF: Weightlifting	8	156	7	104	1.50
FIFA: Football	1	288	1	216	1.33
WS: Sailing	6+	217	5+	163	1.33
ITF: Tennis	3+	105	3+	94	1.12
IAAF: Athletics *	24	1267	23	1198	1.06
BWF: Badminton	3+	88	3+	86	1.02
FIH: Hockey	1	207	1	205	1.01
WR: Rugby	1	149	1	148	1.01
IGF: Golf	1	60	1	60	1.00
UIPM: Modern Pentathlon	1	36	1	36	1.00
ITTF: Table Tennis	2	86	2	86	1.00
WT: Taekwondo	4	64	4	64	1.00
FIBA: Basketball	1	144	1	144	1.00
IHF: Handball	1	142	1	142	1.00
FIVB: Volleyball	1	192	1	192	1.00
WA: Archery	2	64	2	64	1.00
FIE: Fencing	5	106	5	106	1.00
ITU: Triathlon	1	55	1	55	1.00
FINA: Aquatics *	22	1057	24	1072	0.99
FIG: Gymnastics	9	114	9	210	0.54
Total	169	6800	144	5679	1.20

^aThese figures are the sum of athletes competing in each event and therefore an individual athlete may have competed for more than one medal and been counted more than once if they entered more than one event.

blncluding one medal for mixed-sex event.

^cAs a sex-integrated sport the sexes directly compete for the same medals.

Building on Dumbell and De Haan's (2012) comparison of athlete profiles over 50 years of Olympic equestrian events, Table 6.2 presents an analysis of participation at 10 Olympic Games. Reflecting the wider representation of women in the Olympics, the number of female athletes competing in equestrian disciplines has increased over the years, but has not yet reached 50%. Analysis of the gender patterns among Olympic competitors shows that on average only 6% of equestrian competitors were female in the early years, compared with twenty-first century Games where this figure has increased to 36%. At the 2016 Rio Olympics, women made up 45% of the 11,237 athletes who competed in the Games and 47% of the events were open to women (either sex-segregated or mixed). This figure was closely mirrored in the 38% of female athletes competing in the Equestrian events.

Table 6.2 Gender distribution of competitors (developed from Dumbell and De Haan, 2012)

	D	ressaç	ge	Sho	owjum	ping	Eventing			Total		
	M	F	Sum	M	F	Sum	М	F	Sum	M	F	Sum
1952	20	4	24	51	0	51	59	0	59	130	4	134
1956	28	9	37	68	5	70	56	1	57	152	12	164
1960	12	5	17	68	3	71	73	0	73	153	8	161
1964	15	7	22	43	4	46	47	1	48	103	13	116
1968*	≤ 20	≥ 6	26	≤ 44	≥ 7	51	≤ 48	≥ 1	49	104	22	126
Total	75	25	100	230	12	238	235	2	237	538	37	575
Odds ratio	75%	25%	3.00	97%	5%	19.17	99%	1%	117.50	94%	6%	14.54
2000	23	25	48	62	12	74	59	23	82	134	70	204
2004	24	28	52	66	11	77	52	23	75	142	62	204
2008	19	28	47	61	16	77	42	28	70	122	72	194
2012	16	34	50	59	15	74	48	26	74	123	75	198
2016	21	39	60	60	14	74	42	23	65	123	76	199
Total	103	154	257	308	68	376	243	123	366	644	355	999
Odds ratio	40%	60%	0.67	82%	18%	4.53	66%	34%	1.98	64%	36%	1.81

^{*}The Olympic report does not list all competitors so some data are not exact.

De Haan (2015) noted that the equestrian disciplines could not been seen as a homogenous group, but that each had their own sub-culture. Showjumping for example, remains dominated by male competitors, seeing only a slight increase from 5% female participation in the early Games to 18% in recent Games. This

disproportionate representation cannot simply be explained by competition results. Before women's inclusion in showjumping in the 1956 Olympics women have been successfully competing in the sport. In order to strengthen the male-only national teams, successful female riders at the time were asked to lend the 'team' their horses for male riders to compete. Pat Symthe first joined the British Showjumping Team in 1947, the same year she won her first open category. Before competing in the 1956 Olympics where she won a bronze medal and was made an Officer of the Most Excellent Order of the British Empire (OBE: a British order of chivalry rewarding contributions to the public outside the civil service) in the same year, Smythe had been asked to loan her best horse, Prince Hal to the male-only team (Smythe, 1954). Success in riding comes from the right partnership between horse and rider; Prince Hal simply did not perform for the male riders. Although the combination of Symthe and Prince Hal had been immensely successful on the international circuit, when she was finally selected for the Olympic team, the male coach had black-listed the horse and Smythe had to compete on her less talented and less experienced second horse. This example from showjumping in the 1950s highlights that even though women gained access to the sport, their sporting experience was significantly influenced by patriarchy and capitalism. Today, outside of Olympic competition, on the professional global showjumping circuit patriarchy and capitalism remain dominant discourses. Big money competitions such as the Longines Global Champions Tour offer prize money for a class of €400,000 (equivalent to over US\$470,000) - far more than is offered in the other disciplines.

Reflecting the patriarchal control discussed in showjumping, before their inclusion in the Olympic competition, successful female eventers were also asked to hand over their carefully trained and valuable horses for use within all male teams. Although the sport has always relied heavily on the cooperation of independent owners, women riders were expected to hand over their horses without question or reward. In 1956 British rider Sheila Willox, who placed second at Badminton (considered the best and toughest Eventing course in the world – even more challenging than any Olympic course) was asked to loan her horse.

"They came to me in the collecting ring at Badminton before Showjumping (the final part of the competition) and said they wanted me to make my horse available for the male Olympic riders. I said no. I told them that 'High and Mighty' was my only horse and I had no money to replace him" (Burke, 1997, p.108).

The selectors persisted and put immense pressure on the 20-year-old, who finally agreed to sell rather than lend her horse. Of the three disciplines, Eventing has the closest affiliation with the military and it was the last of the disciplines to allow female competitors. However, it has seen the largest growth from 1% female competitors in the early years, to 34% of the competing athletes now being female.

Women were most likely to be competing in Dressage both then and now, although they now form a much greater proportion with 60% of competitors at twenty-first century Olympic Games being female, compared withi 25% in earlier Games. Hedenborg and White (2012) suggest that a likely explanation for the higher number of women in Dressage compared with the other Olympic disciplines is due to the fact that Dressage riding was (and arguably still is) more compatible with an accepted femininity. Of all the disciplines, the subtleties of dressage require empathy and consideration as to how to coax the best performance from the horse, allowing the horse's natural paces to show. Dressage was the subculture in which Dashper (2012a) conducted an ethnographic study using inclusive masculinity as the framework to explore the changing nature of masculinities in sport. She noted that an increasing acceptance of openly gay men in equestrian sport resulted in a decreased level of homophobia, but that this did not necessarily result in a reduction in the polarization between masculinity and femininity. Through a poststructuralist lens we can note dressage competitors demonstrate more inclusive forms of masculinity but that they are still constructed in opposition to a devalued femininity.

Participation is only one aspect of sport at an elite level; performance remains the dominate measure of success. With regards to medals won, four nations have dominated Olympic equestrianism in the twenty-first century: Germany, the United Kingdom, the United States, and the Netherlands. Despite the fact that to date there are no longer any explicit, formal barriers to participation for females at any level of equestrian sport (within the context of culturally specific gendered sporting access), Travers (2008) notes that this does not simply translate to equality of opportunity. Dressage has more female Olympic athletes in this century in all four of these nations, whereas showjumping sees great variability in female representation across the four dominant nations in Olympic equestrian sport in the twenty-first century (Table 6.3). Indeed, as a result of a three year ethnographic study of gender relations in equestrian sport, Dashper (2012b) refers to "subtle discrimination and hidden barriers [which] combine to produce a glass ceiling effect at the top levels of the sport, denying many women participatory parity in relation to their male peers" (p. 217). Specifically Dashper (2012) refers to three distinct barriers: (a) a combination of gender and class, (b) financial pressures, and (c) the barrier of 'family'. What can be seen from Table 6.3 is that these successful equestrian nations overall demonstrate more equitable representation than the average for the sport. Although there is individual variation, it would appear that in selecting the athletes most likely to achieve medal success, they are selecting from both sexes and both sexes are enabling success within equestrian sport.

Table 6.3 Participation of the sexes in Olympic equestrian sport in dominant nations of the twenty-first century compared with all equestrian athletes (OR = odds ratio)

	Dressage		ge	ShowJumping		Eventing			Total			
	M	F	M:F OR	M	F	M:F OR	M	F	M:F OR	M	F	M:F OR
GER	3	16	0.19	16	4	4.00	14	9	1.56	33	29	1.14
GBR	10	19	0.53	17	0	∞	5	18	0.28	31	28	1.11
USA	7	12	0.58	10	10	1.00	11	12	0.92	28	34	0.82
NED	6	13	0.46	19	1	19.00	4	3	1.33	29	17	1.71
ALL	103	154	0.67	308	68	4.53	243	123	1.98	644	355	1.81

6.2.6 Horse ownership

We cannot discuss participation and power in equestrian sport without highlighting the unique aspect of horse ownership. At the Olympic level, horse ownership is governed by the Fédération Equestre Internationale (FEI International Equestrian Federation). In Olympic competition the rider and horse must share the same nationality and a horse's nationality is determined by that of its owner. According to Chapter V Article 139, of the FEI regulations for 2017 (Fédération Equestre Internationale, 2017a), the following rules apply:

"Horses entered for the Olympic Games must be the property of Owners of the same nationality as the Athlete by 15th January of the year of the Games (see Olympic Regulations)."

The imposed date of registration creates a 'transfer window' of ownership bringing in issues of national, political and economic pressures. As nations secure qualification at an Olympic Games the pressure to acquire or keep appropriate horse power until the registration date can alter the combination of horse and rider who ultimately compete. At this level of the sport, horses are commodities, and in a similar fashion to stock options their value fluctuates based on performance with basic economic principles of supply and demand affecting the market value. Horses are also unfortunately highly susceptible to injury, resulting in a potential loss of all value. From a sport development perspective, emerging markets such as the Middle Eastern countries of Saudi Arabia and Qatar are becoming very involved in the top end of Showjumping and bring with them substantial economic buying power. Rob Hoekstra, Performance Manager for Britain's Showjumping team explains that the buying power of these countries has "definitely moved the whole sport and business up a level ... they've got a big budget, and horses at that level are of course expensive, probably between £500,000 and

£2.5m each" (Williams, 2012). The cost or value of horses at the Olympic level of the sport is not generally public knowledge. However, it was reported in the press that three of the British horses, Valegro, Uthopia, and Alf, which were part of the gold medal winning Dressage team at the 2012 Olympics, were expected to be auctioned off post-Games for about £20 million (Harper, 2012).

Dumbell, Douglas, and Rowe (2017) identified that most British Olympic athletes in the twenty-first century do not own any part of their horse. This trend continues beyond Britain (see Table 6.4), because 65% of athletes from the dominant nations did not own their horse. There was no clear trend witnessed as to whether this is affected by gender, and it has been suggested that commercial factors and national funding systems have a greater effect on athlete horse ownership. That said, Coutler (2013) reports increased business skills and focus within male equestrian athletes compared with female athletes and the advantage that taking a more instrumental approach to the horse can have in protecting an equestrian athlete if a horse is sold or removed from their care (Dashper, 2014). This may provide male athletes with an advantage (Dashper, 2012), however, this advantage would not seem to translate into over-representation. As we have highlighted in this chapter, however, showjumping is the most commercialized equestrian discipline and has by far the greatest proportion of male athletes (see Table 6.3) within the Olympic equestrian events.

Table 6.4 The pattern of horse ownership (part or whole) of Rio 2016 competitors (OR = odds ratio)

Proportion	Dressage		Show	/jumping	Eventing		Overall
with stake	Male	Female	Male	Female	Male	Female	M:F OR
GER	0	0	0.67	1	1	0.67	1.40
GBR	0.5	0.5	0.24	-	0	0	1.45
USA	0	0.33	0	0	0	0	0.00
NED	0.33	1	0.5	-	1	0.5	0.84
Sum	29%	33%	38%	33%	43%	33%	35%

6.2.7 Decision Making

Mirroring the push for parity on the playing field, the IOC is also highlighting the need to increase women's representation in decision-making positions at all levels within sport, from the IOC to national governing bodies (NGBs). In line with the liberal feminist approach, the IOC has recommended that 30% of the board members of IFs, national Olympic committees' (NOCs) and NGBs' should be female (Henry and Robinson,

2010). Several studies have reviewed the use of targets and quotas (e.g., Adriaanse and Schofield, 2014 in Australia, and Claringbould and Knoppers, 2007, 2008 in the Netherlands). Henry et al. (2004) concluded that this approach had been successful to the point of raising awareness of gender inequalities and had unlocked a source of skilled, educated, and committed individuals who contributed to improving Olympic governance. However, the researchers also highlighted several limitations to this approach. Some organizations viewed the targets as a ceiling to be attained rather than a base from which to build, and even when minimum targets were achieved, they did not necessarily lead to the adoption of policy initiatives that fostered women's participation in executive decision-making. Critiques of this liberal feminist approach highlight the fact that simply adding women to a male culture does little to facilitate equity (e.g., Henry et al., 2004; Knoppers and Anthonissen, 2005; Sotiriadou et al., 2017). As Betzer-Tayar et al. (2015, p.11) explain:

"as long as women continue to be merely a significant minority at the top of the leadership ladder, their voices may be marginalized and their sociocultural status may be discursively constructed as the 'other', in relation to the norm for the male-dominated boards of executives".

Indeed, even though many NOCs found the IOC's earlier target of 20%, set in 1996, a challenge, Henry and Robinson (2010) contended that a target of 30% by 2017 was required to build on previous momentum. IOC President Thomas Bach has significantly increased the number of women appointed to a commission since his election in 2013 with 38% of places now taken by women, a historic high for the IOC (International Olympic Committee, 2017). Despite these promising figures, men continue to dominate key decision-making positions across all aspects of sport and the percentage of women in governing and administrative bodies in the Olympic movement remains low. Of the 28 IFs representing sports at the Rio 2016 Olympics, no IF currently has a board with more female members than male, one IF has no female board members at all, and just one sport has a female president. Only 21% of the IFs meet the requirement of 30% female board members (see the dark line in Table 6.5). On average, a board member is nearly five times more likely to be male. The International Hockey Federation seems to be most successfully taking their participation level (almost equal) into their board (also equal). Despite the increase in female participation within the Olympic Program, the majority of the sports remain sex segregated, and despite IFs being responsible for the governance of sport participation among both men and women, decision-making powers remain with men.

Table 6.5 Board membership of International Federations of recognised sports in Rio 2016 (dark line shows where IOC recommended 30 % female would be)

	Participation	Board membership					
International federation	M:F odds ratio	Gender of IF first	Gender IF second	Total	Male	Female	M:F odds ratio
ISSF: Shooting	1.56	Male	Male	13	13	0	∞
IJF: Judo	1.56	Male	Male	22	21	1	21
AIBA: Boxing	6.94	Male	Male	21	20	1	20
UCI: Cycling	1.65	Male	Male	16	15	1	15
IGF: Golf	1.00	Male	Male	13	12	1	12
UIPM: Modern Pentathlon	1.00	Male	Female	13	12	1	12
WR: Rugby	1.01	Male	Male	10	9	1	9
FIFA: Football	1.33	Male	Female	36	32	4	8
ITTF: Table Tennis	1.00	Male	Male	8	7	1	7
FINA: Aquatics	0.99	Male	Male	23	20	3	6.67
WT: Taekwondo	1.00	Male	Male	29	25	4	6.25
FIBA: Basketball	1.00	Male	Male	7	6	1	6
ICF: Canoe	2.13	Male	Male	14	12	2	6
IWF: Weightlifting	1.50	Male	Male	14	12	2	6
UWW: Wrestling	2.11	Male	Male	7	6	1	6
FEI: Equestrian	1.62	Male	Female	18	15	3	5
IHF: Handball	1.00	Male	Male	17	14	3	4.67
FIVB: Volleyball	1.00	Male	Male	17	14	3	4.67
ITF: Tennis	1.12	Male	Female	15	12	3	4
IAAF: Athletics	1.06	Male	Male	27	21	6	3.50
WA: Archery	1.00	Male	Male	13	10	3	3.33
BWF: Badminton	1.02	Male	Male	25	18	7	2.57
FIE: Fencing	1.00	Male	Male	20	14	6	2.33
FISA: Rowing	1.58	Male	Male	6	4	2	2
ITU: Triathlon	1.00	Female	Male	8	5	3	1.67
WS: Sailing	1.33	Male	Male	8	5	3	1.67
FIG: Gymnastics	0.54	Male	Male	*	7	5	1.40
FIH: Hockey	1.01	Male	Male	14	7	7	1
Totals	1.20	97%	82%		430	88	4.89

It is evident that participation numbers are far more equitable than leadership positions in governing organizations. Federations have been part of the Olympic movement for different lengths of time. However, it is not possible to simply relate male dominance in governance to a history of male-dominated sport, as Table 6.6 shows. The FEI was formed in 1921. Despite this lengthy history and its military roots the FEI has a similar make-up to many IFs and has more women members than the majority of boards. That said, the International Triathlon Union (ITU) is a more modern organization, founded in 1989, and its governance includes more than 30% women. Interestingly, triathlon includes a mixed event in its World Championships consisting of a four-person team, two men and two women. This format was on the program of the 2010 Singapore Youth Olympic Games and is due to be included in Tokyo 2020 (ITU, 2017). The ITU is also the only IF currently to have a female president.

Table 6.6 Participation and representation at 2016 Rio Olympics

Federation		Pa	articipation		Representation			
	Present at Olympics since	Number of male athletes	Number of female athletes	Male: female odds ratio	Male board directors	Women board directors	Male: female odds ratio	
ISSF: Shooting	1896	341	214	1.59	13	0	∞	
WR: Rugby	2016	149	148	1.01	9	1	9	
FEI: Equestrian	1900	123	76	1.62	15	3	5	
ITU: Triathlon	2000	55	55	1	5	3	1.67	

At the most senior level, however, females serve in the top two positions of the FEI, whereas the British Equestrian Federation (BEF) does not state who is their second in command, and the other three national federations have all-male leadership. The overpopulation of males in the top two positions of IFs is also evident (see Table 6.5). Just five IFs (18%) have a female in one of these positions, with the ITU being the only IF to have a female president, and just four other IFs have females in their second position: FEI, FIFA (Fédération Internationale de Football Association – football), UIPM (Union Internationale de Pentathlon Moderne – modern pentathlon), and ITF (International Tennis Federation – tennis). The four most successful national federations in equestrian sports at the Olympics would all meet the guidance of 30% female representation as a minimum (Table 6.7). Interestingly two of them have more female

than male members, although none of them is below 30% male representation (United States Equestrian Federation [USEF] with 37% being the lowest proportion of males and Deutsche Reiterliche Vereinigung [FN] with the lowest proportion of females at 31%). It is therefore surprising that their IF, the FEI has just 17% of their members who are females, with a member being five times more likely to be male.

Table 6.7 Number of current male and female board members per country NF + FEI (equestrian IF) board membership

Federation	First (second)	Number of directors	Male members	Female members	M:F odds ratio
FEI: International Federation of Equestrian Sports Fédération Equestre Internationale (FEI)	Male (female)	18	15	3	5
British Equestrian Federation (BEF)	Male (none)	12	5	7	0.71
United States Equestrian Federation (USEF)	Male (male)	19	7	12	0.58
Koninklijke Nederlandse Hippische Sportfederatie (KNHS – the Netherlands)	Male (male)	17	11	6	1.83
Deutsche Reiterliche Vereinigung (FN - Germany)	Male (male)	13	9	4	2.25

There have been 14 different presidents of the FEI (see Table 6.8). The first 10 were all male and of notable title apart from Magnus Rydman from Finland who held the presidency from 1939 to 1946. The first female president in 1986 (five years after the appointment of the first female member of the IOC) was HRH The Princess Royal; she has since been followed by two more female presidents, both of whom are of royal descent. Princess Anne was also elected as an IOC member in 1988, becoming only the fifth woman to join that body. In this context we highlight the interrelationship of gender, class, elitism, and access to the higher echelons of sport governance, whereby it would appear that gender combined with significant social status (royal or noble decent) facilitates access to an otherwise patriarchal institution.

Table 6.8 The two most senior members of the FEI board

Years in office	FEI President	Sex	Years in office	FEI Secretary Generals	Sex
1921 – 1927	Baron du Teil	Male			
1927 – 1929	Colonel G.J. Maris	Male			
1929 – 1931	Major J.K. Quarles van Ufford	Male			
1931 – 1935	General Guy V. Henry	Male	1921 - 1951	Major Georges Hector	Male
1935 – 1936	General Baron Max Frh. Von Holzing-Bertstett	Male	1951		
1936 – 1939	Lt. Col. J.K. Quarles van Ufford	Male			
1939 – 1946	M. Magnus Rydman	Male			
1946 – 1954	General Baron Gaston de Trannoy	Male	1951 -	Major Roger Moermans	Male
1954 – 1964	HRH Bernard, Prince of the Netherlands	Male	1956	d'Emaus	
1964 –	HRH Prince Philip, Duke of	Male	1956 - 1976	Chevalier Henry de Menten de Horne	Male
1986	Edinburgh	maio	1976 - 1988	Mr Fritz O. Widmer	Male
1986 – 1994	HRH Princess Anne, The Princess Royal	Female	1989 - 1995	Mr Etienne Allard	Male
1994 – 2006	HRH The Infanta Doña Pilar de Borbòn	Female	1996 - 2005	Dr Bo Helander	Male
2000	de Borbori		2005 - 2006	Mr Jean-Claude Falciola	Male
			2006 - 2007	Mr Michael Stone	Male
2006 – 2014	HRH Princess Haya Al Hussein	Female	2008 - 2011	Mr Alex McLin	Male
			2011– 2014	Mr Ingmar De Vos	Male
2014-	Ingmar De Vos	Male	2014	Mrs Sabrina Ibáñez	Female

The current president of the FEI is Mr. Ingmar De Vos from Belgium, who has held the position since 2014 (Fédération Equestre Internationale, 2017b). The current Secretary General of the FEI is the first woman to hold that office since its introduction in 1921 (Table 8). Previously FEI Director, Governance and Affairs (since 2011) and interim Secretary General from 2014 Mrs. Ibáñez was appointed in January 2015 with unanimous support (Fédération Equestre Internationale, 2015).

It is interesting that the FEI have continuously had one male and one female in the top two positions since 1986, when the first female president was appointed (HRH Princess Anne, The Princess Royal of England) (see Table 6.8). This gender equality within the leadership of equestrian sport does provide a model that may offer valuable insights to other sports in ensuring that female representation is meaningful and high profile in support of future development.

6.2.8 Conclusion

Here, we return to the conflicting discourses of (in)equality in equestrian sport and consider whether this unique sex-integrated sport offers any unique gender-related management insights. The research question driving this inquiry is whether sex-integrated competition in sport can provide a conducive environment for gender equality on the field (participation) and in the boardroom (decision-making)?

In a sex-integrated sport the initiatives advocated by liberal feminism of quotas and active promotion of female sport can have only limited impact. That equestrian sport has achieved comparable female participation in many IFs, despite no quotas being used, suggests the barriers to participation (socialist feminism) are not insurmountable in a sex-integrated sport. This does not mean that equestrian sport has no barriers to participation, and in fact there is variability between the events, where showjumping is still male-dominated and in dressage we are nearing a point that we could soon be concerned about male under-representation. A sex-integrated sport poses fewer challenges to a postcultural feminist approach because the competitors' sex is not an issue, and there are role-models representing a range of gender and sexualities within equestrian sport. There remain event-/discipline-specific challenges to overcome, and these may interact with socialist feminist ideas of how commercialism and maledominated media representations are influential in elite sport. Overall Olympic equestrian sport is an example of how sex-integrated competition can facilitate participation from both sexes, although it also demonstrates how the individual event's social and competition context affects participation by the genders.

The gender balance seen in Olympic competitors in many sports does not translate to a similar gender balance in the governing bodies. The governing bodies of IFs remain a male-dominated domain. The IF for equestrian sport (the FEI) has a greater proportion of female board members than most other Olympic IFs, but does not demonstrate the 30% female membership advocated by the IOC. The FEI has, however, demonstrated gender equality in the top two posts for over 30 years. In this way, it is unusual among IFs, and equestrian sport could contribute valuable insights to support transferring the relative success of the agenda to increase the female participation in the Olympics and increasing the gender equality within the governing bodies of international sporting federations.

6.2.9 Leader profile: Amanda Bond

British born, Amanda Bond is a key player in the world of equestrian sport. Her career started in the UK at Hartpury College, where as a graduating student, she took up her first role working for the college. Over the course of 14 years, Amanda's career at Hartpury developed from one of lecturer to Deputy Principal. During this time it was her role as Event Director for the FEI World Para Dressage Championships, as well as several international dressage and Eventing championships, that led to her first posting outside of the U.K. Due to quarantine restrictions, the equestrian competitions of the 2008 Beijing Olympic and Paralympic Games took place in Hong Kong. Amanda worked for the organizing committee of the Beijing 2008 Games, based at the equestrian venue in the co-host city of Hong Kong. On returning to the UK she was appointed CEO of British Dressage. During that time, she was seconded to work as discipline manager at the London 2012 Olympic and Paralympic Games.

Recently Amanda has returned to Hong Kong. In her current role as an Executive Manager of the Hong Kong Jockey Club she is responsible for overseeing equestrian matters outside of racing with the aim of developing equestrian sport in the region. With over 25,000 employees, the Jockey Club is the largest employer in Hong Kong and it is also one of the largest charitable donors in the world. Amanda is responsible for leading a team of 250 staff. She also manages four equestrian centers and helps key stakeholders with the strategic delivery of equestrian events in Hong Kong. Her role encompasses all aspects of the sport from the grassroots level through to the elite teams who represent Hong Kong on the world stage. She also sits on the Board of the Hong Kong Equestrian Federation and the Riding for the Disabled Association.

Amanda explains that in her 'spare' time, she is the chair of the FEI Para Equestrian Technical Committee and was the Foreign Technical Delegate for the 2015 European Championships and the 2016 Rio Paralympic Games. She is one of only two female chairs from 14 FEI standing and technical committees.

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6.3 Study 4: De Haan and Dumbell, 2019: Strengths and Limitations

Study 4 is a descriptive analysis utilising a mixed-methods approach incorporating feminist theories.

'The purpose of describe research is to gain an accurate profile of events, persons or situations' (Saunders et al., 2016, p. 175).

The researcher has to explore, explain or evaluate the description presented (Saunders et al., 2016). Study 4 contains elements of exploration and evaluation to generate a meaningful contribution to the area of study, e.g. when discussing horse ownership trends.

Study 4 is a 'fully integrated, merged mixed methods research' study enabling powerful description and conclusions (Saunders et al., 2016), a strength of the study. However, merging quantitative and qualitative approaches can reduce each point's value and Saunders et al. (2016) warns that 'quantising' qualitative data may lead to loss of its exploratory or explanatory richness. Whilst Study 4 does not rely on qualitative data for the objectives of this thesis, it does contain some that have not been explored in a rich and immersive way, for example the profile of Amanda Bond, and this is a limitation of the study. Quantifying qualitative data can help 'meaning making' by exposing patterns (Monrouxe and Rees, 2019). Study 4 does publish the numbers, enabling the reader to critically consider the data underpinning the exploration and evaluation included in a way that just stating the overview patterns identified ('closeting') would not (Hannah and Lautsch, 2011).

Study 4 was written to be accessible and has no methods section. This limits how a researcher would be able to utilise Study 4 in their future work.

Study 4's data are from a wide-range of publicly available sources, with the inherent ethical implications outlined in section 2.2. Due to the high-profile nature of the organisations and people about which data was gathered, it was possible to gain this information without encountering large gaps in the data, which can be common when utilising data for a secondary purpose (Bryman, 2016).

Study 4 states clearly that it utilises liberal, socialist and poststructuralist feminist theories, to support the exploration of gender at the start of the analysis. Liberal feminism was chosen as this is the theory that the International Olympic Committee's actions (to numerically equalise representation) fit most comfortably and socialist and poststructuralist theories enabled consideration of socio-cultural perspectives around sport at the Olympic Games (Hovden, 2012; Scraton and Flintoff, 2013). Stating the theoretical perspective as part of the introduction to a mixed-methods study is

commonly used in social science and supports research having a clear 'overarching framework' (Creswell and Creswell, 2018).

Creswell and Creswell (2018) promote five stages of incorporating theory into a mixed-methods study, a common approach in pragmatist research (Saunders et al., 2016). Study 4 satisfies three of the five stages, and in part a fourth. The fifth of Creswell and Creswell's (2016) stages is not met by Study 4 as it does not significantly advance those theories. Study 4 did not aim to advance theory and therefore this is not a limitation. Instead Study 4 pragmatically utilises theories to explore the profiles of super-elite equestrians and those in the governing bodies of equestrian sport. This enables the main strength of Study 4, which is that it draws together a wide range of observational data (quantitative and qualitative) to support an accessible discussion of gender equality in sport.

6.4 Study 4: De Haan and Dumbell, 2019: Contribution to the overall aims and objectives

As a sex-integrated sport if the balance between men and women riders did not reflect wider policy, and here it might not as there is no quota to maintain similar numbers of men and women competitors, then this could jeopardise the future of equestrianism at the Olympics. However the data suggest both men and women are enabled to reach super-elite performance levels. All four most successful Olympic equestrian nations had a more equal representation by men and women riders in the first five twenty-first century Olympic Games, than all nations collectively. Study 4's findings could be used to incentivise nations to actively promote both men and women equestrian athletes. At a time when the International Olympic Committee have reaffirmed they are seeking equality (Olympic Agenda 2020, Recommendation 11, International Olympic Committee, 2018), and committed to continue with an approach to redistributive liberal feminism to achieving equal representation from men and women athletes.

Whether the successful nations are in part successful because they are selecting the best riders, irrespective of sex, is an interesting question. More women competed than men in dressage, more men than women in showjumping, and eventing varied by nation. Data suggests that discipline differences (Study 4; Dumbell et al., 2018) could be related to differences in discipline specific sporting sub-cultures (Dashper, 2012; Coutler, 2013).

Study 4 found that the majority of super-elite riders at Rio 2016 did not own their horse partner. This supports findings from Dumbell et al. (2018) and Dumbell et al. (2010).

Data suggest that super-elite male riders are more likely to own their horse partners than their female peers. The relationship between horse ownership and career success could be further investigated to establish if this is a factor in why men riders seem more likely to progress to elite and super-elite competition level than women.

Equestrian sport has a unique place, as a sex-integrated sport, to provide a lens through which to examine the effect of historical, socio-cultural and sporting influences on a sport. Through comparison between nations it can be seen that socio-cultural factors do influence the profiles of super-elite competitors, however there are similarities between the most successful equestrian nations suggesting that some influences go across a sport. Decisions of a sport's governing body, its leaders, are examples of things that can influence a whole sport, cutting across nations. The effect of composition of governing boards on those participating in a sport is usually indirect, mainly through regulation and media profiles. Study 4 found that, on average, a member of an international federation's board (including the FEI) was nearly five times more likely to be a man than a woman.

Olympic riders and decision-makers of the most successful equestrian nations, including the UK, demonstrated more equal representation by men and women than less successful equestrian nations and most international sporting federations.

Chapter Seven - Study 5: Can Sex-Integrated Sport Provide a Gender Equitable Coaching Environment?

7.1 Rationale for Study 5: De Haan and Dumbell, 2021

7.1.1 Objectives addressed by Study 5: 4, 5, 6

7.1.2 Reason for inclusion

A complex mix of factors directly and indirectly influence participation and specialisation in a sport (Jayanthi et al., 2013; Hancock and Hums, 2016). The coach influences many athletes' development (Lamperd et al., 2016), playing a pivotal role in performance improvements and progression through competition levels (Denison et al., 2017; Gullich et al., 2019). In equestrianism the coach is frequently impactful as the gatekeeper to the essential resource, the horse (Lamperd et al., 2016).

Coaches can be regarded as a middle layer between the participant and the governing body (Hancock and Hums, 2016). Whilst equestrianism might not be numerically dominated by men (Dumbell et al., 2010; Dumbell et al., 2018) the majority of the sport's governing bodies are men (De Haan and Dumbell, 2019). Sport is considered a dominant masculine environment (Messner, 1992) whereas human-animal interactions for recreation, involving the care of animals, are frequently regarded as a female domain (Herzog, 2021). Exploring how the unique environment of a sex-integrated sport combines with these discourses, and reflects in the profile of equestrian coaches, supports future policy direction (Connell and Messerschmidt, 2005) and understanding the socio-cultural and sporting influences present within equestrianism and equestrian sport (Cushion et al., 2003).

7.1.3 Publication details

V - De Haan, D. and Dumbell, L. (2021) Chapter 5. Can Sex-Integrated Sport Provide a Gender Equitable Coaching Environment? In: Norman, L. (ed) Improving Gender Equity in Sports Coaching. 1st edition. London: Routledge. Doi: 10.4324/9781003028642

7.1.4 Why this publication was chosen

'Improving Gender Equity in Sports Coaching' collects original insights into how research could be utilised to make the 'sport coaching environment' more inclusive and

gender equitable (Routledge 2021b). Part of Routledge's 'Women, Sport and Physical Activity' series which offers 'new perspectives on the involvement of women in sport and physical activity' (Routledge, 2021c). With e-books and research repositories, book chapters can be easily accessed through the internet. This book chapter is more likely to reach sport policy and decision-makers, students and researchers than publishing in a research journal.

7.1.5 Author's Contribution:

	Lucy Dumbell	Donna de Haan
Conceptualisation	40%	60%
Developing the research idea	50%	50%
Methodology	40%	60%
Data collection and curation	100%	-
Performing the analysis	60%	40%
Writing the paper	50%	50%

7.2 'Can Sex-Integrated Sport Provide a Gender Equitable Coaching Environment?' as published

7.2.1 Summary

Whilst we have seen a significant increase in the number of women athletes at the Olympic Games, the number of coaches who are women remains disproportionately low. The majority of Olympic sports remain sex-segregated, meaning men and women compete in separate competitions. However the Equestrian disciplines of Showjumping, Dressage and Eventing have been open to men and women athletes to directly compete against one another since 1964, providing somewhat of a unique environment in which to study gender and sport. Whilst we are understanding more about the gendered nature of participating in sex-integrated sport from an athlete perspective (Dashper, 2012; Dumbell et al., 2018) and from a governance and leadership perspective (De Haan, 2015; De Haan and Dumbell, 2019) we know very little about those involved in coaching such sports. The purpose of this chapter therefore is to explore the extent to which a sex-integrated sport can provide a gender equitable coaching environment and what can be learnt from this. Specifically, we use Bourdieu's concepts of field, habitus and capital to review how the structure of equestrian sport, including coach education systems, may disrupt, challenge or reinforce dominant ideologies of gender.

7.2.2 Introduction

The majority of Olympic sports remain sex-segregated, meaning men and women compete in separate competitions. In more recent years, there has been an increase in the number of mixed-sex team competitions, where there needs to be a representation from both sexes, such as table tennis and tennis at the Rio Olympics 2016. There is also one Olympic sport, which is sex-integrated meaning participation opportunities are open to men and women to directly compete against one another. This sport is equestrianism, which involves a horse and human as a competitive partnership.

The Olympic equestrian disciplines, Showjumping, Dressage and Eventing, have evolved from a traditional masculine military foundation. Originally the equestrian disciplines were only open to men competitors. Women were allowed to compete in Dressage in 1952, followed by Showjumping in 1956 and Eventing in 1964 (De Haan and Dumbell, 2016). Within the Olympic context, nations are free to choose the best riders, for individual and team selection, irrespective of their sex. Research shows however, that the most successful equestrian nations demonstrate more equitable participation than other nations (Dumbell et al., 2018). At the 2016 Rio Olympics, women made up 45% of the 11,237 athletes who competed in the Games and 47% of the events were open to women (either sex-segregated or mixed). This figure was closely mirrored in the 38% of women athletes competing in the Equestrian events (De Haan and Dumbell, 2019). Reflecting the wider representation of women in the Olympics, the number of women athletes competing in equestrian disciplines has increased over the years but has not yet reached 50%.

Despite improved opportunities for women to participate, they continue to encounter barriers to involvement in many aspects of sport. For example, during the last two consecutive Summer Olympic Games, only 11% of accredited coaches were women (Olympic.org, 2020). Whilst we are understanding more about the gendered nature of participating in sex-integrated sport, we know very little about those involved in coaching such sports. The purpose of this chapter therefore is to explore the extent to which a sex-integrated sport can provide a gender equitable coaching environment and what can be learnt from this. Specifically, we use Bourdieu's concepts of field, habitus and capital to review how the structure of equestrian sport, including coach education systems, may disrupt, challenge or reinforce dominant ideologies of gender. We begin the chapter by outlining our theoretical position in the context of discussing the coaching landscape of equestrian sport. Throughout the chapter, we present quantitative data pertaining to participation rates of men and women, whilst also drawing on the narratives of two elite level coaches. Finally, we draw conclusions from

our study and present recommendations for future inquiries or directions for research and policy makers.

7.2.3 An introduction to equestrian sport using Bourdieu's concept of field

Bourdieu was one of the first social commentators to consider sport as a serious sociological issue. He acknowledged sport as a field of social significance and one that can be seen to epitomise issues of class, power and the representation of body practices (Bourdieu, 1979). We acknowledge that Bourdieu's work has been criticised by some feminist scholars as being androcentric (Laberge, 1995; Thorpe, 2009), but we highlight the fact that sport as a field is patriarchal and Bourdieu's placement of social class over gender relations certainly resonates with the evolution of equestrian sport in the Olympic context. We also highlight that there are links between habitus, practice and gender in some of Bourdieu's (1990) work and our purpose in this chapter is to identify similar associations and their implications for the coaching experience in a sex-integrated sport.

Bourdieu's concept of a field refers to the social system "within which struggles or manoeuvres take place over specific resources" or access to such resources (Jenkins, 2002, p. 84). In this case, Olympic sport constitute a partially autonomous field within the broader field of high performance or elite sport. Each field has its own historical norms, which include the fields' explicit and formal rules and regulations, alongside informal, tacit and implicit customs, ceremonies and etiquette that are collectively known as practice (Bourdieu, 1990). The Olympic Games are unquestionably entrenched in ritual and customs, from the symbolic rings on the flag, displays of nationalism and performance in the opening and closing ceremonies and medal table rankings. In the Olympic context there are formal rules which may prohibit women from participating in certain events, but there are no equivalent rules that prevent women from coaching athletes, yet women coaches remain predominantly excluded from this field. Individual sports do however have formal rules which they use to regulate the practices of coaches. In equestrian sport, for example, one such organisation is the International Group for Equestrian Qualifications (IGEQ).

The IGEQ was formed in 1992 is an independent voluntary organisation with a mission "To improve horse welfare by developing, promoting and maintaining equestrian qualification standards." (IGEQ, 2019).

As such the IGEQ is responsible for explicitly formalising the rules and regulations associated with coaching qualifications for equestrian sport. It is open to membership from National Equestrian Federations, governing bodies and any organisation

authorised by a government to deliver equestrian qualifications. Each member has a named representative as the IGEQ lead. As of February 2020, 39% of IGEQ named representatives were men and 61% were women.

The IGEQ system provides standardisation of qualifications that supports international comparability, sharing good practice and recognition of a coach's ability. By mapping their qualifications against three internationally agreed coaching minimum standards, members can be issued with an international coaching passport. The IGEQ therefore facilitates an arena of production, circulation, and appropriation and exchange of goods, services, coaching expertise and practice (knowledge) or level of coaching qualification (status), and the competitive positions held by coaches (actors) in their struggle to accumulate, exchange, and monopolise different kinds of power resources (capitals). For Bourdieu, these are all key characteristics of a field.

The idea of standardising and recognising coaching qualifications across several countries is not unique. There are similar initiatives seen in other sports, e.g. football. However, each sport provides a unique setting in which the actors (coaches) and their social positions are located. The Union of European Football Associations (UEFA) for example has coaching levels (Pro, A and B licences) that national coaching qualifications can be aligned with. UEFA made it mandatory in 1997 for those in key coaching positions to hold a UEFA licence. They introduced this to improve standards and to support free movement of coaching across Europe (UEFA, 2020). To some extent this may be a way of creating equitable practices through the standardisation of qualifications. Norman and McGoldrick (2019) however, found inequitable recruitment practices of men and women coaches with the same coaching qualifications. Clubs placed a higher value on experience rather than qualifications and women coaches with the same qualifications as men were given less opportunity to acquire on-field experience. Furthermore, several studies highlight the women participants' experiences of the structural practices of the football coaching system left them feeling undervalued and marginalised (i.e. Norman, 2016; Lewis et al., 2015). Therefore whilst the explicit and formal rules and regulations of the football coaching field appear gender equitable, the informal tacit and implicit customs create a field in which the appropriation and exchange of knowledge or status, and the competitive positions held by actors in their struggle to accumulate, exchange, and monopolise different kinds of power resources (capital) is inequitable.

7.2.4 The habitus of coaching in equestrian sport

The UK was one of the original members of IGEQ and has a world-renowned equestrian education programme in the British Horse Society (BHS) Equine Excellence Pathway (BHS, 2020a), which includes a coaching pathway (see Table 1). The BHS maintain a register of accredited professional coaches (BHS, 2020b) that is publicly available on its website. The register contains member coaches who have current skills and knowledge and who complete a programme of continual professional development to remain so. Coaches with an international passport may become members and appear on the register.

Table 7.1 British Horse Society (BHS) qualifications (adapted from BHS, 2020a and b; IGEQ, 2019)

International Level	BHS Qualification	Coach ability level	Number of affiliated BHS Coaches
None	Stage 2 Complete Horsemanship 2	Communicate foundation skills under supervision.	89
1	Stage 3 Coach	Teaching with limited responsibility usually under supervision of higher-level coach	952
2	Stage 4 Senior Coach	Independent instructor with responsibility for all aspects of teaching	575
3	Stage 5 Performance Coach	Independent Master Instructor	235
International Expert	Fellow of the British Horse Society (FBHS)	Ambassador for the equestrian profession and thought leader for the sector. Expert in equitation and horsemanship.	53

In the UK, whilst 51% of the population are women, 67% of the 1.8 million regular riders (who ride at least once a month) are women (BETA, 2019). However, 91% of BHS accredited professional coaches are women and only 9% men (see Table 7.2). Interestingly the odds ratio of a coach being male increases as the coaching level increases, from only 0.01 at BHS level 2, to 0.25 at BHS level 5 to 0.44 at accredited Fellow of the BHS to 0.89 of active Fellows. Having reviewed senior women coaches experience in the UK in cricket, hockey, football and netball, Norman (2008, p.455) describes the numeric distribution of women coaches at different levels as "comparable

to a narrow 'bottle neck' occurrence whereby the higher the women climb, the more constricted the pathways and opportunities become and so only a very few women manage to reach the top of their profession".

Table 7.2 The representation of the sexes in the British Horse Society (BHS) register of accredited professional coaches and active Fellows (OR is odds ratio) (BHS 2020b)

	Ma	ale	Fen	nale	Male:Female		
BHS Level	Headcount	Percentage of males	Headcount	Percentage of females	Percentage of coaches	Odds ratio	
2	1	0.6	88	5.2	1:99	0.01	
3	53	33.8	899	53.1	6:94	0.06	
4	53	33.8	522	30.8	9:91	0.10	
5	42	26.8	167	9.9	20 : 80	0.25	
FBHS	8	5.1	18	1.1	31 : 69	0.44	
Active FBHS	25	-	28	-	47 : 53	0.89	
Total	157	100	1694	100 %	8 : 92	0.09	

In the context of the Olympics, male coaches occupy the position of incumbents, meaning they are the dominant actors in the higher echelons of coaching. As such, male coaches will generally be invested in maintaining the field in its current form, as changes to the rules of competition risk destabilising their dominant position. The position of each particular actor in the field is a result of interaction between the specific rules of the field, actor's habitus and actor's capital. Therefore, the gendered distribution of coaches at different levels in sport, cannot solely be explained by the structure of coaching qualifications.

The 'drop out' of women in numerous career paths is often discussed using the 'leaking pipeline' metaphor (Aman et al., 2018). Hancock and Hums (2016) discuss that in the U.S. despite more women working in intercollegiate athletics than ever before, the number of women assistant and associate athletic directors is declining. As such, fewer women are in the "pipeline" to achieve the position of Athletic Director. They identified perceptions of gender and professional value incongruence (habitus) as factors which affected women's career choices and opportunities for advancement. In equestrian sport, at the highest levels of UK coaching, whilst more than two thirds of coaches are women a large number of these coaches are not currently active and the proportion of active BHS coaches at the highest level is approximately equal between men and women. This could be regarded as a highly desirable balance, and is certainly unusual

compared to other sports. What makes the UK figures potentially concerning however, is the much smaller overall number of men coaches and raises questions of how and why they seem to progress to the highest levels and remain active there in much greater proportions than women. This requires further investigation to gain more detailed insights into this phenomenon.

The collective entity by which and into which dominant social and cultural conditions are established and reproduced is referred to by Bourdieu as habitus. Specifically, Bourdieu (1994, p.170) defines habitus as a property of social agents, individuals, groups or institutions (athletes, coaches, sport federation) that comprises a "structured and structuring structure". Scholars have previously applied the concept of habitus to specific sports, for example rowing (De Haan and Norman, 2019), professional football (Cushion and Jones, 2014; Blackett et al., 2015), snowboarding (Thorpe, 2005) and rock climbing (Beames and Telford, 2013). Whilst the three Olympic equestrian disciplines share historical norms and collective practices, there are distinct discipline-specific nuances.

The habitus of coaching equestrian sport is different to coaching leisure riding and those learning to horse ride. One female international coach described how leisure riders will often use qualifications and accessibility to choose a coach, and then if they find they can build "a rewarding relationship with that coach, they will return to them". She described competitive riders as

"very different, frequently using competitive background above or combined with qualifications"

to choose to engage with a coach. This was reinforced by the male coach as well. The capital that is accrued for coaching leisure riding and competitive equestrian sports therefore differs. Perhaps because horse riding can be experienced with no reference to competitive requirements and has a large number of competitive discipline-specific nuances, it is unsurprising that competitive background and experience is used to differentiate coaches of competitive equestrian sports.

This is quite different to other sports e.g. football. Even when played as a leisure pursuit, football is usually experienced in a competitive setting, with a game taking place following the rules of the sport and a winner being declared. Equestrianism is not like this and participants usually learn to horse ride with no reference to competition rules, expectations or arguably, skills. In equestrian sport, some coaches may specialise and build a reputation in one specific discipline, whilst others may be more generalists. Riders can access coaching in group or individual settings, they may have a coaching session that works on improving them and the horse in combination or they may pay for a coach to ride their horse, thereby the focus is on training the horse not

the horse / rider combination. Equestrian sport therefore creates numerous different types of coaching habitus.

Furthermore Taylor and Garratt (2010, p. 126) highlight that coaching habitus will vary depending on the

"system of acquired dispositions or categories of perception and assessment held by the coach at the level of practice".

For example, a coach cannot create effective training programmes if they have no experience of the sport. So only once a coach has internalised the "rules and requirements" of the sport (in the sense of the structured structure), can they adapt and communicate an affective training programme to their athlete (in the sense of a structuring structure). A habitus is "structured" by one's past and present circumstances. As most coaches first experience a sport as an athlete, their experience of being coached will inevitably influence their own coaching experience (Cushion et al., 2003). It is "structuring" in that one's habitus helps to shape one's present and future practices. Thus, coaches may be reproducing the discourses about gender and other social power relations into which they were disciplined during their athletic careers.

7.2.5 The valourisation of the gendered body in coach education

A dominant social and cultural discourse describes elite sport as a heterosexual male domain and/or as a place where practices associated with desirable heterosexual masculinities are celebrated (Theberge, 1993). The discourses about desirable (masculine) bodies in sport not only pertain to performing bodies but also regulate which bodies become and are seen as leaders in sport such as coaches (Connell and Messerschmidt, 2005). Kane (1995) and McKay et al. (2000) point to the social construction of differences between women and men athletes as one of the most powerful techniques employed to support male hegemony in sport. Indeed, Hargreaves (2002) suggests the historical justification for segregating sport was built around the ideas of sexual difference and the belief in the unsuitability of sport and physical activity for women. Equestrian sport challenges this notion of desired physicality in sport as it is not the human athlete's body that is judged. In equestrian sport however there is no sex-based biological advantage for either men or women. As Dashper (2012, p. 215) explains,

"masculine sporting abilities such as speed and strength are less significant ... strength of a rider plays a role, but this is limited as within the equestrian partnership the horse will always be the stronger partner".

For Bourdieu, the habitus instils a world-view in its subjects by conferring (cultural) value upon things, be they material or immaterial. Put simply, within the habitus, some things are valourised and some are not. Even at the seemingly intimate level of the body, the habitus posits and bestows specific properties. Some of these are constructed as 'good', while others are 'bad' and stigmatised (such as physical strength and athleticism). Coach education material is an indicative guide to the valourisation of the athletic body. Coaching texts tend to emphasize physical differences between men and women (Yoshiga and Higuchi, 2003). In general coach education materials tend to be based on a biomedical framework (Denison et al., 2017) that view gender as a physical binary (LaVoi et al., 2007).

Fielding-Lloyd and Mean (2016), and Lewis et al. (2015), explored the gendering of coach education. They found that instructors and male students were complicit in constructing male coaches and athletes as the norm for the development of coaching methods that emphasized practices associated with desirable athletic masculinity. In our review of UK equestrian coach education material, we found a distinct lack of gender pronouns or gendered language. For example, in the BHS coaching syllabi we found 220 references to 'riders', 13 references to 'learners' and then use of 'coaches' or 'horse trainers' or 'clients'. But there was no reference to 'males' and 'females' or 'men' or 'women'. When we reviewed the key BHS coaching text (Print, 2011) we noted consistent use of the word 'rider' and 'instructor' but again no use of gendered pronouns. We found content referring to the rider's body shape, having three main somatotypes but these were not ascribed or discussed with regards to a specific sex. The only sex-related discussion pertained to the difference in anatomy of the pelvis, and acknowledgement that male riders may make different mistakes than female riders as a result of their 'conformation'. In her study of the lived experience of equestrian sport in the Olympic context, De Haan (2015) also noted the absence of gender pronouns in the stakeholder narratives of those involved in supporting athletes, including coaches.

7.2.6 How equestrian coaches accumulate power and recognition: Bourdieu's concept of capital

For Bourdieu (1977), valorised properties within the habitus come to constitute cultural capital, the possession of which affects how social and cultural relations are made and remade, and importantly by whom and for whom. The concept of capital sits at the centre of Bourdieu's (1985) construction of social space:

"The structure of the social world is defined at every moment by the structure and distribution of the capital and profits characteristic of the different particular fields" (p.734).

In short, capital refers to the different forms of power held by different social agents. Bourdieu (1986) identifies various forms of capital including economic, social, cultural, symbolic, linguistic, academic and corporeal. The ability of an actor, an athlete or coach to accumulate capital is proportionate to their position in the social space. In the same way that the habitus of equestrian coaches differs both when coaching leisure riding or competitive equestrian sport, and between competitive sporting disciplines, the forms of capital available to them also differs.

Bourdieu (1988) understood society to be structured along differences in the distribution of capital with individuals striving to maximise their own personal capital. The amount of capital that can be accumulated by an individual makes a significant contribution to determining the range of available choices open to that individual (Bourdieu, 1989). Purdy et al. (2009) explain that in this context capital becomes the capacity to exercise power over ones' own future and the future of others. However, the ability of an individual to accumulate various forms of capital is proportionate to their position in the social space. In equestrian sport, horses are an essential asset which at the elite level require significant economic capital. Horse owners therefore have considerable capital as they make the decisions as to which rider have access to their horse. In order to truly exercise power over their own future, riders would ideally also be the owner of their horses. At the Rio Olympic Games in 2016 only three Team GB riders were part owners of their horse, and these were all men (Dumbell et al., 2018). This reinforces Bourdieu's belief that women are not typically capitalaccumulating objects, rather they are capital-bearing objects, whose value accrues to the primary groups in which they belong (Lovell, 2000).

In equestrian sport capital/power may come from being an owner/rider but there is another dual role many hold within equestrian sport and that is rider/coach. As a sexintegrated sport men and women can accumulate capital as riders, however this may be easier if they are an owner/rider which at an elite level appears to be a male dominated domain. In equestrian sport capital/power may come from being an owner/rider but there is another dual role many hold within equestrian sport and that is rider/coach. Carl Hester for example has ridden for Team GB at five Olympic Games and went to the Rio Olympics in 2016 as a team rider and coach for the Dressage team. When describing his career, he refers to himself as a rider and a coach, and a horse trainer. For the purpose of this chapter we are utilising the term horse trainer as a person who trains horses directly, meaning they are likely to ride the horse themselves. The coach focusses on the combination of rider and horse. In fact, three of

the four Team GB horses at the Rio Olympics had been trained by Carl himself (Braddick, 2017), meaning he had ridden the horses to develop their athletic potential.

The concept of rider and coach, and horse trainer, is not unusual, although the scale of Hester's success is. What is unusual in equestrian sport is for coaches not to have ridden, in fact most still ride, albeit to varying levels. When equestrian coaches adapt a coaching plan, they do so in response to not only the rider's behaviour but also the horse's responses to the rider (Hall, 2017). In fact, it is considered good practice in BHS examinations to be able to ride the horse to experience what the rider experiences. Perhaps it is this multiple role paradigm (coach, rider, horse trainer, horse owner) that makes equestrian coaching unusual.

Our female coach said

"unless at elite level, I will be expected to offer insights into what the rider will feel, how they can improve and also how to improve the horse".

Additionally, Lewis (2013) found that high level competitive riders would frequently engage several coaches who they perceived offered different advantages. For example, one might act as a mentor and provide performance feedback, behaving as a 'sounding board' for ideas, another might be very good at training horses and offer insights in that capacity, another might be very good at 'the art of competition' and offer insights into how to maximise marking rewards in a discipline. These roles, where the rider is the one who decides on tactics and selectively engages different coaches for different roles is quite unusual in the sporting world, where in many sports typically it is the coach who would decide tactics. At this point we do not know if these different coaching roles are more likely to be taken by a coach who is a man or a woman, and we do not know if riders prefer working with men or women coaches. Clearly the gender distribution would be linked to opportunities to accrue capital in these areas, therefore this is an area of research that should be investigated further.

Our male international coach also believed he accrued considerable capital from his multiple, simultaneous roles within, and wider association with, the sport,

"people know I am an international showjumping course builder. They come to me for insights into courses and how they can be ridden."

Due to the longevity of equestrian athletes and the unique nature of equestrian sport the simultaneous nature of these multiple roles is not unusual, but is different to many other sports. For example, it would be hard to imagine an international football manager refereeing a first division game. It would be interesting to understand the gender and make up of these associated positions in equestrian sport, however these data are not available at this time. What we do know is that showjumpers are more

likely to be male and the majority of advanced showjumping course builders are also male (22 from 30 Level 5) (British Showjumping, 2020).

In sport in general we know very little about coaches' acquisition of capital beyond association with winning athletes and position taking (coaching position, such as head coach). Denison et al. (2017) argue that those who coach the elite are the coaches that are most respected and to whom others listen. This suggests that coaches in high performance and international sport may exert a great deal of power on other coaches as well as athletes. We know that the more capital an actor has the more power that individual or group has to influence what is considered to be of value. In equestrian sport it would seem that some methods of accumulating this capital may be through male-dominated activities (such as horse ownership and associated positions in equestrian sport).

7.2.7 Disrupting, challenging or reinforcing a gendered coaching environment

The field of sport is one in which the male heterosexual non-disabled-body is seen as the ideal. It is built on a network of historical relations of power between positions held by individuals, social groups or institutions all of which celebrate hegemonic masculinity. Men are the incumbents in sport and in sport coaching. In the Olympic context, thanks to formal imposed rule changes, women athletes have been able to slowly intrude into this space. Unfortunately, the same cannot be said for coaching. During the last two consecutive Summer Olympic Games, only 11% of accredited coaches were women (Olympic.org, 2020). The traditional gender binary of sexsegregated sport reinforces hegemonic masculinity and reinforces the gendered constructs and discourses that position women as other. In this study we have tried to establish if sex-integrated sport disrupt, challenge or reinforce this.

What we have found is that within the context of UK equestrian sport women coaches are arguably the incumbents. Of the BHS accredited professional coaches 91% are women. In other coach related leadership roles, women are also well represented, for example of IGEQ named representatives 61% are women. Team GB equestrian staff consist of 46 people, 25 female and 21 male, and those that are directly related to coaching are 5 females and 3 males (TeamGBR Equestrian, 2020). Position-taking such as this is one way for coaches to accumulate capital. In the context of reviewing the coaching environment using a Bourdieu framework, power is intrinsically linked to capital. We therefore suggest that this contrasts with many other sports, where the coaching and support staff are predominantly male. It is interesting to note however that the odds ratio of a coach being a man increases as the coaching level increases,

from only 0.01 at BHS level 2, to 0.89 of active Fellows. We conclude therefore that the coaching pipeline in equestrian sport in the UK is probably not equitable and we call for additional research to investigate the transition of men and women coaches throughout the system.

Within equestrian sport we have noted unique position taking opportunities, we have seen that some groups may be able to create capital through a unique combination of multiple roles. Such position taking corresponds to agency, actions and practices in the field which affords the actor with more symbolic capital than that of those with only singular status. Our preliminary review, suggests that within the elite echelons of the sport these combined positions are often taken by men, although we stress the need for further research across all levels, and disciplines, of the sport to validate this. At this point we do not have enough data to draw conclusions as to whether men or women are more likely to take these positions. We do however highlight the complexity of the intersectionality of capital acquisition within equestrian coaching.

In this chapter we have also discussed how coach education material across sport is often gendered and how this can perpetuate discourses which frame men and male athletes as the desirable norm, problematizing women athletes' bodies and their behaviours (Connell and Messerschmidt, 2005). We have noted that women are largely absent from coach education material. Having interviewed women senior national coaches of major team sports (football /soccer, field hockey, rugby league, rugby union, cricket, netball, basketball and volleyball) Norman (2010) reported that these coaches felt undervalued and underrated. These feelings were the result of not overt discrimination but more subtle, insidious ideologically based oppression that contribute to women's continued underrepresentation (Halford and Leonard, 2001). Norman (2008) argued that ineffectual coach education contributes to women's lack of power within coaching.

Our research shows a lack of gendered discourse in UK coaching material associated with equestrian sport. Equestrian coaches interviewed confirmed that they had been encouraged to refer to athletes as riders (through training and reinforced by educational materials) and as equestrian is a sex-integrated sport, even at the highest levels, that removes the implication of gender. This approach has been evident for at least the last forty years in the UK and may have supported a large number of women becoming equestrian coaches. Whilst this does 'level the field' in so far as promoting an assumption of participants being male or female it may also not acknowledge the differences between female and male participants that may be important for effective coaching to occur. At this point our perception is that coach education material in equestrian sport is not necessarily an example of a gender equitable coaching

environment but rather an example of one that is gender-blind. We believe therefore that equestrian sport is creating a different gendered coaching environment as far as coach education is concerned. At this point it is unclear whether this is an intentional approach or simply an effectual outcome of the field. In order to truly disrupt gendered ideologies in coach education, materials need to challenge perceptions associated with the ideal body in sport. Therefore, being gender blind in sport cannot be considered a neutral position due to the overwhelming discourse of masculine hegemony. Men and women's bodies are different. Men and women athletes are different. Coaching material needs to acknowledge these differences to truly contribute to an equitable coaching environment. We believe there is potential for this type of coach education material to disrupt the dominant gendered discourses in coaching. However, further research is needed to fully understand the affect this has on the coaching environment.

Whilst our review has been limited in scope, we believe it provides a useful insight into this unique coaching environment. We argue that equestrian sport challenges dominant gender discourses in coaching but suggest additional research is required to ascertain if this equates to an equitable coaching environment. We began the chapter questioning if the sex-integrated competition structure would disrupt, challenge or reinforce a gendered coaching environment. We end by suggesting that it is perhaps the paradigm of multiple roles within the coaching field that offers greater opportunity to acquire capital which in turn challenges traditional gender discourses of power within the coaching field. We appreciate these constructs are not directly transferable to other sports. We know additional research is required to fully understand the construct and context of capital in equestrian sport and we call for other sports to do the same. We suggest that an equitable coaching environment will only be achieved if men and women coaches have equal opportunity to acquire capital. It is therefore critical that sporting lead bodies consciously work to understand what that capital is and create habitus in which all coaches have the opportunity to acquire it.

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7.3 Study 5: De Haan and Dumbell, 2021: Strengths and Limitations

Study 5 is a descriptive analysis utilising a mixed methods approach in a similar way to Study 4 (Saunders et al., 2016). As such it has many of the same strengths and limitations.

Study 5 utilises a single theory to provide its theoretical framework, Bourdieu's concepts of field, habitus and capital (Bourdieu, 1979; Bourdieu, 1990). This is a more typical social sciences approach (Creswell and Creswell, 2018), however it does mean that the accessibility of the discussion may be reduced, compared to Study 4 as readers are exposed to more aspects of Bourdieu's theorising. This is a limitation of the study when objective 6 is considered. To reduce the chance that a reader would stop engaging with the chapter because of the use of Bourdieusian theory effort was made to integrate it into the chapter and describe the concepts as they were included (for example, field, at the start of section 7.2.3). This was felt to be more accessible than a large section on theory before more contextually applied sections.

Bourdieu's work was chosen as it is a well-established framework to consider sociological aspects of the structures of equestrian coaching and Bourdieu himself acknowledged the social significance of sport (Bourdieu, 1979). Bourdieu's theories have been explored, including by feminist scholars and therefore their strengths and weaknesses are known (Jenkins, 2002; Thorpe, 2009). A strength of this approach is that an academic audience would be able to draw on the extensive body of literature utilising and discussing Bourdieu's theory and concepts, and enabled the authors to limit their description of the theory used to those aspects required to explore coaching in equestrian sport. As Study 5 was felt to be more likely to be accessed by people interested in sport, and sports coaching than scholars of social theory it was felt that using a well-known framework was particularly beneficial.

Study 5 does involve 'quantising' of qualitative data (Saunders et al., 2016), however includes more qualitative data than De Haan and Dumbell (2019). Despite this it only aims, and engages, with the qualitative data on the surface such as when integrating in the thoughts of the two coaches interviewed. If the aim of Study 5 was to explain the reasons underlying the data (causality) then this would be a serious limitation of the study (Bryman, 2016). Study 5 explores an area with limited published information about it and the goal was not an explanatory one and therefore this is not felt to be a major weakness of the study.

7.4 Study 5: De Haan and Dumbell, 2021: Contribution to the overall aims and objectives

Study 5 found that a UK accredited professional coach is more than ten times more likely to be a woman than a man. The highest qualified coaches, who are an 'ambassador for the equestrian profession and thought leader for the sector' (British Horse Society, 2020a) are similarly likely to be a man as a woman (Study 5). Whilst the fact that the majority of equestrian coaches are women is acknowledged within the industry, published figures to illustrate this are not commonly presented (as acknowledged by Vinson et al., 2016). UK regular riders (who ride at least once a month) are twice as likely to be women than men despite the proportion of male riders increasing between 2015 and 2019 (BETA, 2019). Women are therefore over-represented within UK accredited, professional equestrian coaches.

Understanding the gender profiles of equestrian coaches in the UK not only provides a lens with which to consider the historical, socio-cultural and sporting influences on the people in equestrian sport, but also illustrates the equestrian role-models that British participants are frequently exposed to (Lamperd et al., 2016). As the number of men riders is reported to have increased so quickly recently (BETA, 2019) and the number of coaching role models is still low the influence of coaching role models must, however, be only one part of the participation model.

The coaching role models that many potential riders would see are likely to be women. This may be a feature in why more women and girls participate in riding and coaching than men as studies do report the significance of women role models for women to entering coaching (e.g. Robertson, 2010, Lamperd et al., 2016).

It is widely acknowledged that the majority of coaches of elite sport are men (Vinson et al., 2016; Fasting et al., 2017; Flanagan, 2017). Studies have shown that whether the coach is a man or woman is not a factor in the success of sporting outcomes (e.g. Dawley et al., 2004). Across summer and winter Olympics in the last decade only about 10% of accredited coaches and only about 30% of technical officials were women. In Tokyo 2020 these figures increased to 13% of coaches and 31% of technical officials. The IOC's Gender Equality and Inclusion Strategic Framework for 2021-24 aims to increase the number of female coaches eligible for, and selected for, World Championships and Olympics (International Olympic Committee, 2021h). UK equestrian coaches are therefore unusual as women and men are similarly represented at the highest qualification levels and also within the TeamGB coaching team (Study 5).

Chapter Eight Discussion

8.1 Profiling British elite equestrians – a surprisingly inclusive sport?

The Olympics is a unique sporting competition, with an emphasis on participation but framed in a highly competitive environment (International Olympic Committee, 2021b; Nasralla, 2021). The mixture of athletes are therefore not all super-elite, and in some sports some participants may struggle to meet the definition of elite (Swann et al., 2015). Equestrian sports do have stringent previous competition experience requirements, which serve to protect the health and safety of riders and horses (Fédération Equestre Internationale, 2021f). Equestrian Olympians can therefore be described as an elite population. The equestrian Olympians selected to represent the four most successful Olympic equestrian nations are super-elite competitors (Gullich et al., 2019).

I have found that despite Olympic equestrian sport being male dominated over its first 50 years both men and women UK riders attain super-elite status during the twenty-first century in the Olympic equestrian disciplines (De Haan and Dumbell, 2016; Dumbell et al., 2018). In the twenty-first century UK super-elite riders, Olympians (Dumbell et al., 2018; British Equestrian, 2021h; 2021i) and World Equestrian Games' representatives (data from Fédération Equestre Internationale, 2021e), are as likely to be women as men, their ages span five decades and they are likely to not-own the horse they ride.

The profiles constructed (Table 3) demonstrate that

'riding's one of those amazing sports where you can do it no matter what your age is, or your gender' (Mary Hanna quoted in Nasralla, 2021).

The profiles suggest that there are socio-cultural differences that affect men and women between nations in eventing and confirm De Haan's (2015) and Dashper's (2012a) assertion that there are different cultures between equestrian disciplines.

There are a large number of elite riders who will never be a national representative, and because riders are selected for the Olympics (or World Equestrian Games) by their nations, it is not necessarily the highest ranked riders, or rider-horse combinations that are chosen (British Equestrian, 2021i). Dumbell et al. (2010) found elite dressage riders to have the same sex profile as in Table 2 and similar age profiles. There were clear differences in semi-elite dressage competitors being younger, competing in other disciplines, and significantly more likely to be a woman (Dumbell et al., 2010). Whilst other disciplines haven't been studied in a similar level of detail, I suggest that there

are differences between the profiles of riders at different levels of competition performance, in at least some disciplines. My results have identified that future research is required to understand participation and equestrian sporting pathways to super-elite performance in the different equestrian disciplines, to reduce barriers to progression for the much-wider pool of elite riders (now and in the future).

Table 3: Profiles of Olympic discipline riders in the twenty-first century (Dumbell et al., 2018; De Haan and Dumbell, 2019; British Equestrian, 2021h; 2021i; Fédération Equestre Internationale, 2021f; Kassraie, 2021; Team GB, 2021b,d).

Significant has odds ratio above 2.33¹⁵, Majority has odds ratio between 2.33 and 1.5

		Showjumping	Eventing	Dressage
Sex	UK super- elite	Majority men significant	Majority women significant	Similar men as women
	Super-elite	Majority men significant	Similar men as women	Similar men as women
	Elite	Majority men significant	Majority men not significant	Majority women not significant
Age	UK super- elite	5 decades 20s-60s	4 decades 20s-50s	4 decades 20s-50s
	Super-elite	6 decades 10s-60s	4 decades 20s-50s	4 decades 20s-50s
	Elite	5 decades 20s-60s	5 decades 20s-60s	6 decades 10s-60s
Horse Ownership	UK super- elite	Majority not-own significant	Majority not-own significant	Similar part-own as not-own

8.2 Historic, socio-cultural and sporting influences on British equestrian Olympians

The unique partnership between rider and horse is an enabler for inclusivity within physical activity and sport across ages and individuals with a wide range of physical abilities (including para-riders). As Dashper (2012b) explains, in the context of equestrian sport, there are no sex-based biological advantages for either men or women,

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¹⁵ An odds ratio of 2.33 reflects the Henry and Robinson (2010) recommendation, adopted by the International Olympic Committee, of no less than 30% of the minority characteristic being desirable

"masculine sporting abilities such as speed and strength are less significant ... strength of a rider plays a role, but this is limited as within the equestrian partnership the horse will always be the stronger partner" (p. 215).

If we accept Dashper's statement then differences in participation between men and women are unlikely to be due to physical differences and more likely to be due to social constructs, due to historical, socio-cultural, sporting and other influences. Although Dashper's statement relates to sex, actually the horse always being the stronger partner and the partner that performs the locomotion that enables riding activity enables wider inclusivity, discussed in section 8.3.

In order for people to be able to take advantage of the possibilities that equestrianism offers they need to be aware that the opportunity is available to them. One way for this is by someone who is 'deemed worthy of imitation' to be available, a relatable role-model (Pleiss and Feldhusen, 1995).

'The importance of role models for women in sports is undeniable. In fact, one could assert that it is a virtuous circle. The more women take positive, leading roles as athletes, trainers, journalists and decision-makers, the more women will see that gender inequalities can be overcome – not only in sports but in all professions.' (International Labour Organization, 2006)

Role-models can be accessible or inaccessible. Accessible role models have 'regular direction interactions' with the person and inaccessible role models do not (e.g. sporting heroes, celebrities) (Strasser-Burke and Symonds, 2019). Role models can inspire increased motivation and higher self-esteem, both important characteristics in pursuing a new physical activity and/or career in sport (Lockwood et al., 2002; Yancey et al., 2002; Lamperd et al., 2016). Having both accessible and inaccessible role models is important to demonstrate that equestrian activities, and sports, are open to a wide range of individuals of different physical abilities.

Olympians are widely recognised as role-models, inaccessible role-models, for many people (Edgar, 2021). The Olympic Games is the largest multisport event in the world and reaches global audiences of billions and can impact consumers' perceptions of culture and current affairs (Guerin and Naraine, 2020). As such who participates in the Olympic Games and who achieves media interest and medal success can influence the future of a sport and its participants. In Tokyo 2020 47.9 % of athletes were women (Arba, 2021). Team GB sent more women than men to the Olympics and there were increased number of teams in some women sports, e.g. women water polo had 2 teams more in Tokyo 2020 than in Rio 2016 (although still 4 teams less than men). Due to tight overall number constraints male sports were reduced to achieve this goal. The five new sports added to the Olympic programme for Tokyo 2020 had to have equal numbers of men and women (Fryer, 2021). However, it is not just the profile of

athletes (riders) that supports sustainable broad participation in a sport but also the coaches, trainers, sport officials and sporting decision makers.

How role models and influential figures affect sporting participation appears to vary, dependent on the sport and the sector population being studied. Mutter and Pawlowski (2014) found a small increase in new participants but a larger increase in participation amongst already active football players following success of national teams. This is a theme discussed by Lockwood et al. (2004, 2005) who found that people already considering participation in an activity, found positive models effective motivators and that who and what people found likely to increase participation was both socially and personally influenced. What is clear is that recent Olympic success, from UK men and women, across a wide range of ages and backgrounds, working in partnership with a valued horse, owners and support team (including coach and sporting decision makers) provides unprecedented role models for riders and those considering riding (Dumbell et al., 2018; De Haan and Dumbell, 2019; De Haan and Dumbell, 2021).

8.2.1 Historic Influences

The establishment of a sex-integrated sport, where both men and women riders are successful, goes against a historical background where Olympic equestrian sport and the formation of the sport's international governing body was dominated by Eurocentric, military, men, and aristocratic influences (De Haan and Dumbell, 2016). The hypermasculine background surrounding the founding of the modern Olympics has been reported as common to many sporting environments (Messner, 1992).

The historic military influences on equestrian sport, in both the formation of its rules, its ruling body and the fact that only male, military officers could compete in the Olympic equestrian disciplines until 1952 (De Haan and Dumbell, 2016) could have resulted in a sport were hypermasculinity was unusually persistent. In the UK the military influence over equestrian sport appears to have persisted for a shorter period than in Sweden (Hedenborg and White, 2016). In Sweden the government funded equestrian sport to enable army personnel (men) to ride their army horses in competition into the 1960s (Hedenborg and White, 2016). In the UK a lot of men were lost in the World Wars, 6 % of the adult male population in WWII alone (UK Parliament, 2021). Equestrian sport (like many areas of UK society) opened up to women (both in participation and increasingly leadership) during and after the wars. In the UK riders had to self-fund their sport from the nineteenth century and therefore riding for sport was linked to the aristocracy and the wealthy (Hedenborg and White, 2016; Nicholson and Taylor, 2020).

Equestrian sport could still be dominated by men, despite its inclusive masculinity culture. It is remarkable that although women have only been allowed to compete in all three Olympic disciplines since 1964 (less than 60 years ago) a point where UK superelite riders are as likely to be women as men has been have reached (De Haan and Dumbell, 2016; Dumbell et al., 2018; British Equestrian, 2021h; 2021i; Fédération Equestre Internationale, 2021e).

The UK eventing socio-cultural environment appears to support women reaching super-elite status more successfully than other nations. Eventing is the most dangerous of the Olympic disciplines and is the discipline with the strongest military history (De Haan and Dumbell, 2010; Hedenborg and White, 2012). Eventing allowed women to compete at the Olympics latest (Hedenborg, 2009). At first glance it is therefore surprising that it is the discipline in which UK women outnumber men at super-elite level. Outside the Olympics, UK eventing competitions in the twentieth century allowed women to compete. At the first Badminton Horse Trials in 1949 a quarter of the twenty-two starters were women (Berendt, 2019) and was first won by a woman in 1954. A woman won the first Burghley Horse Trials in 1961. Women eventing riders were therefore playing lead roles in UK eventing before Olympic eventing allowed women to compete. To this day Lucinda Green holds the record for the most wins of Badminton Horse Trials (6, starting in 1973) (Badminton Horse Trials, 2021). Hedenborg and White (2015) have shown that this sporting participation and media acceptance was not present in Sweden. These results, combined with the British media's acceptance of women in equestrian sport may have paved the way for UK society accepting women's success in eventing (Hedenborg and White, 2015).

For some sports 60 years ago would be several athlete generations ago (e.g. football (Kalen et al., 2019), however some twenty-first century equestrian Olympians were born in the 1950s and would have been directly influenced by the first women equestrian Olympians and these media representations (Dashper, 2012; Dumbell et al., 2018; Belam, 2021). For example, the Olympic Showjumping gold medallist in Rio 2016, Nick Skelton, was born in 1957 and first competed in the Olympic Games at Seoul 1988 and subsequently competed in seven Games (Olympics.com, 2021a). In Seoul 1988 Nick Skelton's fellow equestrian team member was Captain Mark Phillips, a British officer, then husband to Princess Anne of the UK and he had won Gold in the 1972 Munich Games in the team eventing competition, having been a reserve for the 1968 Olympics (Olympics.com, 2021b).

For equestrianism the historic is a very real direct influence as well as an indirect one.

8.2.2 Socio-cultural influences

There is little evidence of a hypermasculine culture in UK equestrian sport and there is a similar likelihood of an UK Olympic equestrian athlete being a man or a woman (Dumbell et al., 2018; De Haan and Dumbell, 2019). Messner (1992) reported that team sports were more likely to be hypermasculine. Equestrianism can be a team activity and sport (either with a team such as in polo or equestrian vaulting, or by the use of cumulative scores as in Olympic equestrian sport where it is more akin to a relay) (Fédération Equestre Internationale, 2021a). The most important partnership (team) during riding is the rider-horse partnership (Lamperd et al., 2016) and perhaps this serves to reduce hypermasculine tendencies (Messner, 1992; Anderson and McGuire, 2010).

Equestrian sport has openly gay men present in relatively high numbers, through decreased homophobia and increased inclusive masculinity than that reported in other contexts (Anderson and Guire, 2010; Dashper, 2012a). As a participant in Dashper's (2012a, p.1115) study said,

'it doesn't matter whether you're gay, straight, male, female, when it comes down to it all that matters is whether you can actually ride or not!'.

It is not just in riders that a relative inclusive culture (at least compared to other sporting contexts) is seen. There are more than 50% more lesbian, gay and bisexual equestrian coaches than the average in other UK sports (British Equestrian Federation, 2019).

Dressage is suggested in literature to be a feminised terrain (Hedenborg and White, 2012) and this, along with it being a sex-integrated sport, challenges men's construction of their masculinity (Anderson, 2005). However, I found that UK dressage Olympians are as likely to be men as women, women elite riders reflecting the proportion of UK women regular riders and semi-elite dressage riders being significantly more likely to be women (Dumbell et al., 2010; Dumbell et al., 2018; De Haan and Dumbell, 2019; British Equestrian Trade Association, 2019). These results suggest that UK dressage may have particular socio-cultural influences that are different to other disciplines. Numerically men are more likely to progress through dressage competition to super-elite levels than women¹⁶. Riders display longevity at super-elite level but if few men are participating then it could be in a couple of decades there will be no UK super-elite dressage riders and the author believes this to be as undesirable as women experiencing more barriers to success.

¹⁶ British Dressage (2019) shows members 19 times more likely to be women, Dumbell et al. (2019) showed semi-elite to be 8 times more likely to be women, elite majority women, super-elite similar proportion men and women

Elite and super-elite showjumping riders in the first five Games of the twenty-first century, across all nations, are significantly more likely to be men than women (De Haan and Dumbell, 2019). It took until Rio 2016 to have a twenty-first century woman Olympian in the UK showjumping team, and until Tokyo 2020 for a UK woman to ride (Dumbell et al., 2018; Team GB, 2021b; Fédération Equestre, 2021e). The male dominance in showjumping has been seen across the sport since Melbourne 1956 (the first Games where women could compete in showjumping) (Hedenborg and White, 2012). British Equestrian have the Podium tier of the World Class Programme to support future medal winning riders (British Equestrian, 2021b), however by itself this cannot offset unknown socio-cultural, sporting and other influences that might be making it more difficult for women than men. Dashper (2012) reported barriers for women reaching super-elite level in showjumping including having to stop riding to start a family, and how to maintain horse partnerships at this time. The USA are highly unusual in that they had an equal number of twenty-first century super-elite men and women Olympians in showjumping (De Haan and Dumbell, 2019; Drumwright, 2021). Investigating the socio-cultural influences around showjumping participation and sporting structures in the USA, may contain valuable insights to support more women reaching elite and super-elite performance levels in UK showjumping¹⁷.

8.2.2.1 Access to the horse

Access to horses, suitable to support an enjoyable and rewarding riding experience is a challenge for all riders (Lamperd et al., 2016).

'The unique element to equestrian sport is the partnership between athlete and horse. Riders in the Paralympic and Olympic disciplines need to consider the financial implications of not only sourcing but also the ongoing care of at least one suitable horse in order to help them continue their performance development and to be competitive on the field of play.' (British Equestrian, 2021b, p.52)

The ability to access horses who will support the development of the rider is crucial to their progression through competitive levels (Keaveney, 2008; De Haan et al., 2015; Lamperd et al., 2016), and is a concern for many riders, particularly women (Dashper, 2014). As Malin Baryard and Peder Fredericsson (super-elite showjumpers) said:

'All riders look for a special horse. You can come far with any horse, but not all the way unless you are a good match. There is not one good type of horse, but a good type of horse for every rider.' (reported in Axel-Nilsson, 2015, p14)

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¹⁷ UK Olympic showjumping riders in the twenty-first century are 21 times more likely to be men; UK World Equestrian Games showjumping riders are 5.67 time more likely to be men than women.

For super-elite competition performance it is usual that the rider-horse partnership is based over building up mutual trust, communication and respect¹⁸ over a prolonged period of time (Wipper, 2000; Pretty and Bridgeman, 2005; Keaveney, 2008; Visser et al., 2008; Dashper, 2014; Lamperd et al., 2016).

Lamperd et al. (2016) identified entrepreneurial skills and establishing financial independence and having to sell or pass on good horses to earn sufficient money to live as essential skills for the elite rider. Establishing a financial infrastructure was key to riders' transition to elite status and selling horses, getting more owners/rides and coaching were all common ways to provide this (Lamperd et al., 2016). A top-quality competition horse is undoubtedly worth a lot of money (Dumbell et al., 2010; Dashper, 2014). There are examples of extremely wealthy people, or their family members, taking part in equestrian sport (Carey, 2018; Nguyen Le, 2021). At Rio 2016 the number of UK riders who had a paid for education was disproportionately high, which indicates that the super-elite UK rider is more likely to come from a more wealthy background (Lawrence, 2017). For an athlete having part ownership of a horse is advantageous, providing security (Dashper, 2012). My data show that men are more likely to own part of their horse partner and Coutler (2013) reported increased business skills and focus within men riders than women. Family members being the owner of the horse (in part or wholly) provides security and is seen in equestrian sport (e.g. Tokyo 2020 eventer Tom McEwens' horse is part-owned by his mother (British Equestrian, 2021i)). However, personal or family wealth is not a necessity as some high-profile super-elite competitors illustrate, e.g. Olympians Oliver Townend and Charlotte Dujardin (Fletcher and Dashper, 2013; Dumbell and Scott-Ward, 2021).

Most riders seek sponsorship/patronage to provide the financial support required to compete at elite and super-elite levels (Dashper, 2014; Dumbell et al., 2018). Quite often this is through the rider not owning their horse partners. Owners have power over their horses, and the riders who ride them, who have to maintain a strong and secure (often personal) relationship with the horse's owner(s) probably several of them to support the multiple horses required to maintain elite and super-elite performance (Williams, 2013; Lamperd et al., 2016). Owners may be people (probably middle to upper classes aware that owning a talented horse provides prestige, Martin (1979)), or they may be businesses (either in a commercialised relationship or where the horse is aimed at lucrative breeding in the future). Hedenborg and White (2012) and Dashper (2012) suggest rapid commercialisation of showjumping at the end of the twentieth and

¹⁸ The terms communication and respect are utilised in literature, however are the subject of discussion within the academic community, particularly their relationship with training. Expanding on this is outside the scope of this thesis, however I am aware of this contention and am looking forward to

contributing to developments in this area.

early twenty-first century may have been more challenging for women than men, as at that point men were regarded as better commercial propositions. Since 2012 superelite riders (men and women) have become more recognised as brand ambassadors for the large leisure riding population, there are signs that riders may be using increased sponsorship opportunities to maintain part-ownership in their horse partners (e.g. increased proportion of horse owners in UK Tokyo 2020 squad). Whether UK women riders continue to find it more difficult in the commercialised equestrian sporting world has not been specifically investigated to the author's knowledge.

The contradiction about equestrian sport relying on a partnership between rider and horse, but the necessity for many riders to sell (or owners sell or move to another rider) the horses they partner places pressure on riders to objectify, or at least distance themselves, from the very horses they have to develop a partnership of mutual trust (Wipper, 2000; Birke and Brandt, 2009; Dashper, 2014). As a participant in Dashper (2014, p.360) said

'I've got a lovely mare at the moment, but I'm definitely going to have to sell her so I'm trying my hardest not to get attached to her. You do have to have a bond, a relationship – you know, trust – to be able to perform at such a level and do well, but you have to be ready to sell them if someone wants to buy them. I need to get a lorry this year, so I'm going to have to sell that mare to pay for it. There's no other way'.

8.2.3 Sporting influences

The International Olympic Committee (IOC) have committed to:

'encourage and support the promotion of women in sport at all levels and in all structures with a view to implementing the principle of equality of men and women' (IOC, 2021a).

In Tokyo 2020 47.9 % of athletes were women (Arba, 2021). Team GB sent more women than men to the Olympics and there were increased number of teams in some women sports, e.g. women water polo had 2 teams more in Tokyo 2020 than in Rio 2016 (although still 4 teams less than men). Due to tight overall number constraints male sports were reduced to achieve this goal and the five new sports added to the Olympic programme for Tokyo 2020 had to have equal numbers of men and women (Fryer, 2021). To increase nations competing in equestrian sport, the numbers of athletes in each team were reduced to 3 resulting in a record 50 nations competing, including 5 new nations (Dumbell and Scott-Ward, 2021).

Following the Stockholm Olympic Games in 1956, when women were allowed to compete in Olympic dressage for the second time, the Swedish gold medallist suggested that the women's standard of dressage was so high that they should have their own competition (Hedenborg, 2009). Whilst at times since there have been calls

for sex-segregation, largely results show that both men and women competitors are successful in sex-integrated equestrian sport (Dumbell et al., 2018).

When a group moves from a significant minority to numerically more equal is an important step on the way to equality, but it does not necessarily lead to an equitable culture (Sotiriadou et al., 2017). Numerical equality does not necessarily lead to the adoption of equitable policy initiatives, especially if there is little sport-specific situated research to illustrate where inequitable practice lies and how to address it (De Haan and Norman, 2020). However, where the minority (e.g. women) are meaningfully represented at all levels of an organisation (or sporting structure) then there is potential for change (Henry and Robinson, 2010).

8.2.3.1 Equestrian Sporting Board Membership

The people who form sporting governance, the board members of international federations, are a product of historical, socio-cultural and sporting influences on their sport, and directly contribute to these influences on the people in a sport (Henry and Robinson, 2010). Sporting policy can affect each sport to differing extents (Betzer-Tayar et al., 2015). For example, having quotas for competitors of different sexes in many Olympic sports means that to gain a full picture of participation in the sport would need to adopt methodologies that provide deeper insights, however providing profile information to compare sports still yields interesting information and views.

Until 1948 the International Olympic Committee had an all-male membership (De Haan and Dumbell, 2016). During Rio 2016 the decision makers in the international federation for equestrian sport, the FEI, were five times more likely to be a man than a woman (De Haan and Dumbell, 2019). By Tokyo 2020 this figure had significantly reduced to 1.5 times more likely to be a man (data available at Fédération Equestre Internationale, 2020) and there has been a man and a woman as FEI President and Secretary General since 1986 (De Haan and Dumbell, 2019). This is particularly noteworthy as sport organizations established before 1995 were found to find it more difficult to change culture and recognise the input of women and other groups into their boards (White and Kay, 2006).

In 2020 the FEI board exceeded the International Olympic Committee's recommendation of 30 per cent women representation (Henry and Robinson, 2010) but President De Vos said 'even 38 per cent is not enough and we will keep working on the gender balance' (Gillen, 2020). The FEI joined the International Gender Champions Network in 2017 and created the 'Gender Equality Grant in Equestrian Sport' in 2020, an annual grant to fund one National Federation's programme to promote gender

equality (Fédération Equestre Internationale, 2021d). This is key to the future of a modern sport as gender equality is required by government and the International Olympic Committee (White and Kay, 2006). It is particularly important for a sexintegrated sport, and is supported by the four most successful equestrian national federations in the twenty first century whose board membership all had neither sex below 30 % by 2016 (De Haan and Dumbell, 2019). The British Equestrian Federation actually had the most balanced board during Rio 2016 with 5 male and 7 female members (De Haan and Dumbell, 2019). All these things together suggest that equestrian sport's claim of sex-integration is moving beyond 'tokenism' towards a truly sex-integrated experience. This is a powerful message and the author believes that it should be used to promote inclusive initiatives in the future.

8.2.3.2 Equestrian Sports Coaches

Sports coaches are examples of accessible role models and directly influence whether participation in riding is a positive or negative experience, and the progression of a rider's sporting career (Young, 2014; Lamperd et al., 2016; UK Coaching, 2016; Strasser-Burke and Symonds, 2019; De Haan and Dumbell, 2021). Within sport, coaches have been identified as a key group that can effect change (De Haan and Norman, 2020) and ensuring they reflect gender equality within their sport was identified as a key area for development by the European Union (Katsarova, 2020) and within the International Olympic Committee's (2018) Gender Equality project.

UK equestrian coaches are likely to be women (92%), almost all have a formal qualification, they coach on average 16 hours a week and most are paid to coach (British Equestrian Federation, 2019; De Haan and Dumbell, 2021). UK sports coaches are more likely to be men (54%), most do not have a formal coaching qualification, they coach on average less than 3 hours a week and most are not paid to coach (Norman, 2008; Thompson and Mcilroy, 2017). These differences were highlighted by Vinson et al. (2016) who recognised that equestrian coaches did not conform to the UK sports coaching norm. The extent to which these differences contribute to women being over-represented (92% of coaches but 67% of regular riders) as equestrian coaches is unknown (British Equestrian Trade Association, 2019; De Haan and Dumbell, 2021).

The majority of qualified equestrian coaches coach riding as both a leisure activity and a sport (British Equestrian Federation, 2019). The majority of UK riders, ride for leisure (approximately 95 %) although a quarter of UK riders in 2019 had competed in a riding competition in the last twelve months (British Equestrian Trade Association, 2019).

95% of equestrian coaches coach across ages and ability levels, with only 8.6% reporting that they coach elite riders and only 7% of coaching hours used for elite riders (British Equestrian Federation, 2019). Riding coaches are usually qualified, accessing cheaper insurance (British Equestrian Federation, 2019; KBIS, 2021). The UK subcultures of riding for leisure (and other non-riding equestrian leisure activities) and riding for sport, are under-researched. In a preliminary study Dumbell and Lewis (2018) found that leisure and sporting youth riders did differ in what they enjoyed about rider-horse interactions. If riders display differences depending whether they ride for recreation or sport then it is reasonable that coaches do too.

Men and women form similar proportions of the highest-qualified UK equestrian coaches and those coaches employed by the national federation, similar to UK superelite riders (Dumbell et al, 2018; De Haan and Dumbell, 2021). This is unusual as it is widely accepted that the majority (~86%) of elite athletes' coaches are men (Sweden – Riksidrottsforbundet, 2006; Slovenia – Kajtna, 2008; Norway – Fasting et al., 2016). Whilst a pleasing example of numerical equality, it demonstrates that men's progression through the equestrian coaching levels is much higher than women's (De Haan and Dumbell, 2021).

Perhaps the isolation women sport coaches report (Norman, 2008) is experienced by men equestrian coaches less in the equestrian sport environment than in the leisure riding environment (Dumbell et al. (2010) found an increased representation of men riders and men officials at higher levels of UK competition). Perhaps men coaches experience an increased socio-cultural acceptance of men in sport, than in the often feminised area of human-animal care as leisure riding. In many sports, coaching is a career to enter after a competitive career (Merry, 2009), but in equestrian sport this is not the case. Dual career riders are common, where a rider both rides and coaches, and many actually have triple career where the very successful rider may also be a coach of riders and a trainer of horses (De Haan and Dumbell, 2021). As the equestrian coaching qualification levels increase, they focus more on sport than leisure riders (British Equestrian Trade Association, 2019). It would be interesting to explore whether there was a virtuous cycle supporting men progressing through the qualification levels.

Norman (2008) interviewed coaches working in senior roles within UK governing bodies of team sports about barriers to women's progression. One barrier reported is that an ideal coach should have experience as an exceptional performer and women's sport is often regarded (accurately or not) as being a lower standard than the men's sport (Norman, 2008). However, the argument does not apply to sex-integrated equestrian. In equestrian sport the majority of coaches are women so it is likely that

the feeling of isolation is less common. Participants in Norman (2008) mentioned the lack of salaried coaching positions, however equestrian coaches typically receive payment, although they may have a second job alongside coaching.

Riding is both a leisure activity and a sport, and relies on a complex human-animal relationship sitting at the juxtaposition of masculinised (sport, Messner, 1992; Dashper and St John, 2015) and feminised areas of UK culture (caring for animals, Donovan, 2006). The extent to which there is a 'leaky pipeline' for women coaches (Aman et al., 2018) and/or how Norman's (2008) 'bottle-neck' in equestrian coaching progression is experienced would be useful to consider how equestrian coaching could be developed as a profession to support both men and women. Whilst it is not known why there are a lower proportion of women, than men, reaching high qualification levels and coaching elite athletes, it is likely to be due to a number of interacting factors. It seems likely that leisure and sport riders will display differences in which coaches positively influence their riding careers, and act as role-models for future generations.

8.3 Participation and policy

Equestrian sport's claim to be sex-integrated is key to the future of this unusual sport in the Olympic Games. The International Olympic Committee believes the Olympic Games are

'one of the most effective global platforms for promoting and accelerating gender equality, in particular with regard to athletes participating, as well as the event schedule, including competition hours and medal events per day' (Palmer, 2021).

Ensuring that equestrian sport is recognised as contributing to the discussion around representation of the sexes within sport and the Olympic Games, will help it retain its status as an Olympic sport, so important for funding and public awareness (International Olympic Committee, 2018; Dumbell and Scott-Ward, 2021).

Equestrian sport is an expensive sport in the Olympic programme, as both riders and horses have to be catered for, venues do not suit multi-purpose uses in the future, and only support equestrian and modern pentathlon Olympic sports during the Games and dressage during the Paralympic Games (BBC, 2021b; Gannett, 2021). In 2008 equestrian sport was held at a different site to other sports, predominantly for horse immigration and welfare purposes (De Haan, 2015). To overcome this expense and difficulty equestrian sport has to offer value as an Olympic Sport. Ensuring that equestrian sport is recognised as contributing to the discussion around representation of the sexes and multi-generational athletes within sport and the Olympic Games, will help it retain its status as an Olympic sport, so important for funding and public

awareness (Wahlquist, 2016; International Olympic Committee, 2018; Dumbell and Scott-Ward, 2021).

At a time when estimates of the numbers of regular riders across Great Britain show an increase in riding, there is a decrease in horse ownership despite the majority of UK regular riders coming from more wealthy socio-economic household occupation groupings (AB) (British Equestrian Trade Association, 2019). In 2019, the proportion of riders who were from households of skilled manual workers or semi and unskilled manual workers (socio-economic groupings C2 and D) were estimated to have increased by 31 % from 2015 (British Equestrian Trade Association, 2019). For those who decide to own or care for a horse, the average estimated annual expenditure per horse in Great Britain was £4174 in 2019 (British Equestrian Trade Association, 2019). This amount is significant, however it is within the annual savings of the average UK household (Schomberg and Bruce, 2021). What is interesting is that riders do not have to own (or care for) a horse, even at the highest levels (Dumbell et al. 2018; De Haan and Dumbell, 2019).

UK women and girls participate in less physical activity and sport, than men and boys (Office for National Statistics, 2015; Sport England, 2021). Increasing women and girls' physical activity has become a national agenda. Approximately 4% of children in England and 22% of secondary school girls participated in riding during 2018 (Sport England, 2021). Over 1.2 million regular riders are women (British Equestrian Trade Association, 2019). British Equestrian (2021a) state 'You're never too old to start riding' and that you 'can start riding from a very young age' however they talk about participation from the age of 4 years of age and the entry level of the pathway does talk predominantly about children (Lamperd et al., 2016; British Equestrian, 2021b). This could be revised to take advantage of the unusual flexibility in rider's profiles seen within my data.

Riding also involves interacting with a horse, a partnership with many benefits, e.g. increased self-esteem in female adolescent riders (Davies and Collins, 2015), socially desirable characteristics (Thorell et al., 2017), wellbeing through animal interaction (Wells, 2009) and frequently in being outdoors in nature with its associated benefits (Pasanen et al., 2014). There is an opportunity for the equestrian sector to position itself, more actively, as an activity that could help meet government targets.

As well as the health and societal benefits of riding, as a sex-integrated sport equestrian disciplines have an important role in promoting the ability of people to compete, together and against one another. For example no equestrian athlete has to state their sex or 'gender to participate in FEI competitions or at the Olympic and Paralympic Games' (Fédération Equestre Internationale, 2021f). Individuals who might

be excluded by binary sex classifications can therefore participate in equestrian sport (Channon et al., 2016). Equestrian sport is a sport 'where gender constructions are less visible, dissolved or differ from other sports' (Hellborg and Hedenborg, 2015).

Within equestrian sport riders frequently return from even life-threatening injuries to continue performance (e.g. Olympian Laura Collett (Baldock, 2021)) and experience seems to enable riders to offset age-related changes in physical ability. It also facilitates the increase seen in riders aged over 45 years between 1999 and 2019 by supporting older people to start and return to riding (British Equestrian Trade Association, 2019). This is in contrast to the UK population that have a reduced activity level over 45 years (NHS Digital, 2019). Perhaps the presence and media recognition of older role models for older riders (inaccessible super-elite athletes, and celebrities like the Queen, and accessible sports coaches) is starting to have an effect (Butler, 2017; Thompson and Mcilroy, 2017; Johnston, 2020).

The ability to function as a partnership is helped by experience, often meaning that more-experienced riders can repeat standards of performance with different horses and therefore having an unusual longevity at all levels. Wipper (2000, p.66) describes a successful human-horse partnership as involving

'a complex set of negotiations...a give-and-take between horse and rider rather than either dictating the other'.

The flexibility and individuality of each rider-horse partnership enables para-athletes to compete in non-para competition. For example Sophie Wells (para-equestrian athlete) won the junior international class (non-para) at the Hickstead under 21 international and competed on the dressage Young Rider European team as being selected for the World championship para-equestrian dressage squad in the same year, 2010 (British Paralympic Association, 2021).

I believe that equestrian sport could present itself as an unusually inclusive, and truly sex-integrated, sport. I have presented my research in a range of settings, focussing consciously on publishing in general sport publications, promoting the worth of equestrian sport, not as a curiosity but as a model that other sports could learn from (and vice-versa). I feel that for the longevity of equestrian sport it is important to support and reinforce this message, preferably with evidence-based studies.

The Olympic equestrian disciplines arose from a military-dominated, eurocentric view of the ideal rider-horse partnership (De Haan and Dumbell, 2016). The European dominance may not be complete, with USA one of the most successful equestrian nations, however in the UK equestrianism, and equestrian sport, is dominated by white riders (Dumbell et al., 2010; Lawrence, 2017). Attracting riders from a wider range of ethnic backgrounds is part of British Equestrian's commitment to equality and diversity

(British Equestrian, 2021g). There is growing interest in recreational and sporting equestrian activities in other nations, such as China (Wang and Zou, 2020). Increasing the ethnic diversity of British equestrian sport and the international appeal of equestrian sport across more nations is a challenge that should not be ignored.

8.4 What do these findings mean when researching riding?¹⁹

Riding is classed as a high-risk leisure activity, arguably the highest risk common UK leisure activity (Thompson et al., 2015; Kruger et al., 2018). One factor that could increase participation and encourage people to return to regular riding is if riding could have a reduced risk of injury (British Equestrian Trade Association, 2019). Better riding skill and better horse training would help to reduce that risk, as would improving the two-way communication between rider and horse that depends on the generalised rider-horse relationship both have (Camargo, 2018; Williams & Tabor, 2017; Thompson et al. 2015). Every time a rider-horse partnership encounter a new situation or challenge then they will both draw on their generalised rider-horse relationship as well as the individualised rider-horse relationship they have established (Figure 3).

¹⁹ In the following discussion the author recognises that investigating rider performance is an emerging area. When considering research in the light of this thesis' findings it is not intended to devalue the worth of investigating an area that is under-investigated, but more to demonstrate how returning to the principles of good scientific research, and in particular the selection of the population and the study sample, and providing carefully judged guidance on how far results are generalisable is important.

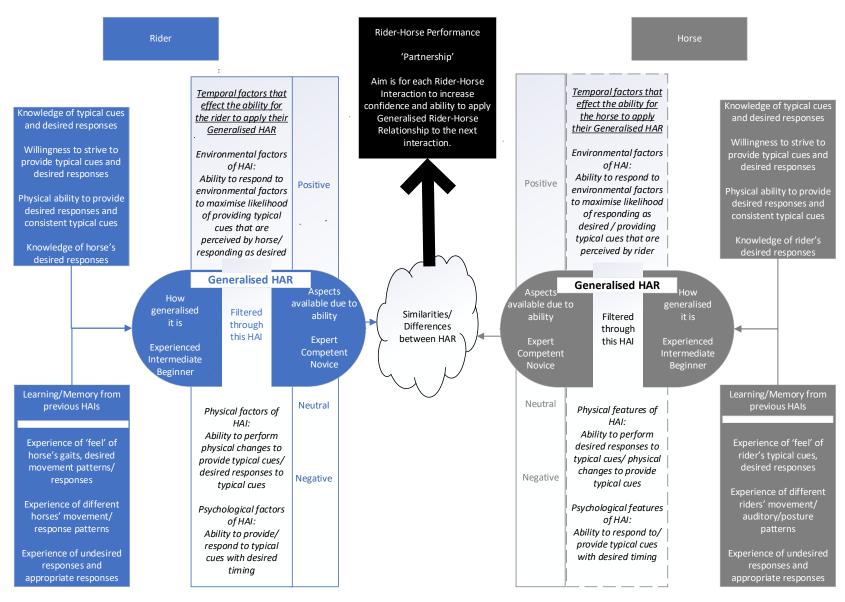


Figure 3. A proposed model of factors that influence an individual rider-horse interaction and rider-horse performance (Author's own with content derived from Waring, 2003; Hausberger et al., 2008; Sankey et al., 2011; Williams & Tabor, 2017; Camargo, 2018)

The generalised rider-horse relationship leads to an expectation that the interactant will behave similarly to previous horses/humans they have experienced in a 'patterned interaction' (Sander, 2003). The more generalised a horse's rider-horse relationship is, i.e. the more different interactions with different riders forms the basis of that relationship, the more truly generalised it is likely to be and therefore as a model of reactivity the more likely the horse is to be able to interpret the rider's behaviours and act in the desired manner (see Figure 3). This can save time in new interactions and can increase the likelihood of mutually positive interactions, however the opportunity for potential mis-communications and undesirable outcomes, is understandably high (Thompson et al., 2015; Williams & Tabor, 2017; Camargo, 2018). Elite riders utilise their generalised rider-horse relationship to enable fast adaptation to new horses. Sir Mark Todd, the FEI's Rider of the Twentieth Century, won Badminton Horse Trials (the most prestigious event in the world at the time) in 1994 with a horse that he was asked to ride a week before the event (Badminton, 2020). Whilst this feat is remembered as an unusual success story, it does illustrate how useful a generalised rider-horse relationship is to both rider and horse.

Within the conceptual framework proposed in Figure 3 many features inform the generalised rider-horse relationship that both interactants possess, as horses commonly interact with a large range of different humans and humans commonly interact with a range of different horses (Hausberger et al., 2008; Birke and Thompson, 2018; Lilley, 2020). In fact, riding a wide range of horses is recommended as part of a rider's development, and required for many recognised industry qualifications (e.g. British Horse Society Qualifications, 2020). Establishing the horse's generalised rider-horse relationship, including being ridden by different people, is a key feature of training the horse for horse-riding activities (Hawson et al., 2010). At the same time it has to be remembered that there are other high-level factors that affect how a particular horse will react at a given time (see Figure 3).

To support better coaching and horse training, understanding what expert riders do, that separates them from non-expert riders, is key. Enabling evidence-based studies of expert riders is essential for the future of riding and both rider and human wellbeing. When researching expert riders, studies should include both men and women participants, in similar proportions, if they wish to represent the elite population. Currently when studies research elite riders, the samples vary considerably. For example in studies looking at rider performance Egenvall et al. (2016) did use 3 men and 4 women riders but Terada (2000) did not report the sex of the riders. Within the studies that Hobbs et al. (2020) rated as robust enough to include in their meta-analysis of the characteristics of elite riders some studies used both men and women

but in very different proportions, e.g. Eckardt and Witte (2016) had 15 women and 5 men whilst Olivier et al. (2016) had 16 men and 9 women riders. Sung et al., (2015) used all men riders. It is reasonable to assume that the riding, positions and possibly techniques, of men and women may be different, due to the different anatomy of the pelvis and other musculoskeletal structures, and weight distribution seen (Leong, 2006). Whilst Ille et al. (2014) found no difference in horses' response to men and women riders during a jumping course they did find differences in saddle pressure, although the analysis was lacking detail.

There are fewer studies looking at the rider-horse relationship but the sex profiles see large variation (e.g. Hogg and Hodgins (2021) had 31 women and 5 men riders, Axel-Nilsson (2015) had all women riders). Given that there was limited knowledge of the demographic profiles of elite riders it is perhaps unsurprising that such variation exists. To increase external validity (generalisability and applicability) of research findings, studies should report the sex of their participants, and if investigating elite and/or expert riders should utilise robust samples of both men and women riders.

If research wishes to study super-elite performance in Olympic equestrian disciplines my results demonstrate that performers can have a wide range of ages, unusual for many other sporting disciplines. This poses challenges to a researcher as it is known that ageing changes muscle behaviour and muscle coordination processes and the repertoire of muscular patterns is usually reduced in older adults (compared to young adults) (Vernooij et al., 2016). Older adults are known to exhibit different movement patterns when performing routine tasks, such as walking and detailed hand movements, when compared to younger adults (e.g. Murrell and Entwistle, 1960; Rudolph et al., 2007). As such when studying riding technique it is likely that age-related changes may be visible and therefore particular care must be taken when selecting and reporting sample groups.

Currently there is varied practice in published research surrounding selection of participant groups for age. Some studies do not report the age of their participants, despite reporting on physiological and biomechanical characteristics (e.g. Terada, 2000; Engell et al., 2016). My results suggest that all studies should report the age of participants. Broadly studies tend to utilise younger samples than the profile data would suggest represents expert performers. Hobbs et al. (2020) identified more robust studies, used participants with mean ages ranging from 19.9 to 33.9 years, and the more experienced samples tended to be older, sometimes by a decade, than the less experienced samples (Munz et al., 2014; Sung et al., 2015; Eckardt and Witte, 2016; Olivier et al., 2017). With the wide age range of UK super-elite and elite riders (twenties to sixties) (Dumbell et al., 2018; Dumbell et al., 2010) it appears that the

research being conducted is using participants whose ages do not represent British elite equestrian performers but more closely match semi-elite dressage competitors (Dumbell et al., 2010).

Many studies included in Hobbs et al. (2020) were claiming to compare expert vs novice performers, but the actual criteria used to judge these classifications demonstrated large variation between studies. For example, when compared to Table 2, competition, experience and professionalism were used, although broadly it was performance that was being investigated (Munz et al., 2014; Sung et al., 2015; Eckardt and Witte, 2016; Olivier et al., 2017). The lack of clear terminology is clearly demonstrated throughout published research and supports Williams and Tabor (2017) who identified this as a weakness when studying equestrian performance. More accurate terminology, reflecting the literature from other areas and sports, would be of benefit here, and Table 2 could be developed further for wide-scale adoption to benefit future research.

I have shown that if research was going to investigate elite performance, even in a simulated non-competition environment, then it would require access to an established rider-horse partnership. This returns to the idea that an individual rider-horse relationship capable of supporting super-elite performance may have quite different characteristics to an expert rider and an expert horse using a generalised rider-horse relationship (supported by Hausberger et al., 2008). This is an area that is seldom acknowledged in the limitations of studies on expert riders. Although the idea of a rider-horse partnership is acknowledged in Hobbs et al.'s (2020) review of horse and rider performance it is either not reported (Sung et al., 2015) or there was different practise in the studies. For example Olivier et al. (2017) utilised a horse simulator (Olivier et al., 2017), Munz et al. (2014) had experienced riders riding their own horses and the novices' riding novel horses, and Eckardt and Witte (2016) had all riders on their own horses.

Hobbs et al.'s (2020) study does carefully position its findings, recognising that they are restricted by the studies they have utilised. For example it describes the links between rider and horse performance it found as 'a proposed theoretical model'. It does not explicitly state the issues with rider samples, that studies do not state how they select and define the riding ability of riders utilised in a standardised manner, and they do not describe the rider-horse partnerships, as limitations of the studies and their findings and therefore a key focus for future studies. I believe that these are fundamental flaws to studies of rider performance that are intended to represent high performing riders, engaged in an activity that is inherently based on the quality of the rider-horse relationships (from rider and horse) involved. Future studies in rider performance,

which are designed to have findings that represent elite populations and that can be generalised across them, should consider and report all these factors.

Chapter Nine Conclusion

The unique feature of riding, and equestrian sport, is the direct physical interface between the rider and horse, whereby the rider is seated on the horse and it is the horse's movement that is the fundamental outcome of riding. The horse enables riding to provide a physical equality that enables a breadth of people to participate in riding, even at super-elite levels of competitive sport. Two of the requirements to maximise the opportunity that this physical equality provides are that people are able to participate in riding (it is available to, and perceived to be available by, those people, with their national and socio-cultural background) and that when they do participate there are evidence-based principles to increase the chance of a positive experience.

The time is right, with considerable media interest in equality, to re-position riding and equestrian sport as being uniquely able to help address some of the UK government's targets for inclusion, physical activity and social responsibility, all within a framework of partnership between horse and rider, human and animal in a sex-integrated setting. In this thesis, I have synthesised previously published and new data to provide a narrative to enable this to occur.

In this thesis I show that in the UK, men and women do participate in riding and equestrian sport (even at super-elite levels), riders start riding at a wide range of ages and participate at a wide range of ages and with a longevity at elite level that can cross six decades. Many riders do not own a horse, even at super-elite competition level, however they are likely to have owned a horse at some point in their riding career, and they are from an increasing range of social backgrounds. The focus of the UK equine sector on using general terms, such as owners (including carers) and riders, has in my opinion, been a strength over many decades. This 'gender-blindness' and in fact person-blindness has limited the accidental exclusion of an individual from riding activities. However it is now time to build upon this foundation. Riders are individuals and focussing on the barriers that exist for prospective, current and past riders and how the sector can promote careers for anyone interested in being part of this surprisingly inclusive activity, will require recognition and exploration of their individual differences.

To support a healthy UK riding population through the twenty-first century, the fundamental principles of riding should be evidence-based. These equitation science principles should be based on empirical research utilising the best methods available to explore, understand and make recommendations. Evidence-based practice will support riding to address the challenges facing riding today (e.g. media perceptions of riding based on historical information that do not reflect the current riding population, a

changing, and declining, UK population that owns horses, integrating and retaining participants that are from different sections of the UK population that have not traditionally been riders). To construct these principles applied research should be conducted utilising samples that represent meaningful populations of UK riders and using agreed terminology (that is defined). I have provided valuable information to inform the selection of these populations, and have advanced the definitions of rider expertise. These will support advancements in equitation science and enable sport scholars to more easily compare equestrian and other sport and therefore be able to use the lessons learnt in equestrian sport to apply to othersporting contexts.

Above all this thesis shows that riding and equestrian sport should be proud that the partnership between rider and horse, that lies at its centre, already enables unusually inclusive physical activities and sporting disciplines to exist, even at elite levels. It is my hope that by promotion throughout my network, both with the fields of equitation science and sport studies, and by publishing and presenting these messages across a range of media I have, and can, play a role in the future of riding and enabling others to experience the pleasure that this activity with partnership at its centre can bring.

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Id=APKAJLOHF5GGSLRBV4ZA#page=23

Zaborskis, M. (2018) *Gender Studies: Foundations and Key Concepts*. Available at https://daily.jstor.org/reading-list-gender-studies/ (Accessed 10 October 2021)

Appendix One: the chapters that address each objective

	Chapter								
Objective	1	2	3	4	5	6	7	8	9
To explore historical influences, including military and male influences, on Olympic equestrian sporting disciplines, their rules, format and the establishment of the sport's lead body.			✓			√			
To profile UK expert performers in the Olympic equestrian sporting disciplines, at elite and super-elite competition level.				✓	>				
3. To compare the profiles of super- elite performers from successful Olympic equestrian nations and across different Olympic sports, to investigate socio-cultural and sporting influences.						✓		✓	
4. To discuss how the gender profiles of leaders in equestrian disciplines and UK equestrian coaches may compare to, and influence, the profiles of expert performers.						√	√	√	
To better enable future researchers to perform equestrian research that is externally valid.			√	√	√	√	√		
6. To better understand how sexintegrated sport and humananimal partnerships may affect participation and remove some barriers to participation and facilitate extending knowledge beyond the equine sector about the worth of studying Olympic equestrian sporting disciplines.	√			√	✓	√	√	✓	✓
7. To identify future research directions from considering the profiles of elite performers, and the influence of historical, sociocultural and sporting factors.	√							√	√